

PALAEONTOLOGICAL SPECIALIST INPUT FOR THE PART II AMENDMENT OF THE ENVIRONMENTAL AUTHORISATION:

PROPOSED DEVIATION TO THE AUTHORISED 132 KV TRANSMISSION POWERLINE ALIGNMENT, NEAR VIRGINIA, MATJHABENG LOCAL MUNICIPALITY, FREE STATE PROVINCE

To whom it may concern:

Date: 14 June 2026

The 2022 Palaeontological Impact Assessment (Butler, 2022), undertaken for the Tetra4 Cluster 2 Gas Production Area near Virginia, within the Matjhabeng Local Municipality, Free State Province (Environmental Authorisation Reference: 14/12/16/3/3/1/2754, issued on 20 September 2023), and the subsequent Palaeontological Compliance Statement (Banzai Environmental (Pty) Ltd, June 2023) prepared for the associated TETRA4 33 kV and 132 kV Powerlines within a 300 m-wide corridor, in response to a Department of Forestry, Fisheries and the Environment (DFFE) comment of 25 May 2023 on the Draft Basic Assessment Report (DFFE: 14/12/16/3/3/1/2754).

Detailed engineering design and final servitude negotiation has since shown that a deviation from portions of the approved 132 kV alignment is required. This letter supports the resulting Part II Amendment application being progressed by EIMS (DFFE Reference: 14/12/16/3/3/1/2754; SAHRIS Case ID: 20978), and confirms whether the deviation changes the palaeontological sensitivity or mitigation requirements already identified for the approved alignment.

Description of the Proposed Deviation

The deviation covers two sections of the approved 132 kV alignment: between structures 50 and 57, and between structures 40 and 67, near Helpmekaar in the northern part of the corridor (refer to Figures 1 to 4). Both sections fall within the broader Tetra4 132 kV corridor near Virginia, already assessed in the studies referred to above.

Geology and Palaeontological Sensitivity of the Authorised Corridor

The approved 132 kV corridor is underlain mainly by Quaternary superficial sediments, alluvium, colluvium, eluvium and gravel, with Permian-aged sandstone and shale of the Adelaide Subgroup (Balfour Formation), Beaufort Group, Karoo Supergroup, exposed in its southern section near the Doringrivier (Banzai Environmental, 2023). The SAHRIS PalaeoMap rates the Quaternary units as Moderate sensitivity and the Adelaide Subgroup as Very High (Almond et al., 2013). A two-day field survey for the original PIA

(Butler, 2022), conducted on 26 and 27 February 2021, found no fossiliferous outcrops. The development footprint was allocated an overall Medium palaeontological significance, Very High pre-mitigation and Moderate post-mitigation for the associated heritage resources impact.

Findings for the Proposed Deviation

The deviation itself is underlain by Quaternary sands (Qs, bright yellow on the 1:250 000 Winburg 2826 Geological Map) and Quaternary alluvium along the local drainage lines (Figure 3), both rated Moderate sensitivity on the SAHRIS PalaeoMap (Almond et al., 2013). It does not cross the Adelaide Subgroup (Balfour Formation) or the Karoo dolerite intrusions, which occur further south and east along the Doringrivier, near Beverley and Kalkoenkrans. The SAHRIS PalaeoMap confirms that the deviation remains within the Moderate (green) sensitivity zone, clear of the Very High (red) zones near Glen Ross to the north-east and Beverley/Kalkoenkrans to the south (Figure 4). Satellite imagery shows the deviation crossing natural veld of low relief, consistent with the vegetation cover and absence of outcrop recorded during the 2021 field survey, rather than the cultivated fields found elsewhere in the wider study area (Figure 1).

Specialist Comment

Having reviewed the deviation against the geology, SAHRIS sensitivity and land use of the previously assessed corridor (Figures 1, 3 and 4), the deviation is clearly located on the same Quaternary sediments and within the same Moderate sensitivity class as most of the approved alignment. No new geological units, higher sensitivity classes, or palaeontological risks are introduced by the proposed deviation.

Conclusion and Recommendation

The deviation between structures 50 and 57, and between structures 40 and 67, is underlain by the same Quaternary sediments and Moderate palaeontological sensitivity as the rest of the approved alignment, and is not expected to add to or alter the palaeontological impacts already assessed (Butler, 2022; Banzai Environmental, 2023). A re-assessment is therefore not considered necessary.

