

**ARCHAEOLOGICAL IMPACT ASSESSMENT
OF THE PROPOSED EXTENSION OF A BORROW PIT ON
MÔRESON (KYKOE 55) NEAR UNIONDALE,
EDEN DISTRICT, 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) of the proposed extension of an existing borrow pit DR01660/1.8/0.8R (Vidamemoria pit no. 278) some 18 km to the southwest of Uniondale, Eden District Municipality. The affected area is located some 500m to the south of the DR01660 road which roughly follows the east-west orientation of the Keurbooms River in the valley between Ghwerna se Berg and the Klein-Langkloof Mountains. Access to the proposed extension will be by an existing farm track from the DR01660. Material excavated from the pit will be used for the maintenance of gravel roads in the area. It is proposed that the worked surfaces will be covered with stockpiled soil for the rehabilitation of the affected area.

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.

The field assessment was conducted on foot on 9 November 2013. The visibility of archaeological material on the ground varied from good to poor depending on the vegetation cover. The vegetation along the eastern boundary was particularly dense and this area was not surveyed.

Most of the proposed extension area is disturbed, either by digging, dumping or infestation by black wattles. Dumped material includes heaps of charcoal, two patches of leached quartzite cobbles in association with heaps of leached pebbles, tree stumps, plastic and some bricks. It initially seemed possible that these cobbles were the remains of local pediment gravels which had been cleared from the fields, but on further inspection they appeared to have been dumped on top of the ferruginised gravels.

The only archaeological material observed was five quartzite artefacts of indeterminate age, found in a secondary context. No other archaeological remains, including structures, were seen.

The scarcity of archaeological material observed and the generally disturbed context of the material suggests that the proposed extension is of low archaeological heritage significance. No significant impact on such resources is expected if the proposed extension is developed. No further archaeological studies or mitigation are recommended.

If any human remains are found during the development of the proposed extension, work in that area must cease and the South African Heritage Resources Agency (SAHRA) must be notified immediately.

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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) of the proposed extension of an existing dam and borrow pit DR01660/1.8/0.8R (Vidamemoria pit no. 278) some 18 km to the southwest of Uniondale, Eden District Municipality. The affected area is located some 500m to the south of the DR01660 road which roughly follows the east-west orientation of the Keurbooms River in the valley between Ghwerna se Berg and the Klein-Langkloof Mountains (Figure 1). Access to the proposed extension will be by an existing farm track from the DR01660. Material excavated from the pit will be used for the maintenance of gravel roads in the area. It is proposed that the worked surfaces will be covered with stockpiled soil for the rehabilitation of the affected area.

