

Phase 1 Heritage Impact Assessment of a proposed new
residential extension at Winburg, Masilonyana Local
Municipality, FS Province.

Report prepared by
Paleo Field Services
PO Box 38806
Langenhovenpark
9330

February 2022

Summary

A Phase 1 Heritage Impact Assessment was conducted over a combined 54 ha area demarcated for the extension of residential development in Winburg, Free State Province. The proposed new development footprint consist of 3 separate areas covering flat, open terrain on the western outskirts of Winburg, and east of the N1 national road. All three areas are underlain by paleontologically insignificant dolerites that are capped by Quaternary to Recent residual deposits, made up unconsolidated, light brown soils of varying depth. The survey indicated that the proposed development footprint would impact superficial sediments (soil overburden) and dolerite bedrock. **Area 1** lies in close proximity to the oldest part of town, the Vaalkop Cemetery, as well as a South African War Concentration Camp Cemetery. There is also a small graveyard located at the northeast corner of the footprint that are included in the development plan. The terrain itself has been largely degraded by informal human settlement or associated activities. There are no signs of *in situ* Stone Age or Late Iron Age archaeological material. There are also no indications of prehistoric structures, historical buildings older than 60 years or above ground evidence of isolated or unmarked graves (outside of the graveyaed area). **Area 2 and 3** have been largely degraded by informal human settlement or associated activities. There are no signs of *in situ* Stone Age or Late Iron Age archaeological material. There are also no indications of prehistoric structures, historical buildings older than 60 years or above ground evidence of unmarked graves. It is unlikely that the proposed development will result in any palaeontological or archaeological impact. There are no major palaeontological or archaeological grounds to suspend the proposed developments in Areas 1-3, which are all assigned a site rating of Generally Protected C. It is advised that access to the graveyard in Area 1 is strictly avoided during the construction phase of development in Area 1. Also, although not directly impacted by the proposed development, the Concentration Camp Cemetery is severely vandalized and neglected and I strongly propose that a permanent fence is put up around it with long lasting signage to ensure that further damage is minimized.

Contents

Summary	2
Introduction.....	3
Site Information	4
Background	5
Field Assessment	7
Impact Statement and Recommendation	7
References.....	8
Tables and Figures	9

Introduction

A Phase 1 Heritage Impact Assessment was conducted over a combined 54 ha area demarcated for the extension of residential development in Winburg, Free State Province (**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. 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.

Methodology

The heritage significance of the affected area is evaluated using existing field data, database information and published literature. Geological maps were used to determine

fossil-bearing rocks within the study area. This was followed by a field assessment by means of a site survey. 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 standards, as prescribed by SAHRA, were used for the purpose of this report (**Table 2**).

Site Information

The proposed new development footprint consist of 3 separate areas covering in total about 54 ha of flat, open terrain (**Fig. 2 & 3**) The sites lie on the western outskirts of Winburg, and east of the N1 national road.

1:50 000 scale topographic map 2827 CA Winburg ..

1:250 000 scale geological map 2826 Winburg.

Site coordinates (**Fig. 3**):

Site 1

- A) 28°31'4.32"S 27° 0'7.95"E
- B) 28°31'8.82"S 27° 0'27.86"E
- C) 28°31'24.17"S 27° 0'23.33"E
- D) 28°31'18.76"S 27° 0'6.11"E

Site 2

- A) 28°30'38.56"S 26°59'57.39"E
- B) 28°30'35.14"S 27° 0'5.64"E
- C) 28°30'51.05"S 27° 0'15.46"E
- D) 28°30'54.77"S 27° 0'11.93"E
- E) 28°30'52.37"S 27° 0'2.39"E

Site 3

- A) 28°30'38.72"S 27° 0'17.07"E
- B) 28°30'39.40"S 27° 0'24.50"E
- C) 28°30'49.57"S 27° 0'21.10"E
- D) 28°30'45.65"S 27° 0'16.24"E

Background

According to the 1:250 000 scale geological map 2826 Winburg, underlying sedimentary rocks in the region are represented by potentially fossil – bearing sandstones, shales and mudstones of the Adelaide Subgroup (Beaufort Group), and palaeontologically insignificant volcanic rocks of the Karoo Dolerite Suite (**Fig. 4 & 5**). Both units are included in the Karoo Supergroup.

Palaeontology

The Karoo geological strata underlying the affected area are generally accepted to be Late Permian in age and are assigned to the *Dicynodon* and Assemblage Zone (Kitching 1977; 1995). The sediments assigned to the *Dicynodon* AZ are associated with stream deposits and vertebrate fossils are primarily found in mudrock sequences between channel sandstones and at sites exposed by high relief terrain. Fossils are frequently preserved as articulated skeletons within well-defined blue-grey or red-brown calcareous nodules. Plant fossils (*Dadoxylon*, *Glossopteris*) and trace fossils (arthropod trails, burrow casts) are also present.

There are currently no records of Quaternary-age fossil sites from alluvial sediments in the vicinity of Winburg, but several late Pleistocene fossiliferous deposits are known from the Virginia-Theunisen area (De Ruiter *et al.* 2011).

