

Exemption from Phase 1 Palaeontological Impact Assessment: Boipatong Community Library, Portion 9 of Erf 1993, Boipatong, Emfuleni Local Municipality, Gauteng Province.

Site: Portion 9 of Erf 1993, Boipatong, Emfuleni Local Municipality, Gauteng Province

Map Reference: 1:250 000 scale geological map 2628 East Rand.

Site Coordinates: 26 40 18.9S 27 50 52.8E

The proposed activity calls for the construction of a new community library on an area covering <5000 m² located on the corner of Dr Nkhoma Street and Sekati Road, Boipatong (**Fig. 1**). According to the 1:250 000 scale geological map 2628 East Rand, the study area is underlain by palaeontologically significant fluvial and deltaic deposits of coarse sandstone, conglomerate and coal of the Ecca Group Vryheid Formation (Karoo Supergroup, ca. 290 to 270 million years ago) (Johnson *et al.* 2006). The Vryheid Formation is known for its abundant coal deposits. Well-preserved plant fossils are commonly found in the shales associated with the coal seams (Anderson and Anderson 1985). A wealth of plant fossils is recorded from this formation, including the well-known *Glossopteris* Flora (including lycopods, rare ferns and horsetails, conifers, Ginkgoales and Cordaitales,). Abundant, low diversity trace fossils, rare insects, possible conchostracans, non-marine bivalves and fish scales have also been reported from this formation (MacRae 1999).

Potential palaeontological impact resulting from the proposed project is regarded as low because of the low topography terrain that is capped and buffered by palaeontologically insignificant superficial overburden as well as the size and scale of excavations over a relatively small impact area (< 2m - deep linear foundation trenches on an area <5000m² in size).

It is recommended that exemption from further palaeontological studies is granted for the proposed project, provided that all excavation activities are restricted to within the boundaries of the development footprint. In the event of chance exposure of fossil remains it is advised that SAHRA is notified as soon as possible so that appropriate steps (*e.g.* recording, sampling or collection) can be taken by a professional palaeontologist.

References

Anderson, J.M. and Anderson, H.M., 1985. Palaeoflora of Southern Africa: *Prodromus of South African megaflores, Devonian to Lower Cretaceous*. A.A. Balkema, Rotterdam. 423 pp.

Johnson, M.R., van Vuuren, C.J., Visser, J.N.J., Cole, D.I., Wickens, H.deV., Christie, A.D.M., Roberts, D.L., Brandl, G., 2006. Sedimentary rocks of the Karoo Supergroup. In: Johnson, M.R., Anhaeusser, C.R. and Thomas, R.J., (Eds). *The Geology of South Africa*. Geological Society of South Africa, Pretoria. Pp 461 – 499.

MacRae, C. 1999. *Life Etched in Stone*. Fossils of South Africa. The Geological Society of South Africa, Johannesburg.

SAHRIS PalaeoSensitivity Map 2015 (<http://www.sahra.org.za/sahris/map/palaeo>).

DECLARATION OF INDEPENDENCE

I, Lloyd Rossouw, declare that I act as an independent specialist consultant. I do not have or will not have any financial interest in the undertaking of the activity other than remuneration for work as stipulated in the terms of reference. I have no interest in secondary or downstream developments as a result of the authorization of this project and have no conflicting interests in the undertaking of the activity.

A handwritten signature in black ink, appearing to read 'L. Rossouw', with a large, stylized initial 'L'.

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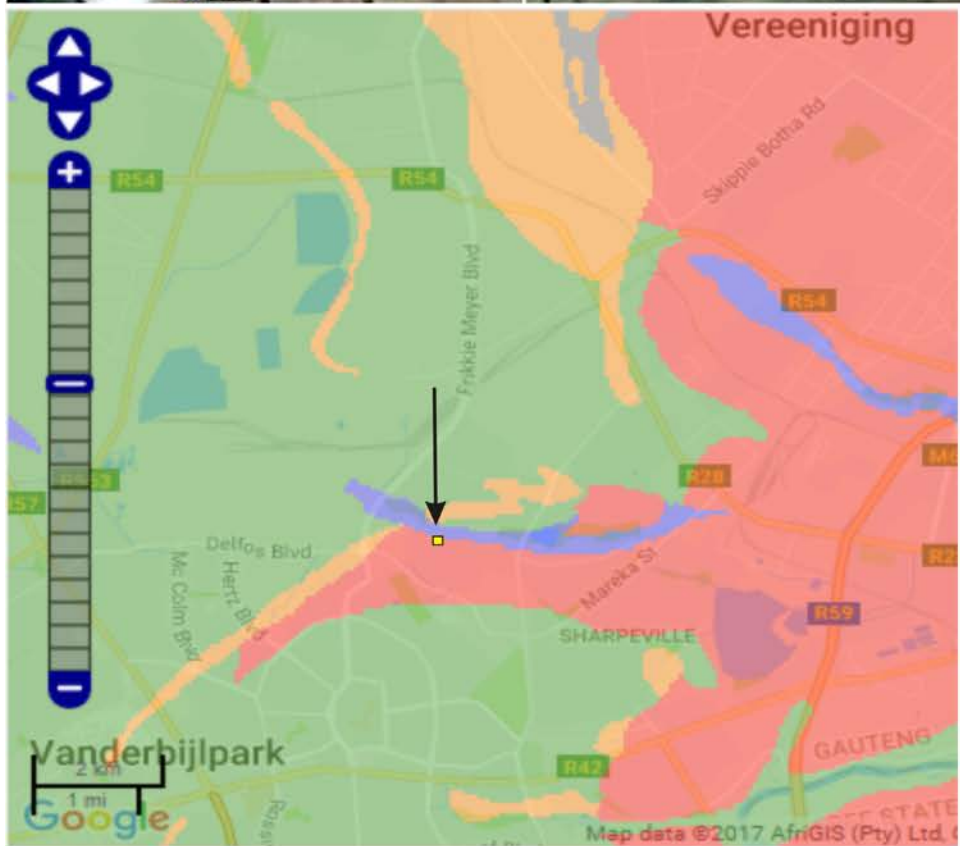


Figure 1. Aerial view of the study area (top) and its position on the SAHRIS palaeontological sensitivity map (red area).