

**Phase 1 Archaeological Impact Assessment of the
proposed new Lourierpark township development
on Portion 1 of the farm Brandkop 702,
Bloemfontein, FS Province.**

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Executive Summary

A Phase 1 Archaeological Impact Assessment was carried out as part of a proposed township development on Portion 1 of the farm Brandkop 702 outside Bloemfontein, Free State Province, where the Mangaung Municipality plans to develop 2000 erven on 400ha of land. A foot survey of the terrain revealed no indication of historically significant structures, graves or *in situ* Stone Age archaeological material, capped or distributed as surface scatters on the landscape. A small blue gum grove, consisting of what appears to be the modern remnants of older copse located near the center of the study area is not considered to be historically significant. It is unlikely that the proposed development will result in any significant archaeological impact at the site. The proposed site is regarded as of low archaeological significance and is assigned the rating of Generally Protected C (GP.C).

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Introduction

A Phase 1 Archaeological Impact Assessment was carried out as part of a proposed township development on Portion 1 of the farm Brandkop 702 outside Bloemfontein, Free State Province (**Fig. 1**), where the Mangaung Municipality plans to develop 2000 erven on 400ha of land. The assessment is required as a prerequisite for new development in terms of the National Environmental Management Act and is also called for in terms of the National Heritage Resources Act (NHRA) 25 of 1999. The region's unique and non-renewable archaeological and palaeontological heritage sites are 'Generally' protected in terms of the National Heritage Resources Act (Act No 25 of 1999, Section 35) and may not be disturbed at all without a permit from the relevant heritage resources authority. As many such heritage sites are threatened daily by development, both the environmental and heritage legislation require impact assessment reports that identify all heritage resources including archaeological and palaeontological sites in the area to be developed, and that make recommendations for protection or mitigation of the impact of the sites.

The NHRA identifies what is defined as a heritage resource, the criteria for establishing its significance and lists specific activities for which a heritage specialist study may be required. **In this regard, categories of development relevant to the Lourierpark development listed in Section 34 (1), Section 35 (4), Section 36 (3) and Section 38 (1) of the NHR Act are as follows:**

34. (1) No person may alter or demolish any structure or part of a structure which is older than 60 years without a permit issued by the relevant provincial heritage resources authority.

35 (4) No person may, without a permit issued by the responsible heritage resources authority—

- destroy, damage, excavate, alter, deface or otherwise disturb any archaeological or palaeontological site or any meteorite;
- *b)* destroy, damage, excavate, remove from its original position, collect or own any archaeological or palaeontological material or object or any meteorite;

36 (3) 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.

38 (1) Subject to the provisions of subsections (7), (8) and (9), any person who intends to undertake a development categorised as—

- The construction of a road, wall, power line, pipeline, canal or other similar form of linear development or barrier exceeding 300m in length;
- The construction of a bridge or similar structure exceeding 50m in length;
- Any development or other activity which will change the character of the site
 - a) exceeding 5000 m² in extent; or
 - b) involving three or more existing erven or subdivisions thereof; or
 - c) involving three or more subdivisions thereof which have been consolidated within the past five years;
- The rezoning of a site exceeding 10 000 m²; or
- Any other category of development provided for in regulations by the South African Heritage Resources Agency (SAHRA).

Terms of Reference

A site visit and subsequent assessment took place during **July 2016**. The task involved the following:

- 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.

Methodology

The heritage significance of the affected area was evaluated through a desktop study and carried out on the basis of existing field data, database information and published literature. This was followed by a field assessment by means of a pedestrian survey. A Garmin Etrex Vista GPS hand model (set to the WGS 84 map datum) and a digital camera were used for recording purposes. Relevant publications, aerial photographs (incl. Google Earth) and site records were consulted and integrated with data acquired during the on-site inspection.

Field Rating

Site significance classification standards prescribed by SAHRA (2005) were used for the purpose of this report (**Table 1**).

Locality data

1 : 50 000 scale topographic map: 2926 AA Bloemfontein

The proposed development is located on Portion 1 of the farm Brandkop 702, situated south of and next to the R706 road to Jagersfontein, and about one kilometre west of the N1 national road going through Bloemfontein (**Fig. 2**). The study area consists of 400ha of open, flat terrain and degraded farmland (**Fig. 3**).

