

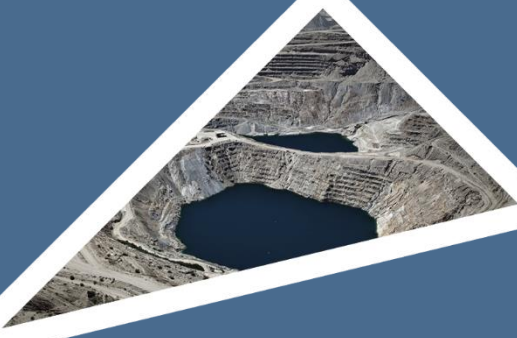


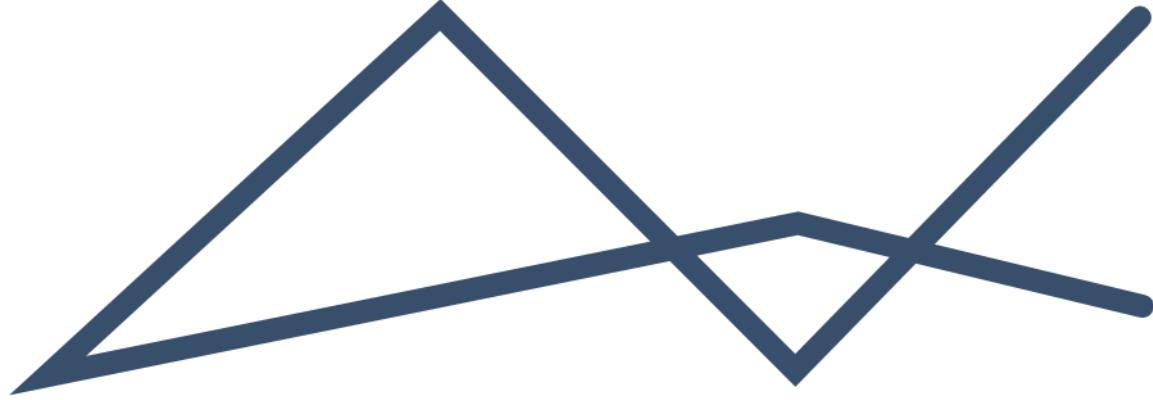
ENVIRONMENTAL
IMPACT
MANAGEMENT
SERVICES

T 011 789 7170 E info@eims.co.za W www.eims.co.za

BASIC ASSESSMENT REPORT

TETRA4 33KV AND 132KV POWERLINES PROJECT





DOCUMENT DETAILS

EIMS REFERENCE: 1526
DOCUMENT TITLE: TETRA4 33KV and 132KV Powerlines Project

DOCUMENT CONTROL

	NAME	SIGNATURE	DATE
COMPILED:	Qaphela Magaqa		2023/03/22
CHECKED:	Liam Whitlow		2023/03/22
AUTHORIZED:	Liam Whitlow		2023/03/22

REVISION AND AMENDMENTS

REVISION DATE:	REV #	DESCRIPTION
2023/03/22	ORIGINAL DOCUMENT	Basic Assessment Report for Public Review and Comment



Table of Contents

Section A: Activity information	1
1. Project Description	1
2. Feasible and Reasonable Alternatives (33kV Powerline)	4
a) Site alternatives	5
b) Lay-out alternatives	6
c) Technology alternatives	6
d) Other alternatives (e.g. scheduling, demand, input, scale and design alternatives)	7
e) No-go alternative	7
f) Physical size of the activity.....	7
3. Feasible and Reasonable Alternatives (132kV Powerline)	9
a) Site alternatives	9
b) Lay-out alternatives	11
c) Technology alternatives	11
d) Other alternatives (e.g. scheduling, demand, input, scale and design alternatives)	12
e) No-go alternative	12
f) Physical size of the activity.....	12
4. Activity Motivation (Need and Desirability)	15
5. Waste, Effluent, Emission and Noise Management	23
a) Solid waste management.....	23
b) Liquid effluent	25
c) Emissions into the atmosphere.....	26
d) Waste permit	26
e) Generation of noise.....	26
6. Water Use.....	26
7. Energy Efficiency.....	27
Section B: Site/Area/Property Description (33kV powerline)	28
1. Gradient of the Site	29
2. Location in Landscape	29
3. Groundwater, Soil and Geological Stability of the Site.....	29
4. Groundcover.....	30
5. Surface Water	31
6. Land Use Character of Surrounding Area	31
Section B: Site/Area/Property description (132kV Powerline)	34
1. Gradient of the site.....	35
2. location in Landscape	35
3. Groundwater, Soil and Geological Stability of the Site.....	36
4. Groundcover.....	36



5. Surface Water	37
6. Land Use Character of Surrounding Area	37
Cultural/Historical Features	39
1. Socio-Economic Character	40
a) Matjhabeng Local Municipality	40
b) Socio-economic value of the activity	42
2. Biodiversity	43
Section C: Public Participation	46
1. Advertisement and Notice.....	46
2. Determination of Appropriate Measures	46
a) Public Participation Process	46
b) Issues Raised by Interested and Affected Parties	48
c) Comments and Response Report.....	49
d) Authority Participation.....	49
Section D: Impact Assessment.....	51
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.....	51
2. Environmental Impact Statement	64
Section E: Recommendation of Practitioner	65
Section F: Appendixes.....	67

List of Figures

Figure 1: Labour status (those aged between 15 - 65 years, shown in percentage, source: Census 2011)	40
Figure 2: Employment sector (those aged between 15 and 65 years, shown in percentage, source: Census 2011).	41
Figure 3: Education profiles (those aged 20 years of older, shown in percentages, source: Census 2011).	42

Appendices

Appendix A: Maps

Appendix B: Site Photographs

Appendix C: Facility Illustration

Appendix D: Specialist Reports

Appendix E: Public Participation

Appendix F: Impact Assessment

Appendix G: Environmental Management Programme (EMPr)

Appendix H: Details of EAP and Expertise

Appendix I: Specialist Declaration of Interest



Appendix J: Additional Information



destea

department of
economic, small business development,
tourism and environmental affairs
FREE STATE PROVINCE

(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 as amended 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 **13 February 2020**. 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 and **EAPASA registered** 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.

Please note: The application for authorisation is for the construction of two separate powerlines by the Applicant – Tetra4 (Pty) Ltd. The powerlines are:

- A short 33 kV powerline connecting the existing compressor station near the Beatrix mine to the to the currently existing 33 kV Beatrix powerline, approximately 1 km in length.
- A new 132 kV Loop In Loop Out (LILO) connecting the new proposed 40 MVA substation, to be located at the Tetra4 plant, with the Eskom Theseus-Oryx 132 kV line to provide the plant with operational power requirements for the Phase 2 expansion.

This project is linked to the Tetra4 Phase 2 Expansion project, however, it is being carried out as a separate application for authorisation from the Phase 2 Expansion project as the Environmental Authorisation (EA) is to be transferred to Eskom post construction of the powerlines. Please note, the Tetra4 Phase 2 project and associated infrastructure including overhead infrastructure received SIP status under the Oil and Gas National Program SIP 20f.

Please note that certain Sub-Headings in Section A have been duplicated for the separate powerlines, Section B and the Biodiversity subsection of Section C has been duplicated for separate assessments of the two sites for the different powerlines.

SECTION A: ACTIVITY INFORMATION

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



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**

Tetra4 (Pty) Ltd wishes to construct two new dedicated overhead powerlines as part of the proposed Phase 2 Gas Production Project which is currently being applied for under their existing Production Right (Ref: 12/4/1/07/2/2) with an application process underway with the Petroleum Agency SA (PASA) and the Department of Mineral Resources and Energy (DMRE). Once the proposed powerlines are constructed, they will be ceded to Eskom to manage during the operational phase and therefore this separate application process for the powerlines is being undertaken (powerlines are excluded from the ongoing PASA/DMRE application). The two new proposed powerlines are as follows:

- A new 132 kV dual loop-in-loop-out (LILO) powerline of approximately 5.5 km in length to the Eskom Theseus-Oryx 132 kV Line. The proposed powerline will feed into a new 40 MVA substation at the Liquid Natural Gas (LNG)/Liquid Helium (LHe) Plant to provide the plant with the operational power requirements.
- A new 33kV powerline to connect a gas compressor station complex to the existing 33 kV Beatrix powerline. The 33kV powerline will be approximately 1 km in length.

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

Listed activity as described in GN 327,325 and 324	Description of project activity
<p>Example:</p> <p>GN 327 Item xx xx): The construction of a bridge where such construction occurs within a watercourse or within 32 metres of a watercourse, measured from the edge of a watercourse, excluding where such construction will occur behind the development setback line.</p>	<p>A bridge measuring 5 m in height and 10m in length, no wider than 8 meters will be built over the Orange river</p>
<p>GNR 983 (Listing Notice 1: Activity 11 (i)):</p> <p>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;</p>	<p>The applicant wishes to construct a 132kV powerline of approximately 5.5km in length.</p> <p>It is noted that the 33kV powerline falls below this listed activity threshold however it is included in this application as the 33kV powerline does impact on watercourses (refer to Activity 19 below).</p>
<p>GNR 983 (Listing Notice 1: Activity 19):</p> <p>The infilling or depositing of any material of more than 10 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 10 cubic metres from a watercourse;</p> <p>but excluding where such infilling, depositing, dredging, excavation, removal or moving-</p> <p>(a) will occur behind a development setback;</p> <p>(b) is for maintenance purposes undertaken in accordance with a maintenance management plan;</p> <p>(c) falls within the ambit of activity 21 in this Notice, in which case that activity applies;</p> <p>(d) occurs within existing ports or harbours that will not increase the development footprint of the port or harbour; or</p> <p>(e) where such development is related to the development of a port or harbour, in which case activity 26 in Listing Notice 2 of 2014 applies</p>	<p>Wetlands are present within the two powerline development corridors in which the powerlines are to be constructed. The construction of the powerlines (specifically the tower foundations/ footprint) will therefore result in more than 10m³ of material being impacted within a watercourse.</p>
<p>GNR 985 (Listing Notice 3: Activity 12):</p> <p>The clearance of an area of 300 square metres or more of indigenous vegetation except where such</p>	<p>The construction of the powerline involves vegetation clearing for each pylon to be erected. The 132 kV powerline crosses NFEPA wetlands and a</p>

Listed activity as described in GN 327,325 and 324	Description of project activity
<p>clearance of indigenous vegetation is required for maintenance purposes undertaken in accordance with a maintenance management plan.</p> <p>b. Free State</p> <p>i. Within any critically endangered or endangered ecosystem listed in terms of section 52 of the NEMBA or prior to the publication of such a list, within an area that has been identified as critically endangered in the National Spatial Biodiversity Assessment 2004;</p> <p>ii. Within critical biodiversity areas identified in bioregional plans;</p> <p>iii. On land, where, at the time of the coming into effect of this Notice or thereafter such land was zoned open space, conservation or had an equivalent zoning; or iv. Areas within a watercourse or wetland; or within 100 metres from the edge of a watercourse or wetland.</p>	<p>watercourse and the 33 kV powerline is located within an NFEPA wetland area. The 132 kV powerline route traverses through some areas delineated as CBA 1 and the endangered Vaal-Vet Sandy Grassland area.</p>
<p>GNR 985 (Listing Notice 3: Activity 14):</p> <p>The development of-</p> <p>(i) dams or weirs, where the dam or weir, including infrastructure and water surface area exceeds 10 square metres; or</p> <p>(ii) infrastructure or structures with a physical footprint of 10 square metres or more; where such development occurs-</p> <p>(a) within a watercourse;</p> <p>(b) in front of a development setback; or</p> <p>(c) if no development setback has been adopted, within 32 metres of a watercourse, measured from the edge of a watercourse;</p> <p>excluding the development of infrastructure or structures within existing ports or harbours that will not increase the development footprint of the port or harbour.</p> <p>b. Free State</p> <p>i. Outside urban areas:</p> <p>(aa) A protected area identified in terms of NEMPAA, excluding conservancies;</p> <p>(bb) National Protected Area Expansion Strategy Focus areas;</p>	<p>The pylons to be erected for the 33 kV and 132 kV powerline have will have a combined physical footprint of over 10 square metres where sections of the powerlines are constructed across watercourses.</p>

Listed activity as described in GN 327,325 and 324	Description of project activity
(cc) World Heritage Sites; (dd) Sensitive areas as identified in an environmental management framework as contemplated in chapter 5 of the Act and as adopted by the competent authority; (ee) Sites or areas identified in terms of an international convention;	

2. FEASIBLE AND REASONABLE ALTERNATIVES (33KV POWERLINE)

“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) of GN 326, Regulation 2014 as amended. Alternatives should include a consideration of all possible means by which the purpose and need of the proposed activity (NOT PROJECT) could be accomplished in the specific instance taking account of the interest of the applicant in the activity. The no-go alternative must in all cases be included in the assessment phase as the baseline against which the impacts of the other alternatives are assessed.

