

UNIVERSITY OF THE
WITWATERSRAND,
JOHANNESBURG



Email: bruce.rubidge@wits.ac.za

11 April 2016

Mr Danie Combrink
TEKPLAN Environmental Consultants
Polokwane
0699

E-Mail: tecoplan@mweb.co.za

Dear Mr Combrink,

Palaeontological Desktop Study – Proposed installation of four underground tanks on Erf 854, Thohoyandou-P Ext. 1

As requested, herewith a Desktop Palaeontological Impact Assessment with regard to the proposed installation of four underground tanks on Erf 854, Thohoyandou-P Ext. 1, Thulamela Local Municipality in the Limpopo Province..

Yours sincerely

A handwritten signature in blue ink, appearing to read 'B. Rubidge'.

Bruce Rubidge PhD, FGSSA, FRSSA, Pr Sci Nat

**PALAEONTOLOGICAL DESKTOP STUDY
UNDERGROUND FUEL TANK DEVELOPMENT,
THOHOYANDOU, LIMPOPO PROVINCE.**

AUTHOR:

Professor Bruce Rubidge
PO Box 85346
Emmarentia

Tel: 072 575 7752

Email: bruce.rubidge@wits.ac.za

CLIENT:

TEKPLAN Environmental Consultants
Box 1883
Polokwane
0699

E-Mail: tecoplan@mweb.co.za

Tel No.: 015 291 4177

Fax No.: 086 218 3267

DATE: 11 April 2016

EXECUTIVE SUMMARY

A desktop Palaeontological Impact Assessment was undertaken on the site earmarked for the proposed installation of four underground tanks on Erf 854, Thohoyandou-P Ext. 1, Thulamela Local Municipality in the Limpopo Province.

The entire study area is deeply underlain by Precambrian basaltic rocks of the Sibasa Formation of the Soutpansberg Group. There is no possibility that the basalts of the Sibasa Formation could contain fossils.

In my opinion this development will not negatively affect palaeontological heritage.

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REPORT

Background Information of the development

This desktop report is part of a Heritage Impact Assessment to determine the effect of the proposed development to install 4 x 46 000 litre underground tanks located on Erf 854, Thohoyandou-P Ext. 1, Thulamela Local Municipality, Vhembe District Municipality area, Limpopo Province. The size of the property is 2 000m².

The study was commissioned by TEKPLAN Environmental Consultants, Polokwane and I was requested to provide a desktop assessment of the effect that the proposed development will have on the palaeontological heritage.

