

Phase 1 Heritage Impact Assessment: Plot 4, Spitskop Smallholdings, Bloemfontein, Free State Province.

Palaeo Field Services, PO Box 38806 Langenhoven Park 9330.

Site: Plot 4, Spitskop Smallholdings, Bloemfontein District

Map Reference. 1:50 000 scale topographic 2926 AA Bloemfontein

1:250 000 scale geological 2926 Bloemfontein

The application relates to proposed new development on Plot 4, Spitskop Smallholdings (**Fig. 1**). The ~4 ha site is situated in on the corner of Soutpansberg Avenue and Du Plessis Road in Langenhoven Park, Bloemfontein (**Fig. 2 & 3**).

Site Coordinates: 29° 5'45.04"S 26° 8'45.57"E

Palaeontology

The palaeontological footprint in the region is primarily represented by Permian Karoo fossils preserved within bedrock sedimentary strata, as well as late Quaternary mammalian fossils preserved within superficial alluvial deposits (e.g. river gravels and overbank sediments). According to the 1:250 000 scale geological map of the area, the site is situated within the Beaufort Group, Adelaide Subgroup (Karoo Supergroup), primarily represented by late Permian, Balfour Formation sedimentary rocks, which are made up of alternating and potentially fossil-bearing sandstone and mudstone layers. Outcrops of intrusive and palaeontologically insignificant Jurassic dolerites (Karoo Dolerite Suite) and associated contact metamorphic metasediments are prevalent around the eastern margin of the study area (**Fig 4**). Inspection of the site indicated that the underlying geology is capped by well-developed superficial deposits that are largely made up of (palaeontologically sterile) Quaternary wind-blown sands and residual soils. Given the depth of the overburden, which is not considered to be palaeontologically sensitive, potential impact on Karoo vertebrate fossils will most likely be very low to improbable.

Archaeology

Historical records (see map dated c. 1951) show no record of permanent dwellings within the study area around 60 years ago (**Fig. 5**) and a brief survey of the terrain indicates that the site has been extensively disturbed by previous farming activities and more recent residential development, with no evident traces of historically significant structures, graves or *in situ* Stone Age archaeological sites. Potential archaeological impact at the site is considered to be non-existent.

Impact Statement

Given the degree of disturbance at and prior degradation of the site, the proposed development footprint is not considered palaeontologically or archaeologically vulnerable and is assigned a SAHRA site rating of Generally Protected C (GP.C).

DECLARATION OF INDEPENDENCE

I, Lloyd Rossouw, declare that I act as an independent specialist consultant. I do not have or will not have any financial interest in the undertaking of the activity other than remuneration for work as stipulated in the terms of reference and have no interest in secondary or downstream developments as a result of the authorization of this project.

Yours truly,

A handwritten signature in black ink, appearing to read 'L Rossouw', written in a cursive style.

18 / 04 / 2017



Figure 1. Position of Plot 4, Spitskop Smallholdings.