Archaeology

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. The Quaternary-age fossil sites from the Doring, Sand and Vet Rivers, also occasionally yield unassociated Middle Stone Age tools. 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 within the vicinity of the survey area (**Fig. 6, no. 1 – 3**).

The study area lies near the western periphery of distribution of Late Iron Age settlements in the Free State, where stonewalled enclosures found on and around dolerite koppies exhibit telltale signs of basic structural units including huts, large enclosures, pieces of walling and stone circles related to prehistoric farming communities in the area. Maggs' classification of settlement patterns (1976) provided

the first major contribution to our knowledge of the Iron Age prehistory of the Free State. It showed that the settlement patterns produced huts of different materials in different styles. Type Z settlements are sparsely scattered over a relatively limited area in the vicinity of Doringberg (Maphororong), at Sandrivierspoort (Mariba) adjacent to the main road between Winburg and Ventersburg (**Fig. 6, no. 4 - 6 & Fig. 7**) and to the northwest along the Vals River in the districts of Kroonstad and Bothaville, including a few sites on the Renoster River, east of Viljoenskroon (Walton 1956; Maggs 1976; Dreyer 1997). Type Z dwellings consisted of a cylindrical hut with stone-walled courtyards at the front and rear, representing a bilobial layout. An excavation conducted at a stone-walled complex on the farm Doornpoort near Winburg, suggest that variations on the arrangement of stone-walled structures as defined for Type V, Type N and Type Z also occurred (Dreyer 1992) (**Fig. 6, no. 4**). The Doornpoort sites lie about 8 km south of the affected area. These sites will not be impacted by the proposed development. Maggs (1976) ascribes the occupation of the sites with bilobial dwellings to early Sotho-speaking Thlaping and Rolong groups. According to radio-carbon dating and oral history, Type Z sites were occupied from the 16th and 17th to early 19th century (Maggs 1976; Dreyer 1992).

History

More recent historical footprints in the vicinity of the footprint include Voortrekker and Anglo Boer War activities. The Winburg Voortrekker Monument as well as a small Voortekker graveyard and monument are located outside Winburg (**Fig. 6, no. 7 - 8 & Fig. 8 & 9**). These sites will not be impacted by the proposed development. The Battle of Karee Siding took place on 29 March 1900 when Boer forces temporarily resisted the advance of British troops north of the Modder River, with 188 and 21 casualties on the British and Boer sides, respectively (**Fig. 6 no. 9**). Winburg was laid out on the farm Waaifontein in 1841 and became a municipality in 1872. The name, originally spelt *Wenburg*, means ‘town of winning’; it may refer to a military victory over the Matabele at Mosega on 17 January 1837, or to the triumph of the protagonists of Waaifontein as site of the town (Raper 1984)

The Winburg Voortrekker Monument as well as a small Voortekker graveyard is located about 3 km south of the affected areas (GPS coordinates S28 32 39.5 E26 59 39.6). These sites will not be impacted by the proposed development.

Field Assessment

All three areas are underlain by paleontologically insignificant dolerites that are capped by Quaternary to Recent residual deposits, made up unconsolidated, light brown soils of varying depth. The survey indicated that the proposed development footprint would impact superficial sediments (soil overburden) and dolerite bedrock (**Fig. 12**).

Area 1

The footprint lies in close proximity to the oldest part of town (270 m west of area, **Fig. 10 & 11**), the Vaalkop Cemetery (400 m southwest of area, **Fig. 12**), as well as a South African War Concentration Camp Cemetery (~80 m east of area, **Fig. 12**) (**Table 1**). There is also a small graveyard located at the northeast corner of the footprint that are included in the development plan (**Fig. 12**). The terrain itself has been largely degraded by informal human settlement or associated activities. There are no signs of *in situ* Stone Age or Late Iron Age archaeological material. There are also no indications of prehistoric structures, historical buildings older than 60 years or above ground evidence of isolated or unmarked graves (outside of the graveyard area).

Area 2

The terrain has been largely degraded by informal human settlement or associated activities. There are no signs of *in situ* Stone Age or Late Iron Age archaeological material. There are also no indications of prehistoric structures, historical buildings older than 60 years or above ground evidence of unmarked graves.

Area 3

The terrain has been largely degraded by informal human settlement or associated activities. There are no signs of *in situ* Stone Age or Late Iron Age archaeological material. There are also no indications of prehistoric structures, historical buildings older than 60 years or above ground evidence of unmarked graves.

Impact Statement and Recommendation

It is unlikely that the proposed development will result in any palaeontological or archaeological impact. There are no major palaeontological or archaeological grounds to suspend the proposed developments in Areas 1-3, which are all assigned a site rating of Generally Protected C (**Table 2**). It is advised that access to the graveyard in Area 1 is strictly avoided during construction phase of development in Area 1. Also the

Concentration Camp Cemetery is severely vandalized and neglected and I strongly propose that a permanent fence is put up around it with long lasting signage to ensure that further damage is minimized.

