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Nokukhanya Khumalo
SAHRA
111 Harrington Street
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Dear Nokukhanya

RE: Palaeontological impact assessment for the proposed Vodacom lattice mast on Farm Boschfontein
SAHRA Case Id: 13137

Background: Vodacom site No 6: Kwambuzi Nongoma 3880

Vodacom intends to construct a 55m Lattice mast with antennae mounted onto the mast, and container housing associated equipment. The size of the base station (fenced area) in which the mast and associated equipment will be placed will measure 10m x 14m (140m2). Vodacom (Pty) Ltd is proposing to construct a base station on the farm Boschfontein in the Polokwane Local Municipality of Limpopo Province. The base station will have a 55m lattice mast, container housing associated equipment, in a fenced area of 140m2. Tekplan Environmental (Pty) Ltd has submitted a consultation Basic Assessment report (BAR) on behalf of Vodacom (Pty) Ltd, in respect of listed activities in the EIA Regulations 2017, that require an application for Environmental Authorisation in terms of the National Environmental Management Act, 1998 (NEMA).

In terms of the National Heritage Resources Act, no 25 of 1999 (NHRA), heritage resources, including archaeological or palaeontological sites over 100 years old, graves older than 60 years, structures older than 60 years are generally protected.

SAHRA's Interim Comment:
The location of the proposed Vodacom Base Station is within a heritage sensitive area, there are known sites located within the Marakele National Park. The development footprint is located adjacent to a road and farm boundary fence. The area is already disturbed and likely any heritage resources located above ground would be of low significance.

Comment from a professional palaeontologist:

Boschfontein Farm lies in mostly in the Alma Formation (Nylstroom Subgroup, Waterberg Group; Barker et al., 2006) with some exposures of the Penge Formation (Chuniespoort Group, Transvaal Basin; Erikssen et al., 2006) as well as a broad coverage of Quaternary Kalahari sands. The site for the proposed lattice mast is indicated as green on the SAHRIS palaeosensitivity map and so requires a desktop study.

Trace fossils have been reported from the Waterberg Group, in particular the Makgabeng Formation which is slightly younger than the Alma Formation and occurs in the same region. These trace fossils are in the form of microbial mat structures and biological crusts, such as roll-ups, oscillation cracks, polygons and ripplemarks (Noffke et al., 2006; Simpson et al., 2013). These structures, however, have been found in the sandstone ridges, cliffs and prominent exposures in a number of these ancient fluvial, lacustrine and tidal sediments (see Simpson et al, (2013) for a summary). They have not been preserved in the adjacent loose sands or in the Kalahari Sands.

From the site photographs the proposed mast will be constructed in a area of loose sand and the foundation will penetrate to a depth of 1.2m. It is close to a road so no new access roads would need to be constructed. It is therefore extremely unlikely that any fossils would be impacted upon. The potential occurrence of trace fossils within the local Alma Formation is extremely low because the mast footprint is not on a hard sandstone outcrop.

It is therefore requested that NO further palaeontological assessment be required. It is the opinion of the professional palaeontologist that the project may proceed.

Yours sincerely

Prof Marion Bamford, PhD (Wits, Palaeontology)
Director: ESI

References cited:

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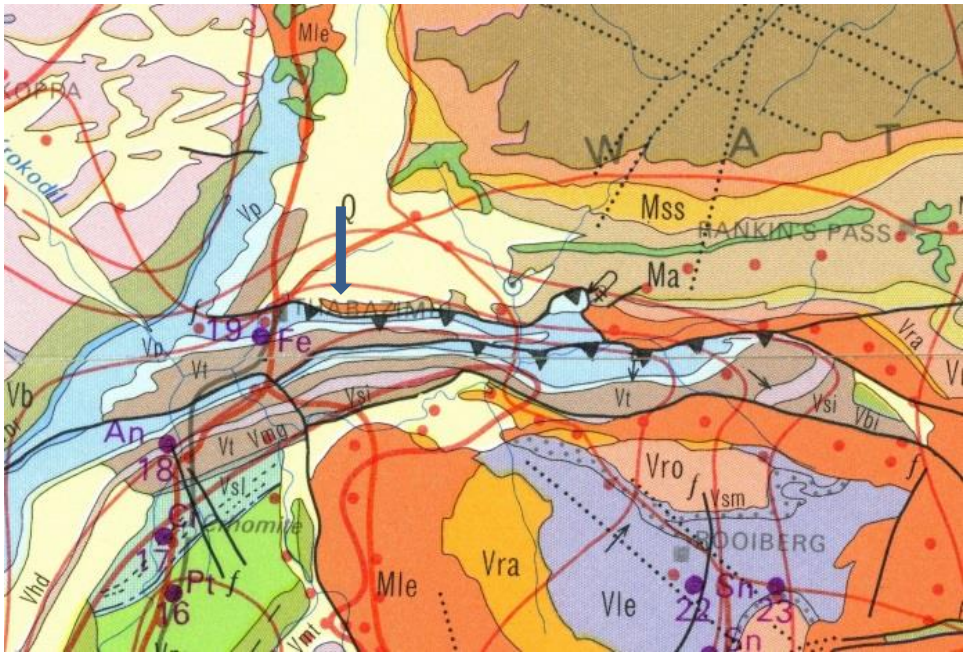

Fig 1: Geological map of the Thabazimbi area with the location indicated by the arrow. Ma = Alma Formation; Vp = Penge Formation; Q = Quaternary Kalahari Sands.

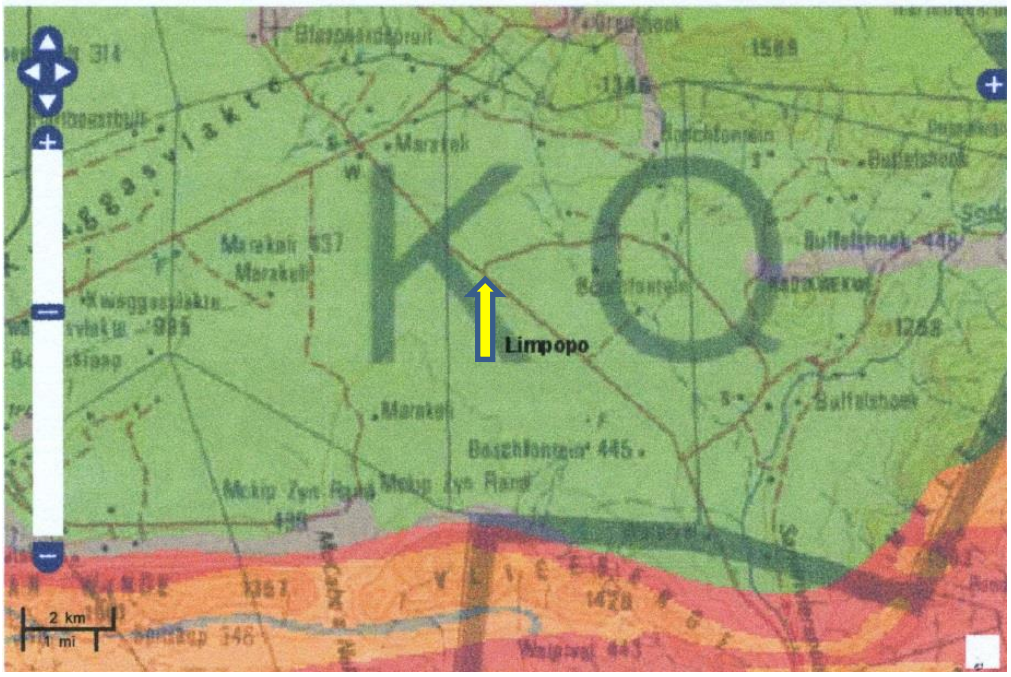

Fig 2: SAHRIS palaeosensitivity map for the Farm Boschfontein, ENE of Thabazimbi. Colours indicate the following degrees of sensitivity: red = very highly sensitive; orange/yellow = high; green = moderate; blue = low; grey = insignificant/zero.