



ENVIRONMENTAL
IMPACT
MANAGEMENT
SERVICES

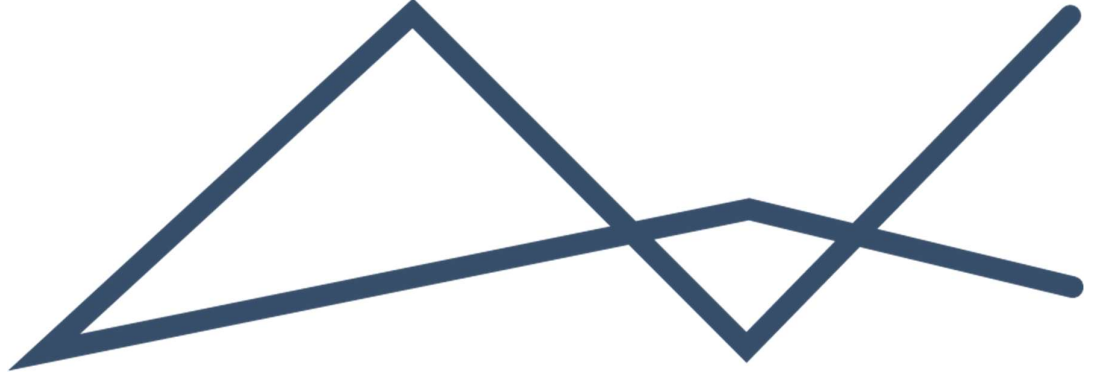
T 011 789 7170 E info@eims.co.za W www.eims.co.za

SITE SENSITIVITY AND VERIFICATION REPORT

TETRA4 33KV AND 132KV POWERLINES PROJECT NEAR VIRGINIA,
WITHIN THE MATJHABENG LOCAL MUNICIPALITY, FREE STATE
PROVINCE - EA AMENDMENT

EA REF: 14/12/16/3/3/1/2754



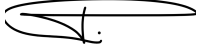


DOCUMENT DETAILS

EIMS REFERENCE: 1764

DOCUMENT TITLE: SITE SENSITIVITY AND VERIFICATION REPORT: TETRA4 33KV AND 132KV POWERLINES PROJECT NEAR VIRGINIA, WITHIN THE MATJHABENG LOCAL MUNICIPALITY, FREE STATE PROVINCE

DOCUMENT CONTROL

	NAME	SIGNATURE	DATE
COMPILED:	Qaphela Magaqa		2026/08/21
CHECKED:	Liam Whitlow		2026/09/25
AUTHORIZED:	Liam Whitlow		2026/09/25

REVISION AND AMENDMENTS

REVISION DATE:	REV #	DESCRIPTION
2026/09/25	ORIGINAL DOCUMENT	SITE SENSITIVITY AND VERIFICATION REPORT



Table of Contents

1	Scope and Purpose	1
2	Project Background.....	2
2.1	Project Aspects.....	2
2.2	Site Locality and layout	2
2.3	DEA Screening Tool Assessment	2
3	Site Assessment	2
3.1	Gradient	3
3.2	Sensitive Areas	3
3.3	Vegetation.....	4
3.4	Land Cover/ Use Description.....	4
4	Verification Findings and Motivation.....	8

List of Figures

Figure 1: Site locality map.....	1
----------------------------------	---

List of Tables

Table 1: Screening Tool Report- Proposed development area environmental sensitivity.	2
Table 2: Site photographs.....	5
Table 3: Assessment for specialist studies and motivation.	8



1 SCOPE AND PURPOSE

Regulation 16(1)(b)(v) of the Environmental Impact Assessment Regulations (GNR 982 promulgated under the National Environmental Management Act (Act 107 of 1998-NEMA)), requires that a Screening Report generated by the national web-based environmental screening tool for the specific site and activity must accompany any application for Environmental Authorization.

The Screening Report identifies preliminary development incentives, restrictions, exclusions or prohibitions that apply to the proposed development site as well as the most environmentally sensitive features on the site based on the site sensitivity screening. On the basis of the sensitivities identified in the site sensitivity screening, a list of preliminary specialist studies required to be considered in the Impact Assessment process are provided.