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.
- Dreyer J. 1992. The Iron Age Archaeology of Doornpoort, Winburg, Orange Free state. *Navorsing van die Nasionale Museum Bloemfontein* 8(7): 262-390.
- Johnson et al. 2006. Sedimentary rocks of the Karoo Supergroup. In: M.R. Johnson, et al. (eds). *The Geology of South Africa*. Geological Society of South Africa.
- Kitching, J.W. 1977. The distribution of Karoo Vertebrate Fauna. Bernard Price Institute for Palaeontological Research. *Memoir* 1, 1 – 131.
- Kitching, J.W. 1995. Biostratigraphy of the Dicynodon AZ. In: B.S. Rubidge (ed). *Biostratigraphy of the Beaufort Group*. SA Comm for Stratigraphy 1 pp. 1 – 46.
- Maggs, T.C. 1976. Iron Age communities of the southern Highveld. *Occasional Papers of the Natal Museum* No. 2.
- Nolte, C.C. 1995. The geology of the Winburg area. Geological Survey of South Africa. Council for Geoscience.
- Venter, W.H. 1974. Die geskiedenis van Winburg tot 1902. *Verhandeling ter vervulling van Magister graad*. Universiteit van die Oranje Vrystaat.
- Walton, J. 1965. Early Ghoya Settlements in the Orange Free State. *Memoirs of the National Museum* 2.

Tables and Figures

Table 1. Site coordinates of historically significant features and monuments located near Area 1.

	Feature	GPS Coordinates	
1	Area 1 Graveyard (0.7 ha)	28°31'11.03"S	27° 0'24.37"E
2	Concentration Camp Cemetery (0.5 ha)	28°31'7.30"S	27° 0'2.81"E
3	Vaalkop Cemetery (2.3 ha)	28°31'23.52"S	26°59'48.42"E
4	Dutch Reformed Church	28°31'7.44"S	27° 0'42.17"E
5	Town Hall	28°31'8.67"S	27° 0'46.71"E
6	Memorial Garden	28°31'9.72"S	27° 0'36.76"E

Table 2. Field rating categories for archaeology 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

