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17 October 2015

Mr Anton von Well
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Dear Mr von Well,

Palaeontological Desktop Study – University of Venda Residence Development

As requested, herewith a Desktop Palaeontological Impact Assessment with regard to the proposed township development at Tom Burke in 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
TOWNSHIP DEVELOPMENT, TOM BURKE, LIMPOPO PROVINCE.

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EXECUTIVE SUMMARY

A desktop Palaeontological Impact Assessment was undertaken on the site earmarked for the proposed Establishment of a township on on Portion 7 of the Farm Van Wyksfontein 3 LR at Tom Burke in the Lephalalale Municipal area, Limpopo Province.

The entire study area is deeply underlain by Precambrian amphibolite rocks of the Beit Bridge Complex of the Limpopo Mobile Belt, which in turn are overlain by Quaternary sediments. There is only a slight possibility that the Quaternary sediments could host fossils but no possibility that the amphibolites of the Beit Bridge Complex 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 establish a township on Portion 7 (portion of Portion 2) of the farm van Wyksfontein 3 LR which is 18.2 ha in extent. The proposed township development will comprise a filling station, , retail, commercial sites, parks and residential sites.

The site is located at Tom Burke a small settlement approximately 10 km south of the Groblersbrug Border Post. Tom Burke is located at the intersection of the N11, between Mokopane and Groblersbrug, and the R572 between Lephalale and Swartwater (Figure 1). The property under consideration is located behind the Tom Burke Police Station.

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.

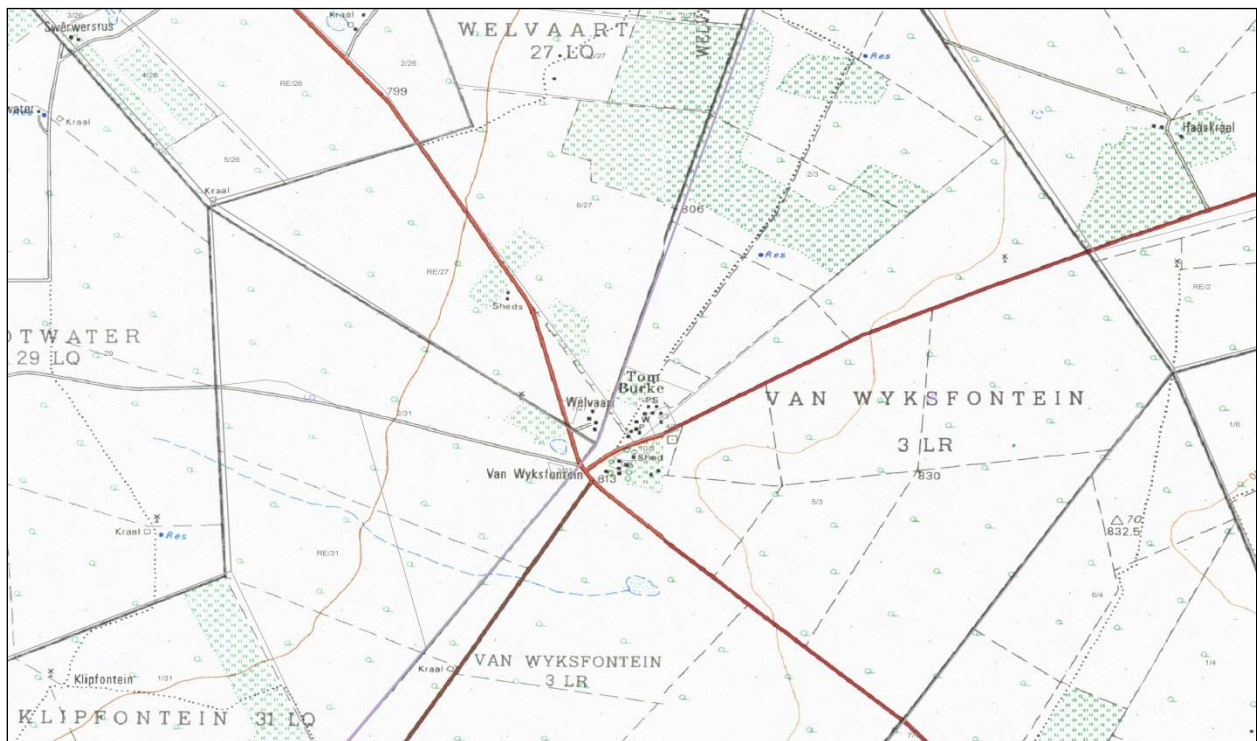


Figure 1: Map (1:50 00 scale) showing the area around Tom Burke in the Lephalalale Municipal area, Limpopo Province (2327BB).