Site coordinates:

- A) 29°10'47.53"S 26°10'2.27"E
- B) 29°11'29.38"S 26°10'42.04"E
- C) 29°12'19.57"S 26° 9'20.84"E
- D) 29°11'28.16"S 26° 8'53.67"E

Background

The Stone Age archaeological record of Modder River catchment north of Bloemfontein spans back to the early Middle Stone Age. Prehistoric archaeological remains previously recorded in the region include stone tools and mammal fossil remains from sealed and or exposed contexts. Along much of the course of Modder River and its tributaries north of Bloemfontein, alluvial deposits contain numerous occurrences of *in situ* Middle and Later Stone Age material eroding out of the overbank sediments where they are often found in association large mammal fossil

remains (Churchill *et al.* 2000; Rossouw 1999, 2000, 2006). The incidence of surface scatters usually decreases away from localized areas such as alluvial contexts and dolerite-shale contact zones when stone tools largely occur as contextually derived individual finds in the open veld. Widespread traces of prehistoric human habitation, in the form of stone tool scatters and individual surface finds, have previously been recorded at Bayswater 286, Lilyvale 2313 and Hillandale 249 (Goodwin and Van Riet Lowe 1929).

Slypsteenberg, which is the site of the old Sydenham Leper Hospital and graveyard, is located about three kilometers east of the site, while the historically significant Brandkop farmstead, including the old farm house, cottage, graveyard, stone-walled compound, surrounding structures and dam walls, is situated about four kilometers to the north of the study area (**Fig. 4**).

Field Assessment

A foot survey of the terrain revealed no indication of historically significant structures, graves or *in situ* Stone Age archaeological material, capped or distributed as surface scatters on the landscape (**Fig. 5**). A small blue gum grove (**GPS coordinates from (A) 29°11'23.89"S 26° 9'49.66"E to (B) 29°11'27.45"S 26° 9'39.40"E**), consisting of what appears to be the modern remnants of older copse is located near the center of the study area (**Fig. 6 & 7**).

Impact Statement and Recommendation

It is unlikely that the proposed development will result in any significant archaeological impact at the site. Trees associated with historical settlements or farmsteads, that are older than 60 years old, are generally protected as heritage sites with cultural significance. However, the remnant grove appears to be younger than 60 years old and is not directly associated with a farmstead or historical structures. The proposed site is regarded as of low archaeological significance and is assigned the rating of Generally Protected C (GP.C).

References

- Goodwin H.J. & Van Riet Lowe, C. 1929. The Stone Age cultures of South Africa. *Annals of the South African Museum* 27: 1 – 289.
- Rossouw, L. 1999. Palaeontological and archaeological survey of the Riet River, Modder River and certain sections of the Gariep River Unpublished Report, Palaeo-Anthropological Research Group. University of the Witwatersrand.
- Rossouw, L. 2000. Preliminary species list of Late Pleistocene / Holocene fossil vertebrate remains from erosional gullies along the Modder River NE of Sannaspos, Free State Province. Unpublished Report , Palaeo- Anthropological Research Group, University of the Witwatersrand.
- Rossouw, L. 2006. Florisian mammal fossils from erosional gullies along the Modder River at Mitasrust farm, central Free State, South Africa. *Navorsinge van die Nasionale Museum* 22(6): 145-162.

Tables and Figures

Table 1. Field rating categories for heritage sites 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 2. Aerial view of the study area. The blue gum grove is demarcated A to B.



Figure 3. General view of the study area, looking south (top) and east (bottom).