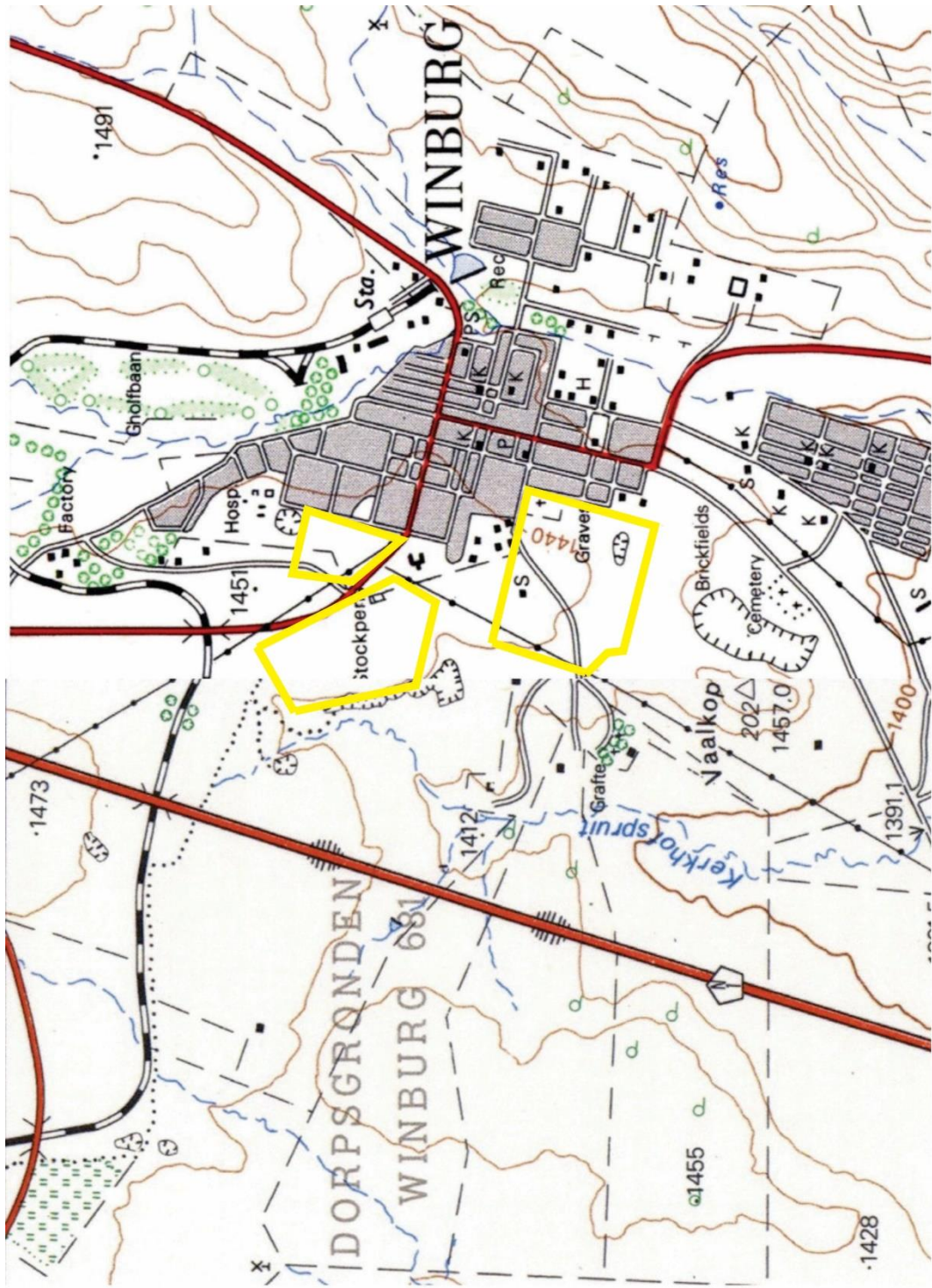


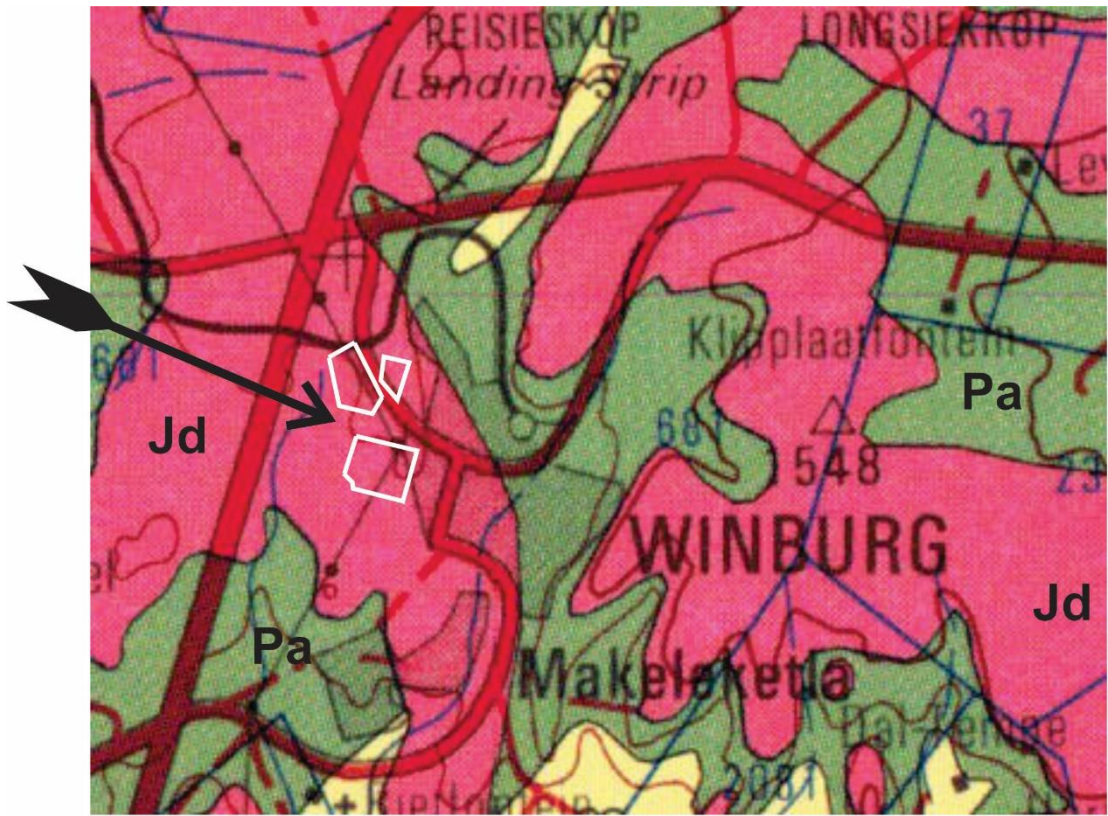
Figure 1. Map of proposed residential development areas marked on portion of 1:50 000 scale map 2827CA Winburg .



Figure 2. Aerial view of Winburg and study areas (white polygons).



Figure 3. Layout of proposed development areas marked 1-3.



