

Phase 1 Heritage Impact Assessment over a prospecting
area on the farm Elandskraal 469 near Mooinooi,
Northwest Province.

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Summary

A Phase 1 Heritage Impact Assessment was carried out over a 300 ha prospecting area on the farm Elandskraal 469 near Mooinooi in the NW Province. Palaeontologically insignificant Bushveld Complex granites that are capped by superficial (Quaternary) deposits, also considered to be of low palaeontological sensitivity, underlie the study area. The field assessment has indicated that there is no above-ground evidence of prehistoric structures, historical buildings older than 60 years, or material of cultural significance or *in situ* archaeological sites within the demarcated area. A large cemetery is located near the northern boundary of the site. The cemetery is rated Local Significance (Grade 3A) and must be protected by way of a ≥ 20 m buffer zone. The rest of the development footprint is rated *Generally Protected C (GP.C)*.

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Introduction

A Phase 1 Heritage Impact Assessment was carried out over a 300 ha prospecting area on the farm Elandskraal 469 near Mooinooi in the NW Province (**Fig. 1 & 2**). The extent of the proposed development (over 5000 m²) falls within the requirements for a Heritage Impact Assessment (HIA) as required by Section 38 (Heritage Resources Management) of the South African National Heritage Resources Act (Act No. 25 of 1999). The task involved identification of possible archaeological and paleontological sites or occurrences in the proposed zone, an assessment of their significance, possible impact by the proposed development and recommendations for mitigation where relevant.

Methodology

The heritage significance of the affected area was based on existing field data, database information, published literature and maps. This was followed up with a field assessment by means of a pedestrian survey within the footprint. A Garmin Etrex Vista GPS hand model (set to the WGS 84 map datum) and a digital camera were used for recording purposes. Site significance classification as prescribed by SAHRA (2005), were used to indicate overall significance and mitigation procedures where relevant (**Table 1**).

Terms of Reference

- Identify and map possible heritage sites and occurrences using available resources.
- Determine and assess the potential impacts of the proposed development on potential heritage resources;
- Recommend mitigation measures to minimize potential impacts associated with the proposed development.

Locality data

1 : 50 000 scale topographic map 2527 DA Bapong

1 : 250 000 scale geological map 2526 Rustenburg

The study area was divided into three zones for the purpose of the report, which combined, covers approximately 300 ha of relatively flat agricultural land and severely degraded mining areas (**Fig. 3**).

General Site Coordinates:

Area 1) 25°43'17.95"S 27°35'19.56"E

Area 2) 25°43'59.31"S 27°35'17.35"E

Area 3) 25°44'26.99"S 27°35'24.89"E

Geology

According to the 1:250 000 geological map of the area (2526 Rustenburg) the study area is underlain by intrusive rocks of the Rustenburg Layered Suite; a unit of the eoproterozoic Bushveld Complex (**Fig. 4 & 5**). The Bushveld Complex is a massive mafic layered intrusion that underlies an area of about 65 000 km² from Zeerust in the west to Burgerslort in the east, and from Bethal in the south to Villa Nora in the north (Coertze et al. 1978; Cawthorn et al. 2006).

Background

The archaeological heritage in the region is largely represented by rock engraving sites and the stone-walled Iron Age structures (**Fig. 6**). Late Iron Age sequences associated with early Sotho-Tswana speakers dominates the archaeology of the North West Province (Breutz 1956; Maggs 1976; Pistorius 1992). The region bears archaeological evidence of early migration, fission and subsequent development of early Sotho-Tswana people, leading to the establishment of numerous Iron Age settlements and complexes. The remains of stone-walled complexes and iron-smelting furnaces date from the beginning of the 15th century AD to the early 19th century AD. In the Marico district northwest of Lichtenburg, stone-walled complexes have been recorded on the farms Honingkrans, Rietvlei, Syferfontein, Bronkhorstfontein and Vergenoegd, including the Kaditshwane mega-site (Booyens 2003). The area between Klerksdorp and Ventersdorp is relatively rich in late Iron Age sites, particularly in the Lemoenfontein-Palmietfontein region, which also includes the ancient Rolong capital of Thabeng (White 1977) (**Fig. 6 & 7**). The architecture of these Iron Age sites has many of the attributes of the Type Z settlements in neighboring parts of the Free State Province, and is clearly the work of ancestral Tswana people, who arrived on the southern highveld in the middle of the 15th century AD. Stone-walled settlements have been recorded west and south of Rustenburg on the farms Grootwagensdrift, Rhenosterfontein, Shylock, Moedwil and Olifantspoort. Another mega-site, which covers several square kilometers, has been recorded on the farm Selonskraal fifteen

kilometers west of Rustenburg. . Rock engraving localities have been recorded on the farms Bospan 68, Zoutpan and Gestoptefontein 145 in the Lichtenburg district.

