

Phase 1 Heritage Impact Assessment of a proposed new
cemetery at Theunissen, FS Province.



Report prepared for Spatial Solutions

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Executive Summary

- A Phase 1 Heritage Impact Assessment was carried out in an area demarcated for a proposed new cemetery of about 10 ha at Theunissen in the central Free State.
- The proposed new cemetery is situated on the farm Spes Bona 290 and next to the Lusaka township, which is located south of Theunissen. The site covers approximately 10 ha of flat and previously disturbed terrain.
- The site is flanked by an existing graveyard along its western boundary and a disused cattle pen with associated kraal structures along its southern boundary.
- The field assessment indicated that the proposed new cemetery will have no impact *in situ* Stone Age or Late Iron Age archaeological material, and there are also no indications prehistoric structures immediately adjacent to or within the affected area.
- Potential impact on intact fossil material within the Quaternary overburden is considered highly unlikely.
- The proposed cemetery will have little impact on potential heritage resources. There are no major palaeontological or archaeological grounds to suspend the proposed development.

Introduction

A Phase 1 Heritage Impact Assessment was carried out in an area demarcated for a proposed new cemetery of about 10 ha at Theunissen in the central Free State (**Fig. 1**). The survey is required as a prerequisite for new development in terms of Section 38 (1) of the National Heritage Resources Act 25 of 1999. A site visit and subsequent assessment took place in May 2013. The task involved identification of possible heritage sites or occurrences in the proposed zone, an assessment of their significance, possible impact by the proposed development and recommendations for mitigation where relevant.

Terms of reference for assessment

- Identify and map possible heritage resources at the proposed site;
- Determine and assess the potential impacts of the proposed development on potential heritage resources in the proposed areas of impact;
- Recommend mitigation measures to minimize impacts associated with the proposed development.

Description of the Affected Area

Details of area surveyed

1:50 000 scale topographic map 2826 BC Theunissen.

1:250 000 scale geological map 2826 Winburg.

Site coordinates (**Fig. 2**): A) 28°25'49.55"S 26°41'36.49"E

 B) 28°25'42.99"S 26°41'46.25"E

 C) 28°25'55.06"S 26°41'58.94"E

 D) 28°26'5.85"S 26°41'49.27"E

The proposed new cemetery is situated on the farm Spes Bona 290 and next to the Lusaka township, which is located south of Theunissen. The site covers approximately 10 ha of flat and previously disturbed terrain (**Fig. 2 & 3**).

Geology

The site is entirely underlain by post-Karoo dolerite intrusions (dykes and sills) (**Fig. 4**). The dolerite bedrock is capped by Quaternary to Recent residual deposits made up of a thin veneer of unconsolidated colluvium and sheet wash (**Fig. 5**).

Background

The site is entirely underlain by post -Karoo dolerite intrusions. Dolerites are not fossiliferous and can be excluded from further consideration in the present assessment. Several late Pleistocene fossiliferous deposits are known from the Virginia-Theunisen area (De Ruiter *et al.* 2011). The sites are mainly represented by alluvial contexts from the Doring, Sand and Vet Rivers which occasionally include unassociated Middle Stone Age tools (**Fig. 6**). Surface scatters of Later Stone Age and Middle Stone Age artefacts are frequent archaeological components along erosional gullies of rivers and streams of the southern Highveld. This include long, high-backed blades from the early Middle Stone Age, typical Florisian retouched blades, trimmed points and Levallois core types and the Smithfield Industries of the Holocene. There are no records of rock engravings in the vicinity of the survey area. Theunissen is situated just outside the western periphery of distribution of Late Iron Age settlements in the Free State (Maggs 1976).

Methodology

A Garmin Etrex Vista GPS hand model (set to the WGS 84 map datum) and a digital camera, were used to record pertinent data. Relevant heritage information as well as existing fieldwork data were assimilated for the report and integrated with information acquired during the on-site inspection.

