

# **Palaeontological Impact Assessment for Kgalalatsane PV facility Odi Airport Basetsana / White Plane PV Facility**

**on behalf of Jaco van de Walt of  
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## **Palaeontological Impact Assessment**

The site of Kgalalatsane PV facility (Odi Aerodrome or White Plane PV Facility; 25°32'39.05"S, 27°56'13.25"E) is north of Brits-Pretoria. Geologically it is in the Bushveld Complex and close to established platinum mines that are exploiting the Merensky reef. The underlying rocks are part of the western limb of the Rustenburg Layered Suite which comprises a complete differentiation sequence for a basic magma. These intrusive rocks have a noritic marginal zone and gabbronoritic main zone. More specifically the site has the Upper Zone of the Rustenburg Layered suite: the Pyramid gabbro/norite and the underlying Main Zone: the Bierkraal magnetite and gabbro (Fig 1). These igneous rocks are around 2070 million years old (Cawthorn et al., 2006).

The rocks are igneous and intrusive with large crystals from slow cooling, rich in a number of platinum group elements, but do not contain fossils. Furthermore they are too old for any recognizable forms of fossils; only bacteria and algae were present at this stage of Earth history (Taylor et al., 2009).

## **Conclusion and recommendation**

Any mining, construction or servitude operations for this site would not impact on the fossil record of South Africa.

## **References**

Cawthorn, R.G., Eales, H.V., Walraven F., Uken, R., Watkeys, M.K., 2006. The Bushveld Complex. In: Johnson, M.R., Anhauser, C.R. and Thomas, R.J., (eds). The Geology of South Africa. Geological Society of South Africa, Johannesburg / Council for Geoscience, Pretoria. pp 261-281.

Taylor, T.N., Taylor, E.I., Krings, M., 2009. Palaeobotany. The biology and evolution of fossil plants. Academic Press, Burlington MA, USA. 1230pp.

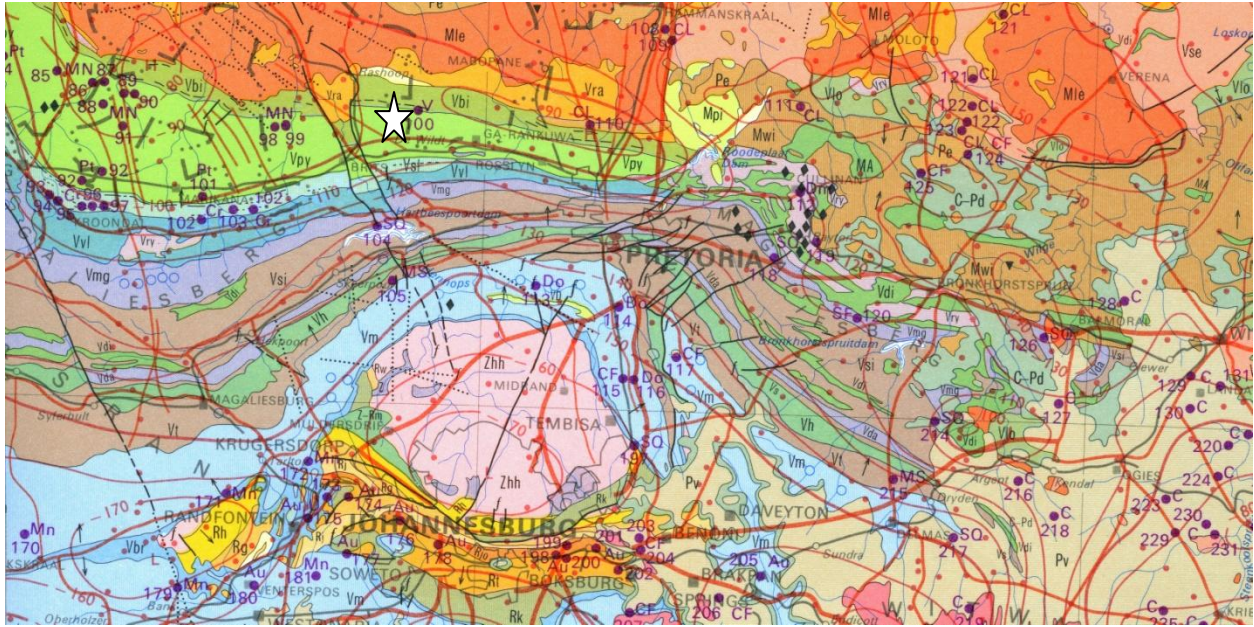


Figure 1: Geological Map (Council for Geosciences, 1984) of the region. Star shows site under investigation. Vbi = Bierkraal magnetite gabbro; Vpy = Pyramid gabbro norite.