The mitigation measures included in the June 2023 Palaeontological Compliance Statement, including the Chance Find Protocol, remain applicable to the deviated alignment and must continue to be implemented. Should palaeontological heritage be uncovered during construction, the Chance Find Protocol must be actioned immediately and the find reported to the South African Heritage Resources Agency (SAHRA).

We trust you find the above in order. If there are any uncertainties or additional information required, please feel free to contact the undersigned.

Yours sincerely



Elize Butler

Banzai Environmental (Pty) Ltd

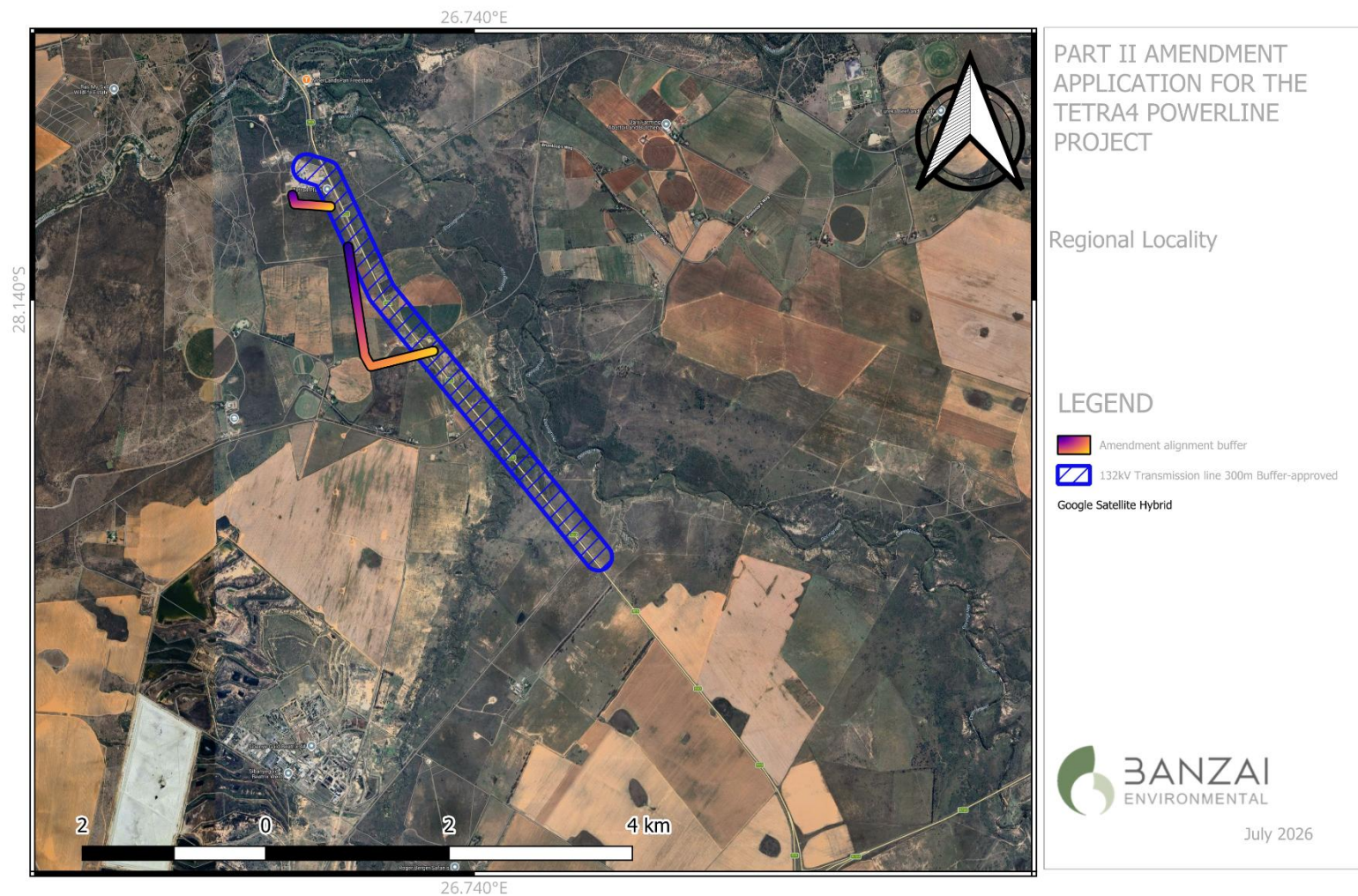


Figure 1: Regional Locality (Google Satellite Hybrid) indicating the proposed deviation in relation to the authorised 132 kV alignment.