Results of Survey

The site is flanked by an existing graveyard along its western boundary and a disused cattle pen with associated kraal structures along its southern boundary (**Fig. 7 & 8**; coordinates 28°25'57.31"S 26°41'45.37"E). The pedestrian survey indicated that the proposed new cemetery will have no impact *in situ* Stone Age or Late Iron Age archaeological material, and there are also no indications prehistoric structures immediately adjacent to or within the affected area. Potential impact on intact fossil material within the Quaternary overburden is considered highly unlikely.

Recommendations

Significance of impacts is summarized in **Table 1**. The proposed cemetery will have little impact on potential heritage resources. There are no major palaeontological or archaeological grounds to suspend the proposed development.

References

De Ruiter, D.J. Churchill, S.E., Brophy, J.K. & Berger, L.R. 2011. Regional survey of MSA fossil vertebrate deposits in the Virginia-Theunissen area of the Free State, South Africa. *Navorsing van die Nasionale Museum Bloemfontein* 27 (1): 1 – 20.

Maggs, T.C. 1976. *Iron Age communities of the southern Highveld*. Occasional Papers of the Natal Museum No. 2.

Declaration

L. Rossouw does independent specialist consulting and is in no way connected with the proponents of the development, other than delivery of consulting services.

Table 1. Significance and rating of potential impact.

Scope	Heritage	Significance	Rating
Development of new cemetery at 28°25'49.55"S 26°41'36.49"E	Palaeontology	Low	General protection C (IV C)
Development of new cemetery at 28°25'49.55"S 26°41'36.49"E	Archaeology	Low	General protection C (IV C)

