

# **Phase 1 Heritage Impact Assessment of a proposed new township development in Olifantshoek, Northern Cape Province.**

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## Summary

A Phase 1 Heritage Impact Assessment was carried out for a new township development located south of the existing Ditlouw Township in Olifantshoek, Northern Cape Province. The proposed pipeline footprint is primarily underlain by palaeontologically insignificant bedrock that is overlain by geologically recent wind-blown sand. Potential impact on palaeontological heritage resources within the proposed footprint is considered low to very low. Potential impact on Quaternary vertebrate fossil resources within the superficial overburden is considered unlikely. As far as the palaeontological heritage is concerned, the proposed development may proceed with no further palaeontological assessments required. A pedestrian survey conducted along six transects within the study area revealed no above-ground evidence of *in situ* Stone Age archaeological material, eroding out or distributed as surface scatters on the landscape. There are also no above-ground indications of rock art, prehistoric structures, graves or historically significant structures older than 60 years within the confines of the development footprint. The site is considered to be of low archaeological significance, especially given the well – developed sandy overburden. It is assigned the rating of Generally Protected C (GP.C), provided that any capped archaeological remains in the form of stone tool scatters, found during the construction phase of the project under the sandy overburden (Qs), should be reported to the relevant heritage resources agency so that a heritage professional can assess their importance and proceed with rescue procedures if necessary.

## Introduction

A Phase 1 Heritage Impact Assessment was carried out for a new township development located south of the existing Ditlouw Township in Olifantshoek, Northern Cape Province (**Fig. 1**). The National Heritage Resources (NHR) Act (Act No 25 of 1999) 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 listed in Section 38 (1) of the NHR Act are:

- The construction of a road, wall, powerline, 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;
- Exceeding 5000 m<sup>2</sup> in extent;
- Involving three or more existing erven or subdivisions thereof;
- Involving three or more subdivisions thereof which have been consolidated within the past five years;
- Costs of which will exceed a sum set in terms of regulations by the South African Heritage Resources Agency (SAHRA).
- The rezoning of a site exceeding 10 000 m<sup>2</sup>.
- Any other category of development provided for in regulations by the South African Heritage Resources Agency (SAHRA).

The significance or sensitivity of heritage resources within a particular area or region can inform the EIA process on potential impacts and whether or not the expertise of a heritage specialist is required.

## **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 information, aerial photographs and site records were consulted and integrated with data acquired during the on-site inspection. A site visit was carried out in March 2016.

## **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.

## **Field Rating**

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

## **Details of Area Surveyed**

### **Locality Data**

1 : 50 000 scale topographic maps: 2722DC Olifantshoek & 2722DD Sishen

1:250 000 scale geological map: 2722 Kuruman

Site coordinates (**Fig. 1**):

A) 27°57'25.88"S 22°44'24.96"E

B) 27°57'27.20"S 22°44'47.60"E

C) 27°58'7.50"S 22°44'52.07"E

D) 27°58'7.98"S 22°44'20.16"E

E) 27°57'49.62"S 22°44'10.45"E

The proposed footprint covers approximately 130 ha of low topography terrain, located on the southern outskirts of Ditlouw Township in Olifantshoek (**Fig. 2**).

### **Geology**

The proposed pipeline route falls within the outcrop area of Olifantshoek Supergroup quartzites and metalavas that are most unlikely to contain any fossil material (**Fig. 3**). The underlying bedrock within proposed development footprint is mantled by well-developed Kalahari Group aeolian sand deposits (*Qs*) with moderate alluvium development along stream incisions and local watercourses and scree deposits where rocky outcrops occur (**Fig 2**).

### **Background**

The archaeological footprint of the region is widespread. Abundant fossil faunal remains and associated Early Stone Age (ESA) artefacts are known from Quaternary spring sediments at Kathu Pan, situated northwest of the town of Kathu (Beaumont 1990; Beaumont and Vogel 2006). The tufas at Norlim, near Taung below the Ghaap Escarpment, contain solution cavities that produced the first type specimen of *Australopithecus africanus* (Dart 1925).

Several Early Stone Age (ESA) sites, containing Victoria West cores, handaxes and cleavers have been recorded along the Harts River, a tributary of the Vaal River, near Taung (Helgren 1979; Kuman 2001). Wonderwerk Cave situated halfway between Kuruman and Danielskuil, is also an important archaeological repository. Various archaeological investigations at the site demonstrated that Wonderwerk Cave contains *in situ*, ESA, Fauresmith and Middle Stone Age through Later Stone Age deposits, including rock art (Chazan *et al.* 2012). It is unique since few sites have yielded such a long sequence of *in situ* ESA horizons which also cover the ESA/MSA transition, while none of the other ESA sites in Southern Africa have yielded such abundant and well preserved *in situ* micro and macro-faunal and botanical remains. Holocene deposits

containing LSA artefacts are known from the rock shelters Blue Pool Cave, Ochre Cave, Powerhouse Cave, Witkrans Cave, Little Witkrans and Black Earth Cave, which are also located in Ghaap Plateau travertine at Norlim (Taung) (Humphreys 1978). The LSA sites have yielded Wilton assemblages with formal lithics dominated by backed pieces including segments and scrapers. At Dikbosch between Kimberley and Griekwastad, a rock shelter located in travertine deposits of the Ghaap Plateau, has yielded LSA artefacts associated with faunal remains. Several prehistoric specularite and haematite mines are found around Postmasburg, including underground workings on the farms Paling M87, open mining pits at Gloucester 13 and Mount Huxley, as well as open mining pits next to the town reservoir. The most famous mining site is Blinkklipkop (Gatkoppies), situated about 5 km northeast of Postmasburg on the townlands (Beaumont 1973; Beaumont and Boshier 1974).

Dolomite terraces and exposed valley floors along the Kuruman River valley are at places decorated with rock engravings that reflect colonial and LSA/Iron Age frontier interactions. Rock art sites in the region, including rock engraving as well as paintings, are known from Wonderwerk Cave (paintings) and the Danielskuil Townlands (engravings) (Thackeray *et al.* 1981; Morris 1990). Sites found northwest of Kuruman, include Gamohaam, Maropeng, Batlharos and Mahakane. Non-representational rock art sites near Postmasburg include engravings from the farms Beeshoek and Klavin and paintings from Andriesfontein and Toto (Van Riet Lowe 1949).

The town of Olifantshoek was established within an area that was previously occupied by Tswana-speaking (Tlhaping and Tlharo) communities who occupied the Langeberg region throughout the late 18<sup>th</sup> century. The Tlhaping and Tlharo branches, who entered the northern Cape from the north at the beginning of the 17<sup>th</sup> century, reached as far south as Majeng (Langeberg), Tsantsabane (Postmasburg) and Tlhake le Tlou (Danielskuil) by the beginning of the 18<sup>th</sup> century (Snyman 1986). A large Tlhaping settlement was established at Nokaneng, about 40 km southwest of Olifantshoek, while the Tlharo largely occupied the Langeberg region between Ditlou (Olifantshoek) and Dibeng (Deben) (Maingard 1933). After clashes with the Koranna, who moved into the

area after 1770, the Tlhaping and Tlharo temporarily abandoned Nokanna and the Langeberg at around 1790 to settle around Dithakong (Kuruman) only to return again to the Langeberg at the beginning of the 19<sup>th</sup> century (Humphreys 1976). At the time of the 1801-1803 Borchers and Somerville expedition, Dithakong was an important BaTlhaping capital. It was calculated that the number of huts there were at least not less than 1 500 and the number of occupants at somewhere between 8 000 and 25 000 (Maingard, 1933; Beaumont 1983; Morris 1990). Extensive stone wall enclosures are found on the adjacent hills and archaeological investigations during the 1980's have revealed that the ruins were built during the 15<sup>th</sup> century A.D. and possibly by sedentary Khoi groups. The area consists of primary and secondary enclosures and cover a total area of about 1 km<sup>2</sup> comprising hundreds of circles of varying size. With the annexation of the region south of the Molopo and north of Griqualand West by the British in 1885, the area became known as British Bechuanaland. Several reservations were established but following a revolt in 1895 known as the Langeberg Rebellion, the reservations were confiscated by the British colonial government, divided up into farms and offered to white settlers (Snyman 1986).

### **Field Assessment**

The proposed development footprint is located within a basin that is capped by well-developed, wind-blown sandy deposits (Qs), reaching depths of more than 1 m (**Fig. 4**). The terrain has been moderately degraded by informal residential development, and associated cattle herding activities (**Fig. 5 & 6**). A large, formal cemetery is located at the north-eastern boundary of the footprint (**Fig. 7 & 8**). The cemetery will not be affected by the proposed development.

### **Impact Statement and Recommendations**

The proposed development footprint is primarily underlain by palaeontologically insignificant bedrock that is overlain by geologically recent, wind-blown sandy deposits. Potential impact on palaeontological heritage resources within the proposed footprint is considered low to very low. Potential impact on Quaternary vertebrate fossil

resources within the superficial overburden is considered unlikely. As far as the palaeontological heritage is concerned, the proposed development may proceed with no further palaeontological assessments required.

A pedestrian survey conducted along six transects within the study area revealed no above-ground evidence of *in situ* Stone Age archaeological material, eroding out or distributed as surface scatters on the landscape. There are also no above-ground indications of rock art, prehistoric structures, graves or historically significant structures older than 60 years within the confines of the footprint. This site is considered to be of low archaeological significance, especially given the well – developed sandy overburden.

It is assigned the rating of Generally Protected C (GP.C) (**Table 1**), provided that any capped archaeological remains in the form of stone tool scatters, found during the construction phase of the project under the sandy overburden (Qs), should be reported to the relevant heritage resources agency so that a heritage professional can assess their importance and proceed with rescue procedures if necessary.

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## 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.

05 / 09 / 2019

## Tables and Figures

**Table 1.** Field rating categories as prescribed by SAHRA.

<b>Field Rating</b>	<b>Grade</b>	<b>Significance</b>	<b>Mitigation</b>
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. Aerial view and layout of the proposed development footprint.





Figure 2. General view of the terrain, looking north.





Figure 3. According to the 1:250 000 scale geological map 2722 Kuruman, the site is located within the outcrop area of the Olifantshoek Supergroup quartzites and metalavas (*Mmd*, *Mml*, *Vh*) that are not considered to be palaeontologically sensitive. Rocks are mantled by well-developed Kalahari Group aeolian sand deposits (*Qs*) with moderate alluvium development along stream incisions and local watercourses and scree deposits where rocky outcrops occur





Figure 4. The site is located within a basin that is capped by well-developed, wind-blown sandy deposits ( $Q_s$ ), reaching depths of more than 1 m.





Figure 5. The terrain has been moderately degraded by informal residential development, and associated cattle herding activities.





Figure 6. Rubbish dumps are scattered over the site,





Figure 7. A large, formal cemetery is located at the north-eastern boundary of the footprint, looking east..



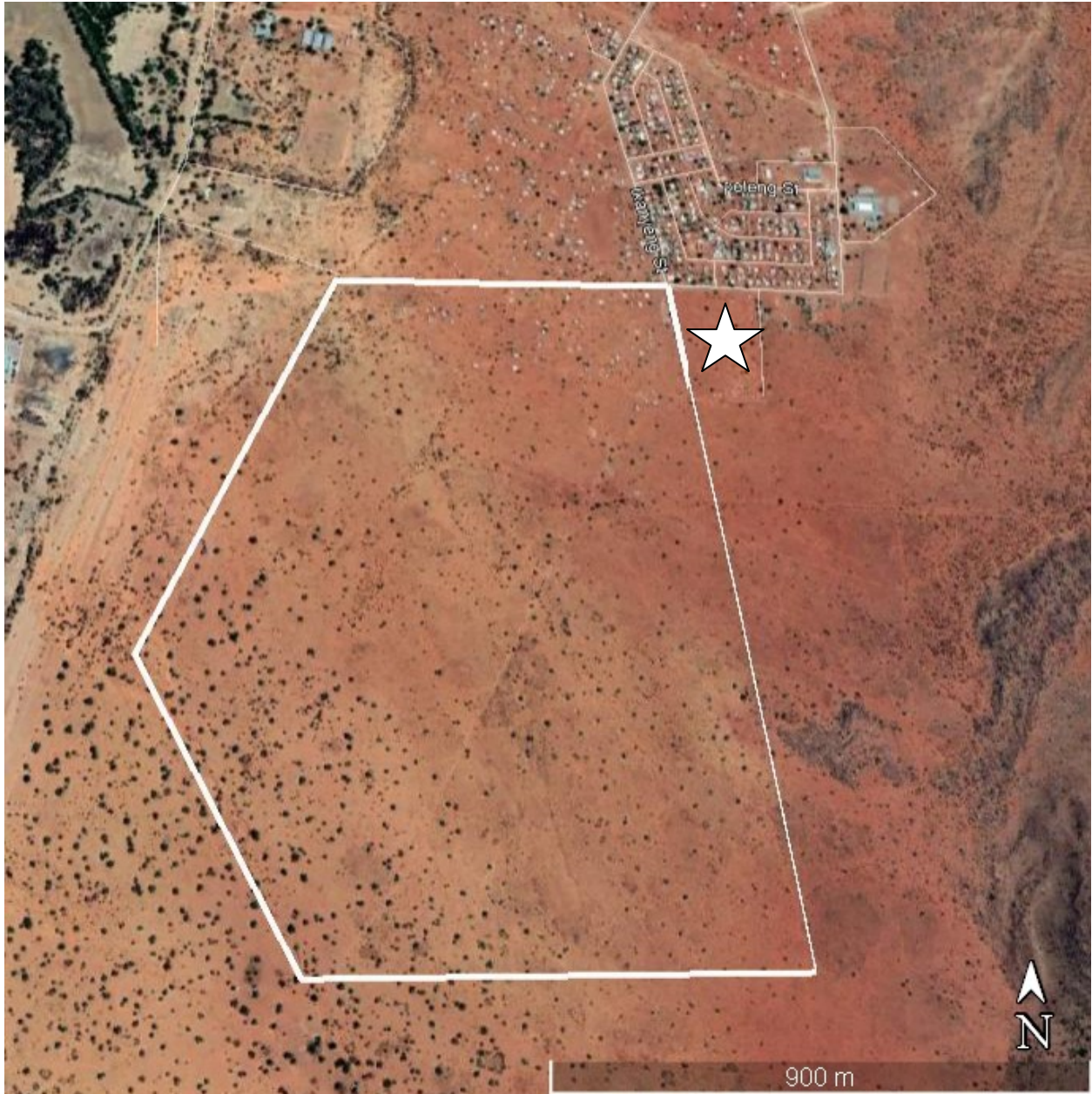


Figure 8. Map of the cemetery (white star). It will not be affected by the proposed development.