GEOLOGIESE LEGENDE

GEOLOGICAL LEGEND

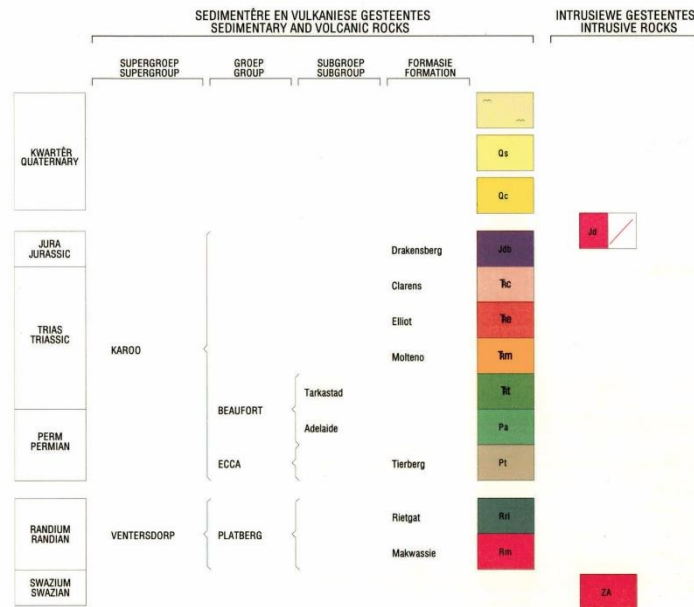


Figure 4. Portion of 1:250 000 scale geological map 2826 Winburg, showing underlying sedimentary rocks in the region are represented by potentially fossil – bearing sandstones, shales and mudstones of the Adelaide Subgroup (*Pa*, Beaufort Group) and volcanic rocks of the Karoo Dolerite Suite (*Jd*). Both units are included in the Karoo Supergroup).

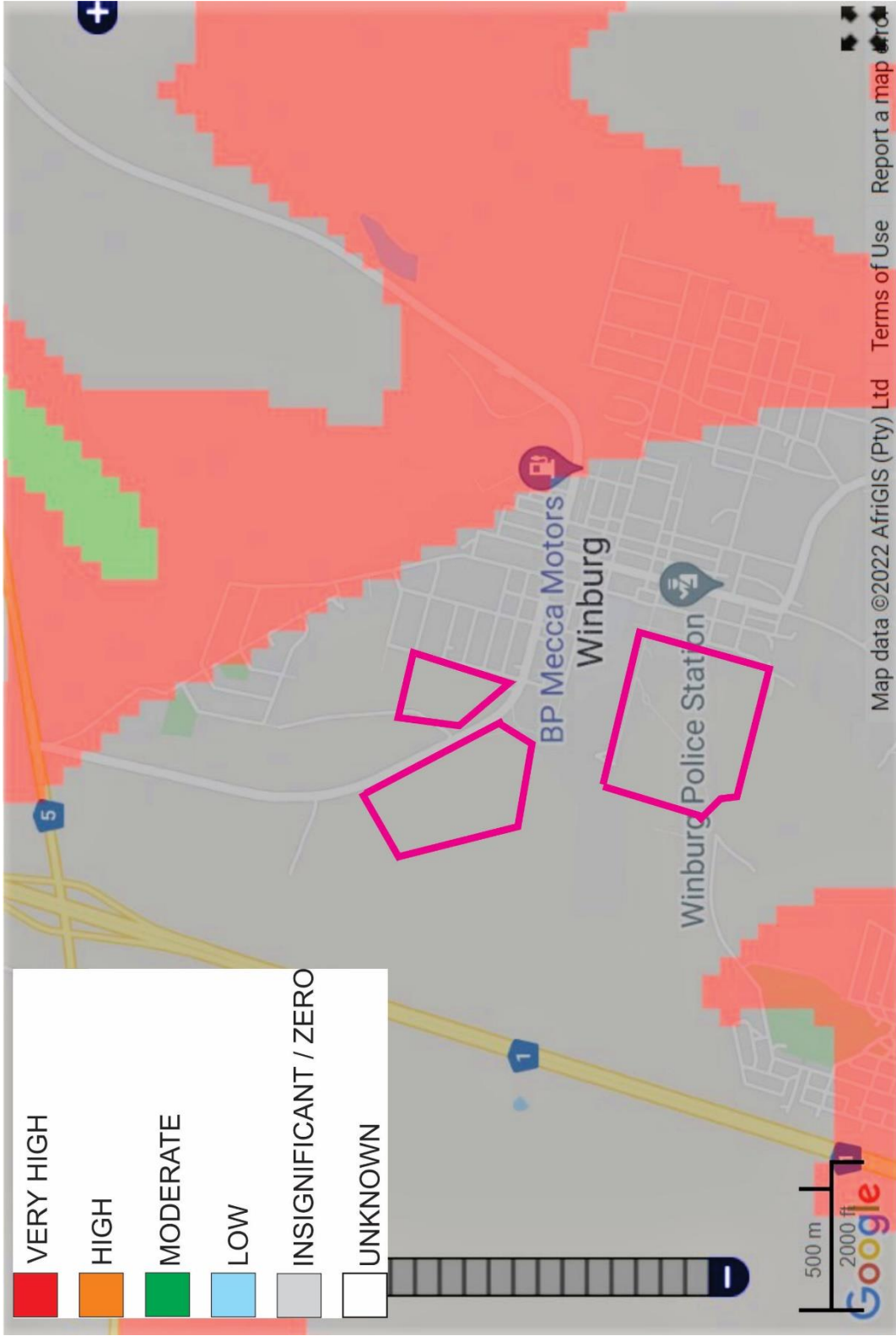


Figure 5. SAHRIS palaeosensitivity map with position of study areas (pink polygons)