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

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

A) SITE ALTERNATIVES

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

In the case of linear activities:

NB: development corridors have been considered for the powerlines where the final alignment will be located. Placement of pylons is to be within areas where the least environmental impact is anticipated within the corridor where possible. A 50m wide corridor is considered for the 33kV powerline.

Alternative:

Latitude (S):

Longitude (E):

Alternative S1 (preferred)

- Starting point of the activity

28°11'6.10"S	26°44'5.25"E
--------------	--------------

28°11'5.12"S	26°44'6.23"E
--------------	--------------

- Middle/Additional point of the activity

28°10'58.92"S	26°43'52.02"E
---------------	---------------

28°10'57.76"S	26°43'53.06"E
---------------	---------------

- End point of the activity

28°10'51.62"S	26°43'38.78"E
---------------	---------------

28°10'50.37"S	26°43'39.57"E
---------------	---------------

Alternative S2 (if any)

- Starting point of the activity

--	--

- Middle/Additional point of the activity

--	--

BASIC ASSESSMENT REPORT

- End point of the activity

--	--

Alternative S3 (if any)

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

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

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

B) LAY-OUT ALTERNATIVES

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

C) TECHNOLOGY ALTERNATIVES

No technology alternatives were considered for this project.

Alternative 1 (preferred alternative)
The construction of a short powerline that will connect to the gas compressor station to provide power. The impacts of the construction and operation of the powerline have been assessed in this BAR.

Alternative 2
The use of diesel generators was considered as an alternative source of power for the compressor station. However, this alternative is not considered feasible because of the potential noise impacts from the diesel generator, dangers associated with fuel storage on site and security risks associated with it. There is therefore only one technology that is economically, environmentally and socially feasible.
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 would imply that the baseline conditions of the site are maintained (i.e. no powerline and thus the negative environmental impacts associated with the construction of the powerline will not be effected, although with a low significance rating). This would result in Tetra4 being unable to supply adequate power to the compressor station complex located near the Beatrix mine creating inefficiencies in the Tetra4's collection and transportation of LNH/LHe to the processing plant through their gas pipeline infrastructure. This alternative implies that all social and environmental impacts identified would not be effected and the project does not go ahead, it would have negative economic impacts for Tetra4.

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

Please note that relevant subsections have been duplicated for each of the proposed powerlines (33 kV and 132 kV). No alternatives were considered for this application

F) 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:

Linear activity, please refer to section below.

or, for linear activities:

Alternative:

Alternative A1 (preferred activity alternative)

Alternative A2 (if any)

Alternative A3 (if any)

Length of the activity:

1.2 km

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:

20 000 m ² (10m x 10m x 20 pylons)

c) **Site Access**

Does ready access to the site exist?

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

YES	

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

Describe the type of access road planned:

Powerline servitudes will be accessed via existing access roads where possible. No new permanent access roads are planned for this project.

3. FEASIBLE AND REASONABLE ALTERNATIVES (132KV POWERLINE)

“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) of GN 326, Regulation 2014 as amended. Alternatives should include a consideration of all possible means by which the purpose and need of the proposed activity (NOT PROJECT) could be accomplished in the specific instance taking account of the interest of the applicant in the activity. The no-go alternative must in all cases be included in the assessment phase as the baseline against which the impacts of the other alternatives are assessed.

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

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

A) SITE ALTERNATIVES

Alternative 1 (preferred alternative)

BASIC ASSESSMENT REPORT

Description	Lat (DDMMSS)	Long (DDMMSS)
Alternative 2		
Description	Lat (DDMMSS)	Long (DDMMSS)
Alternative 3		
Description	Lat (DDMMSS)	Long (DDMMSS)

In the case of linear activities:

NB: A development corridor is considered for this powerline where the preferred route is located within the 300m wide corridor. Placement of pylons is to be within areas where the least environmental impact is anticipated within the corridor where possible.

Alternative:

Latitude (S):

Longitude (E):

Alternative S1 (preferred)

- Starting point of the activity

28° 7'40.73"S	26°43'12.87"E
28° 7'32.99"S	26°43'15.62"E
28° 8'51.59"S	26°44'7.65"E
28° 8'45.76"S	26°44'16.49"E
28° 9'58.50"S	26°45'10.29"E
28° 9'52.49"S	26°45'18.60"E

- Middle/Additional point of the activity

- End point of the activity

Alternative S2 (if any)

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

Alternative S3 (if any)

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

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

Please refer to Appendix A1 for the sets of coordinates taken along the 33 kV powerline.

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

B) LAY-OUT ALTERNATIVES

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

C) TECHNOLOGY ALTERNATIVES

Alternative 1 (preferred alternative)
The construction of a 132kV Loop-In Loop-Out (LILO) powerline approximately 5.5km in length to feed into the proposed 40MVA generator to be located at the Tetra4 plant as part of the proposed Phase 2 gas production expansion project. The powerline is to be connected to the existing Theseus-Oryx substation.

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 would imply that the baseline conditions of the site are maintained (i.e. no new powerline). This would result in Tetra4 being unable to obtain power for the Phase 2 LNG/LHe Plant via the 40 MVA substation planned as part of the Phase 2 development and its associated infrastructure. Large diesel generators would be required indefinitely at significant cost as well as increased local air pollution. This alternative implies that all social and environmental impacts identified would not be affected and the project does not go ahead, it would have negative economic impacts for Tetra4.

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

Please note that relevant subsections have been duplicated for each of the proposed powerlines (33 kV and 132 kV). No alternatives were considered for this application

F) PHYSICAL SIZE OF THE ACTIVITY

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

Alternative:

Alternative A1² (preferred activity alternative)

Alternative A2 (if any)

Alternative A3 (if any)

Size of the activity:

Linear activity, please refer to section below.

or, for linear activities:

Alternative:

Alternative A1 (preferred activity alternative)

Alternative A2 (if any)

Alternative A3 (if any)

Length of the activity:

~5 500m

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:

39 600m ² (30m x 30m x 44 pylons)

c) **Site Access**

Does ready access to the site exist?

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

YES	

² "Alternative A.." refer to activity, process, technology or other alternatives.

Describe the type of access road planned:

Powerline servitudes will be accessed via existing access roads where possible. No new permanent access roads are planned for this project.

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.

d) 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.

e) 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.

f) 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.

g) SITE PHOTOGRAPHS



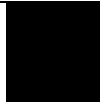

Colour photographs from the centre of the site must be taken in at least the eight major compass directions with a description of each photograph. Photographs must be attached under Appendix B to this report. It must be supplemented with additional photographs of relevant features on the site, if applicable.




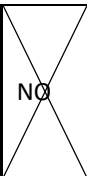


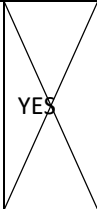

h) FACILITY ILLUSTRATION

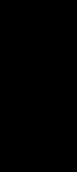
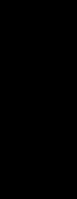


A detailed illustration of the activity must be provided at a scale of at least 1:200 as Appendix C for activities that include structures. The illustrations must be to scale and must represent a realistic image of the planned activity. The illustration must give a representative view of the activity.






4. ACTIVITY MOTIVATION (NEED AND DESIRABILITY)



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

<p>1. Is the activity permitted in terms of the property's existing land use rights?</p>	<p>YES</p>		<p>Please explain</p>
<p>The 33kV powerline is planned land zoned for agricultural use. Whilst the powerline is not anticipated to impact the current land use zoning, as no agricultural activities were noted along the proposed development corridor for the 33kV powerline, however, a formal application for registration of the powerline servitude will need to be pursued. and is not anticipated to impact on the current land use as the servitude runs on an, erection of this powerline is not anticipated to impact the current land use.</p> <p>The 132kV powerline is planned along areas zoned for agricultural land use and areas with and natural vegetation. However, the majority of the route is planned along existing 33kV Powerline servitudes as well as adjacent to an existing road reserve (i.e. on the boundary of the properties) and alignment with these pre-existing powerlines and road servitude will reduce the impact of the powerline to the property's overall land use.</p> <p>Where the powerline infrastructure is to be installed in natural areas, various mitigation measures have been developed in consultation with the relevant specialists to control alien and invasive species. Indigenous species environmental opportunities and benefits will thus be enhanced. Whilst the construction of the 33kV powerline and 132kV powerlines is technically permitted on the current land use, the required servitude registrations have not yet been sought.</p>			
<p>2. Will the activity be in line with the following?</p>			
<p>(a) Provincial Spatial Development Framework (PSDF)</p>	<p>YES</p>		<p>Please explain</p>
<p>The Tetra4 powerlines project is part of the Tetra4 Phase 2 expansion project. The purpose of the construction of these powerlines is to increase the Tetra4 gas gathering footprint within their currently approved production area. Such an investment in the province is set to improve the economic prospects of the local economy, and that of the Free State province.</p> <p>Section 4 of the Free State Provincial Spatial Development Frameworks Chapters 3 and 4 state that the Free State's development target pillars include:</p> <ul style="list-style-type: none"> • Economic restructuring, Growth and Employment Creation <ul style="list-style-type: none"> ○ Driver 1: Minimise the impact of the declining mining sector and ensure that existing mining potential is harnessed. <p>The Tetra4 Phase 2 project, as discussed above, has an economic benefit within the provincial landscape and therefore aligns with the PSDF.</p>			
<p>(b) Urban edge / Edge of Built environment for the area</p>		<p>NO</p>	<p>Please explain</p>
<p>This project is located outside the urban edge, in an area with rural land-use character. The approval of this project is not anticipated to have an impact or control over urban sprawl of the nearby urban areas.</p>			
<p>(c) Integrated Development Plan (IDP) and Spatial Development Framework (SDF) of the Local Municipality (e.g. would the approval of this application compromise the integrity of the existing approved and credible municipal IDP and SDF?).</p>		<p>NO</p>	<p>Please explain</p>

