

**ARCHAEOLOGICAL IMPACT ASSESSMENT
OF THE PROPOSED EXTENSION OF A BORROW PIT ON
KOEËLFONTEIN 59, LAINGSBURG DISTRICT,
CENTRAL KAROO, 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 the proposed extension of an existing borrow pit, MR00374/24.5/0.2L (Vidamemoria pit no. 111), in the Laingsburg District of the Western Cape. Material excavated from the proposed extension will be used for the re-gravelling of the MR00374 which runs from the N1 (from a point approximately midway between Laingsburg and Prince Albert Road) to Merweville to the north.

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 2 June 2012.

Two of the three sandstone artefacts observed are probably of Middle Stone Age (MSA) origin. They were found in an area exposed to sheet wash. No rock engravings or stone features such as walls or graves were observed.

The disturbed context of the stone artefacts indicates that the material is in a secondary context and is therefore of low archaeological heritage significance. No significant impact on such resources is expected if the proposed borrow pit extension is developed. No further archaeological studies or mitigation are 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) for the proposed extension of an existing borrow pit, MR00374/24.5/0.2L (Vidamemoria pit no. 111), in the Laingsburg District of the Western Cape. The proposed site lies approximately 49 km to the north-east of Laingsburg and approximately 39 km to the south-west of Merweville (Figure 1). Material excavated from the proposed extension will be used for the re-gravelling of the MR00374 which runs from the N1 (from a point approximately midway between Laingsburg and Prince Albert Road) to Merweville to the north. Access will be via the existing road and farm track.



Figure 1: Google earth image showing the location of the proposed extension of existing borrow pit MR00374/24.5/0.2L (Pit 111). The pit is approximately 49 km from Laingsburg and 39 km from Merweville respectively. The relevant 1:50 000 topographical map is 3221CD Amandelboom.

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 111124JB48) 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 extension of the existing pit was undertaken by the author on 2 June 2012. A site plan indicating the affected area was provided by Aurecon for the Phase 1 survey. The area was covered on foot and archaeological occurrences and tracks were recorded by a Garmin GPSMAP 62s set on the WGS84 datum (Figure 2). The site and finds were extensively photographed.

4.2 Limiting factors

Visibility of archaeological remains on the ground was good.

5. DESCRIPTION OF AFFECTED ENVIRONMENT AND SITES

5.1 Archaeological background:

With the notable exception of the research done by Sampson in the Seacow Valley (1985), the rich and varied archaeological heritage of the Great Karoo has not been systematically studied. Archaeological impact studies throughout the Karoo are however providing information about the nature and distribution of sites in other areas. For example, the survey done by the Professional Grave Solution (PGS) team for the Gamma-Omega Transmission Line (2010) recorded a variety of sites, ranging from Early Stone Age (ESA), Middle Stone Age (MSA), Later Stone Age (LSA) to possible herder windbreaks and historical sites. Their survey included a section near Merweville where they recorded a site with a dispersed scatter of cores and flakes at which most of the flakes could be refitted to a single prepared core. Another site consisted of a single bifacial handaxe and single struck blank in a disturbed context. A few small archaeological impact studies have been done in the Merweville area by HJ Deacon (2004, 2005a, 2005b). No archaeological material was seen at three proposed borrow pits at Ratelfontein, approximately 25 km to the east of the sites in the present study. Isolated occurrences of stone artefacts (a simple core and un-associated flakes in one area, a single LSA core in another and a typologically distinctive early Holocene type end scraper amongst other individual stone artefacts) were noted in the survey of the proposed 'Far North' Quarry Site about 12 km to the south-east of Merweville (Deacon 2005a). The most important find at this quarry site was a stone slab with engravings of three female figures. The study at Rietvalley, approximately 25 km to the north-west of Merweville, revealed a low density of dispersed stone artefacts which were not

typologically distinctive, although a possible LSA bladelet and the proximal end of an ESA or MSA flake were noted.

5.2 Borrow pit MR00374/24.5/0.2L (Vidamemoria pit no. 111)

Approximate area: 180m x 110 m

Location: S 32° 58' 10.56" E 21° 18' 14.04"

Farm name and number: Koeëlfontein (Kogelfontein 59)

Environment: It is proposed to extend an existing pit which forms a shallow dam that retains run-off water. The affected area is bounded by the farm road to the north-west, a small stream bed to the south-east and a fence to the south-west (Figure 2). There is no obvious boundary on the ground to delimit the north-western end of the polygon. The south-eastern corner, near the MR00374, slopes down to the dam in a north-westerly direction and there is run-off towards the dam (Figure 5). Although the rest of the terrain of the proposed expansion is relatively flat-lying, sheet wash from the area to the north-west of the dam drains down a very gentle slope into the existing pit in a south-easterly direction. Various small water courses, shallow gullies and low channelling walls attest to this. Alluvial outwash gravelly silty sand overlies mudrock of the Abrahamskraal Formation of the Lower Beaufort Group. Angular blocks of sandstone and occasional natural chunks of quartz are found with the gravels (for example, Figure 3). The vegetation cover consists of scattered karoo bushes such as *Pteronia* sp. and sparse grass. Visibility of archaeological material was therefore good.

