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To whom it may concern:

TERRESTRIAL AND AVIFAUNA SPECIALIST INPUT FOR AN AMENDMENT TO AN ENVIRONMENTAL AUTHORISATION FOR THE PROPOSED CONSTRUCTION OF TETRA4 132 kV AND 33 kV POWERLINE DEVIATION WITHIN THE MATJHABENG LOCAL MUNICIPALITY, LEJWELEPUTSWA DISTRICT MUNICIPALITY, FREE STATE PROVINCE.

Project Background

Tetra4 (Pty) Ltd proposes to amend the Environmental Authorisation (EA) for the 132 kV (300 m-wide transmission corridor) and 33 kV Powerlines. These powerlines were assessed as part of the Tetra4 Cluster 2 Gas Production Project but were authorised separately through a dedicated EA to facilitate the future transfer of the authorisation to Eskom, now the National Transmission Company South Africa (NTCSA), following completion of construction.

The EA authorises 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.

The amendment application to the Department of Forestry, Fisheries and Environment (DFFE) includes the request to amend the EA granted in 2023 as follows:

- Amendments to the approved powerline alignments (corridors) following the final design process and servitude agreements, resulting in deviations from the originally authorised corridors, including the inclusion of Portion 8 of Farm Alex Glen Ross No. 562 and the exclusion/avoidance of Portions 1 and 2 of the same farm;
- Amendments to the project layout and associated infrastructure positioning, informed by specialist Heritage walkdowns and micro-siting requirements in line with EA Condition 12;
- Amendments to the Generic Environmental Management Programme (EMPr) to incorporate site-specific mitigation measures identified during specialist Heritage walkdowns, as required by Conditions 13 to 17;

Terrestrial and Avifauna studies have been conducted for the approved Tetra4 Cluster 2 Project, which is now split into the two (2) separate components (Tetra4 Cluster 2 Project, and Tetra4 132 kV and 33 kV Powerline Deviation). These Terrestrial and Avifauna studies include the following:

- The Biodiversity Company. 2022. Terrestrial and Avifauna Baseline & Impact Assessment for the proposed Tetra4 Cluster 2 Project, Virginia, Free State.

Terms of Reference

The Biodiversity Company (TBC) was appointed to conduct a Terrestrial and Avifauna survey of the proposed Tetra4 132 kV and 33 kV Powerline project. This project area was assessed during the previous studies listed above. The focus of this study was therefore to confirm or dispute the findings of the previous studies. Therefore, the Terms of Reference (ToR) for this assessment include the following:

- Review of existing information related to the development;
- Conduct a Terrestrial and Avifauna survey for the planned footprint areas;
- Compare findings in previous reports to those of this survey. Describe any changes to the environment, if applicable, since the previous studies were conducted;
- Review impact ratings and mitigation measures of previous reports and adjust, if necessary, to findings of this survey;
- Detail any Terrestrial and Avifauna constraints identified for the planned infrastructure; and
- Provide information to adequately inform any contractors, environmental officers and personnel pertaining to the freshwater sensitivity and significance for the area.

Tetra4 132 kV and 33 kV Powerline Deviation Project Information

Tetra4 (Pty) Ltd is proposing to amend the Environmental Authorisation (EA) for the Tetra4 132 kV and 33 kV Powerline project by deviating from portions of the originally approved corridor. This deviation triggers the requirement for a Part II Amendment process for which the DFFE requires confirmation that the environment and potential impacts associated with the project have not changed.

Environmental Impact Management Services (Pty) Ltd (EIMS) have been appointed to prepare the Application. The EA Amendment will be completed in terms of Regulation 30(1)(a) of the Environmental Impact Assessment (EIA) Regulations, 2014, as amended, including additional specialist studies and public participation required by the DFFE. The proposed Tetra4 132 kV and 33 kV Powerlines project is located within the Tetra4 Cluster 2 natural gas production right area in Virginia, Free State. It is located within the Matjhabeng Local Municipality and the Lejweleputswa District Municipality. The infrastructure associated with the proposed project includes a 132 kV transmission line with a 300 m-wide corridor, and a 33 kV transmission line with a 15 m-wide corridor. The Project Area of Influence (PAOI) can be seen in (Figure 1 and Figure 2).