<p>The Matjhabeng 2021/2022 Draft IDP states that the bulk electrical network in the area is established. According to the Draft IDP, all mines within the municipality are supplied with electricity by Eskom. This project is in line with the connection and/or energizing of mining related activities to the Eskom grid.</p>		
<p>(d) Approved Structure Plan of the Municipality</p>		 <p>Please explain</p>
<p>According to the Matjhabeng Local Municipality 2022 Land Use Scheme, Chapter 1, section 2, subsection 1.17, the environmental management zones for developments are outlined. It is stated that any development planned within CBA areas are subject to comments from the Free State Economic, Small Business Development, Tourism and Environmental Affairs (FSDESTEA). Subsection 1.17.5 F.g states that powerlines are restricted within CBAs and ESAs. The FSDESTEA has been identified as an I&AP on this project and the competent authority.</p> <p>According to the terrestrial biodiversity specialist study, the construction of the powerlines were identified as having a low significance with recommended mitigation measures towards water resources. Please refer to Appendix D for the Terrestrial Biodiversity specialist study.</p>		
<p>(e) An Environmental Management Framework (EMF) adopted by the Department (e.g. Would the approval of this application compromise the integrity of the existing environmental management priorities for the area and if so, can it be justified in terms of sustainability considerations?)</p>		 <p>Please explain</p>
<p>The Matjhabeng Local Municipality 2022 Land Use Scheme section 2 subsection 1.17 states that all development that is to occur within CBA 1 and CBA 2 areas is subject to comments from the FSDESTEA. Portions of the 132kV powerline traverse through a CBA 1 area. The impact significance on the CBA has, however, been classified as low due to the vegetation clearing footprint. Subsection 1.17.5 F.g states that powerlines are restricted within CBAs and ESAs. The Free State DESTEA has been identified as an I&AP on this project and the competent authority. The 33kV powerline does not cross over CBAs as the area is classified as degraded.</p>		
<p>(f) Any other Plans (e.g., Guide Plan)</p>		 <p>Please explain</p>
<p>No other plans or guides were identified as applicable.</p>		
<p>3. Is the land use (associated with the activity being applied for) considered within the timeframe intended by the existing approved SDF agreed to by the relevant environmental authority (i.e. is the proposed development in line with the projects and programmes identified as priorities within the credible IDP)?</p>		 <p>Please explain</p>
<p>The proposed powerlines are planned as part of the Tetra4 Phase 2 development with an anticipated operational lifespan of 20 years, post the 3 year anticipated construction term. The powerlines will therefore be required for a minimum duration of 20 years. Section B of the IDP 2022, subsection 2.8 states that Eskom has an established bulk infrastructure network to serve mining activities in the area. The Matjhabeng Local Municipality is thus not responsible for the supply of electricity for mining activities, however considers the supply of electricity infrastructure relevant and identifies the need for it. However, formal servitude registrations will need to be pursued for the new powerlines proposed by Tetra4.</p>		

<p>4. Does the community/area need the activity and the associated land use concerned (is it a societal priority)? (This refers to the strategic as well as local level (e.g. development is a national priority, but within a specific local context it could be inappropriate.)</p>	<p>YES</p>		<p>Please explain</p>
<p>The Tetra4 Phase 2 powerlines project is part of the Tetra4 Phase 2 Gas Production project. The Tetra4 Phase 2 project is a key project, registered as a Strategic Infrastructure Project (SIP), that will yield positive socio-economic benefits to the local, regional, and national economies. The proposed construction of the powerlines will indirectly enable the expansion of the Tetra4 gas production project which would result in greater Social and Labour Plan (SLP) commitments and thus ensuring that the community projects initiated by Tetra4 under their Social and Labour Plan will have an increased lifespan and greater positive impact overall.</p> <p>The Tetra4 Phase 2 gas project and its associated infrastructure (including overhead powerlines associated with Phase 2) has received SIP status under the Oil and Gas National Program S20f. Please refer to Appendix J1 for the Tetra4 SIP acknowledgement status.</p>			
<p>5. Are the necessary services with adequate capacity currently available (at the time of application), or must additional capacity be created to cater for the development? (Confirmation by the relevant Municipality in this regard must be attached to the final Basic Assessment Report as Appendix I.)</p>	<p>YES</p>		<p>Please explain</p>
<p>Grid integration studies which indicated sufficient capacity were conducted by Tetra4. Subsection 2.3.1 of the network integration studies states that the Chief Planner for Eskom Transmission was contacted for information. The Eskom Chief Planner for Transmission confirmed that there was sufficient capacity to supply the Tetra4 Phase 2 planned plant. However, cost estimate letters have not yet been pursued. Please refer to Appendix I for the grid integration study conducted.</p>			
<p>6. Is this development provided for in the infrastructure planning of the municipality, and if not what will the implication be on the infrastructure planning of the municipality (priority and placement of services and opportunity costs)? (Comment by the relevant Municipality in this regard must be attached to the final Basic Assessment Report as Appendix I.)</p>		<p>NO</p>	<p>Please explain</p>
<p>Tetra4 will be the responsible party for all costs associated with the construction of the powerlines. Once the powerlines have been constructed, they will be ceded to Eskom who is to be responsible for operational maintenance of the powerlines. Grid integration studies which indicated sufficient capacity were conducted by Tetra4. It is therefore noteworthy that the impact on the local municipality will be negligible.</p>			
<p>7. Is this project part of a national programme to address an issue of national concern or importance?</p>	<p>YES</p>		<p>Please explain</p>
<p>The Virginia Gas Project Phase 2 and associated infrastructure including the overhead powerlines (referred to in this document as the Tetra4 Phase 2 Gas Production Project) was granted a Strategic Infrastructure Project status under the Oil and Gas National Program S20f. The proposed powerlines are part of the Tetra4 Phase 2 project which under a separate EIA process identifies natural gas as an energy source that is not cleaner than “green energy” sources such as solar, wind energy, water etc. but cleaner than coal. The Integrated Resource Plan 2019 aims to increase the natural energy mix of natural gas from 2.6% to 15.7% by 2030.</p>			

<p>8. Do location factors favour this land use (associated with the activity applied for) at this place? (This relates to the contextualisation of the proposed land use on this site within its broader context.)</p>	<p>YES</p>		<p>Please explain</p>
<p>The proposed 132kV powerline infrastructure is in an area with agricultural land use, and near natural vegetation. The 132kV powerline route is, however, largely located along the R30 road and within/adjacent to existing powerline servitudes, mitigation measures have been put in place to avoid pivot irrigation systems in areas with agricultural activities.</p> <p>The route considered for the construction of the powerlines considers the connection points, the 132kV LILO powerline is proposed to connect with a 40 MVA substation at the Tetra4 LNG/LHe Plant and considers connecting to the Theseus substation.</p> <p>The 33kV powerline is located along an area with an agricultural land use with near natural vegetation. The powerline is located along an existing servitude area, the impact significance to the land use is anticipated to be relatively low.</p> <p>However, formal servitude registrations will need to be pursued for the respective powerlines.</p> <p>Specialist studies further assessed the proposed development corridors on environmental sensitive features and receptors. The visual assessment highlighted that the location of the powerlines near roads and farmsteads is anticipated to have a high visual impacts and land use character changes, however, the 132kV powerline is to be located mainly along existing powerlines thus making the significance of the impacts low. Refer to Appendix D for Specialist reports.</p>			
<p>9. Is the development the best practicable environmental option for this land/site?</p>	<p>YES</p>		<p>Please explain</p>
<p>The proposed location of both powerlines has been optimised to ensure that minimal disruption to existing land use shall occur. The 132kV powerline runs along the existing R30 road reserve as well as existing powerline servitudes while the 33kV powerline runs along the existing Tetra4 gas pipeline servitude.</p>			
<p>10. Will the benefits of the proposed land use/development outweigh the negative impacts of it?</p>	<p>YES</p>		<p>Please explain</p>
<p>It is anticipated that the construction of powerlines will have a relatively low impact significance while allowing Tetra4 to carry on with the Phase 2 gas production project which has been identified to have positive economic benefits to the local and national economy, as well as Tetra4.</p>			
<p>11. Will the proposed land use/development set a precedent for similar activities in the area (local municipality)?</p>		<p>NO</p>	<p>Please explain</p>
<p>The powerlines are required for power supply to the Tetra4 gas processing plant as part of the plant's planned expansion. The construction of powerlines in this area is not anticipated to set precedent for more powerlines.</p>			
<p>12. Will any person's rights be negatively affected by the proposed activity/ies?</p>		<p>NO</p>	<p>Please explain</p>
<p>The 132kV powerline and 33kV powerlines are planned to traverse through privately owned agricultural properties and will potentially affect landowner rights negatively. Suitable financial compensation will be undertaken. The powerlines are planned along boundaries of the affected properties thus minimising the potential impacts that they may cause.</p>			

<p>13. Will the proposed activity/ies compromise the “urban edge” as defined by the local municipality?</p>			<p>Please explain</p>
<p>This project is located well outside any urban edge as defined by the municipal IDP.</p>			
<p>14. Will the proposed activity/ies contribute to any of the 17 Strategic Integrated Projects (SIPs)?</p>			<p>Please explain</p>
<p>The Virginia Gas Project Phase 2 and its associated infrastructure such as powerlines has been granted a Strategic Infrastructure Project status under the Oil and Gas National Program S20f. The proposed powerlines are part of the Tetra4 Phase 2 project.</p>			
<p>15. What will the benefits be to society in general and to the local communities?</p>	<p>Please explain</p>		
<p>The Tetra4 powerlines project is part of the Tetra4 Phase 2 Gas Production project. The Tetra4 Phase 2 project is a key project, registered as a Strategic Infrastructure Project (SIP), that will yield positive socio-economic benefits to the local, regional, and national economies. The proposed construction of the powerlines will indirectly enable the expansion of the Tetra4 gas production project which would result in greater Social and Labour Plan (SLP) commitments and thus ensuring that the community projects initiated by Tetra4 under their Social and Labour Plan will have an increased lifespan and greater positive impact overall.</p> <p>The Tetra4 Phase 2 gas project and its associated infrastructure (including overhead powerlines associated with Phase 2) has received SIP status under the Oil and Gas National Program S20f. Please refer to Appendix J1 for the Tetra4 SIP acknowledgement status.</p>			
<p>16. Any other need and desirability considerations related to the proposed activity?</p>	<p>Please explain</p>		
<p>N/A</p>			
<p>17. How does the project fit into the National Development Plan for 2030?</p>	<p>Please explain</p>		
<p>South Africa’s energy is mainly generated from coal resources and the NDP aims at transforming South Africa’s energy generation industry to a cleaner alternative of renewable energy sources, and alternative sources such as hydropower. The NDP, however states that the country will also explore the use of natural gas as a less carbon intensive transitional fuel. The Tetra4 Phase 2 gas production project is therefore in line with the NDP, the proposed powerlines project is set to allow for the gathering natural gas which can be used as a source of energy.</p>			
<p>18. Please describe how the general objectives of Integrated Environmental Management as set out in section 23 of NEMA have been taken into account.</p>			
<p>By virtue of this application and Basic Assessment Process, its associated specialist assessments, public participation process with consideration of comments, impact identification and assessment and the management measures presented in the Environmental Management Programme, the objectives of Integrated Environmental Management as set out in Section 23 of NEMA have been taken into account.</p>			
<p>19. Please describe how the principles of environmental management as set out in section 2 of NEMA have been taken into account.</p>			
<p>By virtue of this application and Basic Assessment Process, its associated specialist assessments, public participation process with consideration of comments, impact identification and assessment and the management measures presented in the Environmental Management Programme, the principles of Environmental Management as set out in Section 2 of NEMA have been taken into account.</p>			

i) 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
Constitution of the Republic of South Africa (Act 108 of 1996)	Chapter 2 – Bill of Rights Section 24 – Environmental Rights	National Department of Justice and Constitutional Development	18 December 1996
National Environmental Management Act (Act 107 of 1998)	The proposed project requires an Environmental Authorisation in terms of the NEMA and associated regulations. The regulations set forth the process to be followed in the event that a specific listed activity is triggered by the proposed development (which is the case for this project)	Free State Department of Economic, Small Business Development, Tourism and Environmental Affairs (DESTEA) (Provincial).	4 December 2014
National Environmental Management Act (Act 107 of 1998) – GNR 983, Listing Notice 1: Activities 11 and 19.	The development will entail the construction of a 132kV LILLO powerline of approximately 5.5km in length. The 132kV powerline voltage requires an Environmental Authorisation (EA) for construction. The 33kV, however does not require an EA, however, the proposed powerlines cross over wetlands and watercourses and will require taking dredging out of wetland material for pylon erection, exceeding 10 cubic metres.	Free State DESTEA	4 December 2014
National Environmental Management Act (Act 107 of 1998) – GNR 985, Listing Notice 3: Activities 12 and 14.	The proposed development entails vegetation clearing for each pylon to be erected. The combined vegetation clearing for all pylons within the CBA 1 areas will exceed 10 square metres .	Free State DESTEA	4 December 2014