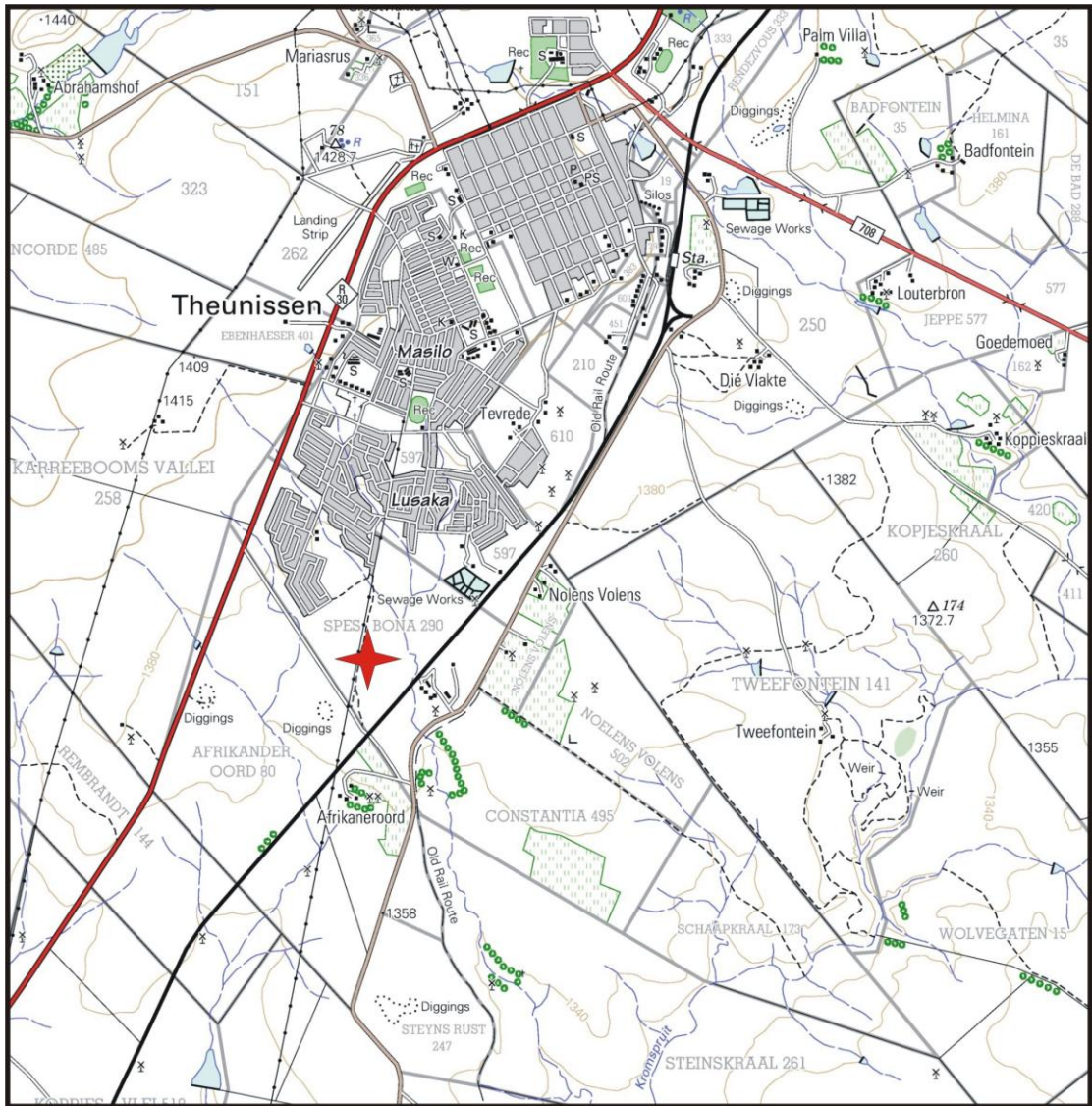


Figure 1. Locality of the proposed new cemetery (portion of 1:50 000 scale topographic map 2826 BC Theunissen).



Figure 2. Aerial view of the affected area.



Figure 3. The site covers approximately 10 ha of flat and previously disturbed terrain.



Figure 4. The site is entirely underlain by post-Karoo dolerite intrusions. Dolerites are not fossiliferous and can be excluded from further consideration in the present assessment.

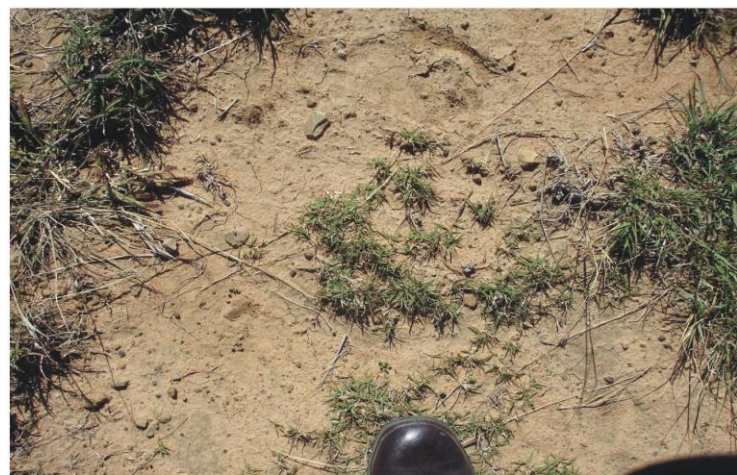


Figure 5. The dolerite bedrock is capped by Quaternary to Recent residual deposits made up of a thin veneer of unconsolidated colluvium and sheet wash.