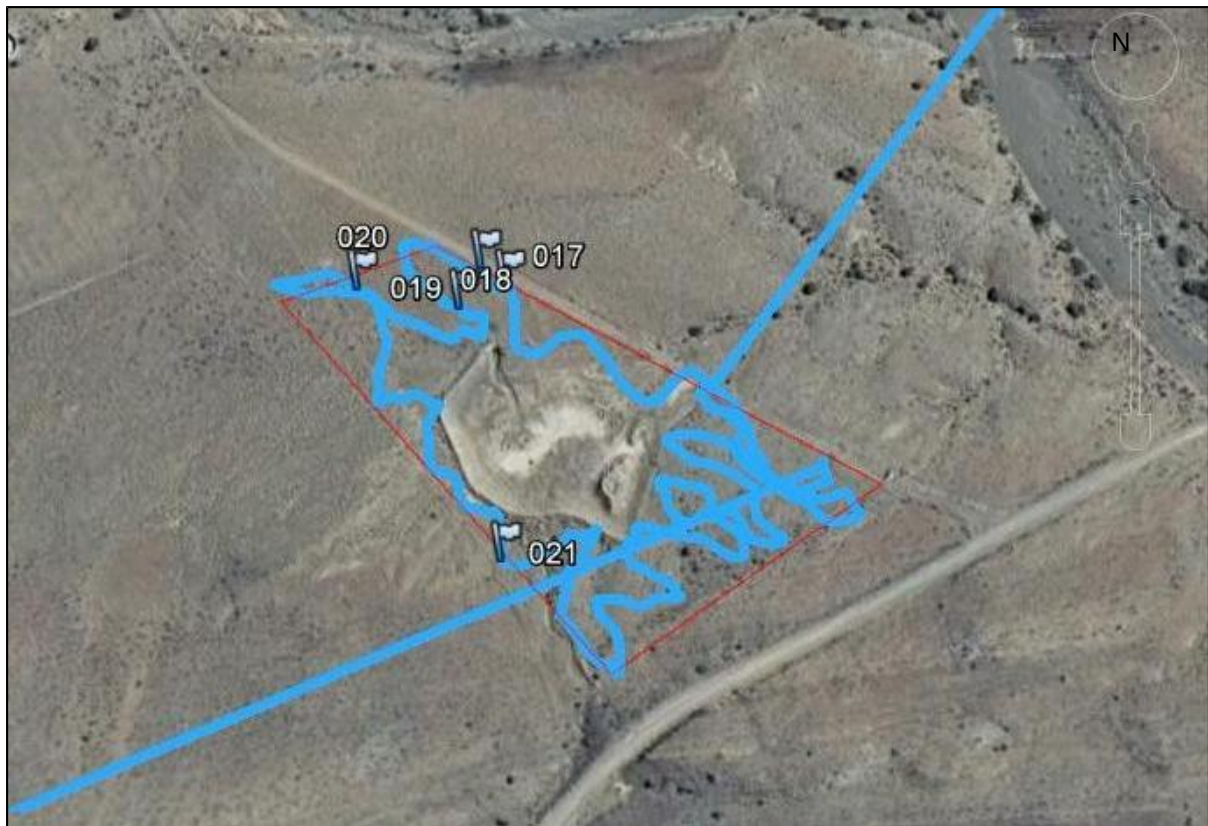


Figure 2: Google earth image showing the proposed extension of the existing borrow pit 111, waypoints and tracks of the field survey. Please note that the straight blue lines do not indicate tracks.



Figure 3: View from the north-western part of the proposed extension towards the south-east. The existing borrow pit is evident to the right of the middle ground.



Figure 4: View towards the north-west from the area to the east of the existing pit.



Figures 5 and 6: View up the slope to the south-east corner of the affected area; view from the south-east corner towards the north-west. The existing quarry lies in the middle of the photo on the right.

Results of the survey: Three isolated artefacts –a convergent flake, an elongated cortex flake and the lightly patinated proximal end of a blade - were observed in the area to the north-west of the dam (Appendix and Figures 7 to 9). Although they appear to be manufactured from local Beaufort Group sandstone rather than quartzite, they were found in an area affected by sheet erosion and are not in a primary context. The convergent flake and blade probably belong to the Middle Stone Age.



Figures 7, 8 and 9: Convergent MSA flake; elongated flake with cortex on the reverse; lightly patinated proximal end of a possible MSA blade.

A low erosion barrier built of sandstone boulders (Figure 10) is the probable source of two fresh-looking sandstone flakes noted (Figure 11) and recorded as waypoints 019 and 021.



Figures 10 and 11: Sandstone boulders forming an erosion barrier; example of fresh-looking sandstone flake which is not artefactual.



6. SIGNIFICANCE AND RECOMMENDATIONS

The three artefacts observed at the proposed borrow pit site occur in an area affected by sheet wash and are therefore in a secondary context. No rock engravings or stone features such as walls or graves were observed. The archaeological material from this site is considered to be of low heritage significance and no further archaeological studies or mitigation are recommended.

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

7. REFERENCES

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8. ACKNOWLEDGEMENTS

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9. APPENDIX

The waypoints below do not indicate sites but only occurrences of single artefacts.

Table 1: Pit 111 waypoints

Waypoint	South	East	Description of material found
017	S32 58 09.1	E21 18 13.0	Sandstone convergent MSA flake
018	S32 58 08.8	E21 18 12.5	Sandstone cortex flake
019	S32 58 09.4	E21 18 12.1	Fresh-looking sandstone flake, not artefactual
020	S32 58 09.1	E21 18 10.3	Proximal end of MSA blade
021	S32 58 13.2	E21 18 12.8	Fresh-looking sandstone flake, not artefactual