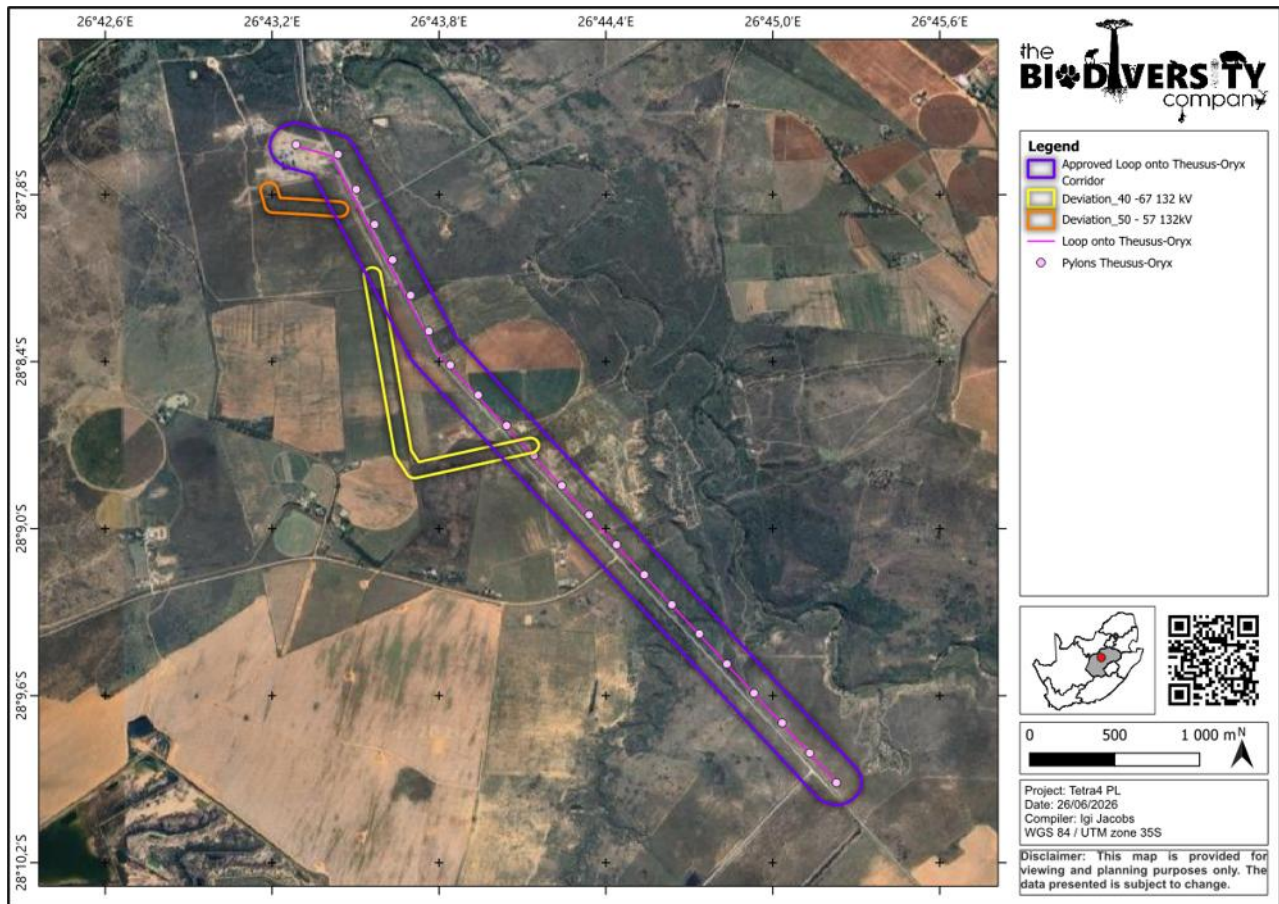


Figure 1 *The proposed layout and infrastructure associated with the 132 kV Powerline Deviations*