Field Assessment

Area 1 has been impacted by ongoing mining activities, as witnessed by multiple excavation, diggings and overgrown rubble heaps (Fig. 7). Areas 2 and 3 have been altered by ongoing farming activities (**Fig. 8 & 9**). A foot survey and has indicated no evidence for Stone Age archaeological material, capped or distributed as surface scatters on the landscape. There are also no evidence of Iron Age structures, rock engravings or historical buildings older than 60 years within the study areas. A large cemetery is located near the northern boundary of Area 1 (GPS Coordinates: 25°43'11.53"S 27°35'17.71"E; **Fig.10 & 11**).

Impact Statement

Palaeontologically insignificant Bushveld Complex granites that are capped by superficial (Quaternary) deposits considered to be of low palaeontological sensitivity underlie the study area. The study area is located within a region that is known for rock engraving sites and that bears rich archaeological as well as historical evidence of early migration, fission and subsequent development of early Sotho-Tswana people, leading to the establishment of numerous Iron Age settlements and complexes. However, the field assessment has indicated the there is no above-ground evidence of prehistoric structures, historical buildings older than 60 years, or material of cultural significance or *in situ* archaeological sites within the demarcated area (**Table 1**). The cemetery is rated Local Significance (Grade 3A). The rest of the development footprint is rated *Generally Protected C (GP.C)*.

Recommendations

According to Section 36(3) of the National Heritage Resources Act 25 of 1999 no person may, without a permit issued by SAHRA or a provincial heritage resources authority—

(a) destroy, damage, alter, exhume or remove from its original position or otherwise disturb the grave of a victim of conflict, or any burial ground or part thereof which contains such graves;

(b) destroy, damage, alter, exhume, remove from its original position or otherwise disturb any grave or burial ground older than 60 years which is situated outside a formal cemetery administered by a local authority; or

(c) bring onto or use at a burial ground or grave referred to in paragraph (a) or (b) any excavation equipment, or any equipment which assists in the detection or recovery of metals.

It is recommended that the graveyard is included in the overall management plan of the mine development. Preservation of the site will require that the area is properly demarcated with at least a 20m buffer zone placed around the graveyard in order to avoid potential damage during mining activities. It will be necessary to ensure that the graveyard is accessible to the relatives of the deceased.

References

Boeyens, J.C.A. 2003. The Late Iron Age sequence in the Marico and early Tswana history. *South African Archaeological Bulletin* 58 (178): 63 – 78.

Breutz, P.L. 1956. Stone Kraal settlements in South Africa. *African Studies* 15 (4): 157 – 175.

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White, D.A. 1977. The excavation of an Iron Age site at Palmietfontein near Klerksdorp. *South African Archaeological Bulletin* 32(125): 89-92.

Maggs, T.M.O’C. 1976. *Iron Age Communities of the southern Highveld*. Occasional Papers of the Natal Museum, 2. pp. 1 – 326.

Pistorius, J.C. 1992. *Molokwane: an Iron Age Bakwena village. Early Tswana settlement in the western Transvaal*. Department of Anthropology and Archaeology, University of Pretoria. Perskor. Johannesburg.

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. I have no interest in secondary or downstream developments as a result of the authorization of this project.

Tables and Figures

Table 1. Field rating categories as prescribed by SAHRA.

Field Rating	Grade	Significance	Mitigation
National Significance (NS)	Grade 1	-	Conservation; national site nomination
Provincial Significance (PS)	Grade 2	-	Conservation; provincial site nomination
Local Significance (LS)	Grade 3A	High significance	Conservation; mitigation not advised
Local Significance (LS)	Grade 3B	High significance	Mitigation (part of site should be retained)
Generally Protected A (GP.A)	-	High/medium significance	Mitigation before destruction
Generally Protected B (GP.B)	-	Medium significance	Recording before destruction
Generally Protected C (GP.C)	-	Low significance	Destruction