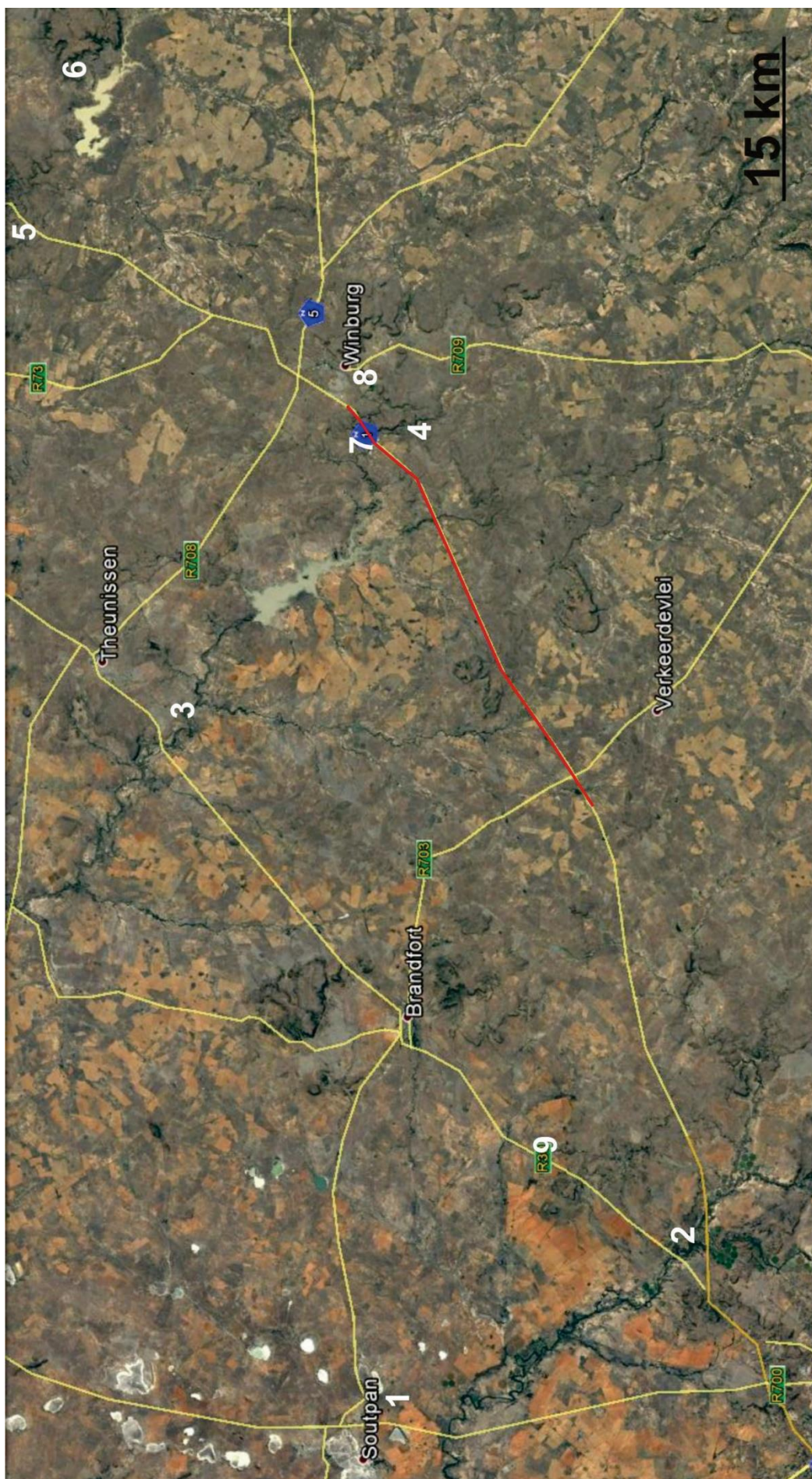


Figure 6. Map of palaeontological, archaeological and historical sites mentioned in text.