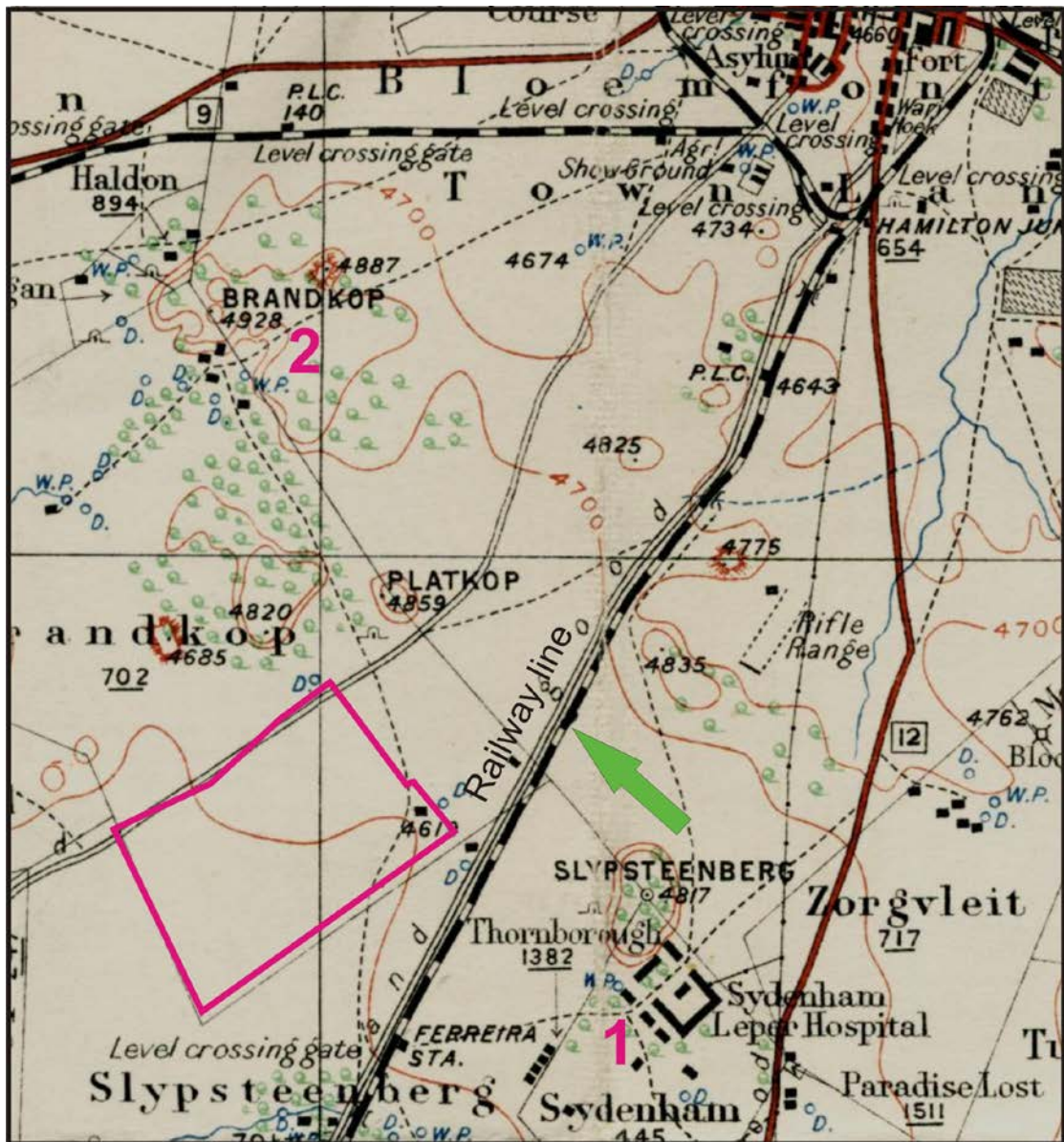


Figure 4. British Military Map of Bloemfontein ca.1913. The railway line that was crucial in transporting British troops during the Anglo Boer War is indicated by a green arrow. The Sydenham Leper Hospital was located at the foot of Sypsteenberg (1). The historically significant Brandkop farmstead is situated about 4 kilometers to the north of the study area (2).



Figure 5. Looking east (top left), southeast (top right), and southwest (bottom left). The study area is made up of open, flat terrain and degraded farmland. Scale 1 = 10 cm.



Figure 6. A small blue gum grove, consisting of what appears to be the modern remnants of older copse (looking west, top and center), demarcated A to B (bottom).