BASIC ASSESSMENT REPORT

Title of legislation, policy, or guideline	Applicability to the project	Administering authority	Date
National Heritage Resources Act, 1999 (Act No 25 of 1999)	<p>Section 38 of the National Heritage Resources Act requires that the applicant must at the very earliest stages of initiating such a development, notify the responsible heritage resources authority and furnish it with details regarding the location, nature and extent of the proposed development.</p> <p>In terms of Section 38.1 of the NHRA, linear developments exceeding 300m in length (including powerlines). The proposed 33kV and 132kV exceed this threshold.</p>	South African Heritage Resources Agency (SAHRA) and Free State Heritage Resources Agency (FSHRA)	28 April 1999
<p>The National Environmental Management: Biodiversity Act (Act No. 10 of 2004 – NEMBA)</p> <p>Section 57 and 87</p> <p>Section 75 regulation 4,</p> <p>Section 73.3</p>	<p>Regulations published under NEMBA provides a list of protected species (flora and fauna). According to the Act (GN R. 151 dated 23 February 2007, as amended in GN R. 1187 dated 14 December 2007) which require a permit in order to be disturbed or destroyed. The terrestrial biodiversity report states that Alien Invasive Plants were noted during the field survey, a suitable IAP Management Programme.</p> <p>Red text avifauna protected species were noted in the project area. Provisions in NEMBA have to be followed with regards to protected species.</p>	Free State DESTEA	7 June 2004
National Environmental Management: Air Quality Act, 2004 (Act 39 of 2004) - GN R. 827	It is expected that the activity will give rise to minor dust generation during construction. Dust suppression measures are included in the EMP, which must be adhered to for the duration of the construction period. The dust fall rate must comply with the national dust control regulations (as published in GN R. 827 of 1 November	Free State DESTEA	1 November 2013

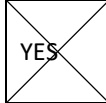

Title of legislation, policy, or guideline	Applicability to the project	Administering authority	Date
	2013) in terms of Section 53, read with Section 32 of the National Environmental Management: Air Quality Act (No. 39 of 2004 – NEM:AQA) of 600 < D <1200 mg/m ² /day (30 days average) within a non-residential area, and D< 600 mg/m ² /day (30 days average) within a residential area.		
National Water Act (Act 36 of 1998) Section 21 (c) and (i)	It is anticipated that during construction work will be carried out within a regulated water area. Construction work is anticipated within regulated wetland areas. An application for a water use general authorisation has been lodged with DWS.	DWS	

5. WASTE, EFFLUENT, EMISSION AND NOISE MANAGEMENT

A) SOLID WASTE MANAGEMENT

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

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

	
<p>The exact quantities of waste to be produced from construction activities are to be determined at final design stages however based on the small scale of this project, the volumes are anticipated to be minimal.</p>	

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

The types of waste to be generated during construction phase include general (non-hazardous waste) and hazardous waste including:

- Domestic waste;
- Waste generated from site preparation/vegetation clearing (Garden waste);
- Excess building materials and/or construction rubble;
- Hazardous waste (e.g. chemicals, oils, contaminated soil by spillage)

All waste generated as part of construction activities will be temporarily stored at the Tetra4 LNG/LHe Plant in clearly marked containers for final disposal by a qualified contractor for disposal at a licensed disposal site. Hazardous waste will be disposed at a facility authorised to handle hazardous waste. Records of all final waste disposal certificates must be kept.

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

Construction solid waste will be disposed at an appropriate landfill site within the Matjhabeng Local Municipality.

Will the activity produce solid waste during its operational phase?

	NO
N/A	

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

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

No solid waste will be produced at operational phase of the powerline.

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

N/A

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

N/A

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

Can any part of the solid waste be classified as hazardous in terms of the NEM:WA?

YES	
----------------	--

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.

Note: During the construction phase, it is anticipated that only small volumes of hazardous waste may be generated such as empty paint containers, oils or contaminated soil (in the event of minor spills). The volume of hazardous waste will not trigger any NEMWA listed activities.

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

 NO

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

 NO

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

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

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

Will the activity produce effluent that will be treated and/or disposed of at another facility?

 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?

	NO

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

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

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

Not applicable to this application as the only emissions anticipated are from construction activities and will consist of exhaust emissions and dust.

D) WASTE PERMIT

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

	NO

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

Not applicable to this application.

E) GENERATION OF NOISE

Will the activity generate noise?

	NO

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

Describe the noise in terms of type and level:

N/A

6. WATER USE

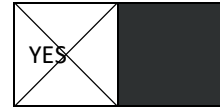
Please indicate the source(s) of water that will be used for the activity by ticking the appropriate box(es):

<input checked="" type="checkbox"/> Municipal

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

--

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



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

The water use application is for a non-consumptive water use.

7. ENERGY EFFICIENCY

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

N/A

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

N/A

SECTION B: SITE/AREA/PROPERTY DESCRIPTION (33KV POWERLINE)

Important notes:

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

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

A

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

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

YES	
----------------	--

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	Free State
District Municipality	Lejweleputswa District Municipality
Local Municipality	Matjhabeng Local Municipality
Ward Number(s)	Ward 9
Farm name and number	Palmietkuil 328
Portion number	Portion 6
SG Code	F03300000000032800006

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?

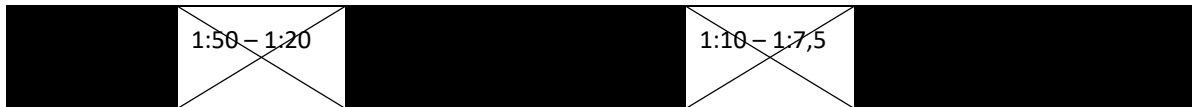


1. GRADIENT OF THE SITE

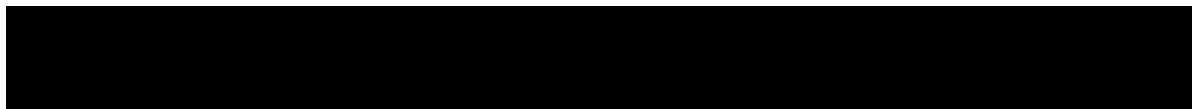
Indicate the general gradient of the site.

The site is fairly gentle with the steeper gradient occurring at the watercourse crossing

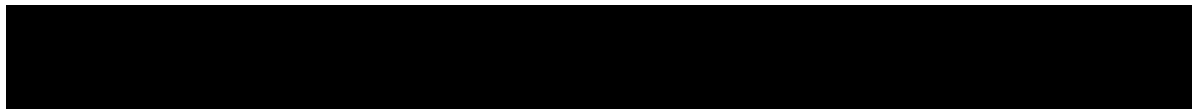
Alternative S1:



Alternative S2 (if any):



Alternative S3 (if any):



2. LOCATION IN LANDSCAPE

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

2.1 Ridgeline

2.2 Plateau

2.3 Side slope of hill/mountain

2.10 At sea



2.4 Closed valley

2.5 Open valley

2.6 Plain



2.7 Undulating plain / low hills

2.8 Dune

2.9 Seafront



3. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

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

	Alternative S1:	Alternative S2 (if any):	Alternative S3 (if any):
Shallow water table (less than 1.5m deep)	YES		
Dolomite, sinkhole or doline areas		NO	
Seasonally wet soils (often close to water bodies)	YES		
Unstable rocky slopes or steep slopes with loose soil		NO	
Dispersive soils (soils that dissolve in water)		NO	
Soils with high clay content (clay fraction more than 40%)		NO	
Any other unstable soil or geological feature		NO	
An area sensitive to erosion		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 with heavy infestation ^E	Veld dominated by alien species ^E	
			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	
Non-Perennial River		NO
Permanent Wetland	YES	
Seasonal Wetland		NO
Artificial Wetland	YES	
Estuarine / Lagoonal wetland		NO

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

A Closed Valley Bottom (CVB) wetland, artificial wetland and seep wetlands have been delineated. The 33kV powerline crosses over the Bossluispruit River, a tributary of the Doring River. Please refer Appendix D for the Wetlands Specialist 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

BASIC ASSESSMENT REPORT

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)
		Underground Mine

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

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

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

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

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

Buffer area of the SKA?		<input checked="" type="checkbox"/> NO
-------------------------	--	--

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

SECTION B: SITE/AREA/PROPERTY DESCRIPTION (132KV POWERLINE)

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):

B

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

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

YES	
----------------	--

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	Free State
District Municipality	Lejweleputswa District Municipality
Local Municipality	Matjhabeng Local Municipality
Ward Number(s)	Ward 9 and 24
Farm name and number (Portion numbers)	Kalkoenkrans 225 (0 RE, 1, 2); Mond van Doornrivier 38(RE), Alex Glen Ross 562 (0 RE, 1, 2, 3, 4, 5)
Portion number	<i>Please see above</i>
SG Code	F03300000000022500000; F03300000000003800000; F033000000000056200000; F033000000000056200001; F033000000000056200002; F033000000000056200004; F033000000000056200005; F033000000000056200003; F03300000000022500001; F03300000000022500002

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.

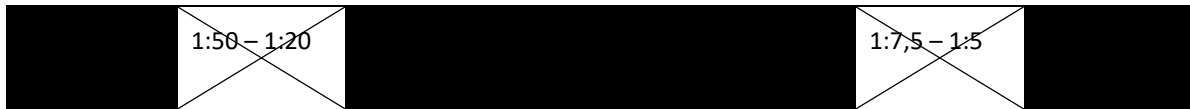
Is a change of land-use or a consent use application required?



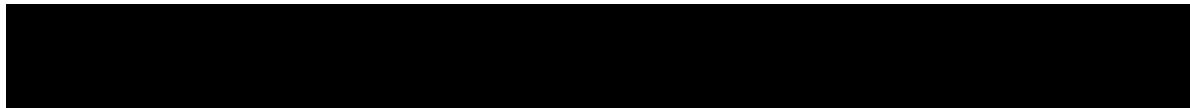
1. GRADIENT OF THE SITE

Indicate the general gradient of the site.