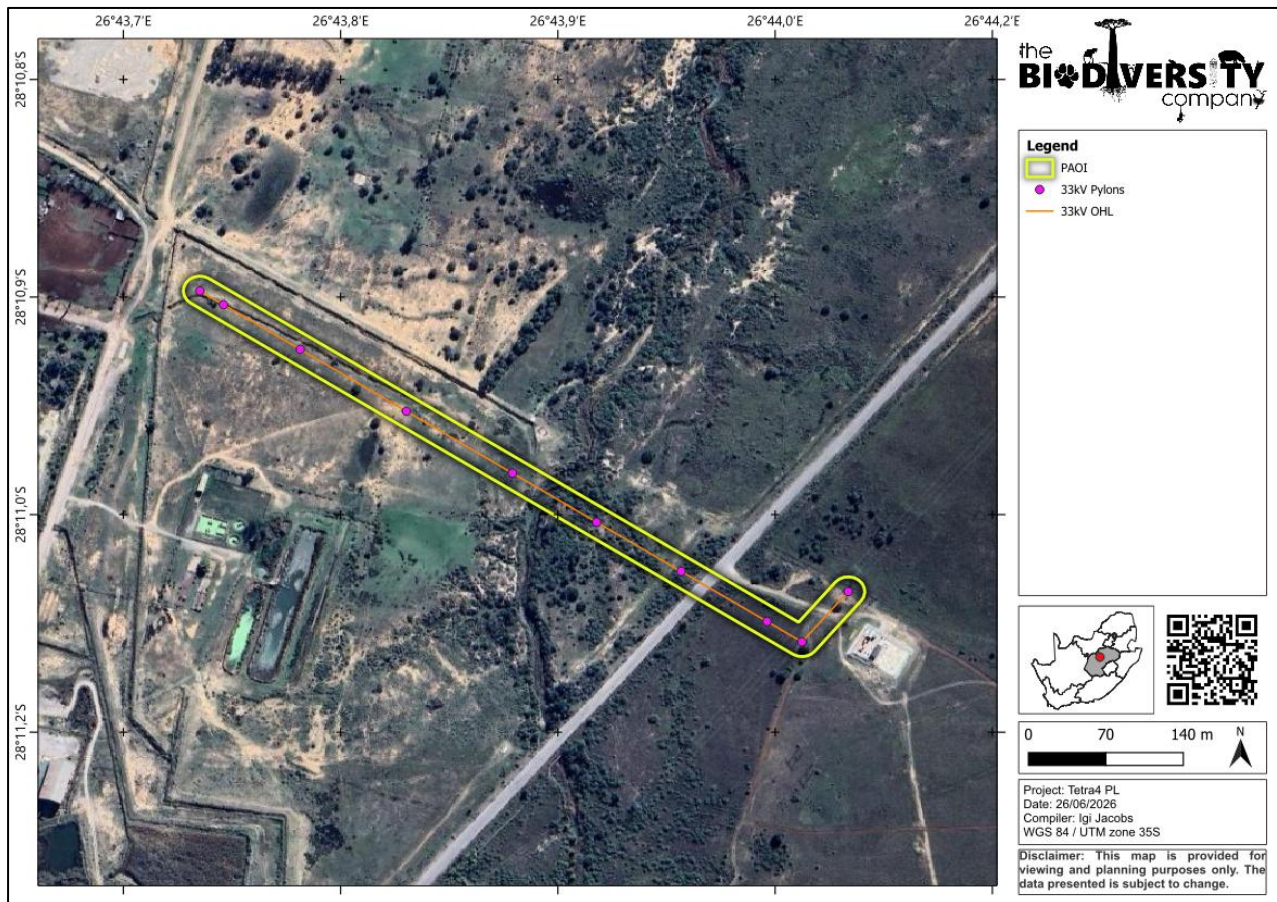


Figure 2 The proposed layout and infrastructure associated with the 33 kV Powerline Alignment

Findings

Terrestrial Findings

A field survey of the area was conducted from the 14th to the 18th of March (wet season survey) 2022, with a follow-up survey on the 22nd of June 2026 (dry season survey). During the most recent site visit, no additional species, protected or Species of Conservation Concern (SCC) were observed beyond those previously recorded (TBC 2022). Four distinct habitats were delineated within the PAOI: Degraded Grassland, Disturbed Grassland, Transformed, and Water Resources. The habitat and SEI delineations for the PAOI are illustrated in *Figure 3* and *Figure 4*, corresponding to the Tetra4 132 kV and the Tetra4 33 kV Powerlines, respectively. Refer to Appendix A: Site **Photos** for photos of each habitat type identified. These delineations are similar to those delineated in the TBC report 2022. The SEI status of the Tetra4 132 kV Powerline and the Tetra4 33 kV Powerline can be seen in *Figure 5* and *Figure 6*. Please note that the habitats and SEI are consistent for both the terrestrial and avifaunal aspects.

