ARCHAEOLOGICAL IMPACT ASSESSMENT OF A PROPOSED BORROW PIT ON KLEINVLEI, KLAARSTROOM, PRINCE ALBERT MUNICIPALITY, WESTERN CAPE

(Assessment conducted under Section 38 (8) of the National Heritage Resources Act as part of a Heritage Impact Assessment)

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EXECUTIVE SUMMARY

Natura Viva cc was appointed by Vidamemoria Heritage Consultants on behalf of Aurecon South Africa (Pty) Ltd to undertake an Archaeological Impact Assessment (AIA) for a proposed borrow pit DR1721/8.4/0.02R (Vidamemoria pit 25) on the farm Kleinvlei, approximately 8.7 km to the southwest of Klaarstroom in Prince Albert Municipality of the Central Karoo District. No new roads will have to be constructed during the development of the site as access to the pit will be from existing roads and tracks. Pit 25 will be incorporated into the existing adjacent dam after development.

This study forms part of the Heritage Impact Assessment triggered by the development. The brief for the study was a field visit and short report identifying and assessing archaeological resources and any impact on them, an assessment of significance and recommendations regarding any mitigation required. Dr L Webley of ACO Associates acted as the Principal Investigator supervising the study done by M Tusenius of Natura Viva cc. The field assessment was conducted on foot on 17 February 2012.

No Stone Age or herder archaeological remains were observed on the ground or in heaps of stone from past agricultural activity and the excavation of geotechnical test pits. A historical dry stone wall is located approximately 70 m to the southwest of the affected area.

The site under consideration is of low archaeological heritage significance. No impact on archaeological resources is expected if the proposed borrow pit development proceeds. No further archaeological studies or mitigation are therefore recommended.

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1. INTRODUCTION

Natura Viva cc was appointed by Vidamemoria Heritage Consultants on behalf of Aurecon South Africa (Pty) Ltd to undertake an Archaeological Impact Assessment (AIA) at the site of a proposed borrow pit DR1721/8.4/0.02R (Vidamemoria pit 25) on the farm Kleinvlei, approximately 8.7 km to the southwest of Klaarstroom (Figure 1). Klaarstroom lies in the Prince Albert Municipality of the Central Karoo District, to the north of the Swartberg mountain range. Material excavated from the borrow pit will be used for the re-gravelling of portions of road DR01721. The proposed borrow pit is located up-slope of a dam, a converted former quarry, which stores water used for irrigation (Figure 2). Pit 25 will be incorporated into the existing dam after development. No new roads will have to be constructed as access to the pit under consideration will be from existing roads and tracks.

Figure 1: Google earth image showing the location of proposed borrow pit DR1721/8.4/0.02R (Vidamemoria pit 25), approximately 8.7 km to the southwest of Klaarstroom. The N12 cuts through the Swartberg at Meiringspoort, to the south of Klaarstroom. The relevant 1:50 000 topographical map is 3322AD Rosselserf.

2. LEGAL FRAMEWORK

Section 38 of the National Heritage Resources Act (Act 25 of 1999) is triggered by certain types of development, including changes of character to an area exceeding 5 000m², and makes provision for compulsory Heritage Impact Assessments to assess the potential impacts of such proposed developments on heritage resources. In terms of Section 38(1), a Notification of Intent to Develop (NID) form was submitted to Heritage Western Cape (HWC) by Vidamemoria. Following comment from HWC (case number 110928JL27) an AIA was included amongst the requirements according to Section 38(8) of the Act.

3. TERMS OF REFERENCE

The terms of reference for the AIA stipulated a field visit to locate and map archaeological resources, a short report dealing with the field observations, an assessment regarding the significance of the resources (in the context of other studies in the area) and any impacts on them, as well as recommendations regarding any mitigation required. The report was to be overseen by Dr Lita Webley of ACO Associates as the Principal Investigator.

4. STUDY APPROACH

4.1 Methods

The field survey was undertaken by the author on 17 February 2012. Site plans indicating the affected areas were provided by Aurecon. The proposed borrow pit and the area across the road were covered on foot. Archaeological occurrences and tracks were recorded by a Garmin GPSMAP 60CSx set on the WGS84 datum. Relevant occurrences and their context were photographed.

4.2 Limiting factors

Archaeological visibility on the ground was generally good as the vegetation was fairly sparse. The only exception was in the extreme west of the affected area where there was a dense growth of shrubs.