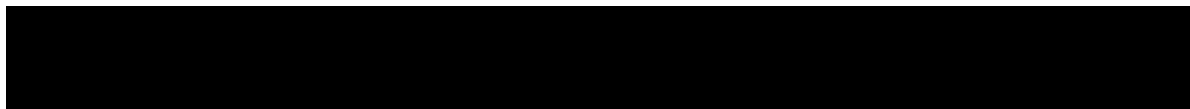
Alternative S1:



Alternative S2 (if any):



Alternative S3 (if any):



2. LOCATION IN LANDSCAPE

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

2.1 Ridgeline

2.2 Plateau

2.3 Side slope of hill/mountain

2.10 At sea



2.4 Closed valley

2.5 Open valley

2.6 Plain



2.7 Undulating plain / low hills

2.8 Dune

2.9 Seafront



3. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

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

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

	<p>Natural veld with scattered aliens^E</p>	
	<p>Cultivated land</p>	

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.

NB: A Terrestrial Biodiversity Assessment was conducted by a suitably qualified specialist and is included in Appendix D of this report.

5. SURFACE WATER

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

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

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

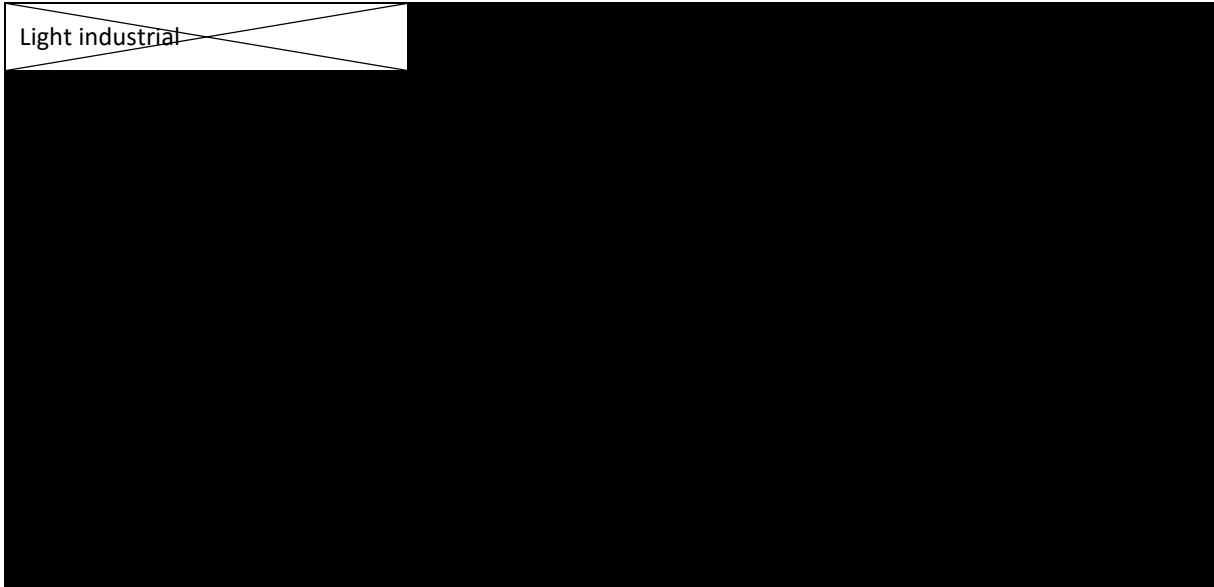
The 132kV powerline development corridor traverses through seep wetlands, closed valley bottom wetlands and artificial wetland. The powerline route crosses over the Bossluispruit River.

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	
	Agriculture
	River, stream or wetland

Light industrial



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



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



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



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

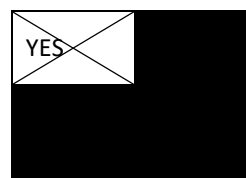
Critical Biodiversity Area (as per provincial conservation plan)	YES	
Core area of a protected area?		NO
Buffer area of a protected area?		NO
Planned expansion area of an existing protected area?		NO

Existing offset area associated with a previous Environmental Authorisation?		NO
Buffer area of the SKA?		NO

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

CULTURAL/HISTORICAL FEATURES

Are there any signs of culturally or historically significant elements, as defined in section 2 of the National Heritage Resources Act, 1999, (Act No. 25 of 1999), including Archaeological or paleontological sites, on or close (within 20m) to the site? If YES, explain:



The paleontological and archaeological study identified burial site labelled Tet 11, it has been rated as having a high heritage significance. The burial site is located in an easterly direction to the compressor station the 33kV powerline is to be connected and will not be affected by the construction activities. Structures SSL/BET/25, SSL/BET/26 with low heritage significance were identified relatively north of the connection point of the 33kV powerline. Please refer to figure 53 of the Palaeontological and Archaeological Report.

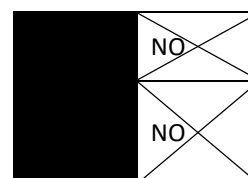
Burial grounds TET 19 and TET 22 fall outside of the 132kV 300m transmission loop, kindly refer to Figure 52 of Palaeontological and Archaeological Report.

Kindly refer to the Appendix D for the paleontological and archaeological study.

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:

Kindly refer to response provided above.

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



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

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

1. SOCIO-ECONOMIC CHARACTER

This section provides details on the socio-economic profile of the application area.

A) MATJHABENG 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:

The development area is located within Ward 9 of the Matjhabeng Local Municipality, directly neighbored by ward 24. The two aforementioned wards have the highest proportion of people of economically active age (aged between 15 and 65 years) that are employed as indicated in Figure 1 below. Since 2010, employment in the gold mining industry has shown a steady decline from 157 019 in 2010 to 94 399 in 2020 (Minerals Council South Africa, 2022). The proportion of unemployed people in the region is likely to have increased over the same time period.

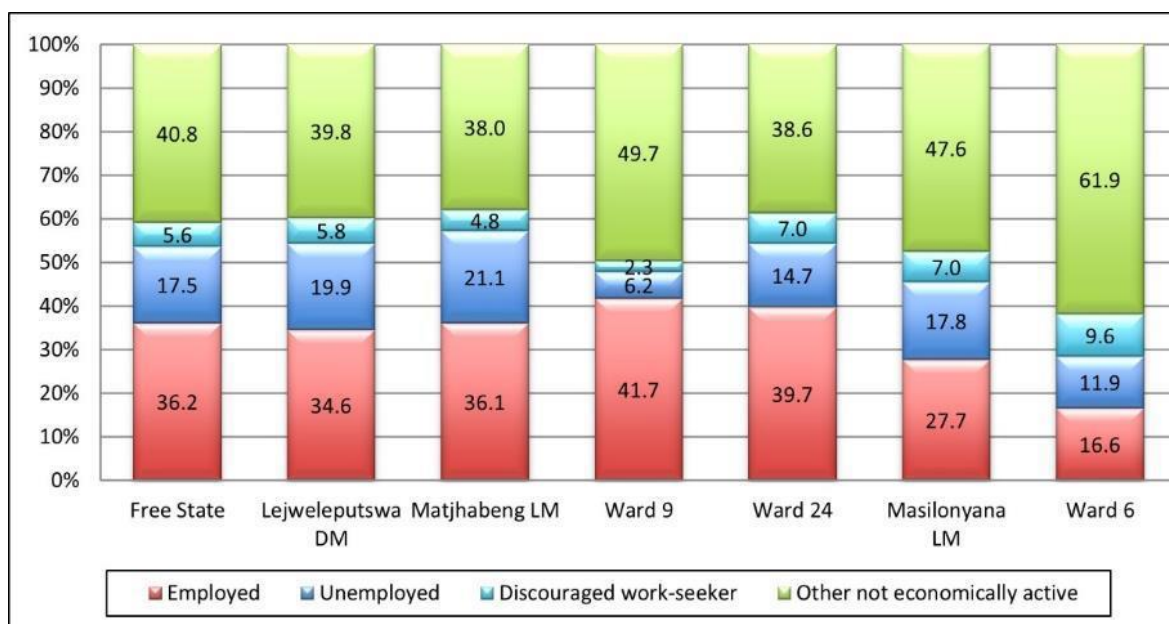


Figure 1: Labour status (those aged between 15 - 65 years, shown in percentage, source: Census 2011)

Ward 9 of the Matjhabeng Local Municipality has the highest proportion of people that are employed in the formal sector and the lowest proportion of people that are employed in the informal sector as illustrated in Figure 2 below.

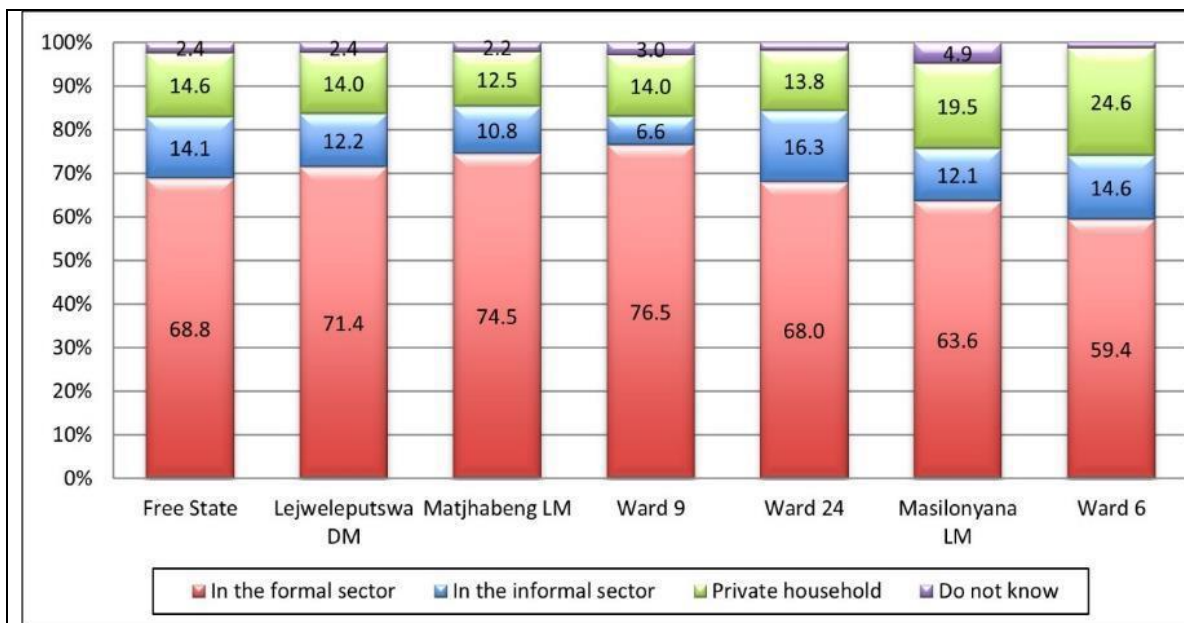


Figure 2: Employment sector (those aged between 15 and 65 years, shown in percentage, source: Census 2011).

Economic profile of local municipality:

The project area is located in ward 9 of the Matjhabeng Local Municipality. The economy of the municipality is mainly sustained by mining activities in and around Welkom, Allanridge, Odendaalrus and Virginia. Manufacturing activities aimed at the mining exist to a limited extent in the aforementioned towns, with other sectors being limited. Other main sectors include manufacturing, tourism, agriculture, gold jewellery, transportation (logistics) and retail (Matjhabeng Local Municipality IDP, 2022/2023).

Level of education:

According to Census 2011, the education profile of the area for people aged 20 years and above is illustrated in Figure 3 below. Within ward 9, the study area, nearly 55% of the people have completed grade 12 or higher whilst approximately 5% of the population in ward 9 has no form of formal education. In comparison with the surrounding areas, ward 9 has the highest proportion of the population that has completed at least grade 12.