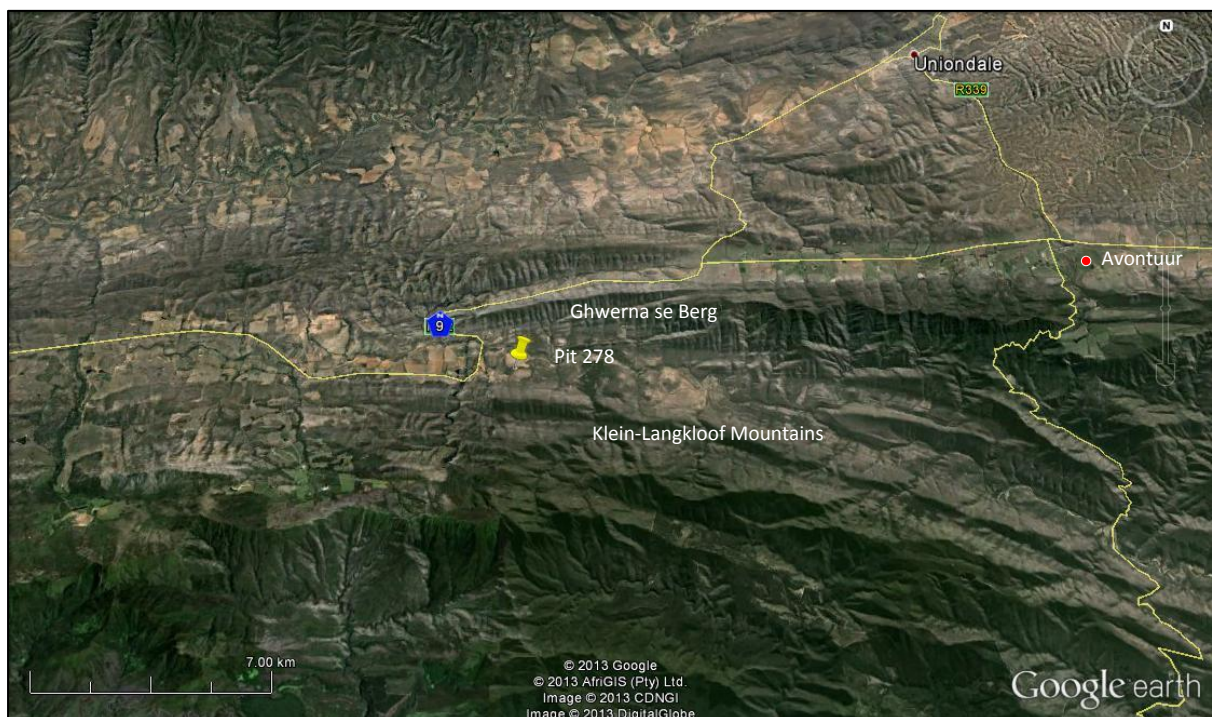


Figure 1: Google earth image showing the location of the proposed extension of borrow pit DR01660/1.8/0.8R (Pit 278). The DR01660 road lies in the valley between Ghwerna se Berg and the Klein-Langkloof Mountains. The relevant 1:50 000 topographical map is 3322DD Karatara.

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 (case130531ZS20E) 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.

4. STUDY APPROACH

4.1 Methods

Fieldwork for the proposed pit extension was undertaken on 9 November 2013. A site plan indicating the affected area was provided by Aurecon for the Phase 1 survey. The area was covered on foot and the tracks were recorded by a Garmin GPSMAP 62s set on the WGS84 datum (Figure 2). The site was extensively photographed.

4.2 Limiting factors

The visibility of archaeological material on the ground varied from good to poor depending on the vegetation cover.

5. DESCRIPTION OF AFFECTED ENVIRONMENT AND SITE

5.1 Archaeological background:

Only one Archaeological Impact Study done in the Uniondale area is indicated on the SAHRA Archaeology, Palaeontology and Meteorite Unit Report Mapping Project DVD (2009). This concerned the proposed upgrading of road sections, the relocation of an intersection and the subsequent need for a borrow pit (Nilssen 2006). The affected area, close to Avontuur, lies some 19 km to the northeast of Pit 278. Four isolated stone artefacts were recorded at the borrow pit site – a large retouched quartzite flake, an Early Stone Age (ESA) core, an ESA/Middle Stone Age (MSA) core and a MSA or Later Stone Age (LSA) radial core. The only other study of which the author is aware is the recent assessment of graves at the site of the proposed extension of a borrow pit to the northeast of Uniondale (Halkett 2013). The area was inspected following the identification of a single gravestone at the initial site identification stage of the borrow pit. Subsequently at least an additional 16 graves or possible graves were recorded. Grave goods were found on some of the graves, but no other archaeological remains were seen.

5.2 Borrow pit DR01660/1.8/0.8R (Vidamemoria pit no. 278)

Approximate area: 30 000m²

Location: S 33° 46' 11.25" E 22° 58' 28.24"

Farm name and number: Môreson (Kykoe 55)

Environment: The affected area is located towards the base of a gentle, south-facing slope and is surrounded by agricultural land and indigenous renosterveld vegetation invaded by alien black wattle trees (Figures 2 to 10). The limits of the polygon are indicated by fences in most directions. A farm track cuts through the middle of the affected area in a roughly north-south direction. Earth dams, probably the result of previous quarrying, occur on either side of the track (Figures 2 to 4, 6, 7 and 10). They are designated the eastern and western pits in this report. Ferruginised, fine gravels overlies cleaved Bokkeveld Group mudrocks.