Prior to commencing with a specialist assessment identified in the Screening Report, the current use of the land and the environmental sensitivity of the site, must be confirmed by undertaking a site sensitivity verification. The site sensitivity verification must be undertaken by an environmental assessment practitioner or a specialist. The site sensitivity verification must be undertaken through the use of:

- a) a desk top analysis, using satellite imagery;*
- b) a preliminary on-site inspection; and*
- c) any other available and relevant information.*

This Site Sensitivity and Verification Report (SSVR) is a record of the outcome of the site sensitivity verification in compliance with the requirements of the procedures for the assessment and minimum criteria for reporting on identified environmental themes in terms of Sections 24(5)(a) and (h) and 44 of the NEMA. The SSVR aims to:

- a) confirm or disputes the current use of the land and the environmental sensitivity as identified by the screening tool, such as new developments or infrastructure, the change in vegetation cover or status etc.;*
- b) contain motivation and evidence (e.g. photographs) of either the verified or different use of the land and environmental sensitivity; and*
- c) be submitted together with the relevant assessment report prepared in accordance with the requirements of the Environmental Impact Assessment Regulations(EIA Regulations).*



2 PROJECT BACKGROUND

2.1 PROJECT ASPECTS

Tetra4 (Pty) Ltd (hereafter referred to as “the EA holder”) is the holder of the Environmental Authorisation (EA) for the Tetra4 33kV and 132kV Powerlines Project near Virginia, within the Matjhabeng Local Municipality, Free State Province issued in terms of the Environmental Impact Assessment Regulations, 2014 as amended by the Department of Forestry, Fisheries and the Environment in 2023 (Ref: 14/12/16/3/3/1/2754). The EA approves the following listed activities:

- GNR 983 (Listing Notice 1): Activity(ies):
 - 11 and 19
- GNR 985 (Listing Notice 3): Activity(ies):
 - 12 and 14

For the following activities:

- A new 132kV dual Loop-In-Loop-Out (LILO) powerline of approximately 5.5km in length connecting to the Eskom Theseus-Oryx 132kV 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 operational power requirements.
- A new 33kV powerline to connect a gas compressor station to the existing 33kV Beatrix powerline. The 33kV powerline will be approximately 1km in length.

During the final design of the powerlines, undertaken in accordance with **Condition 12** of the approved EA and informed by the conclusion of the necessary servitude agreements, the EA holder has deviated from portions of the originally approved corridor. As a result, the EA holder now seeks to amend the existing EA to accommodate these deviations (for the 132kV powerline).

This deviation necessitates a Part 2 Amendment to the EA in order to assess the potential impacts associated with the changes to the originally approved corridor alignment.

2.2 SITE LOCALITY AND LAYOUT

The Tetra4 Powerline Project is located within the Matjhabeng Local Municipality, Free State Province. The 132 kV powerline traverses the farms Mond van Doornrivier 38 (RE), Kalkoenkrans 225 (RE, Portions 1 and 2), and Alex Glen Ross 562 (RE, Portions, 3 4, 5, 8), generally running parallel to the R30. The 33 kV powerline is located on Palmietkuil 328 (6), and the site is situated approximately 11 km from Virginia at its nearest point. The centre point of the site is 28° 8'41.31"S; 26°44'8.66"E. Please refer to project locality map below.