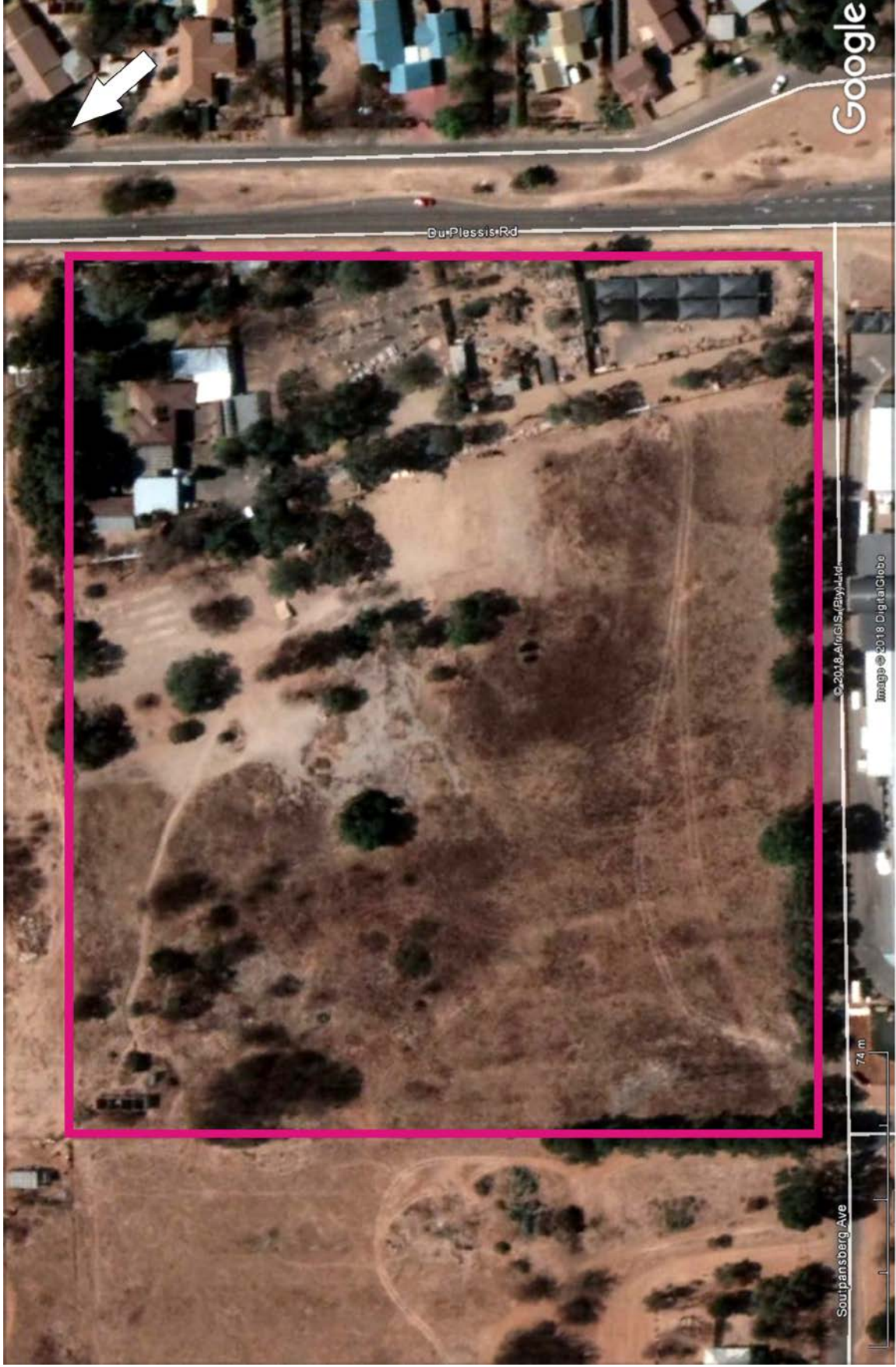


Figure 2. Aerial view of the terrain.



Figure 3. General view of the site, looking north.