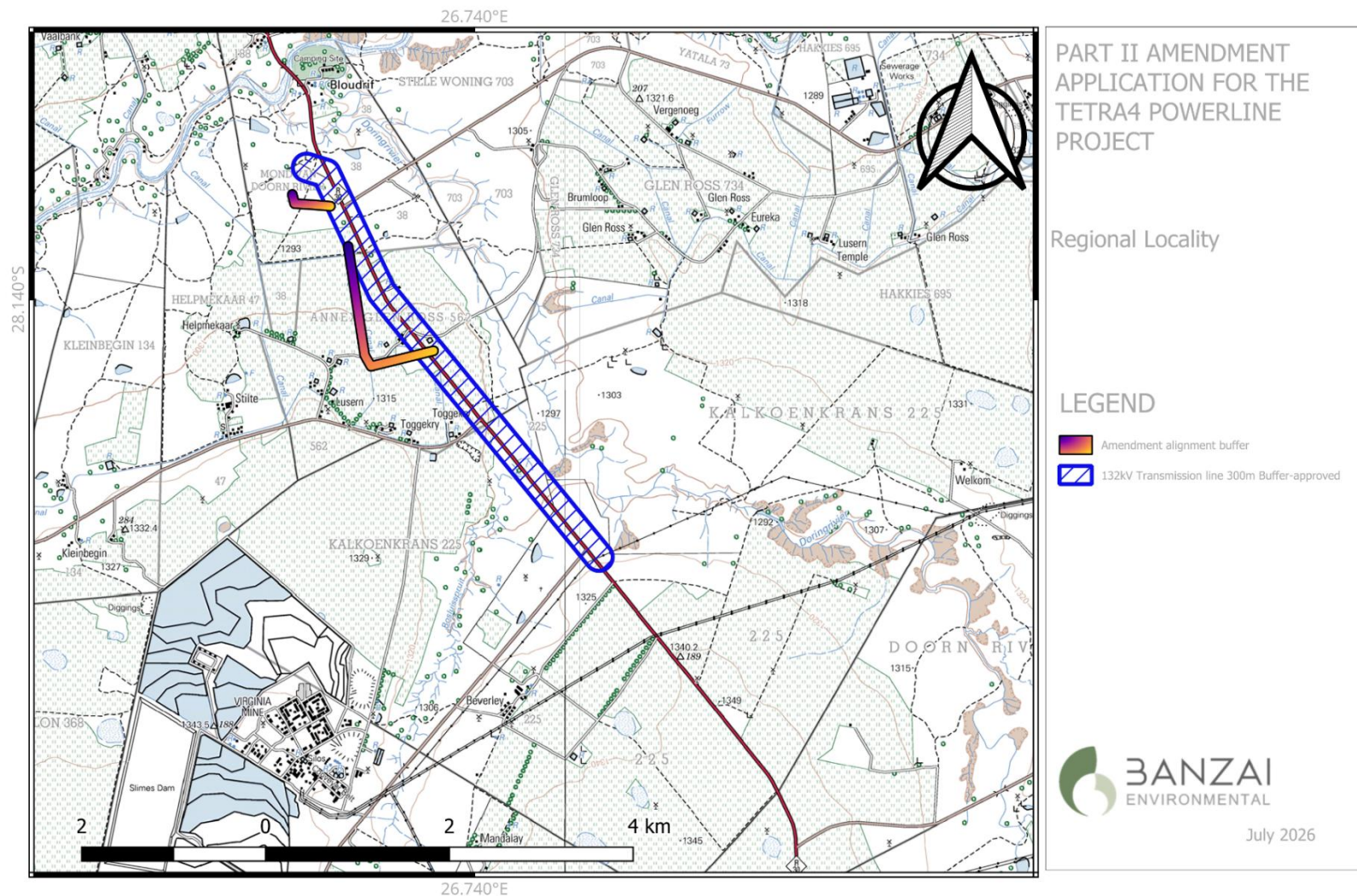


Figure 2: Extract of the 1:50 000 topographical map indicating the proposed deviation in relation to the authorised 132 kV transmission powerline corridor, near Helpmekaar, Matjhabeng Local Municipality, Free State Province.