Details of the study area

The study area proposed for the township development is on Portion 7 (portion of Portion 2) of the farm van Wyksfontein 3 LR (Figure 2) which is 18.2 ha in extent and will comprise the following:

- 79 Residential 1 Erven
- 1 Residential 3 Erf
- 3 Public Open Space Erven
- 3 Business 1 Erven
- 1 Filling Station
- 1 Undetermined Erf
- Roads with a length of 2 016m
- Engineering services such as sewage, water supply and electricity will be installed.

The area is covered by the 1:50 000 topographical Map Sheet 2327BB.

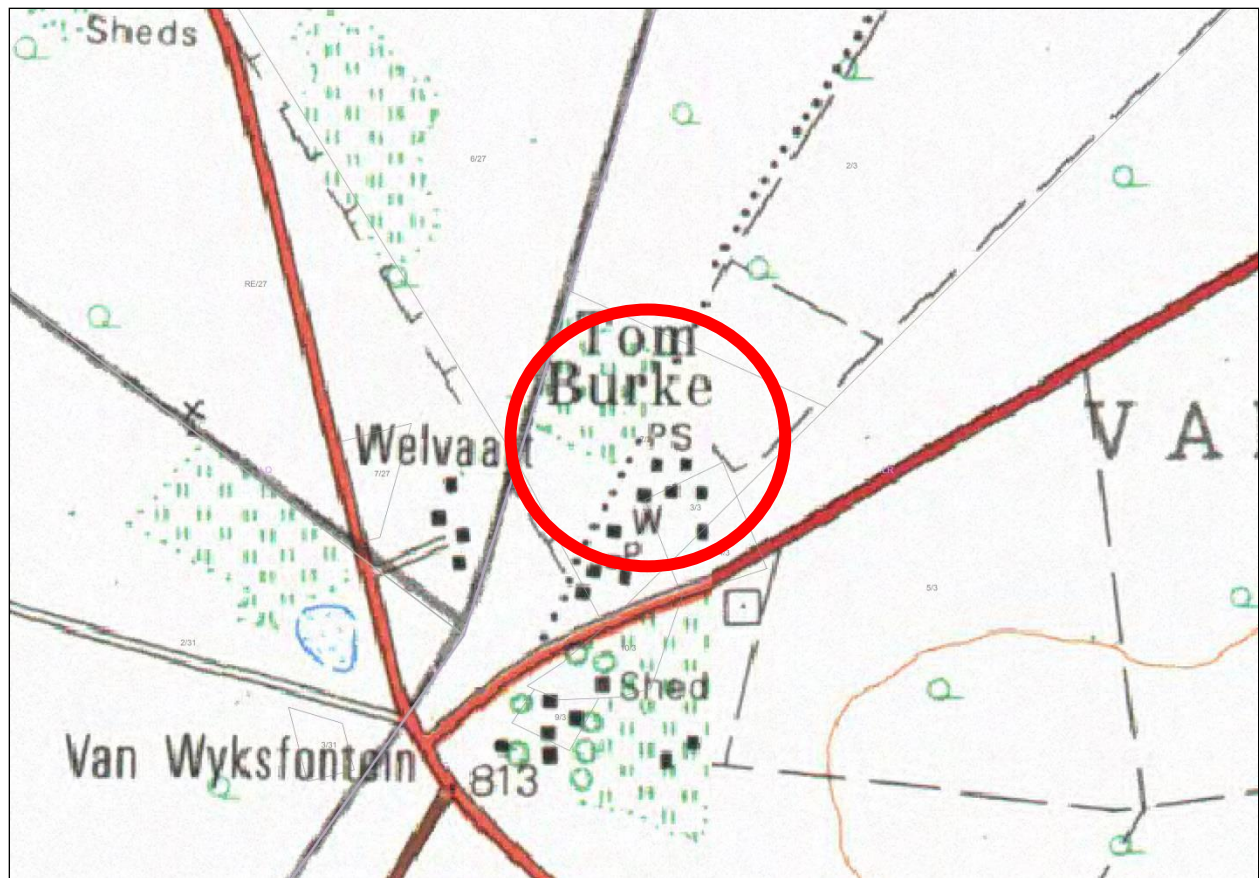


Figure 2: Map (1:50 00 scale) showing the position (red circle) of the proposed township development on Portion 7 of the Farm Van Wyksfontein 3 LR at Tom Burke in the Lephalalale Municipal area, Limpopo Province (2327BB).