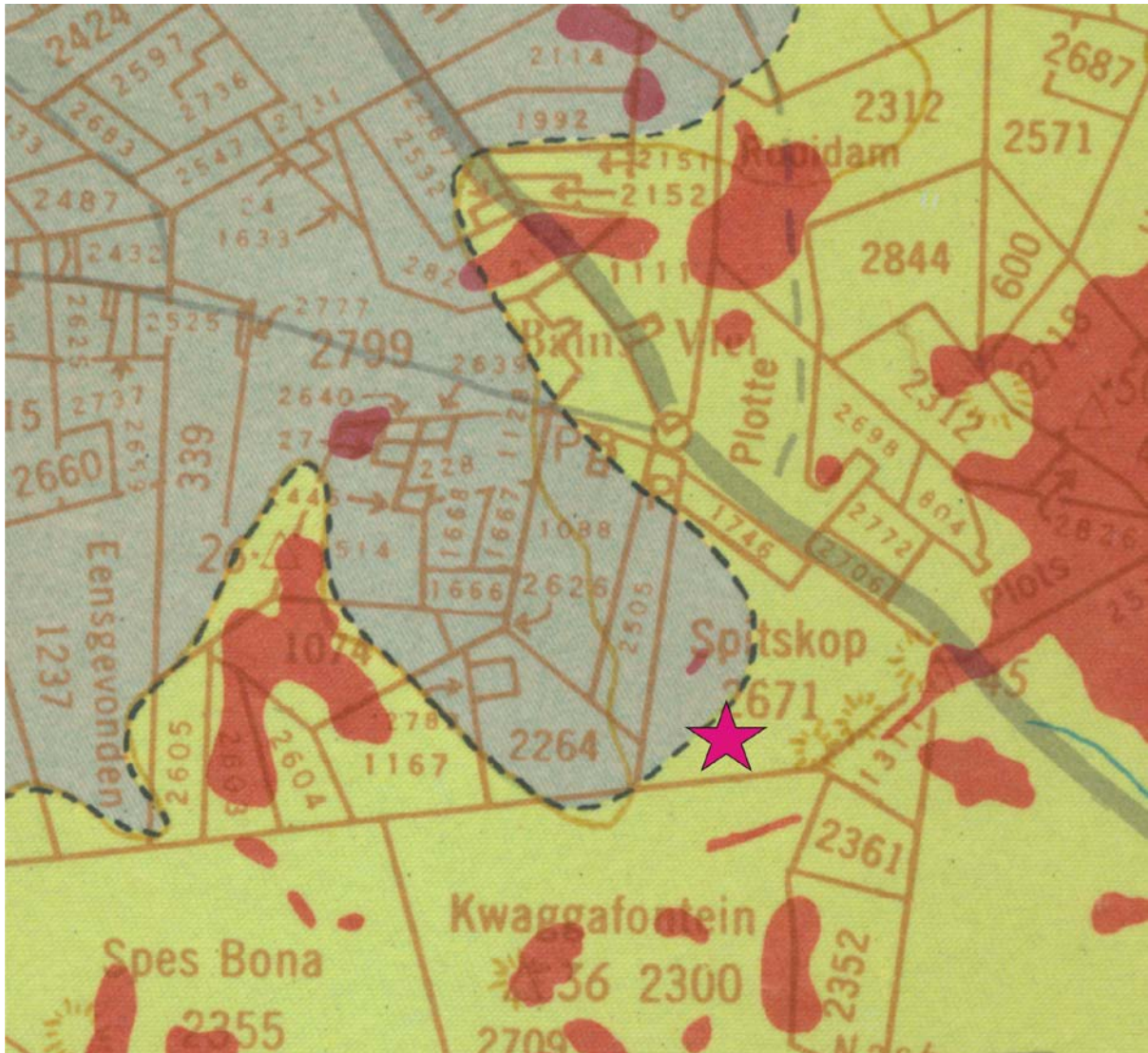


Figure 4. Portion of 1:250 000 scale geological map 2926 Bloemfontein, indicating the site's location (star) within an outcrop area of the Late Permian Adelaide Subgroup (Beaufort Group, Karoo Supergroup).

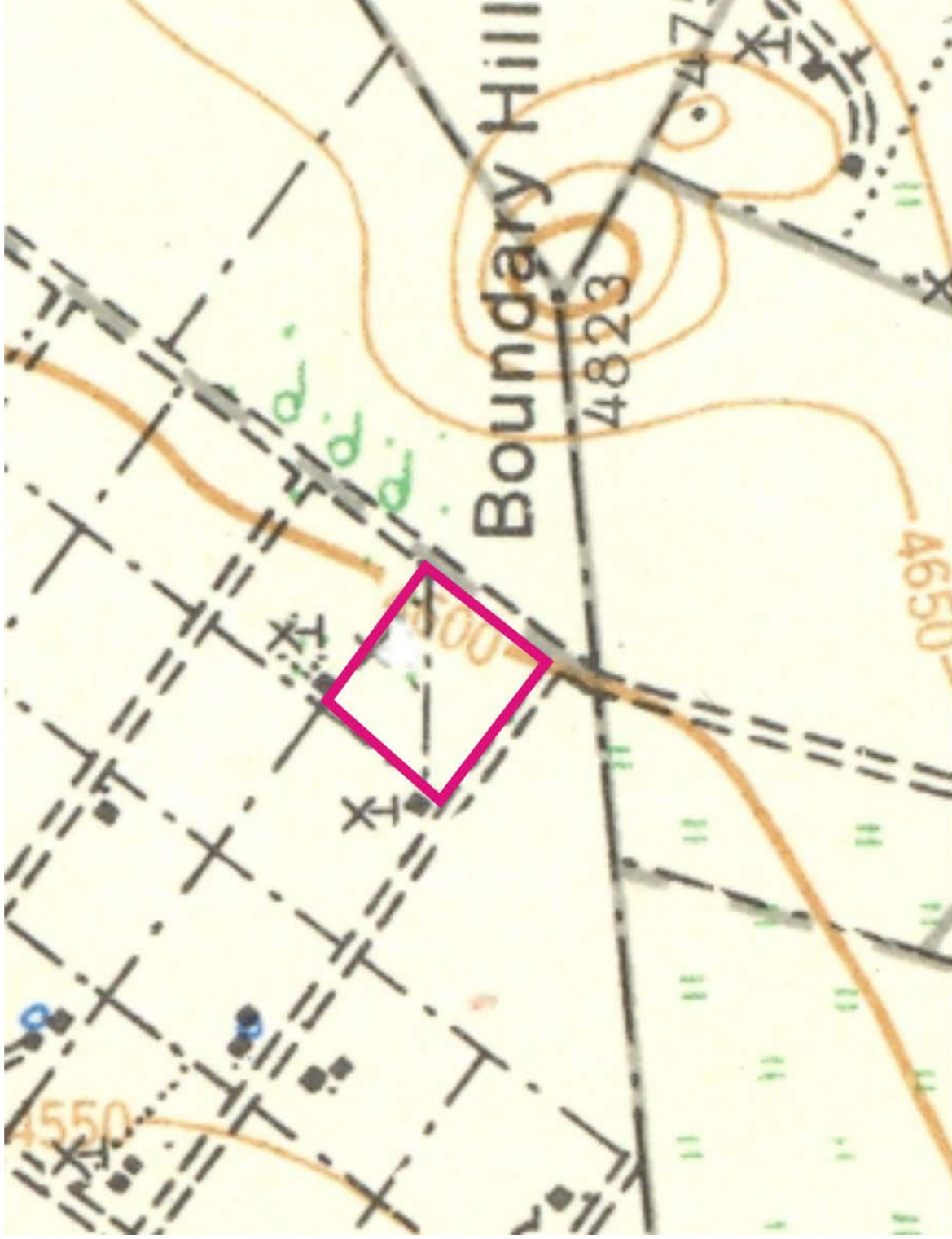


Figure 5. Plot 4 marked on 1:50 000 scale topographic map 2926 AA Bloemfontein, dated c. 1951.