



BPI for Palaeontological Research

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Dear Mark

Photovoltaic Development, Grootvlei, – Palaeontological Impact Assessment

As requested, I have undertaken a desktop EIA to assess the possible affect on palaeontological heritage which will result from the proposed Photovoltaic Cell Project within the Grootvlei village area (Figure 1).

Almost the entire study area is underlain by proposed development area is underlain by sedimentary rocks Permian Vryheid Formation of the Ecca Group of the Karoo Supergroup, with some Jurassic Karoo dolerites toward the South which in turn are covered by thick soil with grassland and marshes.

The rocks of the Vryheid Formation of the Ecca Group are renowned for their wealth of plant fossils of the famous Gondwanan *Glossopteris* flora which has been described from Permian-aged rocks. This flora is the source of the coal which is mined from the Vryheid Formation in South Africa. The dolerites, which are plutonic volcanic rocks, will not contain fossils. Because important plant fossil localities are known from the Vryheid Formation the proposed photovoltaic development may expose rocks of the Vryheid Formation which are not currently visible as they are covered by soil and vegetation.

In my opinion this development will not negatively affect palaeontological heritage and suggest that, from a paleontological perspective, this development should proceed. If construction activities expose extensive mudrocks of the Vryheid Formation, it will create a unique opportunity to explore the area for fossils. It is thus recommended that, should fossil bearing mudrocks of the Vryheid Formation be exposed by excavation activities, a qualified palaeontologist be contacted to assess the exposure for fossils

so that the necessary rescue operations are implemented. Depending on the nature of the fossils discovered, this could entail excavation and removal to a registered palaeontological museum collection. A list of professional palaeontologists is available from South African Heritage Resources Agency (SAHRA).

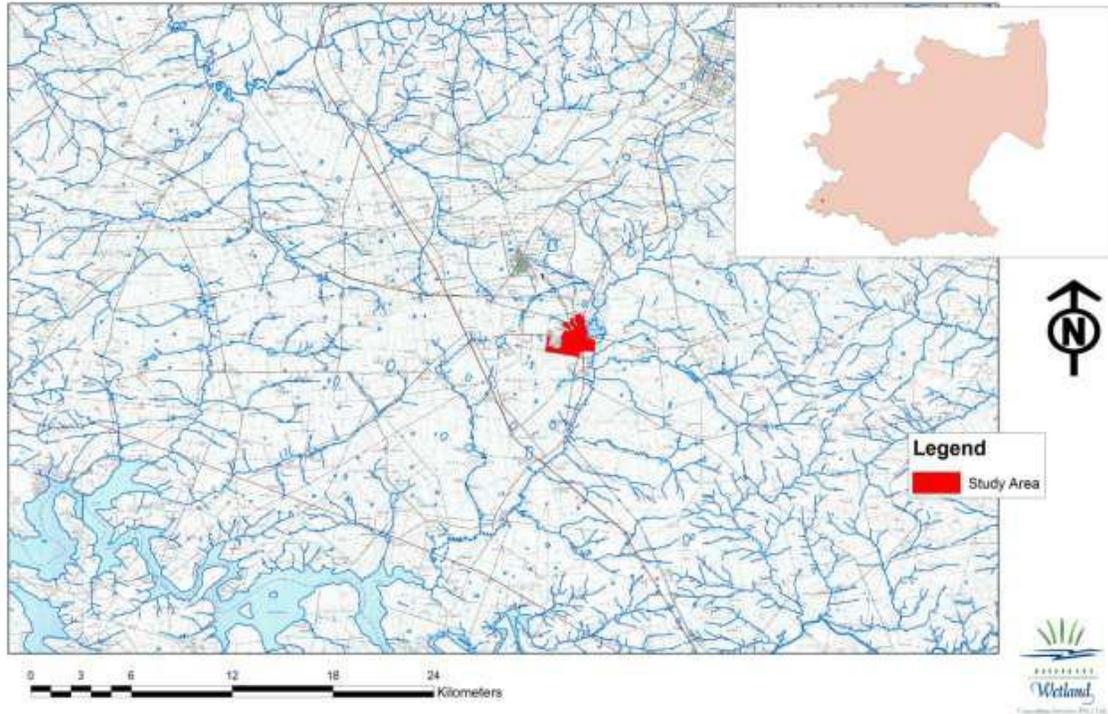


Figure 1: Map showing the locality of the study area at Grootvlei, Mpumalanga

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Yours sincerely

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