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EVOLUTIONARY STUDIES INSTITUTE

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Dr Ragna Redelstorff
Heritage Officer Archaeology, Palaeontology & Meteorites Unit
South African Heritage Resources Agency
111 Harrington Street
Cape Town 8001

Dear Dr Redelstorff

RE: Request for Exemption of any Palaeontological Impact Assessment for the proposed clearing of indigenous vegetation for agriculture on Farm Granite Hill 456, Cromdale, south of Mbombela, Mpumalanga.

In my capacity as a professional palaeontologist, I am requesting exemption for palaeontological impact assessment in terms of the National Heritage Resources Act (Act 25 of 1999) and the National Environmental Management Act (Act 107 of 1998) which requires that the proposed development must be preceded by the relevant impact assessment, in this case for palaeontology.

The owner of the property plans to clear some indigenous vegetation and old cultivation to develop the land for agriculture (Fig. 1). The entire farm lies on the ancient, non-fossiliferous rocks of the Nelspruit Suite that is composed of porphyritic granite and biotite gneiss (Fig. 2). These rocks are too old for any fossils, over 3.4 Ga (Robb et al., 2006) and are the incorrect type to preserve fossils as they are igneous and metamorphosed.

Based on the geology, and confirmed by the zero palaeosensitivity (grey) in the SAHRIS map (Fig. 3), there is no chance of fossils occurring on the project site. We therefore request exemption from any further palaeontological impact, and that the project be authorised.

Figure 1: Google Earth site map for the area to be cleared for agriculture (thin black outline, Cromdale, south of Mbombela.

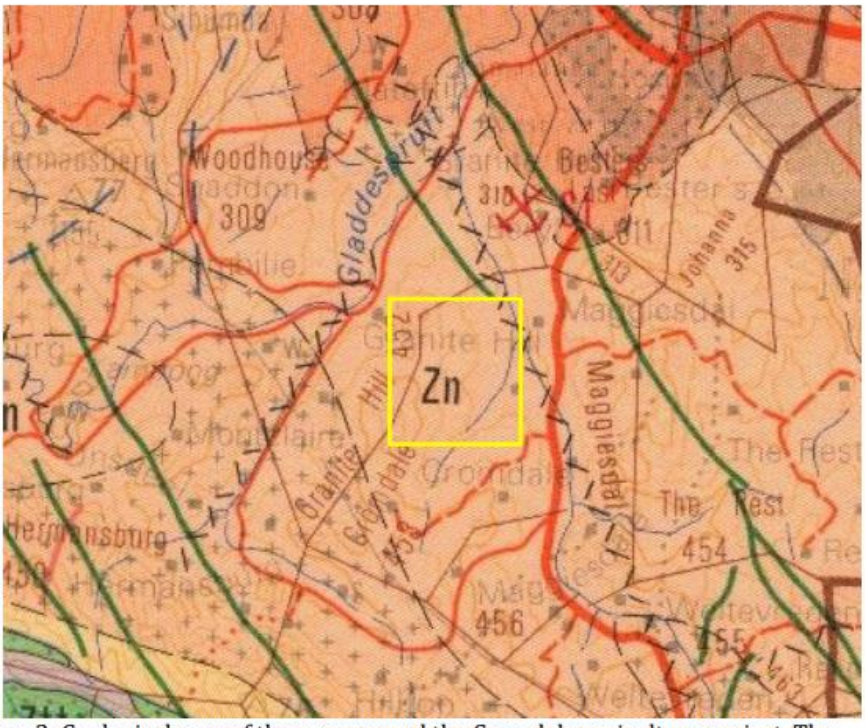

Figure 2: Geological map of the area around the Cromdale agriculture project. The location of the proposed project is indicated within the yellow rectangle. Abbreviations of the rock types are: Zn = Nelspruit Suite; biotite granite. Map enlarged from the Geological Survey 1: 250 000 map 2530 Barberton.

Figure 3: SAHRIS palaeosensitivity map for the site for the proposed Cromdale Agriculture project shown within the yellow rectangle. Background colours indicate the following degrees of sensitivity: red = very highly sensitive; orange/yellow = high; green = moderate; blue = low; grey = insignificant/zero.

Reference cited:

Robb, L.J., Brandl, G., Anhaeusser, C.R., Poujol, M., 2006. Archaean Granitoid Intrusions. In: Johnson, M.R., Anhaeusser, C.R. and Thomas, R.J., (Eds). The Geology of South Africa. Geological Society of South Africa, Johannesburg / Council for Geoscience, Pretoria. Pp 57-94.

Yours faithfully

MKBamford

Prof Marion Bamford
Palaeobotanist; PhD (Wits 1990)

Declaration of Independence

This letter has been compiled by Professor Marion Bamford, of the University of the Witwatersrand, sub-contracted by Henwood Environmental Services, Mbombela, South Africa. The views expressed in this report are entirely those of the author and no other interest was displayed during the decision making process for the Project.

Specialist: Prof Marion Bamford

Signature: MKBamford