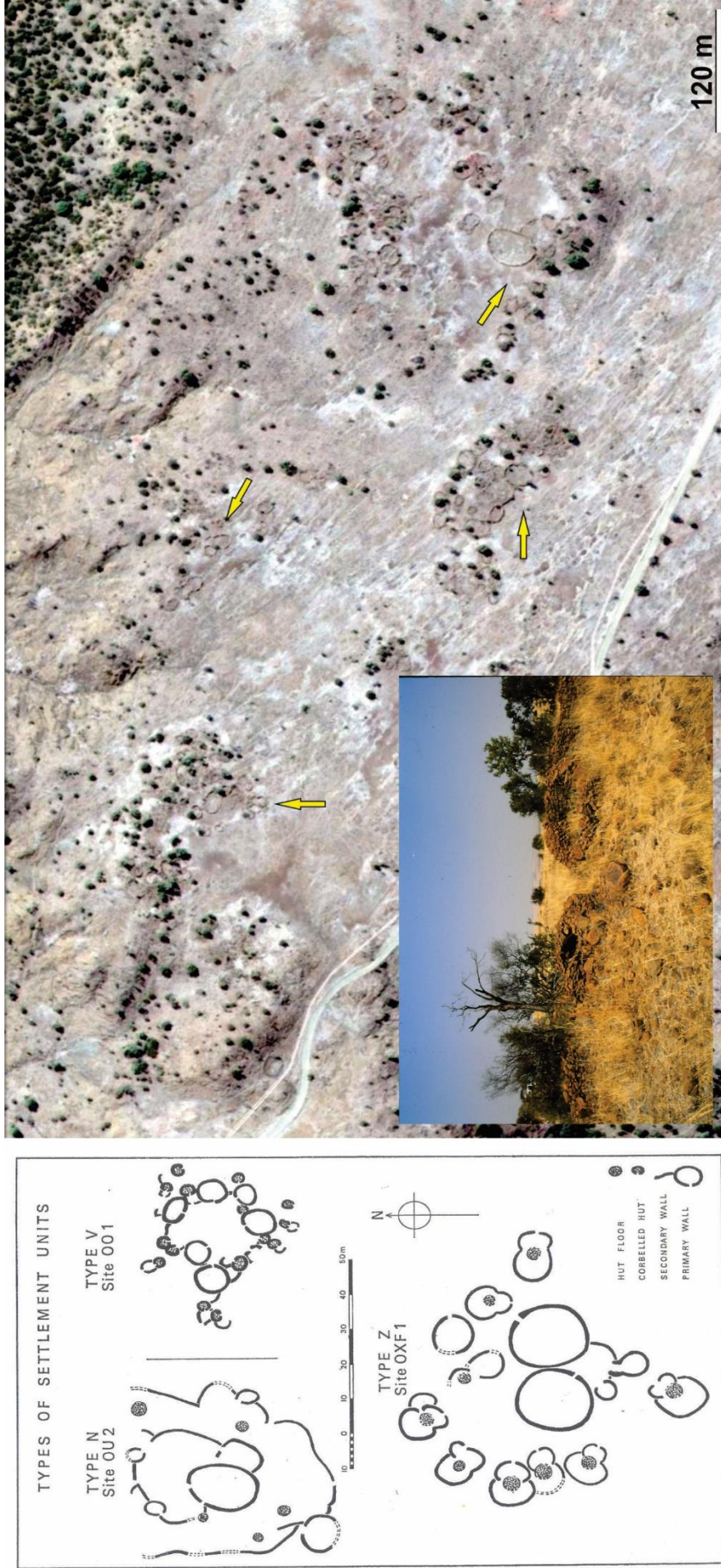


Figure 7. Iron Age settlement types from the southern Highveld according to classification by Maggs (1976). Aerial view of bilobial dwellings at Doringberg arranged around a cluster of central cattle byres.

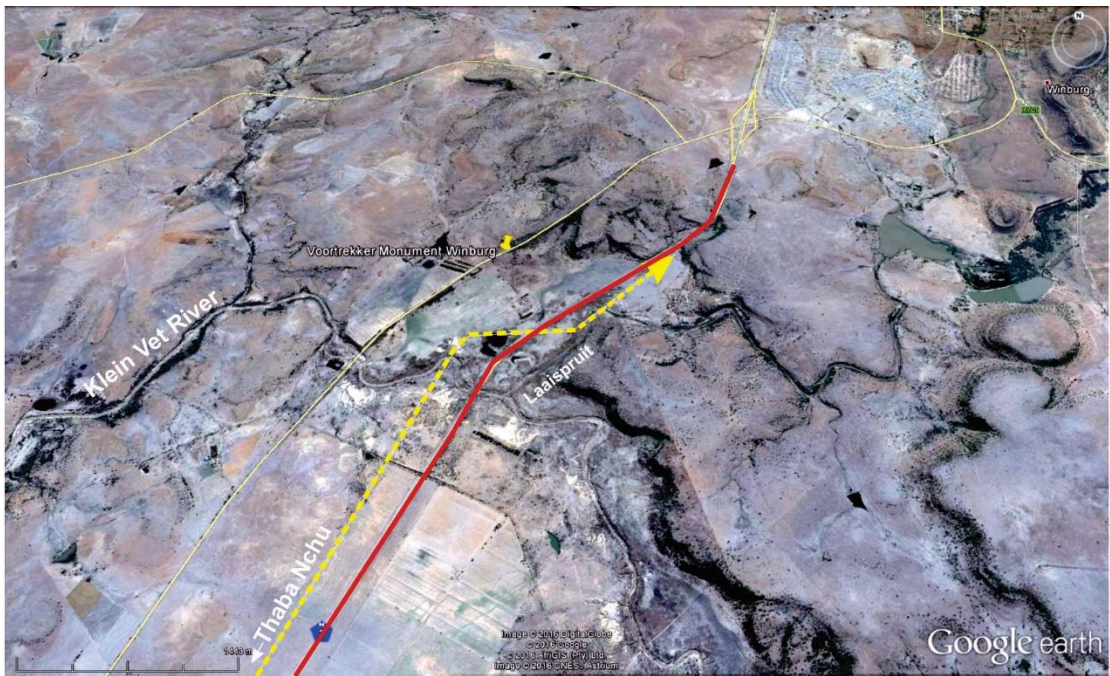


Figure 8. Route of the Great Trek reaching Winburg from Thaba Nchu via Verkeerdevlei in 1836 (above). The Andries Potgieter party crossed the Klein Vet River and camped at the Laaispruit before continuing north. Winburg was laid out on the farm Waaifontein in 1841 and became a municipality in 1872. The Voortrekker Monument and accompanying museum was opened in 1968 (below).