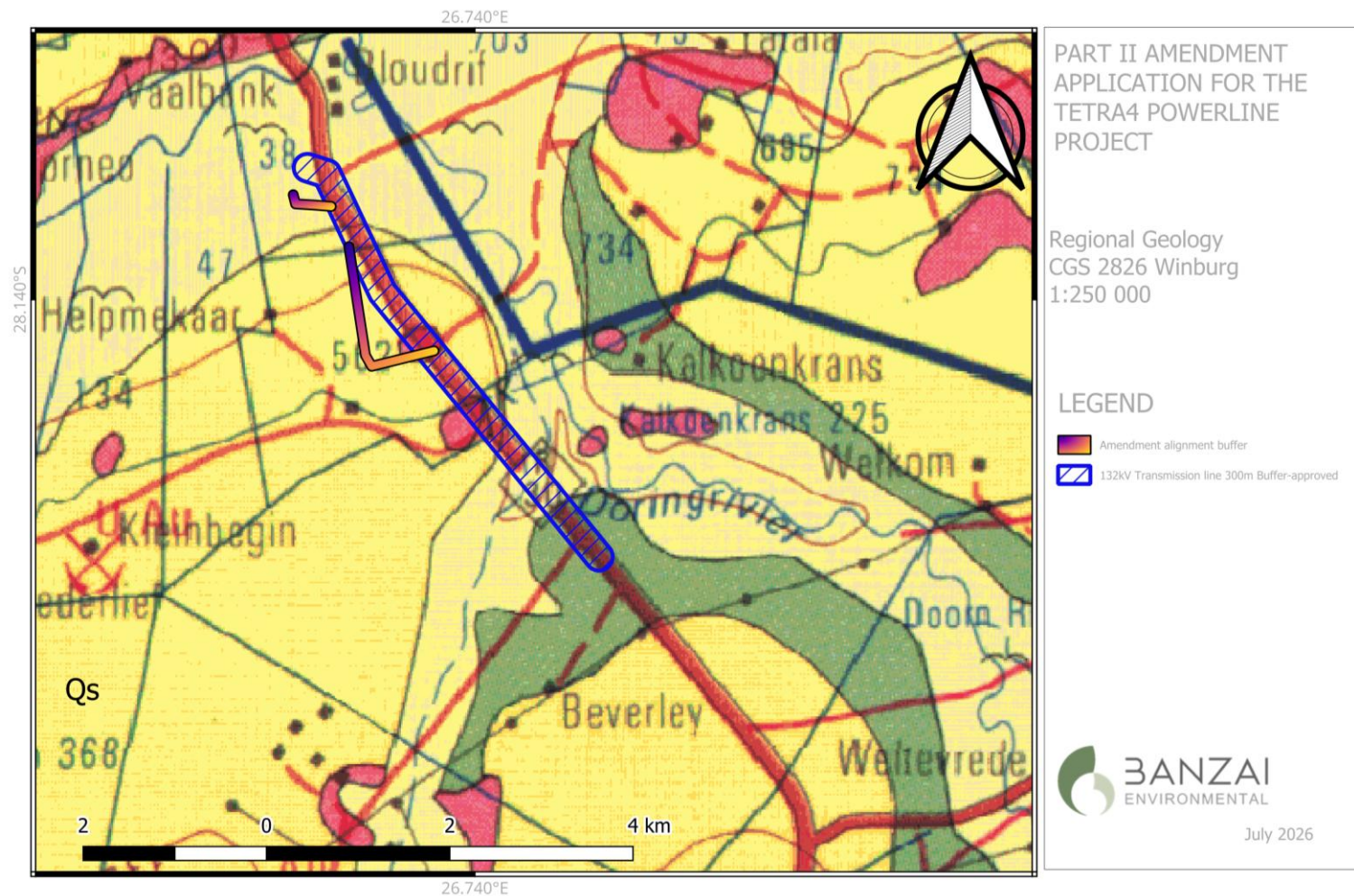


Figure 3: Extract of the 1:250 000 Winburg 2826 Geological map (Council for Geosciences) indicating that the proposed deviation is underlain by Quaternary sands (Qs, bright yellow) as well as Quaternary alluvium (yellow single bird figure).