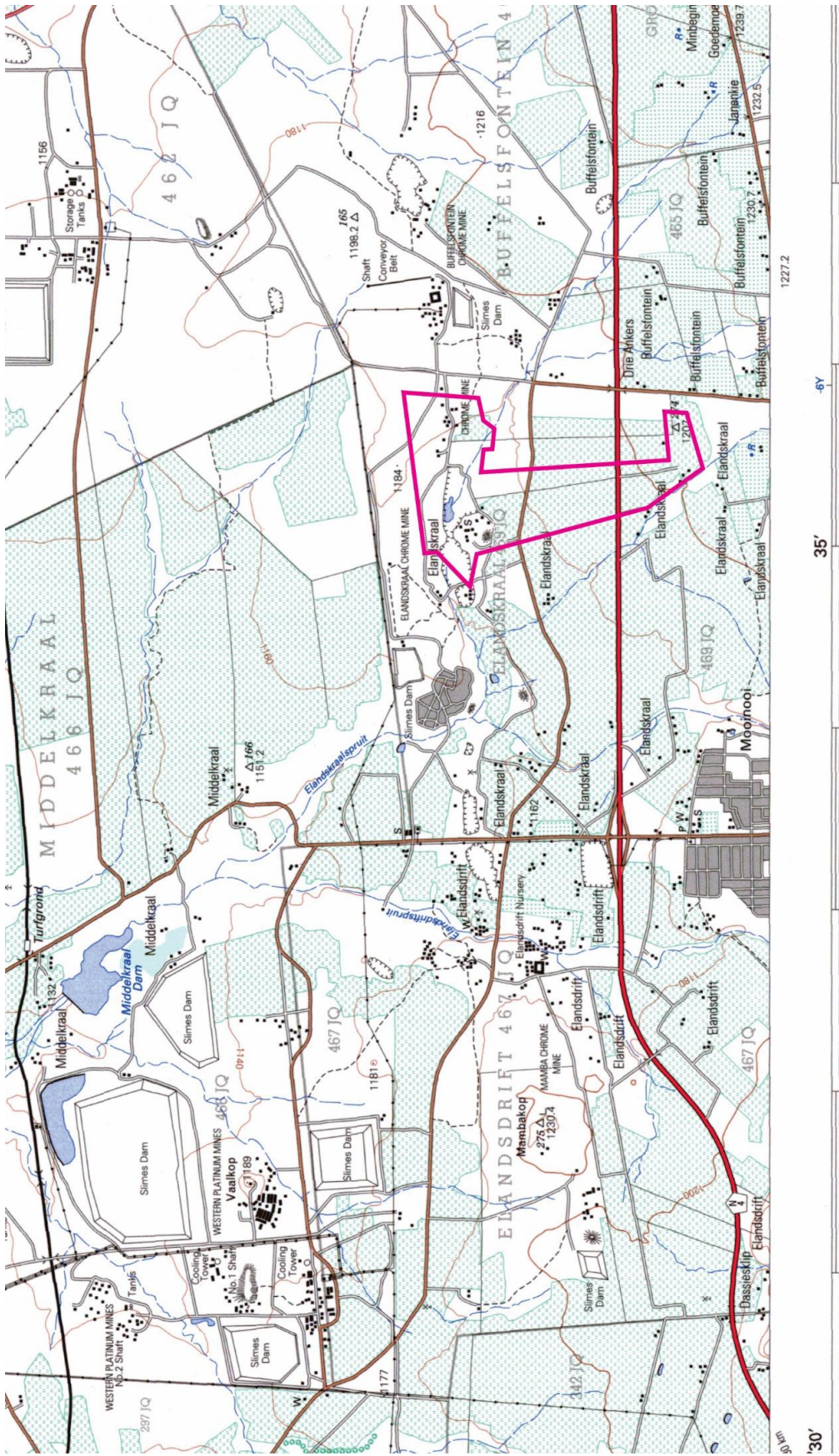


Figure 1. Map of the proposed development area (portion of 1:50 000 scale topographic 2527DA Bapong).