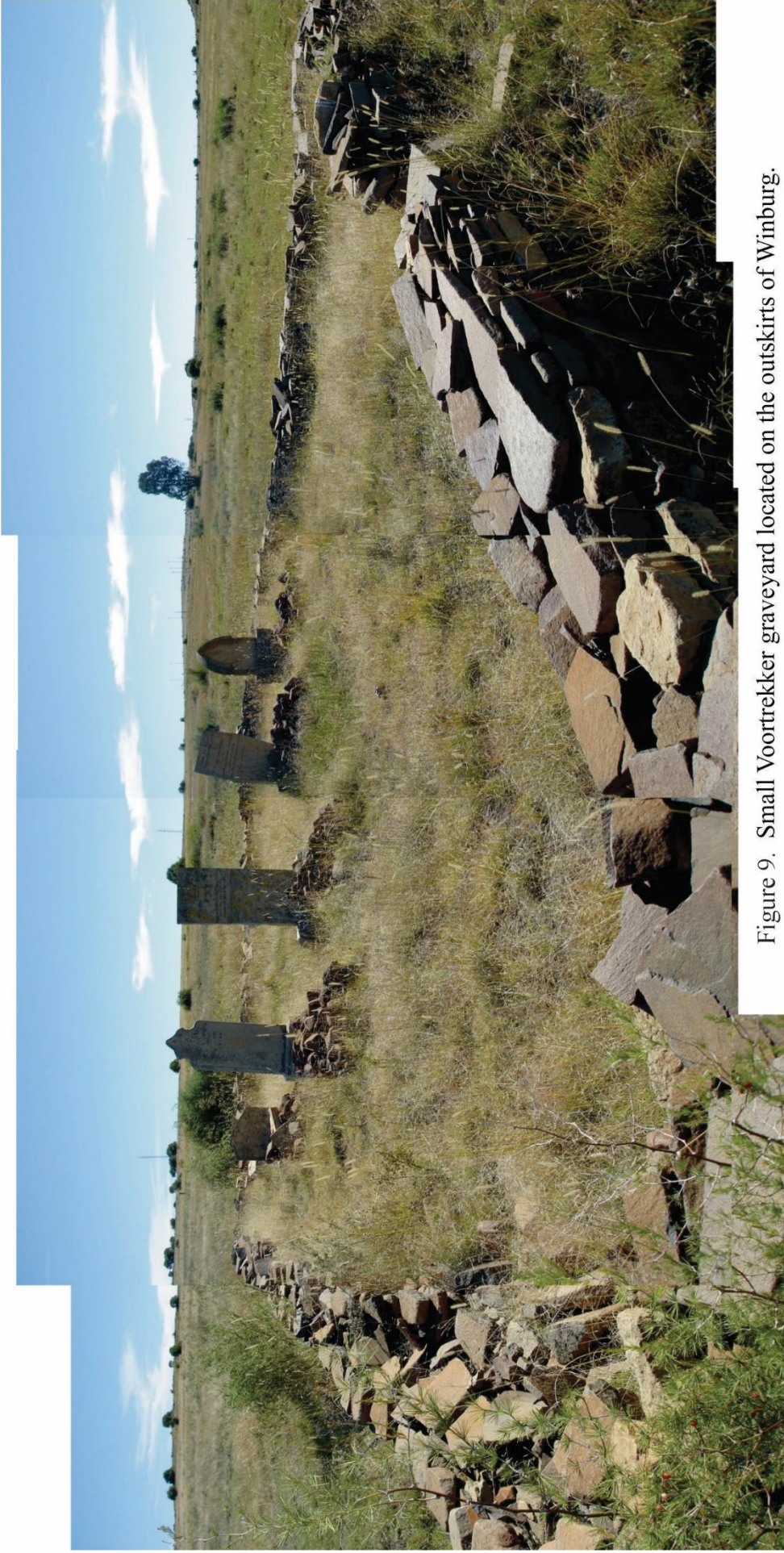


Figure 9. Small Voortrekker graveyard located on the outskirts of Winburg.



Figure 10. Position of study areas in relation to oldest part of town ca. 1849.



Figure 12. Position of historical Concentration Camp Cemetery (red polygon) and Vaalkop Cemetery near Area 1.



Die groot tent by die bloekombome het as hospitaal
diens gedien.



Figure 13. View of the Winburg Concentration Camp looking north
(above) and southwest (below), vide Venter 1974.



Figure 14. General view of Concentration Camp Cemetery, looking east and south (top & center) and cemetery in Area 1, which also includes British War Graves (bottom).