5. DESCRIPTION OF AFFECTED ENVIRONMENT AND SITES

5.1 Archaeological background

It appears that few Archaeological Impact Assessments have been previously carried out in the Klaarstroom area. No such studies were noted on the SAHRA Archaeology, Palaeontology and Meteorite Unit Report Mapping Project DVD (2009). A few studies further to the north are not directly relevant as they deal with sites on the plains of the Great Karoo rather than the foothills of the Swartberg. There appear to be no entries for material collected or studied from Klaarstroom in the accession register of the data base housed at Iziko: South African Museum (S Ouzman, pers. comm.) I am only aware of a 2010 study undertaken at several sites in and near Klaarstroom by Van Pletzen-Vos & Rust. No archaeological remains were observed at any of the surveyed areas during this study.

During 2010 a local resident alerted Natura Viva cc to the presence of Stone Age artefacts near Kluesplaas, several kilometers to the north of the study area, and showed us some of the specimens (P Roux, pers. comm). They were quartzite Early Stone Age (ESA) bifaces and quartzite cores which may be ESA or Middle Stone Age (MSA). While doing palaeontological field work in the region to the west of Klaarstroom a very occasional quartzite flake was observed by Natura Viva members. It is concluded that there is probably a low archaeological visibility in the general area.

5.2 Borrow pit DR1721/8.4/0.02R (Vidamemoria pit 25)

Approximate area: 150 m x 100 m
Location: S 33° 21' 31.50" E 22° 26' 48.06"
Farm name and number: Kleinvlei (Klein Valie 182)

Environment: The affected area lies in disturbed, agricultural land adjacent to a dam in a bend of the DR01721, a circular route in the foothills of the Swartberg from Klaarstroom to Meiringspoort, where the N12 runs between Beaufort West and De Rust. The dam is a converted former quarry which stores water for irrigation. The proposed borrow pit lies up-slope from the dam and is bounded by the road to the east and a small rocky slope adjacent to the road in the south (Figures 2, 3 and 4). An erosion gully (donga) lies immediately to the west (Figure 5). Colluvial gravelly, silty sand overlies weathered Bokkeveld Group shale which can be seen in the floor of the donga. Fragments and slabs of sandstone, quartzite and mudstone lie on the surface of the surveyed ground, as well as heaped next to geotechnical test pits. The quartzite originates from the old land surfaces along the Swartberg (J Almond, pers. comm.). Lumps of natural quartz occur within the gravelly sand. Heaps of rocks removed during past ploughing are also present (Figures 6 and 7). The vegetation has been disturbed by this agricultural activity and the remains of burnt shrubs provide evidence of a recent fire. The re-grown vegetation consists of low bushes, e.g. renosterbos (*Elytropappus* sp.) and sparse grass with the result that archaeological visibility on the ground is good. Visibility was only a problem in the small piece of ground to the west of the donga where there was a dense cover of indigenous shrubs and tall grass.

Figure 2: Google earth image showing the location of the proposed borrow pit 25 and the tracks recorded. The erosion gully (donga) lies immediately to the west of the study area and the closest end of the dry stone wall lies approximately 70 m to the southwest.

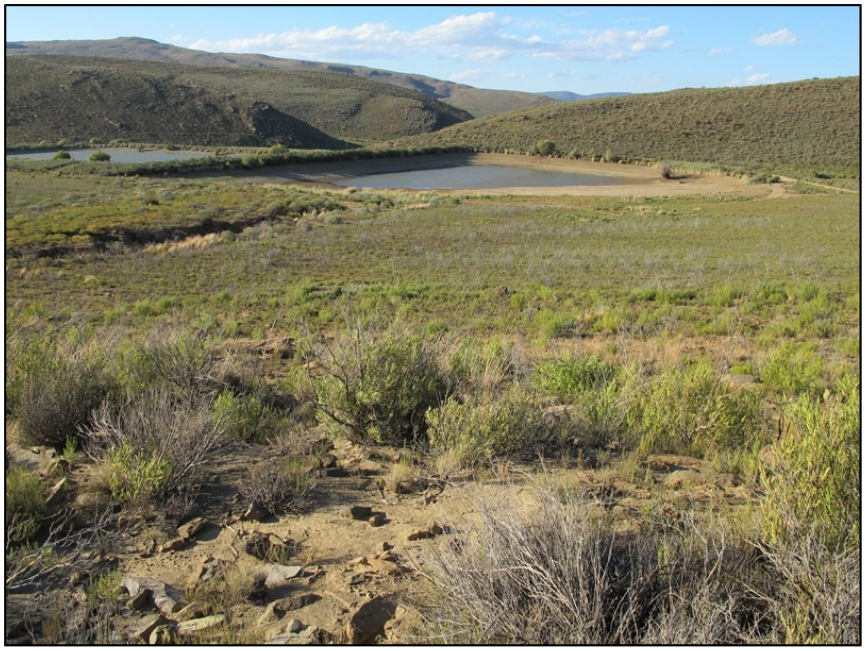

Figure 3: View across the affected area towards the dam in the north. The donga is visible on the left of the photo.