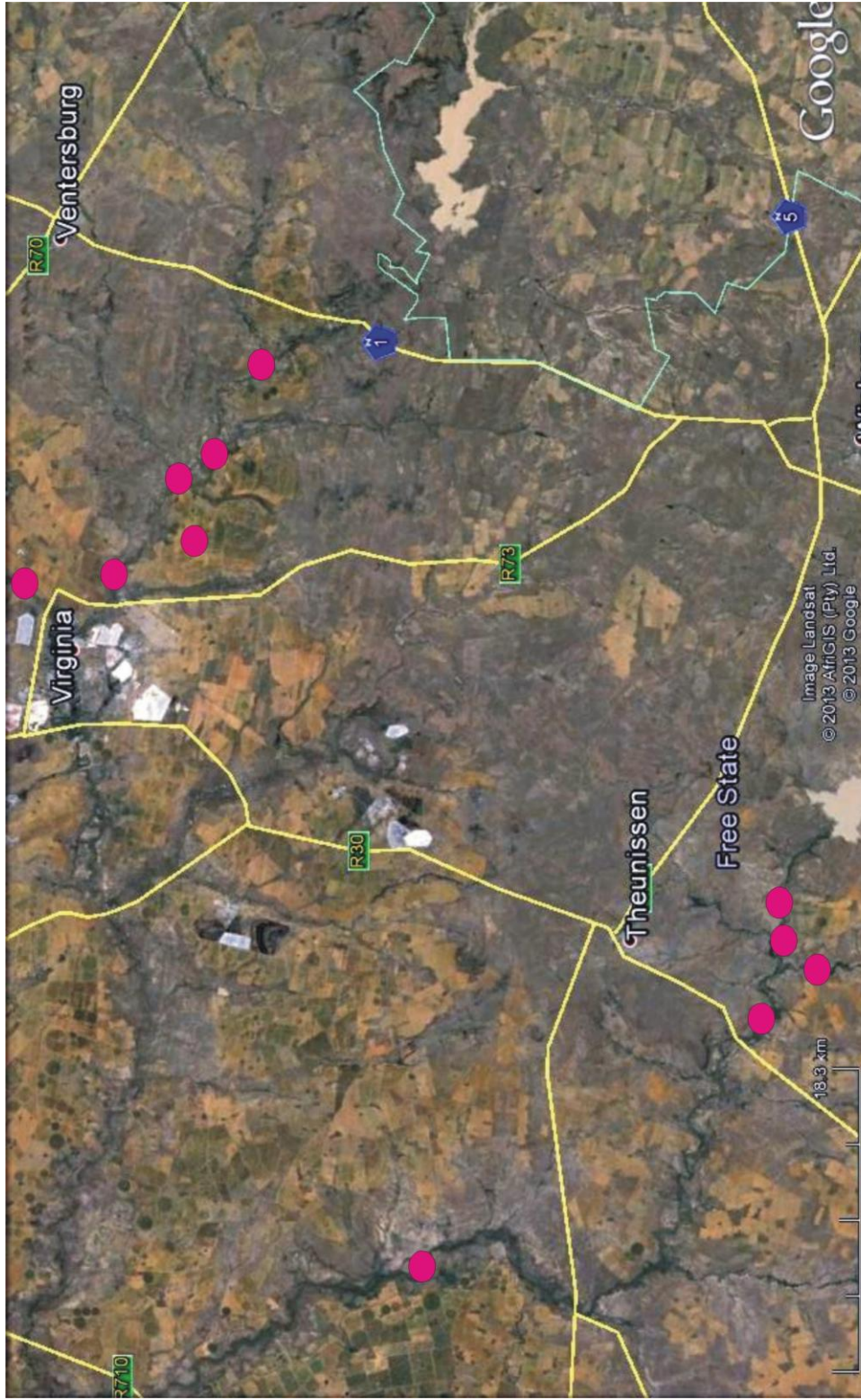


Figure 6. Several late Pleistocene fossil localities are known from the Virginia-Theunissen area (circles) and are mainly represented by alluvial contexts from the Doring, Sand and Vet Rivers which occasionally include unassociated Middle Stone Age tools.



Figure 7. The site is flanked by an existing graveyard along its western boundary.



Figure 8. A disused cattle pen and associated kraal structures (coordinates 28°25'57.31"S 26°41'45.37"E).