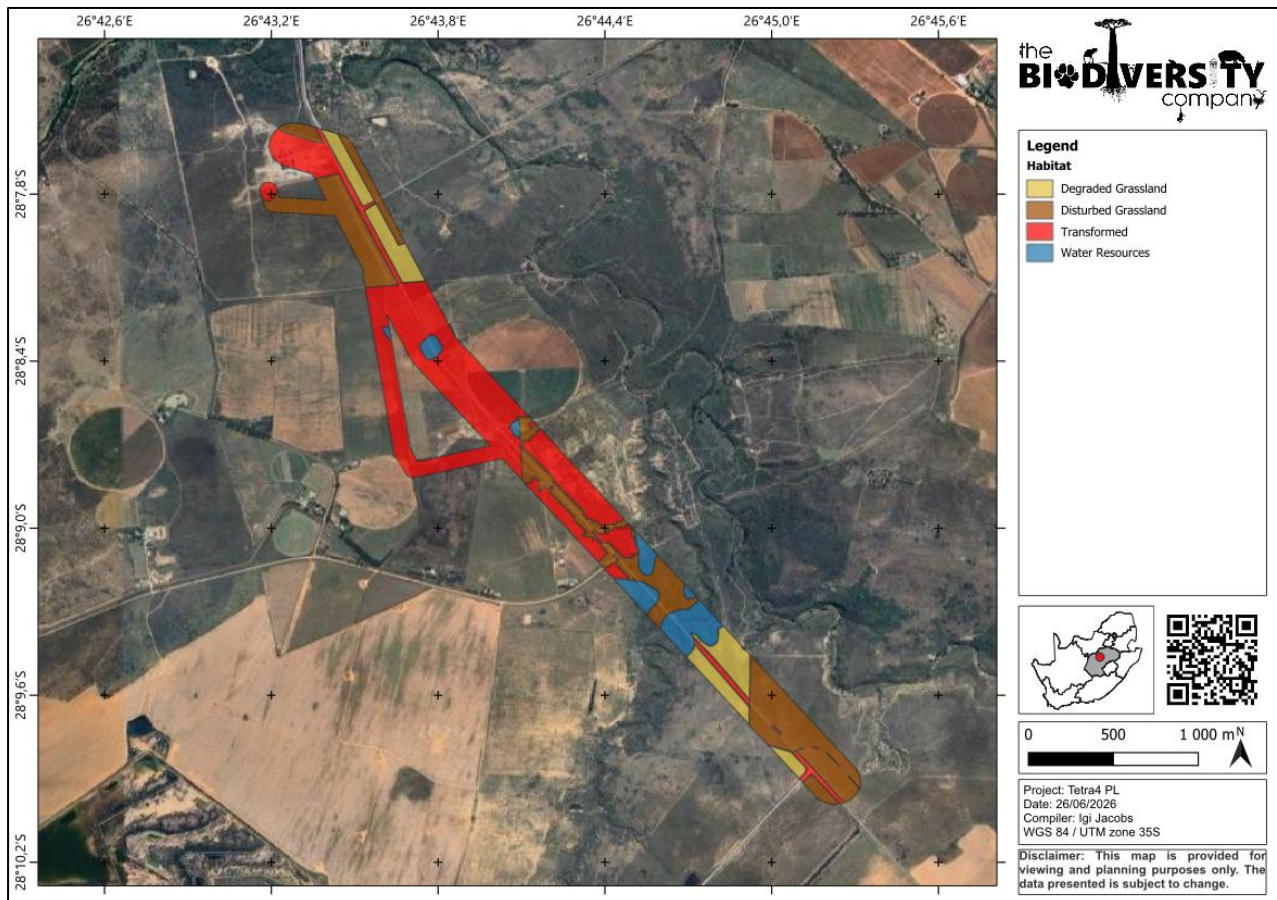


Figure 3 *Delineated terrestrial habitats for the Tetra4 132 kV Powerline, which is applicable to avifauna*