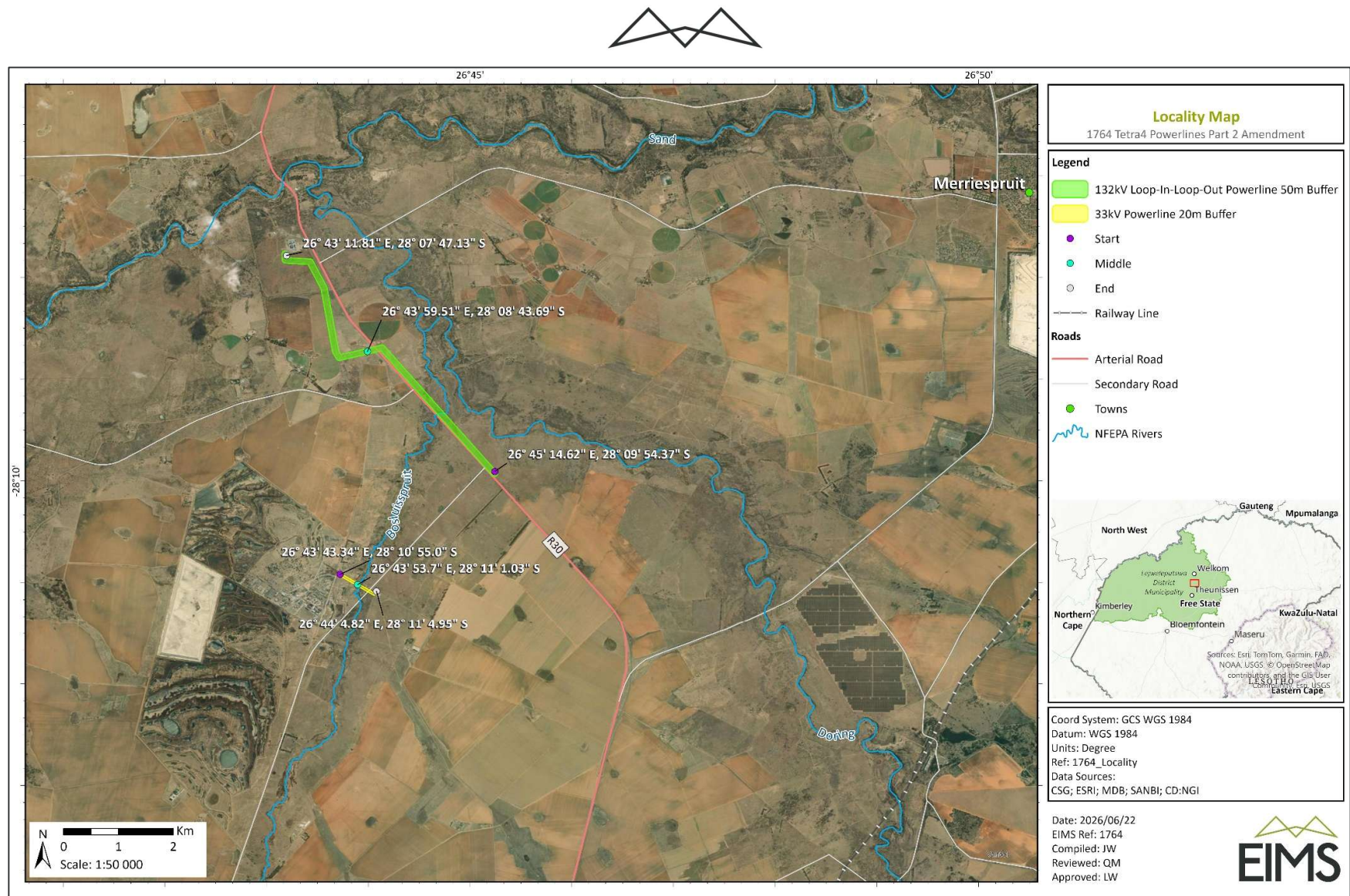


Figure 1: Site locality map.



2.3 DEA SCREENING TOOL ASSESSMENT

Regulation 16(1)(b)(v) of the Environmental Impact Assessment Regulations (GNR 982 promulgated under the National Environmental Management Act (Act 107 of 1998-NEMA)), requires that a Screening Report generated by the national web-based environmental screening tool for the specific site and activity must accompany any application for Environmental Authorization.

The Screening Report identifies preliminary development incentives, restrictions, exclusions or prohibitions that apply to the proposed development site as well as the most environmentally sensitive features on the site based on the site sensitivity screening. On the basis of the sensitivities identified in the site sensitivity screening, a list of preliminary specialist studies required to be considered in the Impact Assessment process are provided. Table 1 provides the proposed development area environmental sensitivity as provided by the national web-based environmental screening tool.

Table 1: Screening Tool Report- Proposed development area environmental sensitivity.