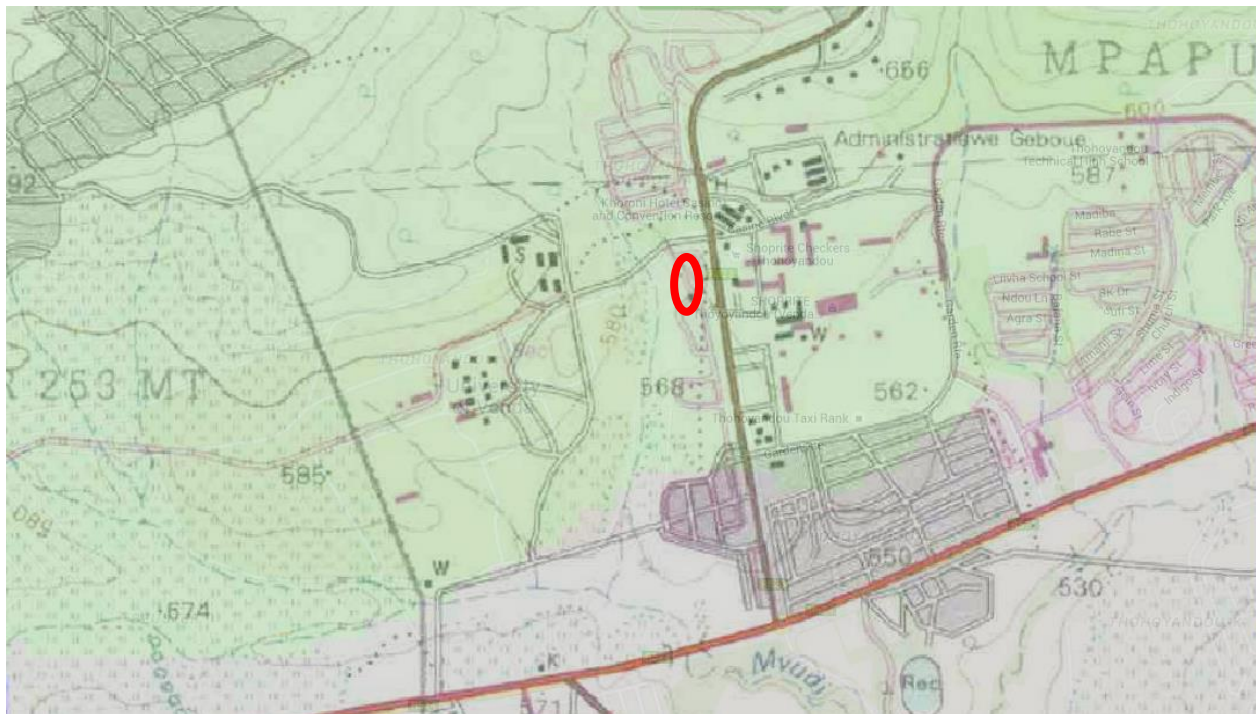


Figure 1: Map (1:50 00 scale) showing the position (red outline) of the proposed installation of 4 underground tanks for the storage of petroleum on Erf 854, Thoyoyandou-P Ext 1, Thulamela local Municipality, Limpopo Province (2230 CD).

Details of the study area

The study area proposed for the installation of 4 x 46 000 litre underground tanks is on Erf 854, Thohoyandou-P Ext. 1, Thulamela Local Municipality in Limpopo Province (Figure 1) and is covered by the 1:50 000 topographical Map Sheet 2230 CD. The property is located on the main road (R523) in the Thohoyandou CBD opposite the GAME Shopping centre (co -ordinates S22° 58' 23.57" E30° 27' 18.48")

Geological Setting

Based on the 1:250 000 geological sheet, 2330 Messina, the area is underlain by Precambrian basalts of the Sibasa Formation of the Soutpansberg Group to the north and leucocratic biotite gneiss, leucocratic granite and pegmatite, grey biotite gneiss and migmatite of the Sand River Gneiss of the Central Zone of the Limpopo Belt to the south (Figure 2).



Figure 2: Geology of the Study area (1:250 000 Geological Map Series of the Republic of South Africa, Sheet number 2330 Messina). Red outline shows study area

Palaeontological Heritage

As the entire study area is underlain by Precambrian igneous and metamorphic rocks it is extremely unlikely that fossils will be found in the study area.

Recommendation

Because rock successions underlying the area for proposed development are of igneous or metamorphic origin and are Precambrian in age there is very little chance that the proposed development will have any effect on palaeontological heritage. In any development there is always the slight possibility that isolated overlying younger deposits could contain fossils. In the unlikely event that fossils are exposed in such deposits it will create a unique opportunity to explore the area for fossils. It is thus recommended that if fossils are exposed as a result of construction activities, a qualified palaeontologist must be contacted to assess the exposure for fossils before further development takes place 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).

Conclusions

The proposed installment of the four underground tanks on Erf 854 Thohoyandou-P Ext. 1, Thulamela Local Municipality will extend over Precambrian igneous and metamorphic rocks and it is extremely unlikely that fossils will be exposed as a result of the development. It is considered that, from a palaeontological perspective, the proposed development should proceed. Should fossils be uncovered in superficial soil deposits during the course of construction activities, the developer must immediately contact a qualified palaeontologist to assess the situation and, if necessary, undertake excavation of the fossils.

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