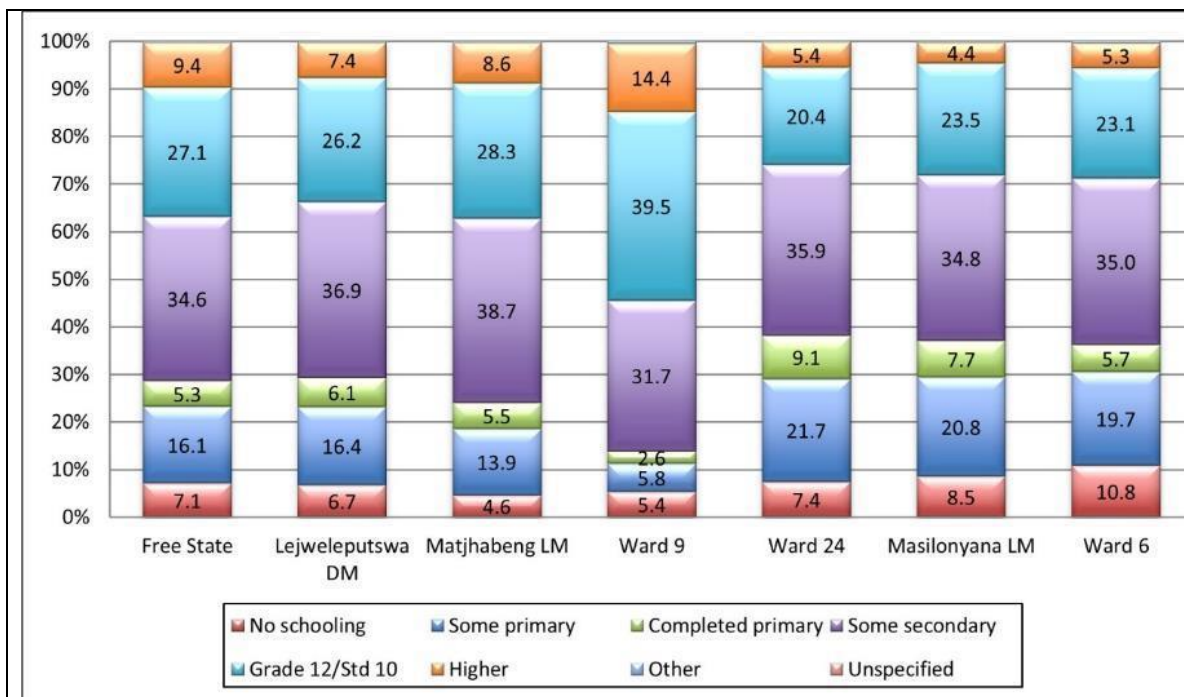


Figure 3: Education profiles (those aged 20 years of older, shown in percentages, source: Census 2011).

B) SOCIO-ECONOMIC VALUE OF THE ACTIVITY

NB: The below stated figures are a combination of both the 132kV and 33kV powerlines

What is the expected capital value of the activity on completion?

R 82.6 million

What is the expected yearly income that will be generated by or as a result of the activity?

R 0

Will the activity contribute to service infrastructure?

~~NO~~

Is the activity a public amenity?

~~NO~~

How many new employment opportunities will be created in the development and construction phase of the activity/ies?

The number of employment opportunities as a result of this project are unknown at this stage.

What is the expected value of the employment opportunities during the development and construction phase?

R 0

What percentage of this will accrue to previously disadvantaged individuals?

N/A

How many permanent new employment opportunities will be created during the operational phase of the activity?

N/A

What is the expected current value of the employment opportunities during the first 10 years?

R 0

What percentage of this will accrue to previously disadvantaged individuals?

N/A

2. 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
<div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; padding: 5px; text-align: center;"> Critical Biodiversity Area (CBA) </div> <div style="border: 1px solid black; padding: 5px; text-align: center;"> Ecological Support Area (ESA) </div> </div>	<p>These terrestrial biodiversity areas provide a variety of ecological services that are considered beneficial, with one key service being the maintenance of biodiversity. The preservation of these systems is the most important aspect to consider for the proposed project. Thus, if these areas are not maintained in a natural or near natural state, destroyed or fragmented, then meeting targets for biodiversity features will not be achieved</p>

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

The table below shows the site habitat condition 33kV powerline development area:

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	0%	
Near Natural	50%	Disturbed Water resource areas occur along an existing servitude area, as well as overgrazed areas. Little to no direct

BASIC ASSESSMENT REPORT

(includes areas with low to moderate level of alien invasive plants)		impact on the ecosystem is expected from the OHL construction. River areas are more natural than wetland areas.
Degraded (includes areas heavily invaded by alien plants)	0%	
Transformed (includes cultivation, dams, urban, plantation, roads, etc)	50%	The area is modified and contains little to no natural vegetation. Overgrazed or cleared of vegetation.

The table below shows site conditions along the 132kV LILO powerline:

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	0%	
Near Natural (includes areas with low to moderate level of alien invasive plants)	20%	Edge effect impacts from the tar road as well as grazing impacts.
Degraded (includes areas heavily invaded by alien plants)	20%	Poor land management practices as well as overgrazing.
Transformed (includes cultivation, dams, urban, plantation, roads, etc)	60%	The area is modified and contains little to no natural vegetation. Overgrazed or cleared of vegetation for agriculture or infrastructure.

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		
			Estuary	Coastline

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

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

Vegetation

The project area is located within the Grassland biome. Grassland biomes are dominated by a single layer of grasses (Mucina & Rutherford, 2006). The 33kV and 132kV powerlines corridors overlap with the Highveld Alluvial Vegetation and the Vaal Sandy Grassland. The Highveld Alluvial Vegetation is characterised by a flat topography that supporting riparian thickets dominated by *Acacia karroo*. The important taxa within this vegetation type are divided into the main growth areas namely: Riparian thicket, Reed Beds, Flooded Grasslands & Herblands and Open Water.

It is noteworthy that the 132kV powerline traverses through modified vegetation areas as a result of agriculture/farming. Natural veld areas have also been modified as a result of edge impacts of the tarred road and some poor land management practices.

The 33kV powerline traverses through a disturbed Water resource area occur along an existing servitude area, as well as overgrazed areas. Little to no direct impact on the ecosystem is expected from the OHL construction. River areas are more natural than wetland areas. The area is modified and contains little to no natural vegetation. Overgrazed or cleared of vegetation.

SECTION C: PUBLIC PARTICIPATION

1. ADVERTISEMENT AND NOTICE

A detailed Public Participation Report (PPR) is attached as Appendix E of this report.

Publication name	VISTA Newspaper	
Date published	11 November 2022	
Site notice positions	Latitude	Longitude
	28.126998 S	26.723067 E
	28.151760 S	26.740581 E
	28.164542 S	26.752208 E
	28.190496 S	26.728014 E
Date placed	10 November 2022	

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 326

A) PUBLIC PARTICIPATION PROCESS

The Public Participation Process (PPP) is a requirement of several pieces of South African legislation and aims to ensure that all relevant Interested and Affected Parties (I&APs) are consulted, involved and their comments are considered, and a record included in the reports submitted to the Authorities. The process ensures that all stakeholders are provided this opportunity as part of a transparent process which allows for a robust and comprehensive environmental study. The PPP for the proposed project needs to be managed sensitively and according to best practises to ensure and promote:

- Compliance with international best practice options;
- Compliance with national legislation;
- Establishment and management of relationships with key stakeholder groups; and
- Involvement and participation in the environmental study and authorisation/approval process.

The purpose of the PPP and stakeholder engagement process is to:

- Introduce the proposed project;
- Explain the authorisations required;
- Explain the environmental studies already completed and yet to be undertaken (where applicable);
- Solicit and record any issues, concerns, suggestions, and objections to the project;

BASIC ASSESSMENT REPORT

- Provide opportunity for input and gathering of local knowledge;
- Establish and formalise lines of communication between the I&APs and the project team;
- Identify all significant issues for the project; and
- Identify possible mitigation measures or environmental management plans to minimise and/or prevent negative environmental impacts and maximize and/or promote positive environmental impacts associated with the project.

The PPP for the proposed project has been undertaken in accordance with the requirements of the NEMA EIA Regulations (2014), and in line with the principles of Integrated Environmental Management (IEM). IEM implies an open and transparent participatory process, whereby stakeholders and other I&APs are afforded an opportunity to comment on the project and have their views considered and included as part of project planning.

At the start of the application process, an initial I&AP database was compiled based on known key I&AP's (previous Cluster 1 application, affected landowners, Organs of State, etc.), Windeed searches and other stakeholder databases. The I&AP database includes amongst others, landowners, communities, regulatory authorities and other special interest groups. The database has been continually updated as and when new I&AP's show interest in the application.

National, Provincial and Local Government Authorities as well as State Owned Entities (SOE's) were notified of the proposed project.

Key stakeholders (other than organs of state) identified in terms of Regulation 41(2)(b) of GN 326

(Please note that in an effort to protect the personal information of the Registered I&AP's the contact information of the I&APs will not be made publicly available. Should you require access to this document for the purposes of fulfilling your obligations under the NEMA EIA Regulations or other lawful right, please feel free to contact the EIMS Information officer at 011 789 7170 or popia@eims.co.za)

Kindly refer to Appendix E5 for the full I&AP and Key Stakeholder Database.

Title, Name and Surname	Affiliation/ key stakeholder status	Contact details (tel number or e-mail address)
dMs Nadia Hetzel	Afgri Agri Services	
Mr Christo van der Rheede	Agri South Africa	
P. Moller	Agri Free State	
Dr Hanelline Smit	Birdlife SA	
Ms Mariette Liefferink	Federation for a Sustainable Environment	
Ms Thato Maila	South African National Biodiversity Institute	
Ms Ingrid Nanni	South African National Biodiversity Institute	
Mr Mark Botha	Botanical Society	
Mr Bradley Gibbons	Endangered Wildlife Trust	

BASIC ASSESSMENT REPORT

Title, Name and Surname	Affiliation/ key stakeholder status	Contact details (tel number or e-mail address)
Mrs Amanda Bourne	Conservation South Africa	
Mr Jacobus Johannes	KL Ranch	
Mr Jacob Nel		
Mr Gerhardus Pienaar		
Alfonso le Roux	Sibanye Gold	

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.

B) ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES

Summary of main issues raised by I&APs	Summary of response from EAP
I&AP deregistration request.	I&APs who formally requested to be deregistered were removed from the project's database
Eskom Holdings SOC Ltd (transmission) requested a Google Earth file (.kmz) of the proposed powerlines	The requested information was shared with Eskom
A local contractor expressed their interest in potential business opportunities from the construction activities of the powerline.	Employment opportunity seekers have been directed to the Tetra4 website that contains a link for interested vendors. Contract seekers have been informed that the application is still underway and the commencement of activities are dependent on approval of the project.
During the Tetra4 Phase 2 EIA public participation period a farmer and landowner raised concerns of powerlines causing obstruction during crop dusting.	This comment was noted. The 132kV powerline is planned along the an alignment with existing powerlines and does not cause an individual impact to crop dusting. Whilst, the 33kV powerline is located in an area with no agricultural activities thus having no impact to crop dusting.

C) 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.

D) AUTHORITY PARTICIPATION

Authorities and organs of state identified as key stakeholders: (Kindly refer to Appendix E5 for the I&AP and Key Stakeholder Database).

