

# APPENDIX D<sub>1</sub>

Heritage Report



# **Phase 1 Heritage Impact Assessment for proposed new Lutzburg Cemetery, Kakamas NC Province.**

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## **Summary**

The proposed development footprint covers a 1ha area that is underlain by palaeontologically insignificant intrusive rocks that are capped by palaeontologically sterile superficial deposits (Kalahari Group calretes and sandy soils). As far as the palaeontological heritage is concerned, the proposed development may proceed with no further palaeontological assessments required. The site is not considered archaeologically vulnerable, and there are no major archaeological grounds to suspend the proposed developments, provided that all excavation activities are confined to within the confines of the development footprint. The site is assigned a site rating of Generally Protected C.

## **Introduction**

A Phase 1 Heritage Impact Assessment was carried out for the establishment of a proposed new cemetery located at the Lutzburg settlement near Kakamas (**Fig. 1**). The extent of the proposed development (over 5000 m<sup>2</sup>) 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 assessment 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.

## Site Information

1 : 50 000 scale topographic map 2820DA Marchand

1 : 250 000 scale geological map 2820 Upington

Centroid coordinates of proposed site: 28°44'41.86"S 20°38'8.29"E

The site covers a 1ha area, located about 50 m to the east of the Lutzburg settlement and about 500m due north of the N14 national road between Kakamas and Keimoes (**Fig. 2 & 3**). The proposed new cemetery site covers open rocky terrain that is capped by a veneer of wind-blown sand (**Fig. 4**).

## Methodology

The palaeontological and archaeological significance of the affected area was evaluated through a desktop study and carried out on the basis of existing field data, database information, published literature and maps. This was followed up with a field assessment by means of a pedestrian survey and investigation of all exposed sections 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 standards prescribed by SAHRA (2005) were used to indicate overall significance and mitigation procedures where relevant (**Table 1**).

## Background

### Palaeontology

According to the 1 : 250 000 scale geological map of the area (2820 Upington, Council for Geoscience, Pretoria) the proposed development footprints are underlain by well-developed, superficial deposits located on intrusive Makolian rocks of the Kakamas Terrane (pink weathering Riemvasmaak gneis, *Mrm*, **Fig. 5**). These rocks are not considered to be palaeontological significant because of the intrusive nature of the strata. The superficial sediments within the study area are made up of Kalahari Group (Quaternary) windblown sand and calcretes. While carbonate-rich overbank deposits associated with large river courses can be potentially fossiliferous, there are currently no records of Quaternary fossil localities within the vicinity of the proposed study areas.

## **Archaeology**

The presence of Early, Middle and Later Stone Age artefacts on the Middle Orange River landscape bears evidence of long-term human habitation during prehistoric times (Rudner 1969; Beaumont et al. 1995; Badenhorst et al. 2015). Archaeological and historical evidence also show that the region was extensively occupied by Khoi herders and San hunter-gatherers during the last 2000 years. Khoi groups such as the Einiqua occupied the area around and east of the Augrabies Falls while the Korana occupied the Middle-Upper Orange River further to the east (Burchell 1822; Penn 2005). A large number of burial cairns were recorded on the Orange River in the Kakamas area on the farms Renosterkop, Rooipad and Augrabies Town and appear to be related to Khoekhoen people, specifically the Einiqua, and historical data shows that a large number of the graves date to the 18th and early 19th centuries (Dreyer & Meiring 1937; Morris 1992, 1995). Rock engraving sites are known to occur along rocky outcrops within the younger valley fills associated with the Orange River in the region (Van Riet Lowe 1941).

## **Field Assessment**

The study area consists of severely degraded terrain made up of an admixture of weathered bedrock (gneiss) and Kalahari Group sand. Investigation of superficial cuttings and deflation hollows located within the study area revealed no evidence of Quaternary fossil remains or exposures. There is no aboveground evidence of intact Stone Age archaeological assemblages or sites, prehistoric structures, previously unrecorded or unmarked graves, or historically significant structures older than 60 years within the study area. A small military graveyard and declared heritage site is located about 300m to the north of the northern boundary of the study area (*GPS coordinates 28°44'36.31"S 20°38'8.55"E, Fig. 2, 3 & 6*). The graveyard, including a monument, commemorates a number of German soldiers who were killed in a battle against a force of the Union of South Africa, which took place here on the 4<sup>th</sup> February 1915, following the German Commander in Chief in South West Africa's decision to attack Kakamas during World War 1.

## **Impact Statement and Recommendations**

The chances of palaeontological impact resulting from the proposed development are considered to be improbable because of the nature of the underlying geology. As far as the palaeontological heritage is concerned, the proposed development may proceed with no further palaeontological assessments required. If, in the unlikely event that localized fossil material is discovered within the superficial overburden during the construction phase of the project, it is recommended that a professional palaeontologist be called in to record and rescue the fossils where necessary.

The study areas are located within a region that has previously yielded ample archaeological as well as historical evidence of the early movement and settlement of Khoi herders and San hunter-gatherers along the Orange River during the last 2000 years. However, the proposed development footprint is located on fairly degraded terrain resulting from previous and ongoing human activities related to the Lutzburg settlement located 400 m to the west of the existing cemetery.

The proposed development area is not considered archaeologically vulnerable and there are no major archaeological grounds to suspend the proposed development, provided that all excavation activities are confined to within the confines of the development footprint. The proposed development footprint is considered to be of low archaeological significance and is assigned a site rating of Generally Protected C (**Table 1**).

## **References**

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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. I have no interest in secondary or downstream developments as a result of the authorization of this project and have no conflicting interests in the undertaking of the activity.

## 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



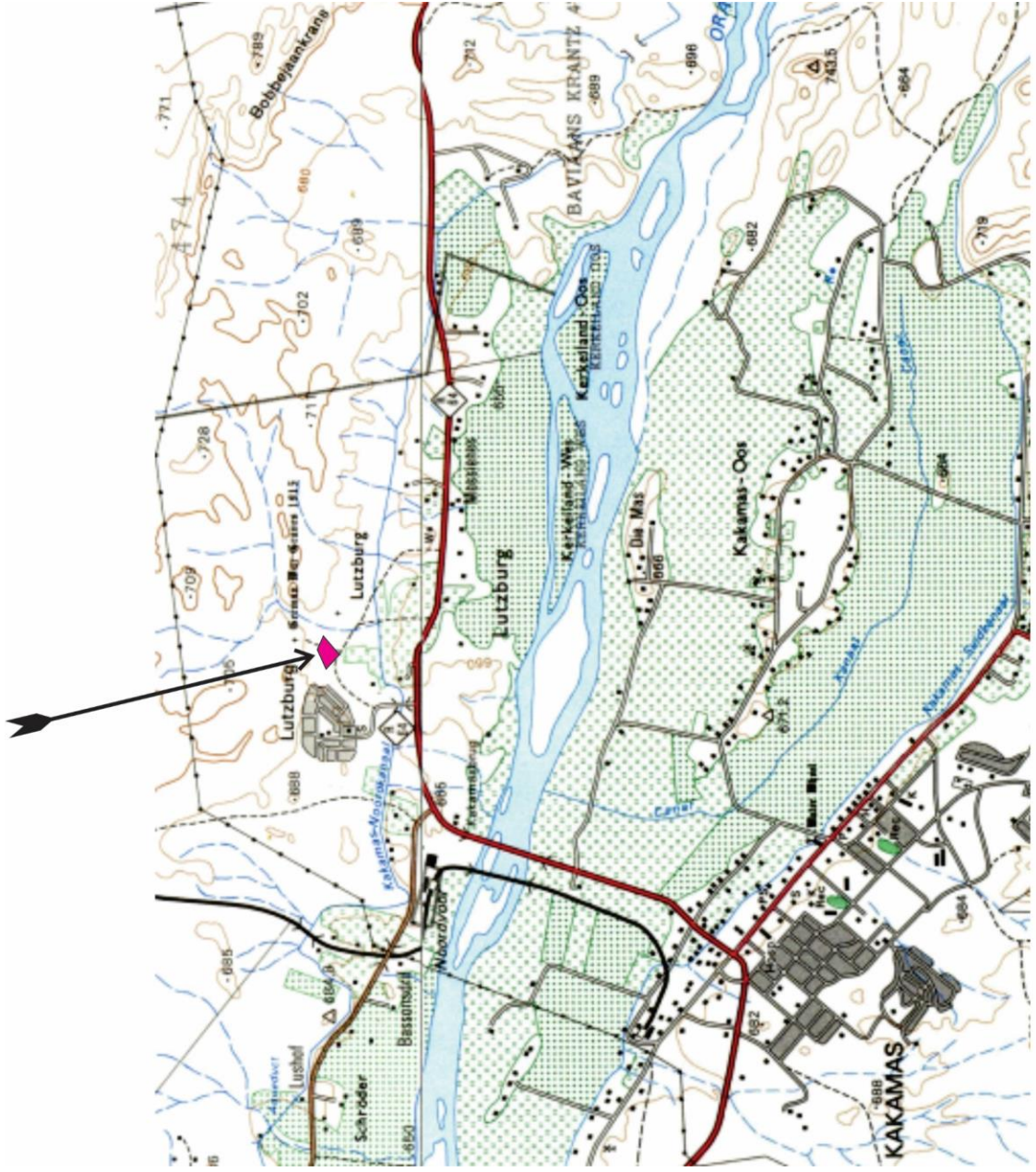


Figure 1. Map of the proposed study area (red polygon) on portion of 1:50 000 scale topographic map 2820 DA Marchand)



Figure 2. Aerial view of the study area. A historical, military graveyard is located in the foothills about 120 m to the north of the study area and will not be affected by the proposed development. The existing cemetery is situated about 150 m due east of the study area.



Figure 3. General view of the existing cemetery at Lutzburg, looking northeast (above) and north (below). The red arrow marks the location of the war graves site.



Figure 4. The terrain is capped by a well-developed veneer of unconsolidated sand.

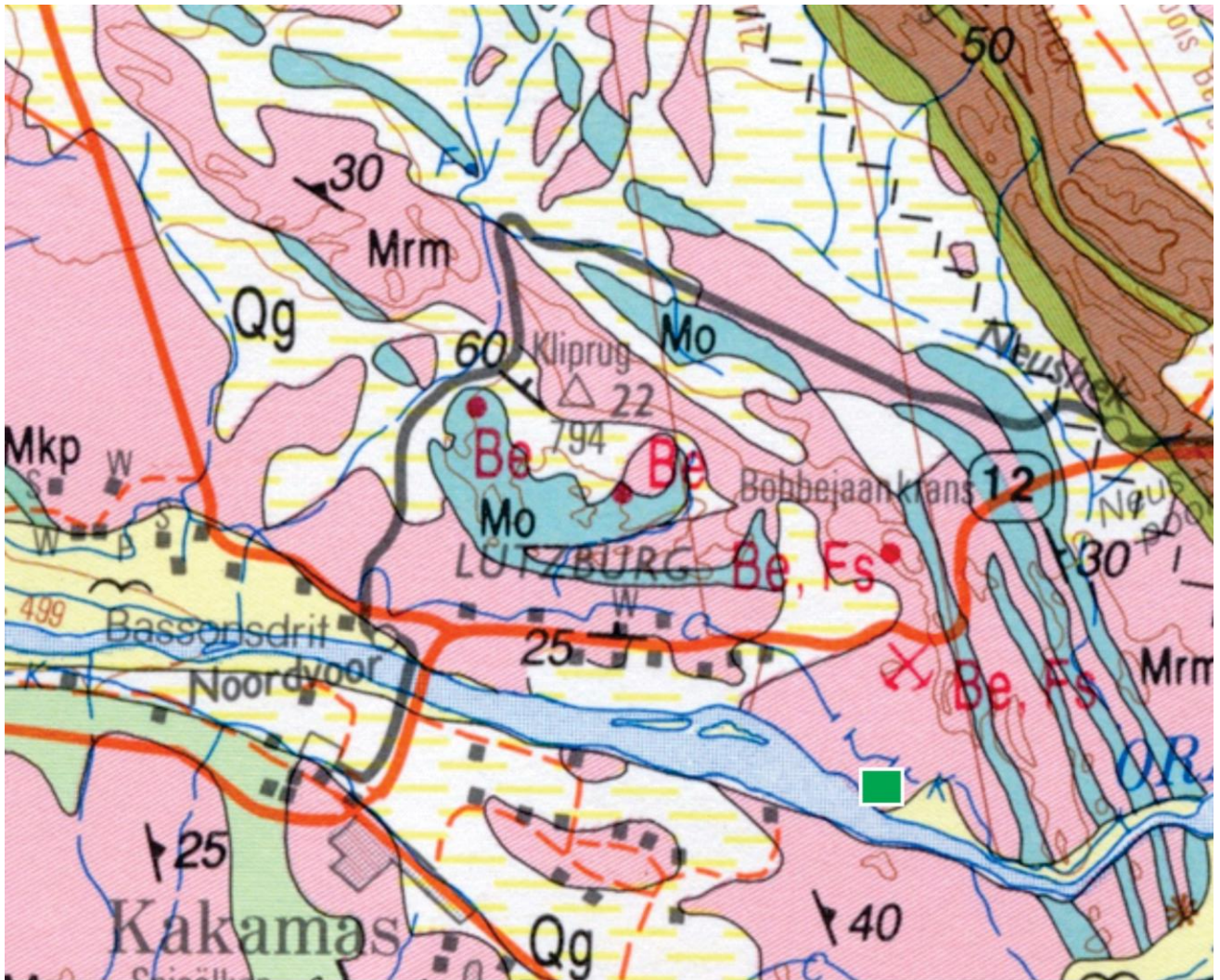
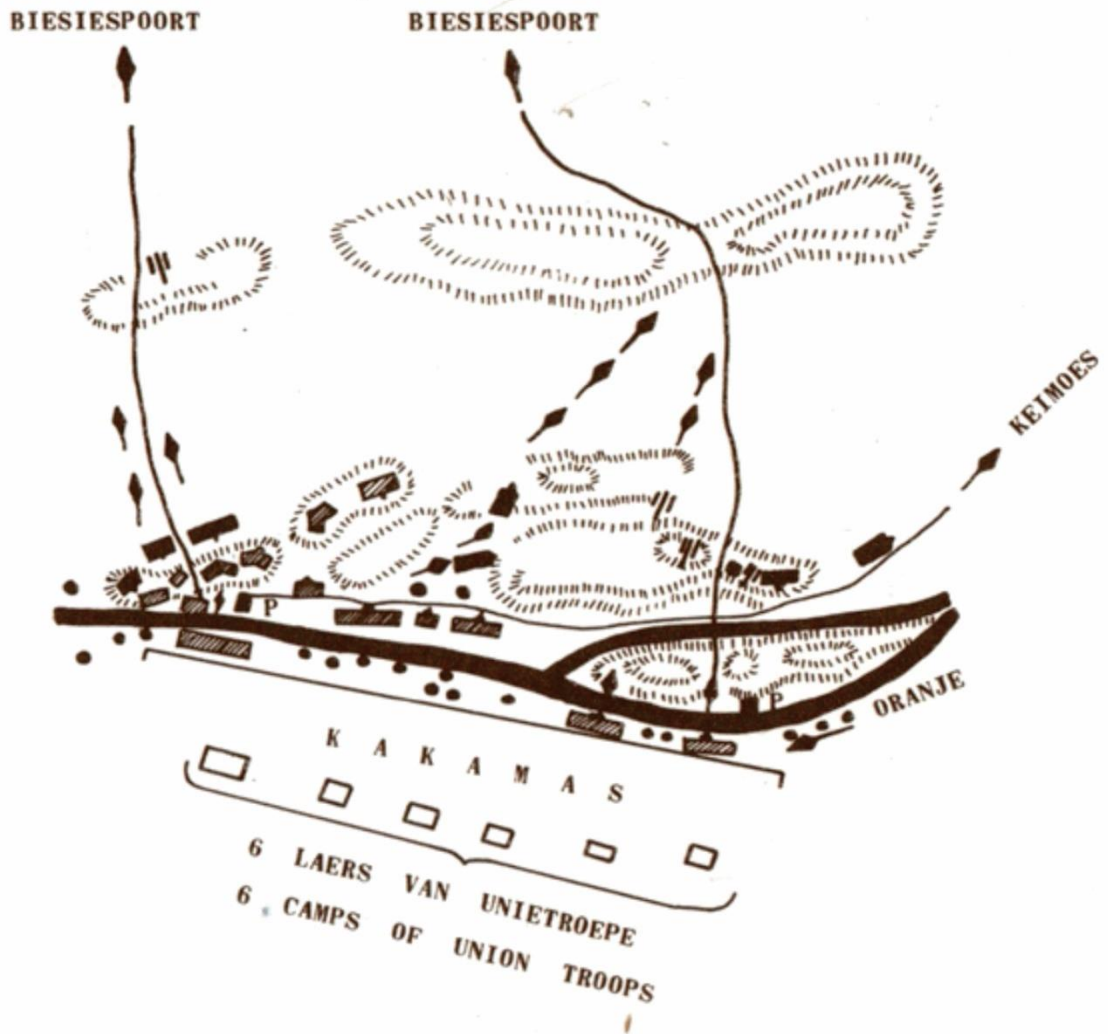


Figure 5. According to the 1 : 250 000 scale geological map of the area (2820 Upington, Council for Geoscience, Pretoria) the proposed development footprint (green square) is underlain by well-developed, superficial deposits (mostly red-brown aeolian sand) located on intrusive Makolian rocks of the Kakamas Terrane (pink weathering Riemvasmaak gneis, *Mrm*).



POSISIE BY STAKING VAN GEVEG  
 POSITION AT THE END OF THE ENGAGEMENT

- DUITSE TROEPE GERMAN TROOPS
- ▨ UNIETROEPE UNION TROOPS
- ⊥ KANONNE ARTILLERY
- P PONT FERRY

Figure 6. Battle of Kakamas, February 1915 (Oberholzer 1972).