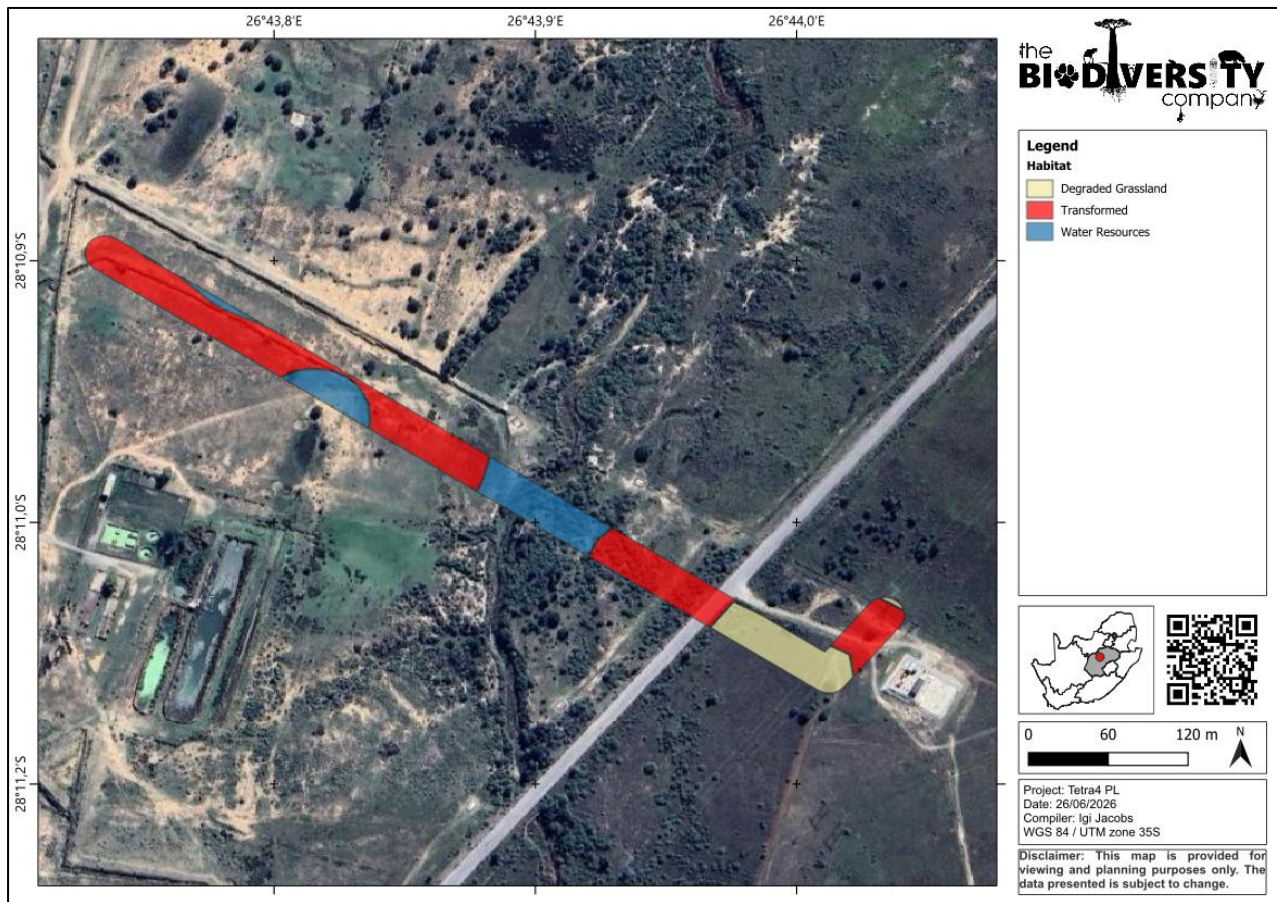


Figure 4 Delineated terrestrial habitats for the Tetra4 33 kV Powerline, which applies to avifauna