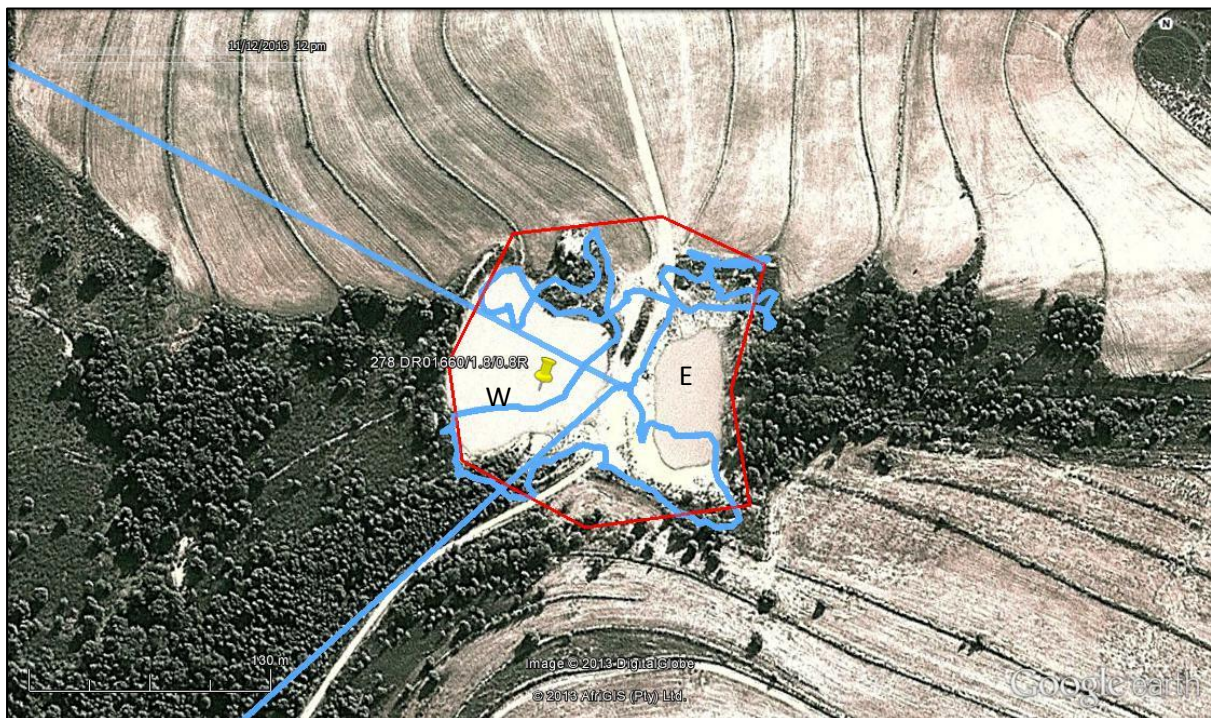


Figure 2: Google earth image showing the proposed extension to borrow pit 278, the eastern (E) and western (W) pits and the tracks of the field survey. Please note that the straight blue lines do not indicate survey tracks.



Figure 3: Eastern pit - view towards the north with Ghwerna se Berg in the background.



Figure 4: Eastern pit - view towards the south with one of the heaps of dumped charcoal in the foreground. Figure 5: View towards the east of the north-eastern part of the polygon showing the invasion of renosterveld vegetation by alien black wattle trees.



Figure 6: Western pit - view towards the northeast. The disturbed area with cobbles lies in the clump of black wattles on the northern side of the pit and the area where four quartzite artefacts were found is indicated by the black oval.



Figure 7: Western pit - view towards the southwest. Figure 8: Detail of the disturbed ground amongst the black wattles in the south-western part of the polygon.



Figure 9: Detail of the leached cobbles dumped on top of the feruginised gravels amongst the black wattles to the north of the western pit. The ruler is about 15cm in length. Figure 10: Western pit - view towards the south with the disturbed black wattle forest evident. The area where four of the stone artefacts were seen is indicated by the black oval.

Results of the survey:

Attention was paid to the areas to the north and south of the dams where the ground was not disturbed by previous mining. During the survey it became apparent that most of the proposed extension area is in fact disturbed, either by digging, dumping or infestation by black wattles. The vegetation along the eastern boundary, between the eastern dam wall and fence, was particularly dense and this area was not surveyed. The part of the polygon with least disturbance, where some renosterbos (*Elytropappus* sp.) remains, is the northern area between the eastern pit and the field to the north (Figures 2, 3 and 5). With the exception of a quartzite flake (Figure 11), no archaeological remains of any sort were observed here. Several heaps of dumped charcoal were however noted (Figure 4).

On the north-western side of the road (Figures 2, 6 and 7) two patches of leached quartzite cobbles were observed in the clump of black wattles (Figure 9). It seemed possible that these were the remains of local pediment gravels which had been cleared from the fields, but on further inspection they appeared to have been transported from elsewhere and dumped on top of the ferruginised gravels. The black wattles have probably grown subsequently. Heaps of smaller leached pebbles and gravel, tree stumps, plastic and some bricks are also associated with the cobbles and black wattles. Four quartzite artefacts of indeterminate age (Figures 12 and 13) were recorded to the west of the cobbles and black wattles. They were seen on a slope in the western pit and are not in a primary context (Figures 6 and 10).

No archaeological remains were seen in the areas to the south of both pits. Although the south-western part is heavily infested by black wattles, visibility of material on the ground was good as there is no undergrowth. The area has been greatly disturbed by digging (Figure 8).



Figures 11, 12 and 13: Quartzite artefacts – flake; two flakes and a chunk; flake. The scale is in cm.

6. SIGNIFICANCE AND RECOMMENDATIONS

The scarcity of archaeological material observed and the generally disturbed context of the material suggests that the proposed extension is of low archaeological heritage significance. No significant impact on such resources is expected if the proposed extension is developed. No further archaeological studies or mitigation are recommended.

If any human remains are found during the development of the proposed extension, work in that area must cease and the South African Heritage Resources Agency (SAHRA) must be notified immediately.

7. REFERENCES

Halkett, D. 2013. An assessment of graves at the site of the proposed extension of borrow pit MR401/11.7/0.03R on Erf 532, Uniondale. Unpublished report prepared for Vidamemoria Heritage Consultants. ACO Associates cc.

Nilssen, P.J. 2006. Proposed upgrading of road sections and relocation of an intersection in the Uniondale area: Archaeological Heritage Impact Assessment. Unpublished report prepared for CCA Environmental (Pty) Ltd. MAPCRM CC.

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

8. ACKNOWLEDGEMENTS

Ms Quahnita Samie of Vidamemoria Heritage Consultants is thanked for commissioning this study and providing background information.