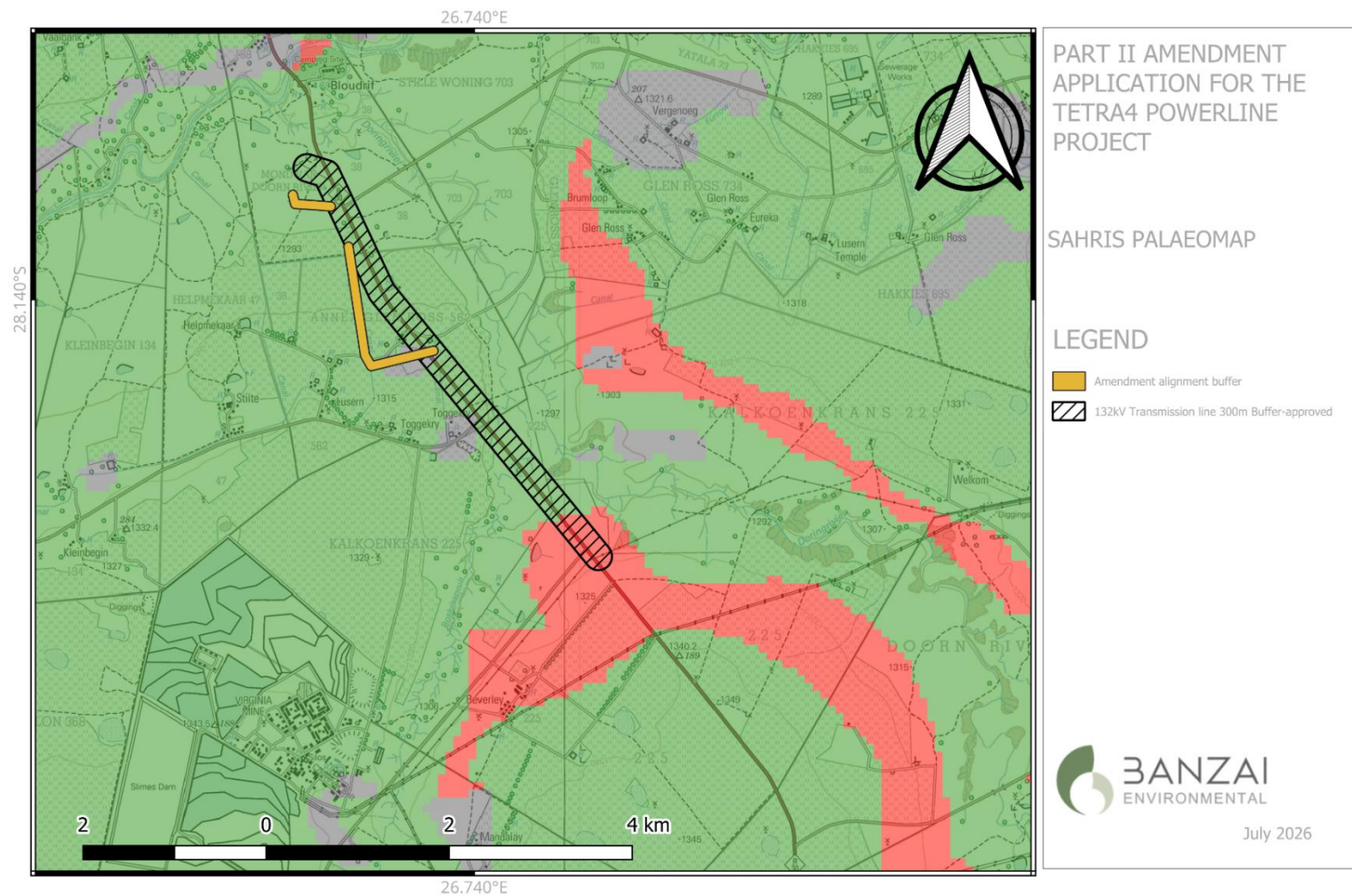


Figure 4: Extract of the SAHRIS PalaeoMap indicating that the proposed deviation falls within an area of Moderate (green) Palaeontological Sensitivity.