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

Include proof that the Authorities and Organs of State received written notification of the proposed activities as appendix E2.

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

1. CONSULTATION WITH OTHER STAKEHOLDERS

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

Proof of any such agreement must be provided, where applicable. Application for any deviation from the regulations relating to the public participation process must be submitted prior to the commencement of the public participation process.

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

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

SECTION D: IMPACT ASSESSMENT

The assessment of impacts must adhere to the minimum requirements in the EIA Regulations, 2014 as amended 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 detailed description of the impact rating methodology and detailed account of the impacts and mitigation measures have been attached as Appendix F. The summary provided in the table below reflects impacts identified for each of the proposed developments as well as the final significance of the impacts post mitigation.

BASIC ASSESSMENT REPORT

Activity	Impact summary	Significance	Proposed mitigation
Alternative 1 (preferred alternative)			
Planning	Terrestrial - Temporary disturbance of wildlife due to increased human presence and possible use of machinery and/or vehicles.	-2 (low negative)	<p>Unnecessary disturbance to flora and fauna must be prevented, this includes amongst others:</p> <ul style="list-style-type: none"> • Laydown and construction preparation activities (such as cement mixing, temporary toilets, etc.) must be limited to the 'Low' sensitivity areas. • The clearing of vegetation must be minimized where possible. All activities must be restricted to within the authorised areas. It is recommended that areas to be developed be specifically and responsibly demarcated so that during the construction phase only the demarcated areas be impacted upon. • No workers or machinery is to be allowed outside of the construction areas, especially where these occur adjacent to high-sensitivity wetland habitat. • Existing access routes, especially roads, must be made use of. • A hydrocarbon spill management plan must be put in place to ensure that should there be any chemical spill out or over that it does not run into the surrounding areas. The Contractor shall be in possession of an emergency spill kit that must always be complete and available on site. <ul style="list-style-type: none"> ○ Drip trays or any form of oil absorbent material must be placed underneath vehicles/machinery and equipment when not in use. ○ No servicing of equipment on site unless necessary. ○ All contaminated soil / yard stone shall be treated in situ or removed and be placed in containers. ○ Appropriately contain any generator diesel storage tanks, machinery spills (e.g., accidental spills of hydrocarbons oils, diesel etc.) in such a way as to prevent them from leaking and entering the environment. ○ Construction activities and vehicles could cause spillages of lubricants, fuels and waste material negatively affecting the functioning of the ecosystem.

BASIC ASSESSMENT REPORT

Activity	Impact summary	Significance	Proposed mitigation
			<ul style="list-style-type: none"> ○ All vehicles and equipment must be maintained, and all re-fuelling and servicing of equipment is to take place in demarcated areas outside of the project area. • The duration of the activities should be minimized to as short a term as possible, to reduce the period of disturbance on fauna. <p>No trapping, killing, or poisoning of any wildlife is to be allowed. Monitoring must take place in this regard.</p>
Construction	Air Quality impacts due to construction and operation of machinery.	-8 (low negative)	<ul style="list-style-type: none"> • Dust-reducing mitigation measures must be put in place and must be strictly adhered to. This includes wetting of exposed soft soil surfaces • No non-environmentally friendly suppressants may be used as this could result in the pollution of water sources
	Noise	-8 (low negative)	<ul style="list-style-type: none"> • The use of smaller/quieter equipment when operating near receptors. Ensuring that equipment is well maintained and fitted with the correct and appropriate noise abatement measures. • Engine bay covers over heavy equipment could be pre-fitted with sound absorbing material. Heavy equipment that fully encloses the engine bay should be considered, ensuring that the seam gap between the hood and vehicle body is minimised. • Where possible only undertake construction activities during the day. If night-time activities are required, do not operate closer than 500 m from any sensitive receptors. Ensure a good working relationship between the developer and all potentially noise-sensitive receptors. • Communication channels should be established to ensure prior notice to the sensitive receptor if work is to take place close to them (especially if work is to take place within 500 m from them at night). Information that should be provided to potentially sensitive receptor(s) includes: Proposed working dates, the duration that work will take place in an area, and working times; The reason why the activity is taking place; The construction methods that will be used; and Contact details of a responsible person where any complaints can be lodged should there be an issue of concern. • When simultaneous noise emitting activities are to take place close to potential noise-sensitive receptors, co-ordinate the working time with periods when the receptors are not at home.

BASIC ASSESSMENT REPORT

Activity	Impact summary	Significance	Proposed mitigation
	Geohydrology – Hydrocarbon contamination of groundwater	-9 (medium negative)	<ul style="list-style-type: none"> • Inspect vehicles for leaks and repair all leaks immediately. Any generators used in watercourses should be used with a functional drip tray. Ensure that sufficient ablution facilities are available on site and that they are located outside of buffered watercourses. • A hydrocarbon spill management plan must be put in place to ensure that should there be any chemical spill out or over that it does not run into the surrounding areas. The Contractor shall be in possession of an emergency spill kit that must always be complete and available on site. <ul style="list-style-type: none"> ○ Drip trays or any form of oil absorbent material must be placed underneath vehicles/machinery and equipment when not in use. ○ No servicing of equipment on site unless necessary. ○ All contaminated soil / yard stone shall be treated in situ or removed and be placed in containers. ○ Appropriately contain any generator diesel storage tanks, machinery spills (e.g., accidental spills of hydrocarbons oils, diesel etc.) in such a way as to prevent them from leaking and entering the environment. ○ Construction activities and vehicles could cause spillages of lubricants, fuels and waste material negatively affecting the functioning of the ecosystem. ○ All vehicles and equipment must be maintained, and all re-fuelling and servicing of equipment is to take place in demarcated areas outside of the project area.
	Hydrology – Erosion	-3 (low negative)	<ul style="list-style-type: none"> • Locate powerline alignments outside of buffered watercourses (sensitive watercourse habitat) as far as possible. Buffered watercourses should be demarcated on site for the entire construction process to help indicate sensitive areas and prevent unauthorised access.
	Hydrology – Alteration of river banks and river bed	-4 (low negative)	<ul style="list-style-type: none"> • Mitigation for pipeline construction primarily includes the avoidance of watercourse crossings. Where crossings are unavoidable, crossings should be located along existing infrastructure features, such as roads, dam walls and existing pipelines. Unavoidable crossings should ideally be located perpendicular to the direction of flow at the shortest possible crossing distances.

BASIC ASSESSMENT REPORT

Activity	Impact summary	Significance	Proposed mitigation
			<ul style="list-style-type: none"> • Long crossings along the length of wetlands, rivers and drainage lines should be avoided as far as practically possible. • Limited topsoil stripping is conditional on the prevention of soil compaction by heavy motorised vehicles (HMsVs) through the use and maintenance of running tracks. Examples of running tracks include bogmats or rock aggregate combined with geotextile fabric and flume pipes. Alternatively topsoil across the entire width of the construction servitude (often referred to as the right of way) can be stripped and stored separately outside of buffered watercourses. Removed topsoil and subsoil should be sorted separately in stockpiles and protected from erosion when required. Additional erosion protection measures should be implemented for stockpiles that are to be stored for an extended duration.
	Hydrology – Alien and/or invasive vegetation	-2 (low negative)	<p>Encroachment/ invasion of alien plants (specifically into watercourses:</p> <ul style="list-style-type: none"> • Restrict the clearing of watercourse vegetation as far as possible. • Areas that have been cleared should be re-vegetated with indigenous species or other suitable plant species, such as <i>Eragrostis tef</i>, after construction and initial rehabilitation work (reinstatement of the geomorphological template) is completed. • Compile and implement an alien plant control program with a particular focus on alien control in watercourses (including wetlands) during the rehabilitation phase of the project. • Rehabilitate disturbed areas as soon as possible. Restrict new footprints to disturbed areas as far as possible. • Regular monitoring should be undertaken in the watercourses to check any possible invasion by alien vegetation so that they can be weeded out before they grow and spread out.
	Social livelihoods	-14 (medium negative)	<ul style="list-style-type: none"> • Areas outside the footprint (including all infrastructure) should be considered as no-go areas.

BASIC ASSESSMENT REPORT

Activity	Impact summary	Significance	Proposed mitigation
	Social – Dust and noise nuisance	-11 (medium negative)	<ul style="list-style-type: none"> Dust-reducing mitigation measures must be put in place and must be strictly adhered to. This includes wetting of exposed soft soil surfaces
	Social – damage to existing services and infrastructure	-11 (medium negative)	
	Visual – Agricultural landscape character	-9 (medium negative)	<ul style="list-style-type: none"> Rehabilitate disturbed areas and reinstate agricultural usage. Minimise disturbance of the natural landscape Rehabilitate disturbed natural areas. Ensure that temporary lighting is of sufficient power to ensure safety but not so powerful that it creates glare that could cause danger for drivers or nuisance for neighbours.
	Visual – Natural landscape character	-3 (low negative)	
	Visual – views from local roads	-6 (low negative)	
	Visual – natural views from homesteads	-5 (low negative)	
	Terrestrial – Destruction, fragmentation and loss of the vegetation community	-11 (medium negative)	
			<ul style="list-style-type: none"> The areas to be developed must be specifically demarcated to prevent movement into surrounding environments, especially wetlands and watercourses. Areas of indigenous vegetation, even secondary communities outside of the direct project footprint, should under no circumstances be fragmented or disturbed further. Clearing of vegetation should be minimized and avoided where possible. Environmental Awareness:

BASIC ASSESSMENT REPORT

Activity	Impact summary	Significance	Proposed mitigation
	Terrestrial introduction of alien species -	-7 (low negative)	<ul style="list-style-type: none"> ○ All personnel should undergo environmental awareness and induction training. A register should be kept of all attendees. Toolbox talks should be scheduled to ensure continuous environmental awareness training. Emergency procedures should be communicated and displayed prominently on the site. A copy of the EMPr should be available on the work site at all times. Appointed sub-contractors must be made aware of their obligations under this EMPr. ● Management of flora and fauna <ul style="list-style-type: none"> ○ Vegetation should be retained as far as possible. Establish an alien invasive plant eradication programme for the control of weed species. This must be monitored for a period of time following rehabilitation to ensure that alien invasive plants do not establish themselves. Unnecessary damage or disturbance to vegetation should be prevented. No trees or shrubs should be felled or damaged for the purpose of obtaining firewood, unless otherwise agreed to with the landowner. Areas outside the footprint (including all infrastructure) should be considered as no-go areas. No faunal species are allowed to be purposefully killed. Any potential protected or sensitive areas should be clearly demarcated and noted as no-go areas. ● Habitat fragmentation and edge effects: <ul style="list-style-type: none"> ○ Undertake activities in previously disturbed areas and/or habitats with lower sensitivity where possible. Locate activities on the boundaries of existing disturbance where possible. Use existing access roads as much as possible. Rehabilitate disturbed areas as soon as possible.
	Pedology	-7 (low negative)	<ul style="list-style-type: none"> ● Ensure that as much of the powerline infrastructure as possible is sited away from agricultural lands. Utilize servitudes, farm roads and any other routes to avoid sensitive areas. Attempt to avoid interference with arable agriculture activities.
	Wetlands-habitat destruction	-3 (low negative)	<ul style="list-style-type: none"> ● Control all waste sources emanating from proposed activities. Maintain minimum distances from aquatic and wetland habitats, where possible. Undertake activities in previously disturbed areas and/or habitats with lower sensitivity.
	Wetlands – water quality	-1 (low negative)	

