

**ARCHAEOLOGICAL IMPACT ASSESSMENT
OF THE PROPOSED EXTENSION OF A BORROW PIT ON
STINKFONTEIN A 97, PIKETBERG AREA, WEST COAST
DISTRICT 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 Nadeson Consulting Services to undertake an Archaeological Impact Assessment (AIA) of the proposed expansion of borrow pit DR02162/3.8/L/100 (Vidamemoria pit no. 188) which is situated in agricultural land on the undulating, coastal sandveld to the northwest of Piketberg, West Coast District Municipality, Western Cape. Material excavated from the proposed extension will be used for the maintenance of gravel roads in the region. No new roads will have to be constructed as access to the quarry site will be via an existing road and access gate. The proposed extension will be rehabilitated and re-vegetated once the material has been removed.

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 by the author and two assistants on 25 November 2012. The proposed extension area was covered by dried grass and scattered bushes. Visibility of archaeological material on the ground was generally good.

Four dispersed silcrete artefacts were recorded on the western and southern margins of the affected area. Other Stone Age archaeological material was observed in a strip of clasts outside the southern border of the polygon. A single crude chunk was noted in heaps of stone removed from the neighbouring cultivated fields. Some of the artefacts are of indeterminate age, but others are clearly either Early or Middle Stone Age.

The near absence of archaeological remains within the polygon and the low density of material in disturbed contexts outside the affected area of Pit 188 indicate that the site of the proposed extension is of low archaeological heritage significance. No further archaeological studies or mitigation are therefore recommended.

If any human remains are found during the development of the proposed pit, 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 Nadeson Consulting Services to undertake an Archaeological Impact Assessment (AIA) of the proposed expansion of borrow pit DR02162/3.8/L/100 (Vidamemoria pit no. 188) which is situated in agricultural land on the undulating, coastal sandveld to the northwest of Piketberg, West Coast District Municipality, Western Cape (Figure 1). The Skurweberg is located some 3km to the east of Pit 188. Material excavated from the proposed extension will be used for the maintenance of gravel roads in the region. No new roads will have to be constructed as access to the quarry site will be via an existing road and access gate. The proposed extension will be rehabilitated and re-vegetated once the material has been removed.