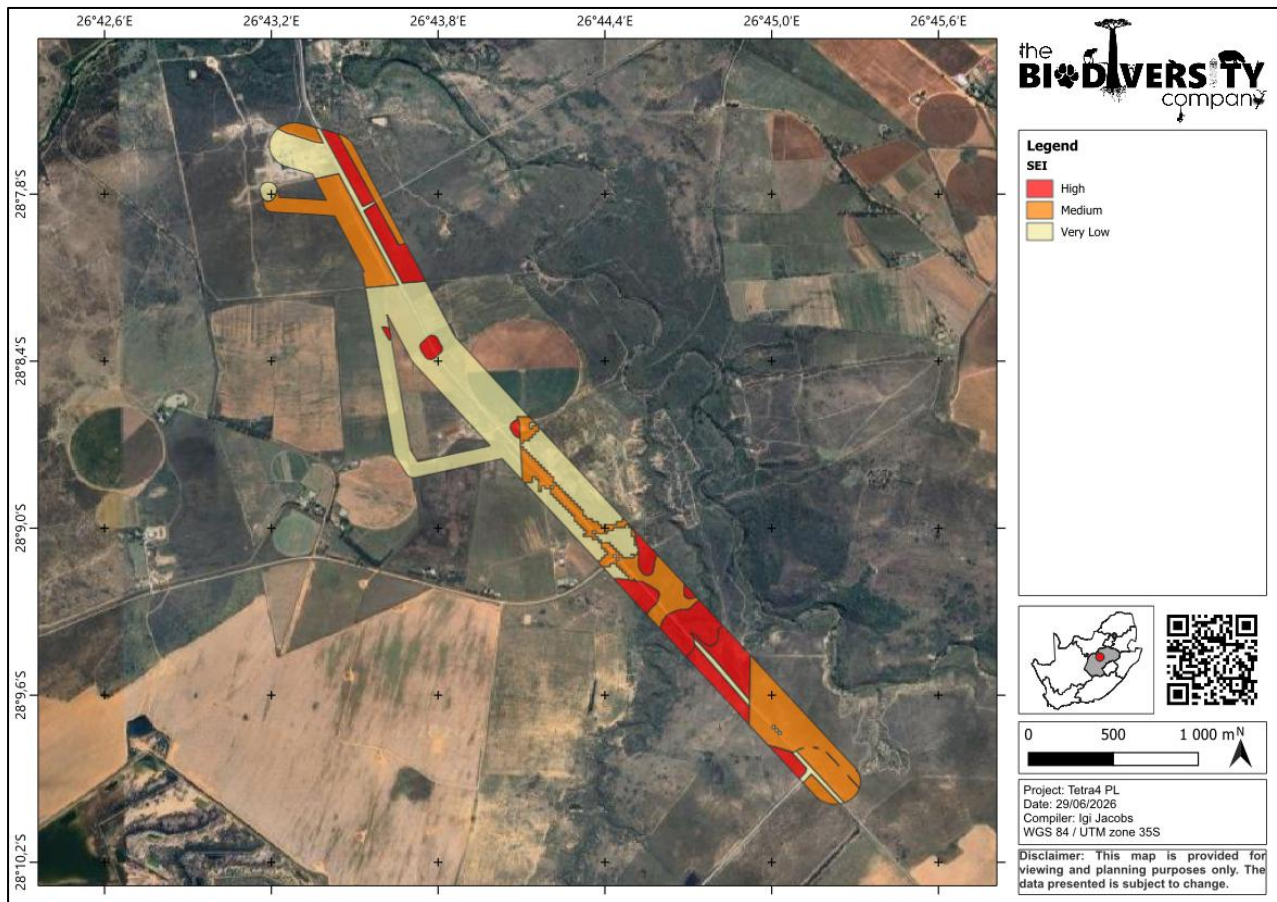


Figure 5 Sensitivities assigned to habitats identified for Tetra4 132 kV Powerline include all themes