Theme	Very High	High	Medium	Low
Agriculture Theme	☒	☐	☐	☐
Animal species Theme	☐	☐	☒	☐
Aquatic Biodiversity Theme	☐	☐	☐	☒
Archaeological and Cultural Heritage	☐	☐	☐	☒
Civil Aviation Theme	☐	☐	☒	☐
Defence Theme	☐	☐	☐	☒
Palaeontology Theme	☐	☐	☒	☐
Plant Species Theme	☐	☐	☐	☒
Terrestrial Biodiversity Theme	☒	☐	☐	☐

3 SITE ASSESSMENT

Prior to commencing with a specialist assessment identified in the Screening Report, the current use of the land and the environmental sensitivity of the site, must be confirmed by undertaking a site sensitivity verification. The site sensitivity verification must be undertaken by an environmental assessment practitioner or a specialist. The site sensitivity verification must be undertaken through the use of:

- a desk top analysis, using satellite imagery;
- a preliminary on-site inspection; and
- any other available and relevant information.

The sub-sections below aim to provide context of the existing site conditions to support the site sensitivity and verification.



3.1 GRADIENT

The general gradient characteristics of the site:

☐ ☐ ☐ ☐ ☐ ☒ ☐ ☐

3.2 SENSITIVE AREAS

<i>Is the site located in the immediate vicinity of the following:</i>	Yes	No	Comment
Erosion Channels or areas of severe erosion/ destabilized soils	☐	☒	None.
Wetlands (within 32m)	☐	☒	None.
Unstable slopes or geological features (rocky outcrops)	☐	☒	None.
Bare areas	☒	☐	The powerline corridor traverses through farm boundaries/crop areas mainly bare/with minimal vegetation cover.
Other Sensitive or risk areas?	☐	☒	None.
Are any existing servitudes and structures directly or indirectly affected by the proposed sites and routes (e.g. Eskom, public road servitudes and restrictions-60m from National Road, farmer's water/irrigation supplies, etc.)?	☒	☐	The deviation crosses the R30 road and will require a wayleave approval from the relevant authority. The proposed powerline corridor also intersects existing powerline servitudes; therefore, Eskom's requirements and guidelines for construction near existing powerlines must be implemented.



3.3 VEGETATION

<i>Which of the listed descriptions best describes the general groundcover on and around the site?</i>				
☐ Natural veld - good condition	☐ Natural veld with scattered aliens	☐ Natural veld with heavy alien infestation	☒ Veld dominated by alien species	☐ Gardens
☐ Sport field	☒ Cultivated land	☐ Paved surface	☐ Building or other structure	☒ Bare soil
Comments on vegetation composition:		Grassland vegetation with heavy alien infestation.		
Comments on weed species/type		The site mostly traverses through cultivated lands/disturbed land.		

3.4 LAND COVER/ USE DESCRIPTION

The SSVR aims to:

- confirm or dispute the current use of the land and the environmental sensitivity as identified by the screening tool, such as new developments or infrastructure, the change in vegetation cover or status etc.; and
- contain motivation and evidence (e.g. photographs) of either the verified or different use of the land and environmental sensitivity.

The proposed Tetra4 Powerline Deviation traverses a predominantly agricultural landscape, following the boundaries of cultivated farmlands for much of its length. Land use within the area is characterised by active crop cultivation and associated farming activities., The powerline deviates in a westerly direction to avoid a centre pivot, moving away from the R30 due to existing powerlines within the property on the western side of the R30. The alignment departs west from the approved farm boundaries and extends across areas of open veld comprising semi-natural vegetation and crop areas. The route ultimately connects to the Tetra4 light industrial plant, where land use transitions from agricultural and open veld areas to industrial infrastructure and operations. Overall, the powerline deviation is located within a landscape characterised by a mix of agricultural, semi-natural veld, and industrial land uses.



Table 2: Site photographs.



View towards start of 132 kV powerline deviation



Westwards view towards proposed deviation route



View of an existing servitude east of the powerline alignment and farm dwellings.