Geological Setting

Based on the 1:250 00 geological sheets, 2326 Ellisras and 2328 Pietersburg, the area is deeply underlain by Precambrian amphibolites (ZM and ZS) of the Beit Bridge Complex which is part of the Limpopo Mobile Belt which separates the Kaapvaal and Rhodesian Cratons (Figure 3). The rocks of the Beit Bridge Complex are in turn overlain by Quaternary sediments (Qc)

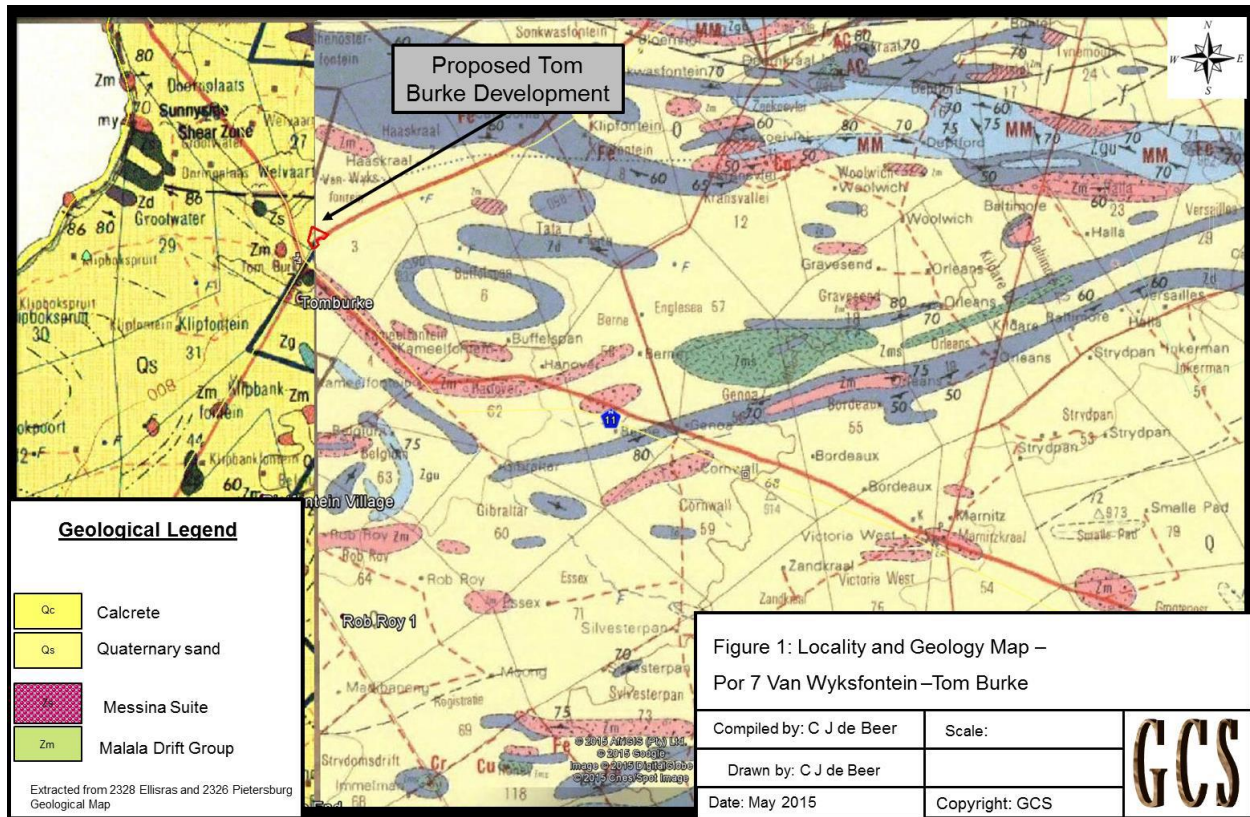


Figure 3: Geology of the Study area (1:250 000 Geological Map Series of the Republic of South Africa, Sheet numbers 2326 Ellisras and 2328 Pietersburg).red outline shows study area. Map from de Beer 2015.

Palaeontological Heritage

The underlying Precambrian rocks of the Beit Bridge Complex do not host fossils and no fossils have been reported from the overlying Quaternary sediments. It is thus 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 township development at Tom Burke 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 Quaternary 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.

Bibliography

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