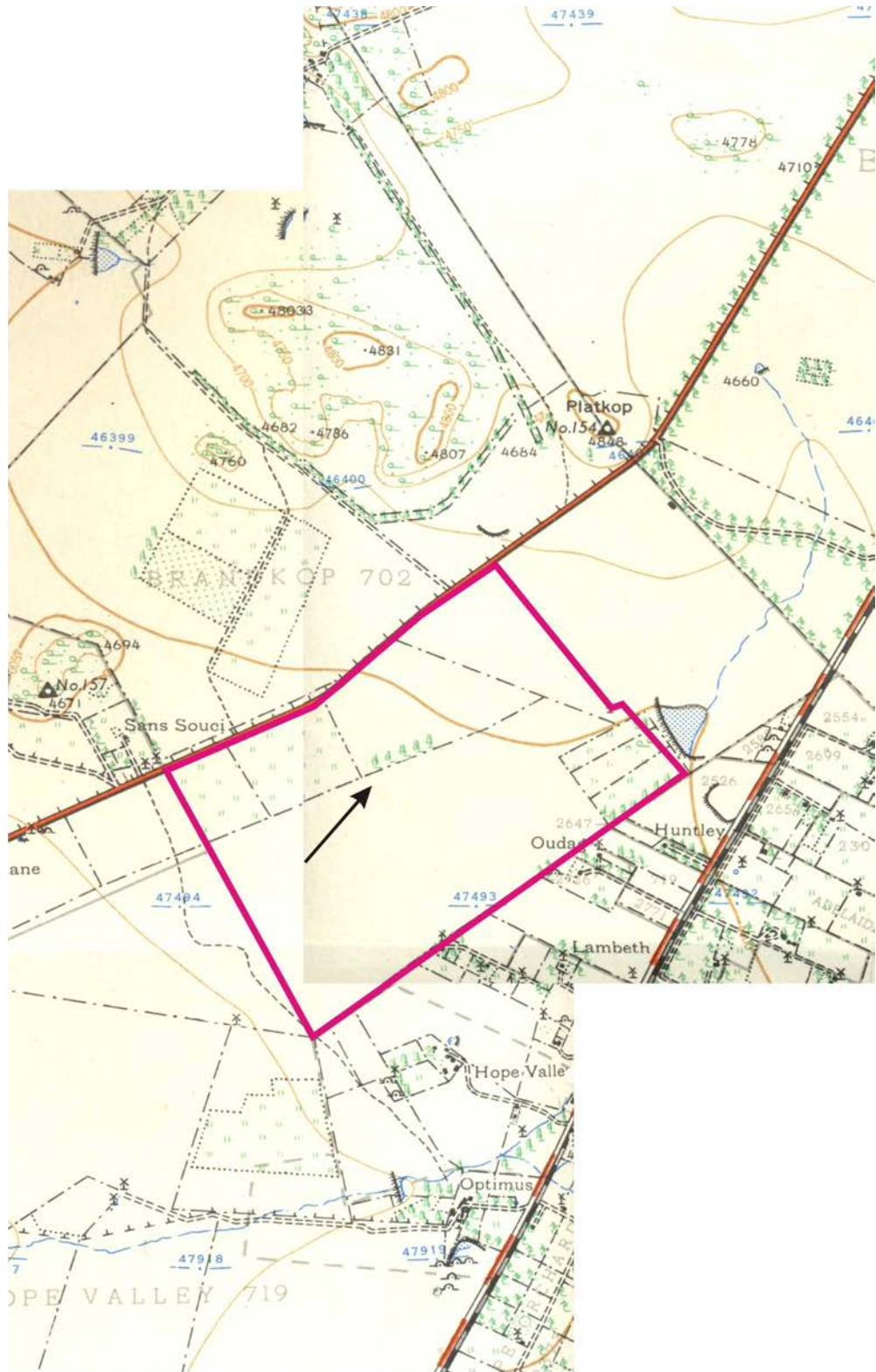


Figure 6. Portion of 1:50 000 scale topographic map of the area circa 1951, indicating a small grove within the boundaries of the proposed development footprint.