BASIC ASSESSMENT REPORT

Activity	Impact summary	Significance	Proposed mitigation
	Wetlands - flow	-1 (low negative)	<ul style="list-style-type: none"> • Store all hazardous materials (Incl. hydrocarbons) in a bunded area, outside of buffered watercourses. Stripped and excavated subsoil and topsoil stockpiles should be stored outside of buffered wetland areas and be protected from erosion. • Topsoil and subsoil should however be protected from erosion. Approaches that border watercourses, particularly those along steep and long slopes, should receive runoff control measures to prevent siltation and concentrated flow into watercourses. • Inspect vehicles for leaks and repair all leaks immediately. Any generators used in watercourses should be used with a functional drip tray. Ensure that sufficient ablution facilities are available on site and that they are located outside of buffered watercourses. • Stabilise new channels that form as a result of headcut erosion or other forms of erosion once they are recorded. Sediment deposition should be prevented in watercourses and especially watercourse channels through the following measures: • Implementing stormwater control measures around construction areas; • Dewatering during excavation activities in watercourses should be released in a silt bay with sufficient capacity that filters and retains sediment before the water is released into the watercourses. • Sediment deposition events into watercourses should be evaluated by an experienced ECO/ wetland specialist and based on the magnitude of the impact recommendations can be made regarding the removal of deposited material.
	Heritage & palaeo – unidentified heritage resources	-8 (low negative)	<ul style="list-style-type: none"> • Grave sites and burial grounds: <ul style="list-style-type: none"> ○ The graves should be demarcated with a 50-meterbuffer and should be avoided and left in situ. ○ A Grave Management Plan should be developed for the graves which also need to be approved by SAHRA BGG. ○ If the site is going to be impacted and the graves need to be removed a grave relocation process as per the Heritage Management Plan for the site is recommended as a mitigation and
	Heritage & palaeo – burial	-8 (low negative)	

BASIC ASSESSMENT REPORT

Activity	Impact summary	Significance	Proposed mitigation
	grounds and graves		management measure. This will involve the necessary social consultation and public participation process before grave relocation permits can be applied for with the SAHRA BGG under the NHRA and National Health Act regulations.
	Heritage & palaeo – historic to recent sites with graves	-8 (low negative)	<ul style="list-style-type: none"> ○ If human remains are discovered a grave relocation process is recommended as a mitigation and management measure. This will involve the necessary social consultation and public participation process before grave relocation permits can be applied for with the SAHRA BGG under the NHRA and National Health Act regulations.
	Heritage & palaeo – impact on structures of medium heritage significance	-6 (low negative)	<ul style="list-style-type: none"> ○ When graves are discovered/uncovered the site should be demarcated with a 50-meterno-go-buffer-zone and the grave should be avoided.
	Heritage & palaeo - palaeontology	-11 (medium negative)	<ul style="list-style-type: none"> • The ECO for this project must be informed that the Adelaide Subgroup (Beaufort Group, Karoo Supergroup) has a Very High Palaeontological Sensitivity. • If Palaeontological Heritage is uncovered during surface clearing and excavations the Chance find Protocol attached should be implemented immediately. Fossil discoveries ought to be protected and the ECO/site manager must report to South African Heritage Resources Agency (SAHRA) (Contact details: SAHRA, 111 Harrington Street, Cape Town. PO Box 4637, Cape Town 8000, South Africa. Tel: 021 462 4502. Fax: +27 (0)21 462 4509. Web: www.sahra.org.za) so that mitigation (recording and collection) can be carried out. • Before any fossil material can be collected from the development site the specialist involved would need to apply for a collection permit from SAHRA. Fossil material must be housed in an official collection (museum or university), while all reports and fieldwork should meet the minimum standards for palaeontological impact studies proposed by SAHRA (2012). • Implement a chance find procedures in case where possible heritage finds are uncovered.
	Socio economic	+8 (low positive)	<ul style="list-style-type: none"> • No informal settlers should be allowed on private property within the development area. If any person erects an illegal structure the landowner and police should be informed immediately and asked to remove the structure. • The Project manager must ensure that a complaints register is established and maintained for the recording of public and community comments and concerns. The comments and concerns must be addressed as far as reasonable possible

BASIC ASSESSMENT REPORT

Activity	Impact summary	Significance	Proposed mitigation
	Agricultural land use	-8 (low negative)	<ul style="list-style-type: none"> The final powerline route should, where possible, not infringe on the landowners surface activities. Irrigation Pivot points should remain unaffected by infrastructure, and must be deviated around for continued pivot irrigation operation. Ensure that as much of the powerline infrastructure as possible is sited away from agricultural lands. Utilize servitudes, farm roads and any other routes to avoid sensitive areas. Attempt to avoid interference with arable agriculture activities.
Operation	Social livelihoods	-21 (high negative)	<ul style="list-style-type: none"> No informal settlers should be allowed on private property within the development area. If any person erects an illegal structure the landowner and police should be informed immediately and asked to remove the structure. The Project manager must ensure that a complaints register is established and maintained for the recording of public and community comments and concerns. The comments and concerns must be addressed as far as reasonable possible. Landowners must be informed prior to commencement of work on their properties and a record of such communication needs to be documented in the form of emails/telephonic records.
	Social servitudes on land values	-21 (high negative)	
	Visual Agricultural landscape character	-5 (low negative)	<ul style="list-style-type: none"> Please refer to mitigation measures proposed construction activities
	Visual – Natural landscape character	-4 (low negative)	
	Visual – views from local roads	-8 (low negative)	

BASIC ASSESSMENT REPORT

Activity	Impact summary	Significance	Proposed mitigation
	Visual – natural views from homesteads	-5 (low negative)	
	Pedology	-6 (low negative)	
	Wetlands-habitat destruction	-4 (low negative)	
	Wetlands – water quality	-1 (low negative)	
	Wetlands - flow	-1 (low negative)	
	Avifauna – collisions with and/or electrocution by newly constructed powerlines	-10 (medium negative)	<ul style="list-style-type: none"> The design of the proposed OHLs must be of a type or similar structure as endorsed by the Eskom-EWT Strategic Partnership on Birds and Energy, considering the mitigation guidelines recommended by Birdlife South Africa (Jenkins et al., 2015). Any OHLs must be of a design that minimizes electrocution risk by using adequately insulated ‘bird friendly’ monopole structures, with clearances between live components of 2 m or greater. Monitoring of the OHL route must be undertaken to detect bird carcasses, to enable the identification of any potential areas of high impact to be marked with bird flappers if not already done so. Monitoring should be undertaken at least once a month for the first year of operation. OHLs, especially over the water resource areas, must be fitted with bird diverters throughout the whole area and not just the portions adjacent to the poles.
	Agricultural land use	-5 (low negative)	<ul style="list-style-type: none"> Please refer to mitigation measures proposed construction activities.

BASIC ASSESSMENT REPORT

Activity	Impact summary	Significance	Proposed mitigation
	Visual – Agricultural landscape character	-1 (low negative)	<ul style="list-style-type: none"> Please refer to mitigation measures proposed construction activities.
	Visual – Natural landscape character	-2 (low negative)	
	Visual – views from local roads	-1 (low negative)	
	Visual – natural views from homesteads	-1 (low negative)	
	Pedology	-5 (low negative)	
	Wetlands-habitat destruction	-3 (low negative)	
	Wetlands – water quality	-1 (low negative)	
	Wetlands - flow	-1 (low negative)	
Alternative 2			

BASIC ASSESSMENT REPORT

Activity	Impact summary	Significance	Proposed mitigation
[Redacted content]			
Alternative 3			
[Redacted content]			

A complete impact assessment in terms of Regulation 19(3) of GN 326 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.

Alternative A (preferred alternative)

Based on the nature and extent of the proposed development and the predicted impacts as a result of the construction and operation of the development, the findings of the BA, and the mostly low to moderate post-mitigation significance level of potential environmental impacts, it is the opinion of the EAP that the environmental impacts associated with the application for the proposed project can be mitigated to an acceptable level and the project should be authorized.

The findings of the specialist studies that were conducted conclude that there are no environmental fatal flaws that prevent the proposed project from proceeding, provided that the recommended mitigation and management measures are implemented.

Alternative B



Alternative C

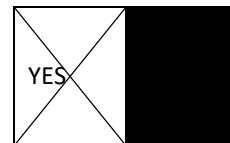


No-go alternative (compulsory)

The no-go alternative would imply that the baseline conditions of the site are maintained. The potential environmental and social impacts associated with the construction of the 132kV LILLO powerline and 33kV powerline would not be effected. However, this would affect Tetra4's ability to power the 40 MVA substation for electricity supply as part of their Phase 2 expansion and the connection of the existing compressor station thus affecting Tetra4's ability to increase pressure for transportation of natural gas to their plant thus affecting production of gas as a product.

SECTION E: RECOMMENDATION OF PRACTITIONER

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



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



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

- Landowners must be informed prior to commencement of work on their properties and a record of such communication needs to be documented in the form of emails/telephonic records
- The areas to be developed must be specifically demarcated to prevent movement into surrounding environments, especially grassland surrounding the Very High Sensitivity area. Areas of indigenous vegetation, even secondary communities outside of the direct project footprint, should under no circumstances be fragmented or disturbed further. Clearing of vegetation should be minimized and avoided where possible.
- Locate the powerlines outside of buffered watercourses (sensitive watercourse habitat) as far as possible. Buffered watercourses within proximity to the construction footprints should be demarcated on site for the entire construction process to help indicate sensitive areas and prevent unauthorized access. Unavoidable crossings should ideally be located perpendicular to the direction of flow at the shortest possible crossing distances. Long crossings along the length of wetlands, rivers and drainage lines should be avoided as far as practically possible.
- The design of the proposed OHLs must be of a type or similar structure as endorsed by the Eskom-EWT Strategic Partnership on Birds and Energy, considering the mitigation guidelines recommended by Birdlife South Africa (Jenkins et al., 2015). Any OHLs must be of a design that minimizes electrocution risk by using adequately insulated ‘bird friendly’ monopole structures, with clearances between live components of 2 m or greater. Monitoring of the OHL route must be undertaken to detect bird carcasses, to enable the identification of any potential areas of high impact to be marked with bird flappers if not already done so. Monitoring should be undertaken at least once a month for the first year of operation. OHLs, especially over the water resource areas, must be fitted with bird diverters throughout the whole area and not just the portions adjacent to the poles.

Is an EMPr attached?



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.

BASIC ASSESSMENT REPORT

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.

Compiled:

_____ **Qaphela Magaqa (Cand. EAP 2022/6016)** _____

NAME OF EAP

SIGNATURE OF EAP

DATE

Reviewed

_____ **Liam Whitlow (Reg. EAP 2019/222)** _____

NAME OF EAP

SIGNATURE OF EAP

DATE



SECTION F: APPENDIXES

The following appendixes must be attached:

Appendix A: Maps

Appendix B: Photographs

Appendix C: Facility illustration(s)

Appendix D: Specialist reports (including terms of reference)

Appendix E: Public Participation

Appendix F: Impact Assessment

Appendix G: Environmental Management Programme (EMPr)

Appendix H: Details of EAP and expertise

Appendix I: Specialist's declaration of interest

Appendix J: Additional Information



Appendix A: Maps



Appendix B: Site Photographs

Appendix B:Site Photographs



Appendix C: Facility Illustration



Appendix D: Specialist Reports



Appendix E: Public Participation



Appendix F: Impact Assessment



Appendix G: Environmental Management Programme (EMPr)



Appendix H: Details of EAP and Expertise



Appendix I: Specialist Declaration of Interest



Appendix J: Additional Information