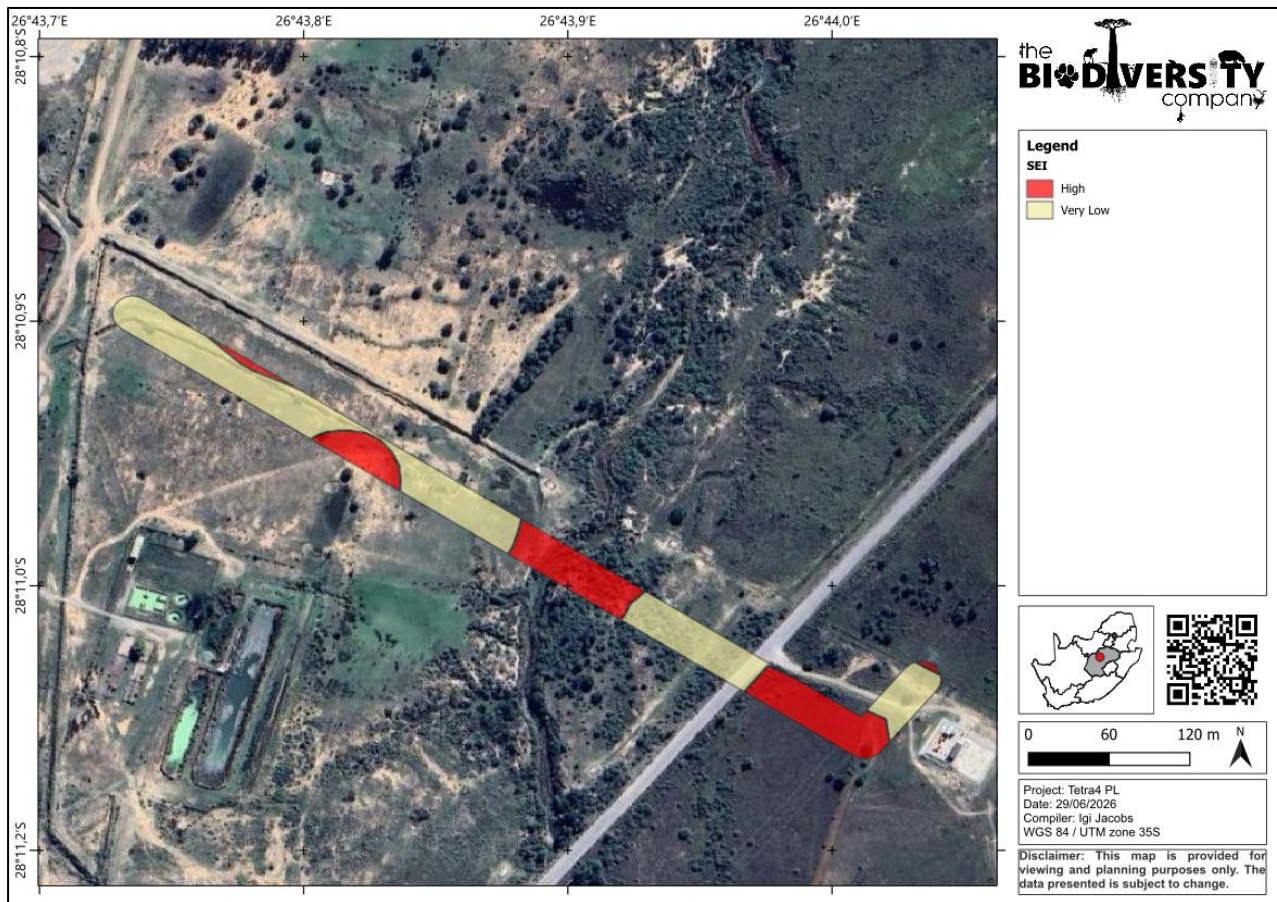


Figure 6 Sensitivities assigned to habitats identified for Tetra4 33 kV Powerline include all themes

The full terrestrial assessment undertaken in 2022 (TBC, 2022) recommended specific buffer zones for sensitive terrestrial and avifaunal habitats occurring within the proposed project area. These buffer recommendations apply to both the construction and operational phases of the development.

The proposed Tetra4 Powerline Deviation layout has been designed to comply with the recommended buffer requirements for sensitive terrestrial and avifaunal habitats. The final alignment and micro-siting of all pylons should be carefully planned to avoid placement within areas delineated as having “Moderate” to “Moderately High” terrestrial and avifaunal sensitivity. Complete avoidance of these sensitive habitats for the proposed 132 kV deviations and 33 kV alignment might be achievable at the infrastructure planning stage, provided that pylons are sited outside the identified sensitive areas and their associated buffer zones.

However, if it is not possible to avoid all sensitive areas, then the mitigation measures outlined in the TBC, 2022 report must be strictly implemented to minimize potential impacts on these habitats.

The current assessment has confirmed that the habitat sensitivities, ecological constraints, and recommended buffer zones remain unchanged from the earlier findings. As such, the avoidance, micro-siting, and management measures previously prescribed continue to be applicable and effective for minimizing terrestrial impacts associated with the proposed powerline deviations.

Avifauna Findings

In the original assessment, eighty-nine (89) avifauna species were recorded. Four (4) of these species were rated as Species of Conservation Concern (SCC) at the time of the original report (2021), whereas 75 were provincially protected. Subsequently, using the new listings as per Lee et al. (2025) and IUCN 2025, an additional 9 SCC are present based on the current listings.

The main habitat types identified across the PAOI were initially identified largely based on aerial imagery and from information obtained from the previous reports. Four (4) main habitats were identified in the PAOI: Transformed, Disturbed Grassland, Degraded Grassland and Water Resources. Refer to Appendix A: Site **Photos** for photos of each habitat type identified.

Based on the outcomes of the SEI determination, the degraded grassland and Water resources within the PAOI possess a High SEI. This denotes that avoidance mitigation, wherever possible, must be implemented. The disturbed grassland has a medium SEI. The diversion crosses a Very Low SEI area and would therefore not alter the impacts associated with the line. The main mitigations recommended in the original assessments are Bird-friendly powerline design, Bird diverters/flappers on lines, especially near water resources, Monitoring of bird carcasses along OHL routes.

The mitigation measures proposed for avifauna in this amendment align fully with those established in the TBC 2022 study. The current survey has verified that the species composition, habitat sensitivities, and key risk areas for avifauna have not changed since the previous assessment. Accordingly, the implementation of bird-friendly powerline designs, installation of bird diverters, and ongoing monitoring remain appropriate and sufficient to address potential avifaunal impacts, as previously recommended.