Figure 4: View of the affected area looking towards the Swartberg in the south. Low, fairly sparse vegetation covers the colluvial gravelly, silty sand on the surface here.

Figure 5: View northwards along the donga to the west of the affected area of pit 25. Slabs of weathered Bokkeveld shale are visible in the bottom of the donga.

Figures 6 and 7: Heaps of stone from past ploughing in the foreground and from a geotechnical pit in the background; detail of some of the heaped rocks. The ruler is 15 cm in length.

Results of survey: The affected area and some land to the east of the road were surveyed (Figure 2). No archaeological remains were observed on the ground or in the heaps of rock. This was somewhat surprising given that Stone Age tools have been found in the general area (see section 5.1) and the fact that the quartzitic boulders, deriving from the old land surfaces, would provide a good source of raw material. Several quartzite exfoliation flakes, which could be confused with artefacts, were noted.

The only feature of historical interest observed lies outside the study area. It is a dry stone wall curving down from the crest of the little ridge to southwest of the donga (Figures 2, 8 and 9). The end of the wall which lies closest to the proposed pit is approximately 70 m away.

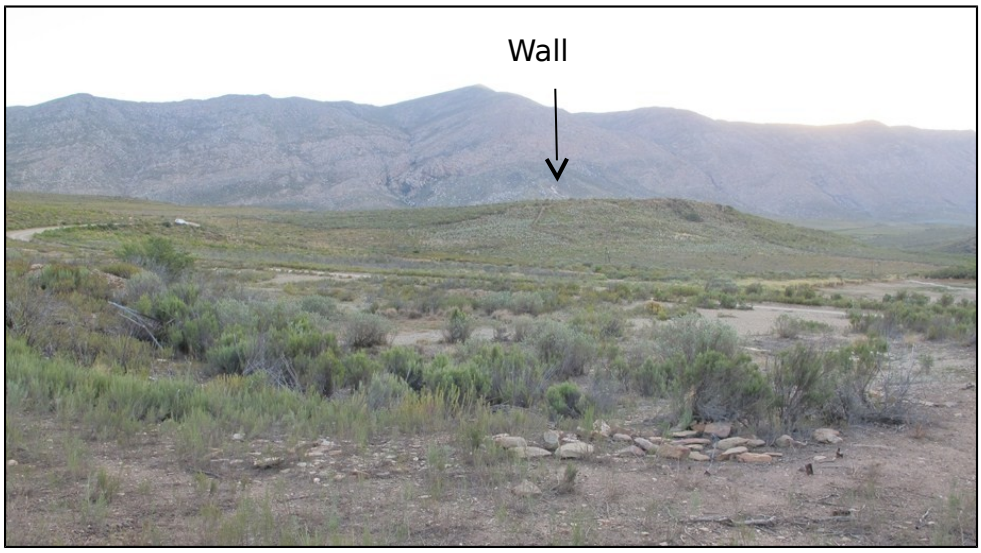

Figure 8: View to the pit 25 site from the northeast. The stone wall descends from the crest of the little ridge in the middle ground. It lies approximately 70 m from the affected area.

Figure 9: Close up of the dry stone wall viewed from the northeast.

6. SIGNIFICANCE AND RECOMMENDATIONS

No Stone Age or herder archaeological remains were observed in the area under consideration so the site is of low archaeological heritage significance. The dry stone wall observed lies outside the study area and there should be no direct impact on it, other than dust from the excavating activities. The proposed pit area is too far away from rocky outcrops where rock paintings may be found, so no impact on such heritage resources is predicted.

No impact on archaeological resources is expected if the proposed borrow pit development proceeds. No further archaeological studies or mitigation are therefore recommended.

7. REFERENCES

SAHRA. 2009. Archaeology, Palaeontology and Meteorite Unit Report Mapping Project DVD. Version 1.0.

Van Pletzen-Vos, L & Rust, R. 2010. Phase 1 Archaeological Impact Assessment on Portion 34 & 29 of Farm 178, Prince Albert, District DC5 (Klaarstroom) Western Cape. Report prepared for Cape Lowlands Environmental Services cc. Pro-Active Archaeology.

8. ACKNOWLEDGEMENTS

Ms Quahnita Samie of Vidamemoria Heritage Consultants is thanked for commissioning this study and providing background information. Dr Lita Webley of ACO Associates acted as supervising Principal Investigator and provided valuable guidance regarding AIA requirements. Dr John Almond, Natura Viva cc, made helpful comments on the draft. Dr Sven Ouzman, Social History Department, Iziko South African Museum, kindly checked the accession register for Klaarstroom entries and Dr Liezl van Pletzen-Vos sent me a copy of the Pro-Active Archaeology report. Dr Paul Roux alerted Natura Viva cc to the presence of Stone Age material in the area.