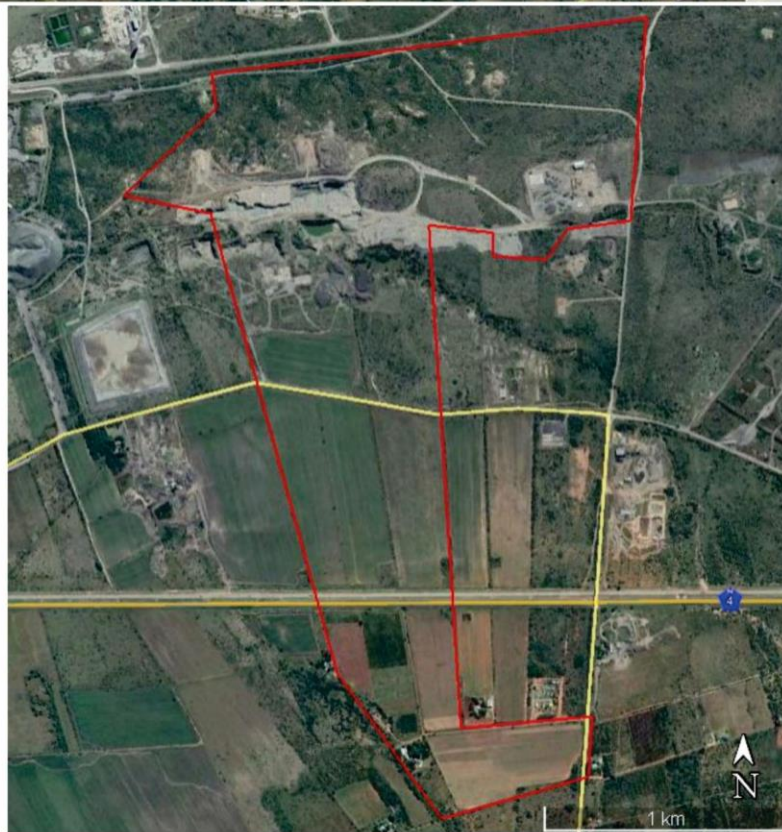


Figure 2. Aerial view of the site.



Figure 3. Layout of site according to descriptions in report.

