

**NATURA VIVA cc**  
**Palaeontological Impact Assessments & Heritage Management,**  
**Natural History Education, Tourism, Research**

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**Proposed rooibos tea agricultural developments on farms Zonderwaterkraal and  
Tweerivier near Nieuwoudtville, Calvinia District, Northern Cape**

**PALAEONTOLOGICAL HERITAGE COMMENT**

The project areas for the proposed rooibos tea agricultural developments on Farms Zonderwaterkraal and Tweerivier, Calvinia District, Northern Cape, are underlain at depth by Late Silurian to Early Devonian sandstones and quartzites of the Table Mountain Group (1: 250 000 geology sheet 3118 Calvinia, Council for Geoscience). These fluvial sediments – assigned to the Rietvlei Formation (and possibly also the slightly older Skurweberg Formation) are generally of low palaeontological sensitivity, with only sparse records of low-diversity trace fossils (invertebrate burrows and trackways) recorded from a few thin horizons. In the study area, field photos and satellite imagery suggest that the Palaeozoic bedrocks are mantled with sandy to gravelly soils (c. 80 cm) and it is unlikely that substantial excavations into the bedrocks will be involved here.

It is concluded that the proposed agricultural developments do not pose a significant threat to local fossil heritage resources and, pending the possible discovery of significant new fossil material during construction, no further specialist palaeontological input is required here.



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**KEY REFERENCES:**

ALMOND, J.E. & PETHER, J. 2008. Palaeontological heritage of the Northern Cape. Interim SAHRA technical report, 124 pp. Natura Viva cc, Cape Town.

DE BEER, C.H., GRESSE, P.G., THERON, J.N. & ALMOND, J.E. 2002. The geology of the Calvinia area. Explanation to 1: 250 000 geology Sheet 3118 Calvinia, 92 pp. Council for Geoscience, Pretoria.

**NATURA VIVA cc (Reg. No. 2000/019296/23)**  
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**Figure 1: Google earth© satellite image showing the location of the Zonderwaterkraal and Tweerivier agricultural development areas situated on the northern side of the Doringrivier some 50 km south of Nieuwoudtville, Northern Cape. The grey areas are underlain by very sparsely fossiliferous fluvial quartzites of the Table Mountain Group. Rusty-brown areas in the NW portion of the satellite image are small outliers of highly-fossiliferous Bokkeveld Group rocks that are *not* represented within the agricultural project areas.**

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