Previous Study Comparison

The terrestrial and avifauna study listed in the Project Background was considered as background information. The initial terrestrial and avifauna study was conducted in 2022 (TBC, 2022), resulting in an ecological assessment report for the project area. Table 1 compares the terrestrial and avifauna findings for the two powerline corridors assessed in the current study with those from 2022. The results of the current study support those of the previous study, with no changes in the sensitivity ratings.

Table 1 Terrestrial and Avifauna findings of the current study in relation to the previous studies (TBC, 2022)

Powerlines	Comments and Recommendations	
	Previous Studies (TBC, 2022)	Current study
132 kV Powerline	Findings: No specific ecological constraints were recorded. and impacts can be avoided with the mitigation provided. Location: Located in previously designated Low sensitivity area (TBC, 2022). Sensitivity area: Classified as "Very Low" sensitivity area and traversing "Medium" to "Very High" sensitivity areas. Recommendation: No changes to placement area required from a terrestrial side or an avifaunal aspect.	Findings: No specific ecological constraints were recorded for the 132 kV deviations and completely avoid sensitive areas. Location: Located in previously designated Low sensitivity area (TBC, 2022). Sensitivity area: Classified as "Low" sensitivity area. Recommendation: No changes to placement area required from a terrestrial side or an avifaunal aspect.
33 kV Powerline	Findings: It was noted that the transmission loop will encroach into the delineated Terrestrial and Avifauna areas. Location: Located in previously designated Moderate to Moderately High sensitivity areas (TBC, 2022). Sensitivity area: Classified as Moderate to Moderately High sensitivity area. Recommendation: Amend placement of transmission loop to avoid encroachment into the delineated Terrestrial and Avifaunal areas and buffer zones.	Findings: No specific ecological constraints were recorded and located outside terrestrial or avifauna buffer buffers. Location: Located in previously designated Low sensitivity area (TBC, 2022). Sensitivity area: Classified as "Low Sensitivity" area (although the DFFE regarded it a terrestrial "Very High" area). Recommendation: No changes to placement area required.

The proposed transmission loop lines for the Tetra4 Powerlines, as identified in previous specialist studies, are currently situated outside areas of "moderate" and "moderately high" terrestrial and avifaunal sensitivity (TBC, 2022). Where crossings of sensitive areas are unavoidable, all infrastructure should be positioned within the boundaries in areas that would have the least significant impact to the area.

Conclusion and Recommendations

The terrestrial and avifaunal surveys conducted in 2022 concluded that the sensitivity of habitats within the Tetra4 132 kV and 33 kV Powerline Deviation PAOI ranged from “Moderate” to “Moderately High.” The findings of the current assessment, undertaken in June 2026, are consistent with those of the previous study, with habitat sensitivities similarly ranging from “Moderate” to “Moderately High.” In addition, the character and descriptions of terrestrial and avifaunal habitats recorded for the Tetra4 132 kV and 33 kV Powerline Deviation PAOI are comparable between the 2022 and 2026 assessments.

The majority of the proposed Tetra4 132 kV and 33 kV Powerline Deviation alignment does not overlap with areas of elevated terrestrial or avifaunal sensitivity. While certain portions of the proposed 33 kV corridor traverse areas of “Moderate” and “Moderately High” sensitivity, the impact can be minimized at the infrastructure level by micro-siting pylons within sensitive habitats in areas where their effect will be least significant. The proposed 132 kV corridor deviations do not overlap with any mapped areas of elevated terrestrial or avifaunal sensitivity. As such, no further layout changes are considered necessary from a terrestrial or avifaunal perspective.

Notwithstanding the above, precautionary mitigation and impact management measures should still be implemented where the powerline infrastructure traverses sensitive terrestrial or avifaunal habitats, particularly during the construction and operational phases. This should be undertaken in accordance with the recommendations contained in the Terrestrial and Avifaunal Assessment reports (TBC, 2022), together with the mitigation measures prescribed in this amendment. On this basis, indirect impacts to sensitive habitats are anticipated to be of “Low” significance.

Overall, no significant impacts are expected from a terrestrial or avifaunal perspective as a result of the proposed amendment, provided that the recommended mitigation measures are implemented and that all pylons are micro-sited outside delineated sensitive habitats and associated buffer areas.

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Appendix A: Site Photos

Table 0-1 illustrates photographs of the habitat units identified within the Tetra4 132 kV and 33 kV Powerline Deviation PAOI.

Table 0-1 *Photos of the Different habitats identified within the Tetra4 132 kV and 33 kV Powerline Deviation PAOI*

Water course	Photos	Water course	Photos
Water Resource		Degraded Grassland	
Transformed		Disturbed Grassland	