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Marion.bamford@wits.ac.za 05 November 2022

Mr Andrew Solomon Heritage Officer Archaeology, Palaeontology & Meteorites Unit South African Heritage Resources Agency 111 Harrington Street Cape Town 8001

Dear Mr Solomon

RE: Request for Exemption of any Palaeontological Impact Assessment for the proposed increased pig processing capacity at an abattoir on Portion 88 of Farm Langkuil 363 IR, Meyerton, Midvaal Local Municipality, Gauteng Province. SAHRA Case ID: 19581

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.

New Style Pork (Pty) Ltd is proposing to expand their operations on Farm Langkuil, adjacent to their current operation (Fig. 1). According to the Geology map (Fig. 2), the site is on the Malmani Subgroup dolomites and so is considered as very highly sensitive a far as the palaeontology is concerned (Fig. 3). It should be noted that not all dolomites preserve any trace fossils, such as stromatolites which are the layers of minerals that were deposited by the photosynthesising algae about 2600 million years ago (Eriksson et al., 2006).

In addition, the site for the proposed construction has already been cleared of vegetation and most likely was cultivated in the past, so any rocks (dolomites) on the surface would have been removed. Since the area is small and disturbed, it is recommended that the project be authorised and once excavations for foundations have commenced, and if any stromatolites are found then SAHRA should be notified. The fossil chance protocol and photographs of stromatolites are included below.



Figure 1: Google Earth map of the Abattoir on Farm Langkuil 363IT, Portion 88 with the proposed extension shown by the red line (centre) into an open and cleared area.



Figure 2: Geological map of the area around the Farm Langkuil. The proposed project is indicated within the yellow rectangle. Abbreviations of the rock types: Vmd = Malmani Subgroup dolomites; Vt = Timeball Hill quartzites. Map enlarged from the Geological Survey 1: 250 000 map 2628 East Rand.

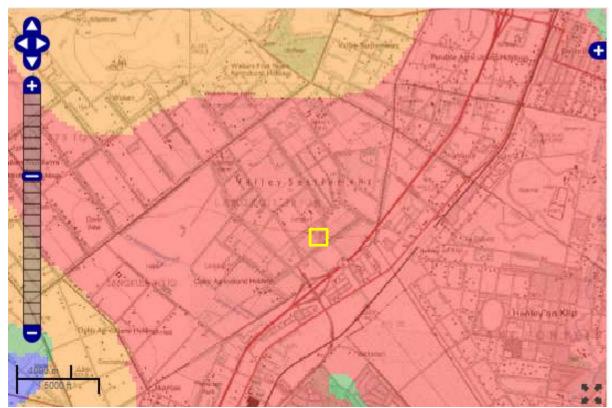


Figure 3: SAHRIS palaeosensitivity map for the site for the proposed abattoir expansion on Portion 88 of Farm Langkuil 363IR shown within the yellow rectangle. Background colours indicate the following degrees of sensitivity: red = very highly sensitive; orange/yellow = high; green = moderate; blue = low; grey = insignificant/zero.

Therefore, we request exemption from any further Palaeontological Impact Assessment and that, as far as the palaeontology is concerned, that the project may be authorised.

Yours faithfully

Prof Marion Bamford

MKBamfurk

Palaeobotanist; PhD (Wits 1990)

Fossil Chance Find Protocol

- 1. The following procedure is only required if fossils are seen on the surface and when drilling/excavations commence.
- 2. When excavations begin the rocks and must be given a cursory inspection by the environmental officer or designated person. Any fossiliferous material (plants, insects, bone, coal) should be put aside in a suitably protected place. This way the project activities will not be interrupted.

- 3. Lists of possible fossils can be provided to the developer to assist in recognizing them.
- 4. Photographs of the putative fossils can be sent to the palaeontologist for a preliminary assessment.
- 5. If there is any possible fossil material found by the developer/environmental officer then the qualified palaeontologist sub-contracted for this project, should visit the site to inspect the selected material and check the dumps where feasible.
- 6. Trace fossils, such as stromatolites, that are considered to be of good quality or scientific interest by the palaeontologist must be removed, catalogued and housed in a suitable institution where they can be made available for further study. Before the fossils are removed from the site a SAHRA permit must be obtained. Annual reports must be submitted to SAHRA as required by the relevant permits.
- 7. If no good fossil material is recovered then no site inspections by the palaeontologist will be necessary. A final report by the palaeontologist must be sent to SAHRA once the project has been completed and only if there are fossils.
- 8. If no fossils are found and the excavations have finished then no further monitoring is required.

Reference cited:

Eriksson, P.G., Altermann, W., Hartzer, F.J., 2006. The Transvaal Supergroup and its precursors. 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 237-260.

Palaeosensitivity map:

https://sahris.sahra.org.za/map/palaeo

Declaration of Independence

This letter has been compiled by Professor Marion Bamford, of the University of the Witwatersrand, sub-contracted by ENVASS, 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

MKBamfurk

Signature: