Phase 1 Archaeological Impact Assessment of a section of the farm Holsloot 47 near Prieska, NC Province.

Report prepared for

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Executive Summary

A Phase 1 Archaeological Impact Assessment was carried out on a section of the farm Holsloot 47 near Prieska in the Northern Cape Province. The assessment pertains to the application for prospecting rights for mining diamondiferous river gravels in the area. The study area has been divided into 3 zones (Area 1, 2 and 3) for reporting purposes. Results of the survey show a low density of surface scatters of mostly individual stone tool artefacts are distributed on undisturbed gravelly surfaces in Area 2 and especially where calcrete outcrops occur. Area 2 is capped by well-developed aeolian sandy deposits that appear to be culturally sterile on the surface. There are no indications of prehistoric structures, undecorated or grass-tempered pot sherds, rock art localities, historical buildings older than 60 years of age or marked graves or graveyards within Areas 1 to 3. Area 1 has already been extensively disturbed by mining activities, leaving no potential archaeological footprint. The site context of the stone tool surface scatters in Area 2 is clearly derived, but viewed within the context of cultural landscape, the weathered / *ex situ* stone tool scatters can be regarded as clear indication of Stone Age human presence on the landscape, and as such, is assigned an overall site rating of *Generally Protected A (GP.A).* It is therefore recommended that future mining activity into Area 2 is preceded by the establishment of a clearly demarcated 10 m-wide buffer zone along the eastern boundary of the study area in order to maintain a representative locality sample of the archaeological landscape and that a representative sample of surface occurrences in Area 2 that lie outside the proposed buffer zone is mapped, recorded and photographed, and added to the buffer zone area for safekeeping. Given the nature of the substantial sandy overburden present in Area 3 it is not possible to exactly predict potentially buried archaeological content under the sand unless fresh exposures indicate otherwise. Accordingly the Area 3 is rated *Generally Protected A (GP.A).* The exposure and subsequent reporting of potentially intact archaeological material capped by the aeolian sandy deposits can be seen as a positive archaeological impact provided that proper mitigation measures are put in place. It is therefore advised that future mining activity into Area 3 is accompanied by archaeological monitoring on a regular basis through spot checks of freshly dug test pits.

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Introduction

A Phase 1 Archaeological Impact Assessment was carried out on a section of the farm Holsloot 47 near Prieska in the Northern Cape Province (**Fig. 1).** The assessment pertains to the application for prospecting rights for mining diamondiferous river gravels in the area. The heritage impact assessments is a pre-requisite for any development which will change the character of a site exceeding 5 000 m2 in extent, as prescribed by the National Heritage Resources Act (Act 25 of 1999). The task involved identification and mapping of possible heritage resources within the proposed project area, an assessment of their significance, related impact by the proposed development and recommendations for mitigation where relevant.

Methodology

The archaeological 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.

Terms of Reference

- Identify and map possible archaeological 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 prescribed by SAHRA were used for the purpose of this report (**Table 1**).

Details of Area Surveyed

Locality Data

1 : 50 000 scale topographic map: 2923 CA Rooisloot

1:250 000 scale geological map: 2922 Prieska

General Site Coordinates**:**

A) 29°33'29.96"S 23° 3'8.41"E

B) 29°34'8.97"S 23° 3'15.14"E

C) 29°35'34.13"S 23° 0'55.43"E

D) 29°34'38.92"S 23° 0'30.96"E

The study area is located is located 30 km NE of Prieska and about 5km SE from the southern banks of the Orange River (**Fig. 1**). The site is located on an ancient river terrace where Tertiary river gravels are mined for alluvial diamonds (**Fig. 2**).

Background

The archaeological footprint in the area are primarily represented by Stone Age archaeology, rock art localities, structural remnants dating back to the Anglo Boer War and its aftermath, as well as graveyards and other historical structures dating more than 60 years ago. The Stone Age archaeological footprint in the region is represented by Early, Middle and Later Stone Age sites associated with pans and natural drainage areas, while the landscape in general is characterized by widespread but low density surface scatters (Beaumont and Morris 1990; Beaumont 1995; Kiberd 2006). MSA and LSA surface scatters have been recorded at Elswater, Brakfontein and Nuwejaarskraal near Douglas (L Rossouw, unpublished data).). The base and lower levels of the Quaternary Kalahari Group sands, which cover vast areas in the region, have yielded Fauresmith and Middle Stone Age artefacts in primary context around Kimberley and Boshof (Beaumont and Morris 1990). Rock engravings are common in the region and are generally found on Ventersdorp basalts near valley fills along the Orange River (van Riet Low 1941). Rock art sites have been recorded on a number of farms around Prieska, including Kleindoring, Wonderdraai and Omdraaisvlei, while historical ruins and graveyards associated with the asbestos mining industry during the first half of the 20th century are located at Kliphuis and Engeldewilgeboomfontein situated just north of Prieska (Hall 1918). Further away, stone pipes and LSA artefacts have been recorded on the farm Doornkuil near Britstown, while prehistoric graves and clay pottery have been recorded along the Orange River in the vicinity of Douglas (Humphreys 1982). Archaeological records and historical eyewitness accounts suggest that Bushman hunter-gatherer and Khoi herder occupied the region prior to European settlement (Burchell 1824; Elphick 1977). Early travellers frequently encountered Koranna and Bushmen groups in the region (Burchell 1824; Skead 2009). Iron Age occupation is absent from the region as the most southerly distribution of Iron Age settlement in the northern Cape was limited to north of the Orange River by the end of 18th century (Maggs 1974; Humphreys 1976).

Field Assessment

Results of the survey show a low density of surface scatters of mostly individual stone tool artefacts are distributed on undisturbed gravelly surfaces along the eastern and south-eastern margins of the study area and especially where calcrete outcrops occur (**Fig. 3, Area 2, and Fig. 4**). The south-western part of the study area is capped by well-developed aeolian sandy deposits that appear to be culturally sterile on the surface (**Fig. 3, Area 3 and Fig. 5**). All the stone tools observed during the pedestrian survey were located as individual finds. The stone tools are largely represented by a temporally mixed assemblage of mostly informal tools including chunks, flake blades, irregular flakes and small to medium-sized cores comparable to LSA and MSA stone tool industries, small Fauresmith bifaces. **(Fig. 6 & 7, Table 2**). The field survey did not yield any of the undecorated or grass-tempered pot sherds that are typically associated later stages of the LSA in the region. No rock art localities were recorded during the survey since Ventersdorp outcrop is relatively sparse in the study area as a result of the substantial Tertiary and Quaternary overburden. There are also no indications prehistoric structures historical buildings older than 60 years of age or marked graves or graveyards within the study area.

Impact Statement and Recommendations

The study area is underlain by Tertiary gravel deposits, calcretes and unconsolidated sandy deposits. Area 1 has already been extensively disturbed by mining activities, leaving no potential archaeological footprint. The site context of the stone tool surface scatters in Area 2 is clearly derived / removed / disturbed etc., but viewed within the context of cultural landscape, the weathered / *ex situ* stone tool scatters can be regarded as clear indication of Stone Age human presence on the landscape, and as such, is assigned an overall site rating of Generally Protected A (GP.A). It is therefore recommended that

- future mining activity into Area 2 is preceded by the establishment of a clearly demarcated 10 m-wide buffer zone along the eastern boundary of the study area (point A to B in Figure 2) in order to maintain a representative locality sample of the archaeological landscape

- a representative sample of surface occurrences in Area 2 that lie outside the proposed buffer zone is mapped, recorded and photographed, and added to the buffer zone area for safekeeping.

Given the nature of the substantial sandy overburden present in Area 3 it is not possible to exactly predict potentially buried archaeological content under the sand unless fresh exposures indicate otherwise. Accordingly the Area 3 is rated *Generally Protected A (GP.A).* The exposure and subsequent reporting of potentially intact archaeological material capped by the aeolian sandy deposits can be seen as a positive archaeological impact provided that proper mitigation measures are put in place. It is therefore advised that

- future mining activity into Area 3 is accompanied by archaeological monitoring on a regular basis through spot checks of freshly dug test pits.

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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

Table 2. GPS coordinates of isolated stone tool scatters observed during the field survey.

GPS #	Coordinates
88	S29 34.001 E23 02.931
89	S29 34.143 E23 02.819
90	S29 34.189 E23 02.761
91	S29 34.309 E23 02.674
92	S29 34.363 E23 02.788
93	S29 33.997 E23 02.621
94	S29 34.003 E23 02.547
95	S29 34.018 E23 02.462
97	S29 34.592 E23 02.105
98	S29 34.516 E23 02.300
99	S29 34.484 E23 02.278
100	S29 34.484 E23 02.278
101	S29 34.421 E23 02.408
107	S29 35.387 E23 00.828
114	S29 35.121 E23 02.749
115	S29 33.823 E23 03.517
116	S29 34.050 E23 03.675
117	S29 34.122 E23 03.312
118	S29 34.236 E23 03.517
119	S29 33.839 E23 04.121
120	S29 34.260 E23 03.173
121	S29 34.397 E23 03.034
122	S29 34.510 E23 02.652

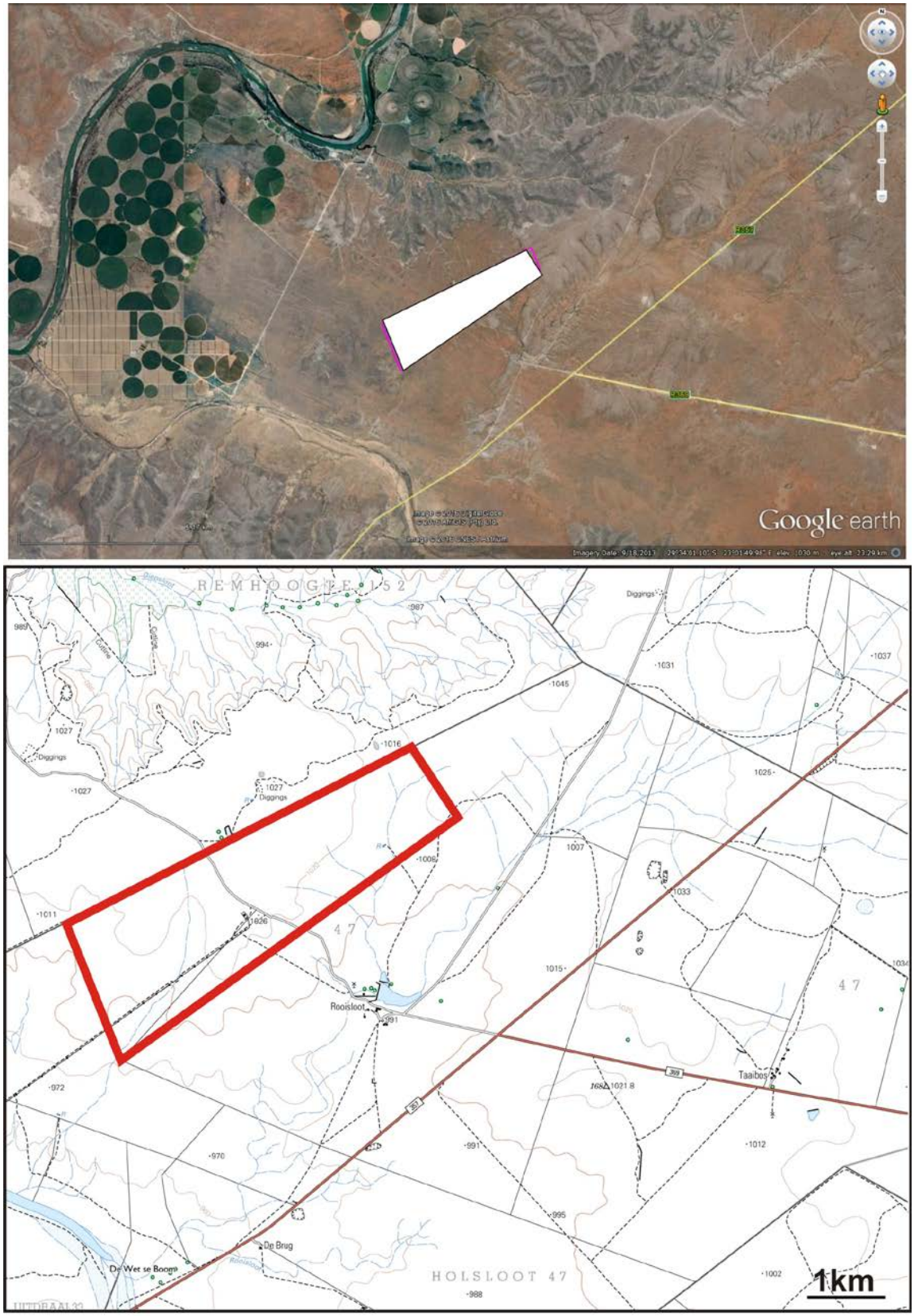

Figure 1. Aerial view (top) and map(bottom) of the study area at Holsloot 47 (portion of 1:50 000 scale topographic map 2923CA Rooisloot).

Figure 2. View of a part of the existing mining area (Area 1).

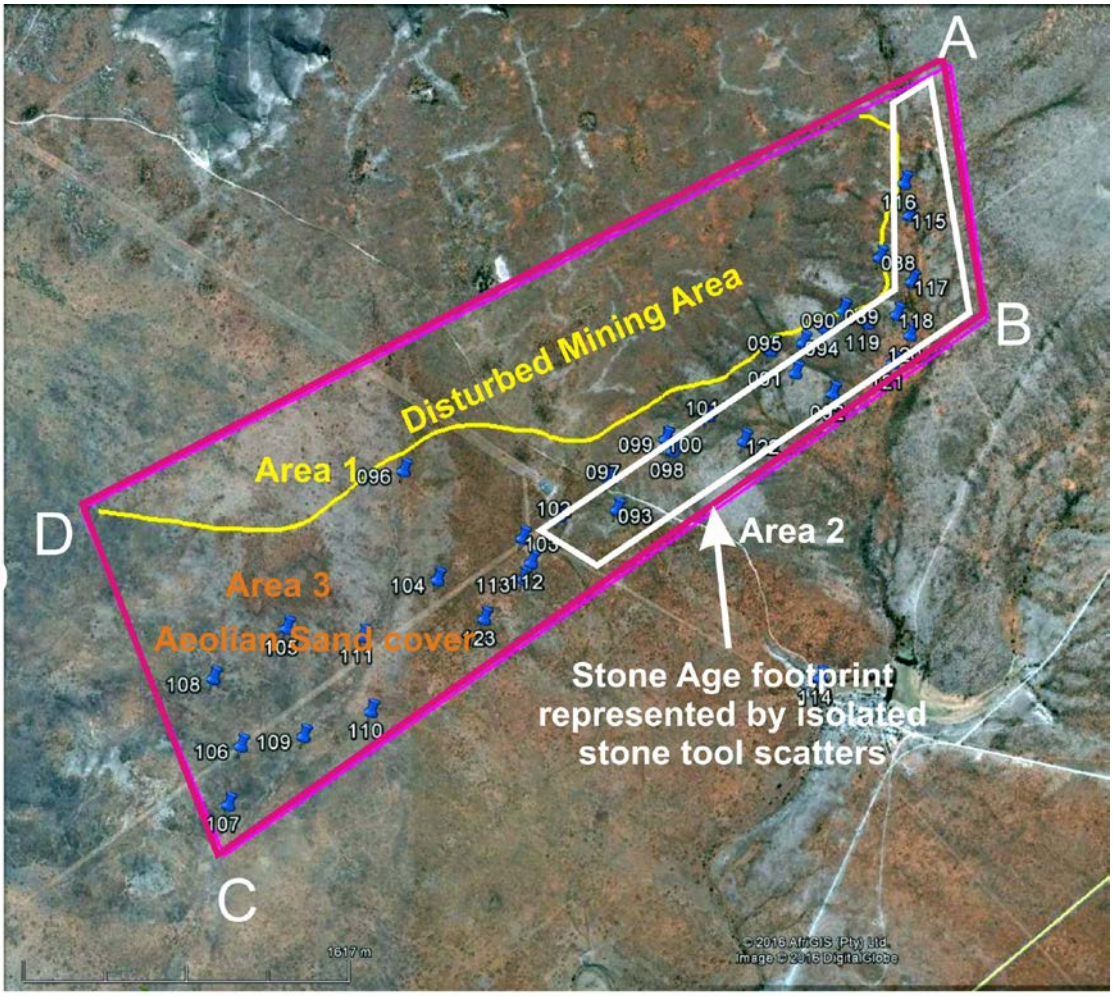

Figure 3. Aerial view of the study area. Relevant observations were recorded using a Garmin Etrex Vista GPS hand model.

Figure 4 General view of the terrain in Area 2. Individual stone tool artefacts are distributed on undisturbed gravelly surfaces along the eastern and south-eastern margins of the study area and especially where calcrete outcrops occur.

Figure 5. General view of Area 3. The south-western part of the study area is capped by well-developed aeolian sandy deposits that appears to be culturally sterile on the surface.

Figure 6. Examples of isolated stone tool finds recorded on the landscape in Area 2. Scale 1 = 10 cm and 1 = 10 mm.

Figure 7. Small Fauresmith type biface recorded on lag deposits in Area 2.