Southward view along the 132 kV deviation route



View of land used for cultivation



General view of the landscape character on Tetra4 property



View towards Tetra4 plant where the powerline ends



View of Theseus-Oryx 132 kV powerline where the 132 kV LILO will connect



View of the 33 kV powerline connection point at the compressor station



33 kV route towards compressor station



4 VERIFICATION FINDINGS AND MOTIVATION

The Screening Report identifies preliminary development incentives, restrictions, exclusions or prohibitions that apply to the proposed development site as well as the most environmentally sensitive features on the site based on the site sensitivity screening (Section 2.3). On the basis of the sensitivities identified in the site sensitivity screening, a list of preliminary specialist studies required to be considered in the Impact Assessment process are provided. Table 3 below lists the screening tool identified specialist studies and associated screening tool sensitivity. Based on the findings of the site verification process (Section 3) a verified, or suggested revised sensitivity is provided together with an associated motivation.

Table 3: Assessment for specialist studies and motivation.

Screening Tool Specialist Study Required:	Level of Sensitivity:	Suggested Sensitivity:	Required level of Assessment	Motivation
Agriculture Impact Assessment	Very High	Very High	Full Study	A full pedological (agricultural potential and soils) assessment was undertaken as part of the Tetra4 Cluster 2 Gas Production Project. The powerline was assessed by the specialist. The Agricultural Specialist has undertaken an assessment and prepared amendment letters to confirm/dispute findings of the 2023 assessments.
Landscape/Visual Impact Assessment	Medium	Medium	N/A	A Visual Impact Assessment was undertaken as part of the original application in (2023). The EAP has undertaken the Site Sensitivity Verification and has confirmed that the landscape character of the site has not changed and thus confirms that the recommendations/findings of the VIA remain valid.
Archaeological and Cultural Heritage Impact Assessment	Low	Low	Other	A heritage specialist was appointed to undertake a walkdown of the final alignment of the proposed powerlines for micro-siting as per the EA conditions. The amendment alignment was also assessed in the walkdown report.
Palaeontology Impact Assessment	Low	Low	Other	A full Palaeontology Impact Assessment was undertaken as part of the original application in (2023). A deviation letter has been prepared by the palaeontology specialist.



Screening Tool Specialist Study Required:	Level of Sensitivity:	Suggested Sensitivity:	Required level of Assessment	Motivation
Terrestrial Biodiversity Impact Assessment	Very High	Low	Compliance Statement	A terrestrial biodiversity specialist has undertaken a site verification and deviation letter based on the findings of the original 2023 report. This confirms whether any changes from the findings of the original assessment findings and recommendations have been identified for the deviation.
Aquatic Biodiversity Impact Assessment	Low	Low	Compliance Statement	The powerline deviation does not traverse any wetlands. The Aquatic specialist undertook a site verification and prepared a deviation letter based on the findings of the original 2023 report. This confirms whether any changes from the findings of the original assessment findings and recommendations have been identified for the deviation.
Avian Biodiversity Impact Assessment	Low	Low	Other	An ecologist has assessed and confirmed the site's (deviation) low avian sensitivity and provided a supplementary statement included in the Terrestrial and Avifauna deviation letter.
Civil Aviation Assessment	Medium	Low	None	The powerline deviation will be along existing powerlines. The CAA/ATNS will be included in the I&AP database and invited to comment on the project.
RFI Assessment	Low	Low	None	The powerline is anticipated to have very low radio frequency and mostly contained within the servitude. It is not anticipated to cause any health impacts as the powerline mostly traverses agricultural crop fields.
Geotechnical Assessment	Low	Low	None	No geotechnical assessment required. The proposed powerline is located within an area of known Geotech with no issues flagged previously.
Plant Species Assessment	Low	Low	Other	A terrestrial biodiversity specialist has undertaken a site verification and deviation letter based on the findings of the original 2023 report. This confirms whether any changes from the findings of the original



Screening Tool Specialist Study Required:	Level of Sensitivity:	Suggested Sensitivity:	Required level of Assessment	Motivation
				assessment findings and recommendations have been identified for the deviation.
Animal Species Assessment	Medium	Low	Other	A terrestrial biodiversity specialist has undertaken a site verification and deviation letter based on the findings of the original 2023 report. This confirms whether any changes from the findings of the original assessment findings and recommendations have been identified for the deviation.