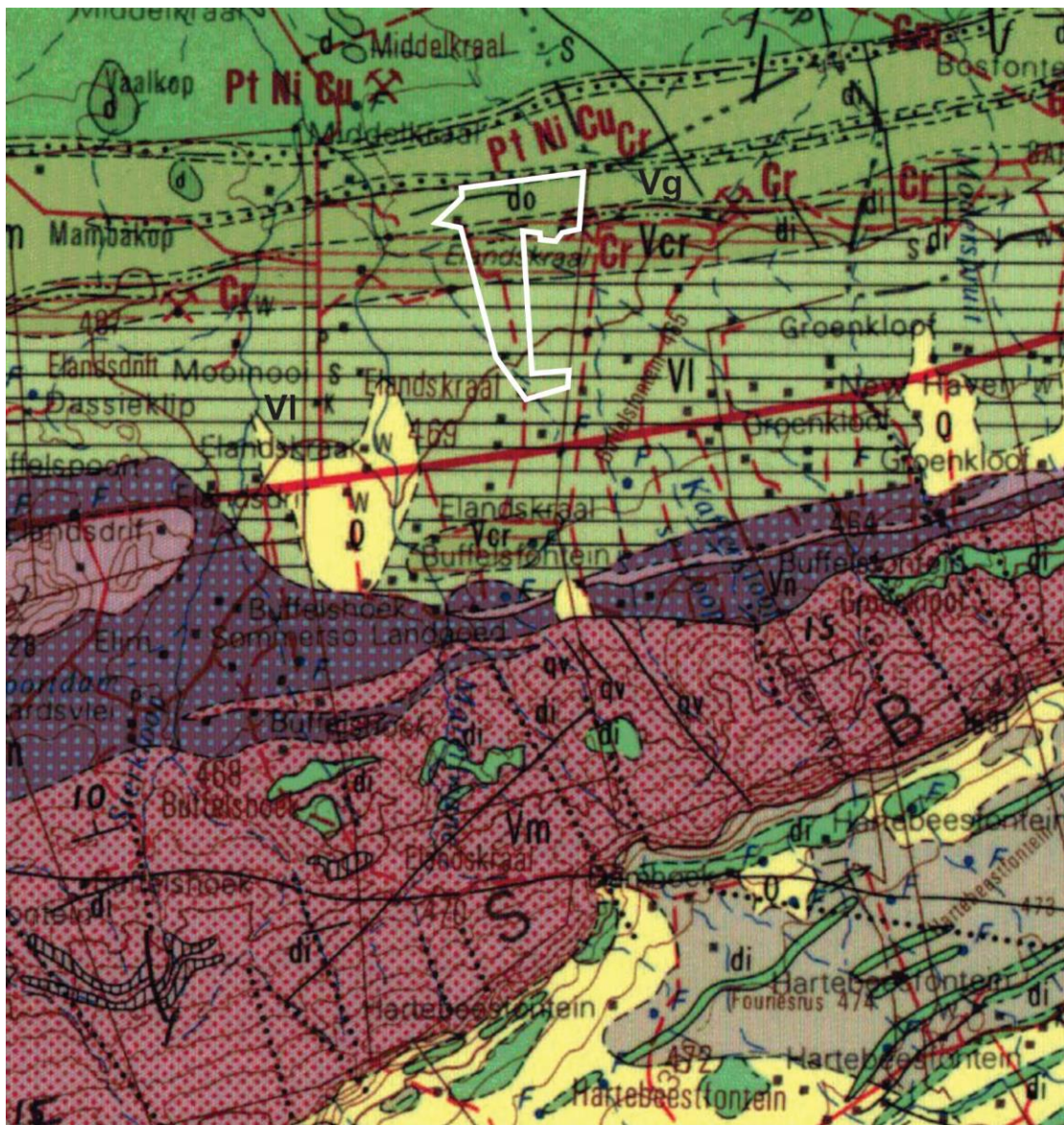


Figure 3. Portion of 1:250 000 geological map 2526 Rustenburg. Study area marked by white polygon.



Figure 5. Exposed coarse-grained intrusive (igneous) rock.
Scale 1 = 10cm.

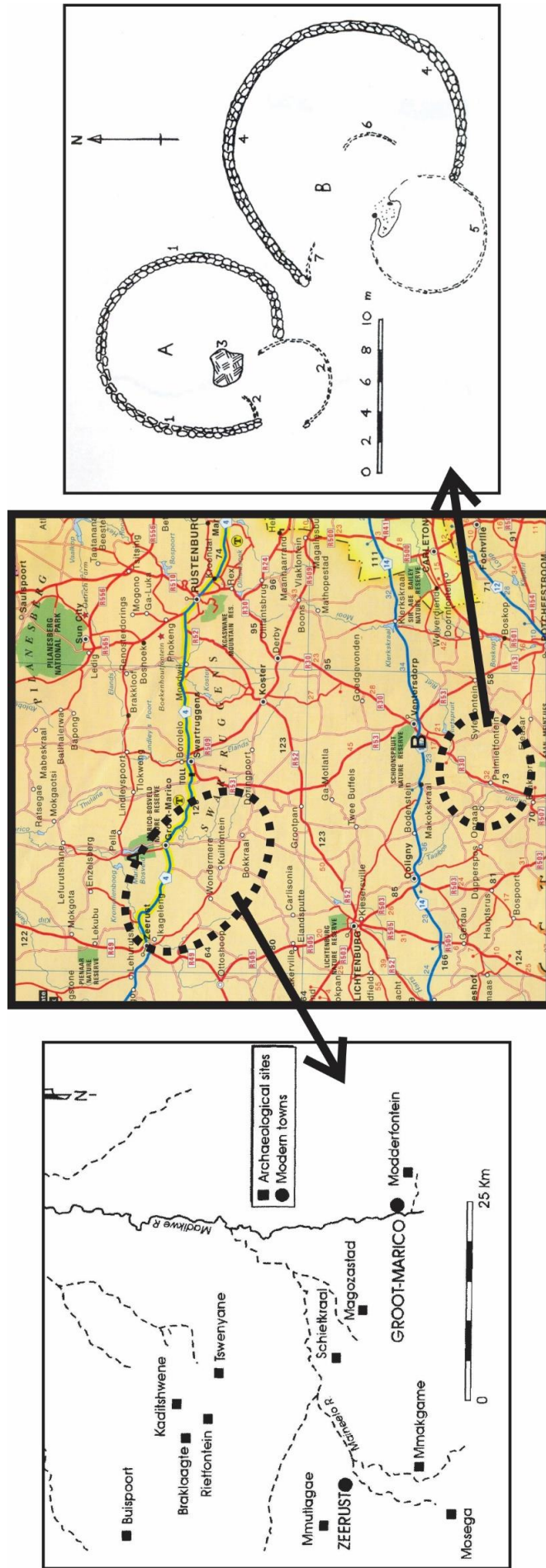


Figure 6. The area between Zeerust, Rustenburg and Ventersdorp is comparatively rich in Iron Age sites, especially in the Marico area northwest of Lichtenburg (A) as well as in the Palmietfontein-Lemoenfontein area, which also includes the ancient Rolong capital of Thabeng (B). General plan of an Iron Age stone-walled settlement on the farm Palmietfontein situated south of Ventersdorp.



Figure 7. General view of Area 1; mining areas (top) and generally pristine pockets of veld with closed vegetation (below left and right).



Figure 8. General view of Area 2, primarily consisting of degraded farmland.



Figure 9. General view of Area 3, primarily consisting of degraded farmland. 3



Figure 10. Aerial view of cemetery located in Area 1.



Figure 11. Large cemetery with multiple graves dating from the middle of the last century to recent.