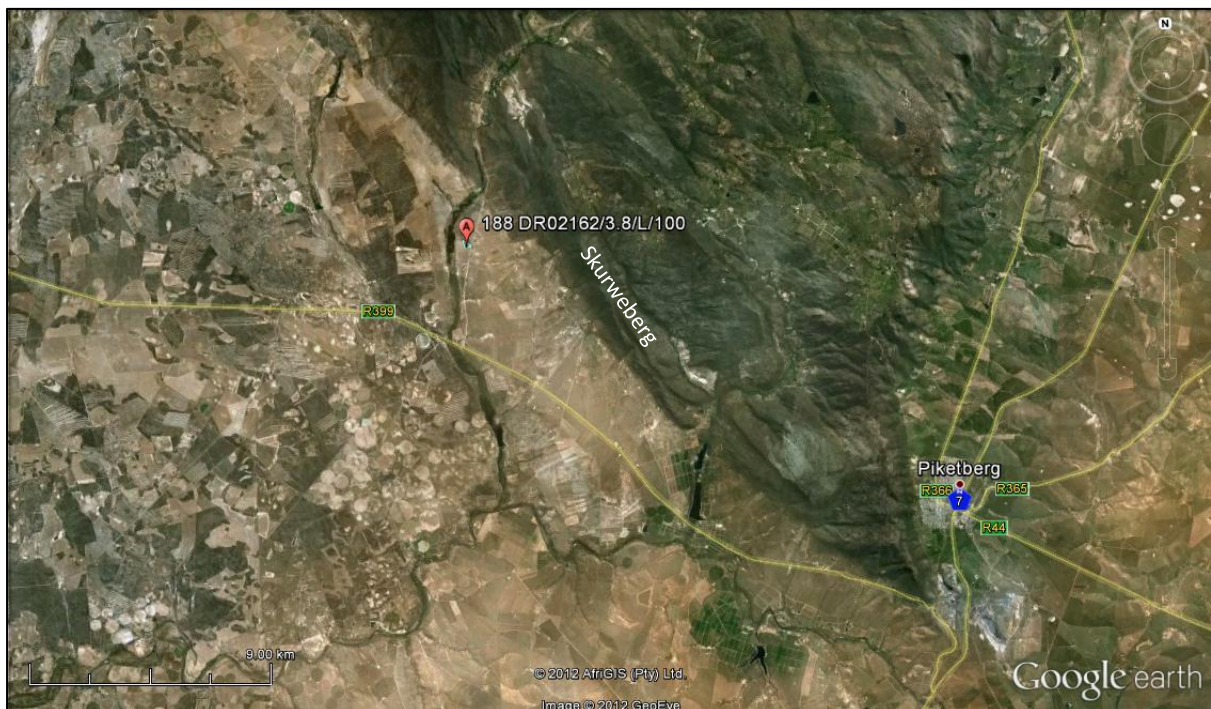


Figure 1: Google earth image showing the location of the proposed borrow pit DR02162/3.8/L/100 (Vidamemoria pit no. 188). The relevant 1:50 000 topographical map is 3218DC Moravia.

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 1905-1990 ref 120726TS45) 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 was undertaken on 25 November 2012. A site plan indicating the affected area was provided by Nadeson for the Phase 1 survey. The area was covered on foot by the author and two assistants and the author's tracks were recorded by a Garmin GPSMAP 62s set on the WGS84 datum (Figure 2). The site was extensively photographed.

4.2 Limiting factors

Visibility of archaeological remains on the ground was generally good.

5. DESCRIPTION OF AFFECTED ENVIRONMENT AND SITE

5.1 Archaeological background:

Extensive surveys done in the sandveld region to the north of Pit 188 by Manhire and other researchers have recorded the presence of stone tool scatters in deflation hollows and on talus slopes in front of small rock shelters (for example, Manhire 1987). Numerous archaeological impact studies have also been undertaken (SAHRA Archaeology, Palaeontology and Meteorite Unit Report Mapping Project DVD 2009). Two such studies conducted in the general area are a survey for a proposed resort development some 8 km to the northwest of Pit 188 (Kaplan 2006) and a survey of fourteen borrow pits in the Aurora and Redelinghuys areas (Orton 2007). Aurora lies some 15 km to the northwest of the proposed extension.

Later Stone Age (LSA) quartz artefacts in varying densities and a single silcrete flake with a notch which is possibly Middle Stone Age (MSA) were observed at four of the six Aurora borrow pit sites (Orton 2007). The remaining two Aurora sites had no archaeological remains. No burials or non-lithic finds were noted at any of the sites. Of the five areas surveyed in the Kaplan study (2006), only one had archaeological material. Low density scatters of mainly Early Stone Age (ESA), some MSA and a few LSA artefacts were recorded.

5.2 Borrow pit DR02162/3.8/L/100 (Vidamemoria pit no. 188)

Approximate area: 10 000m²

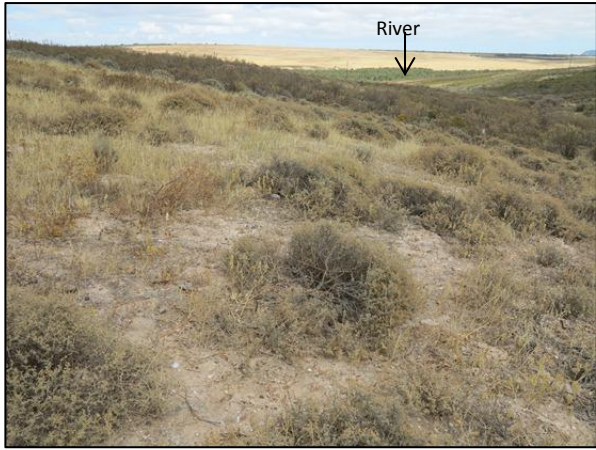
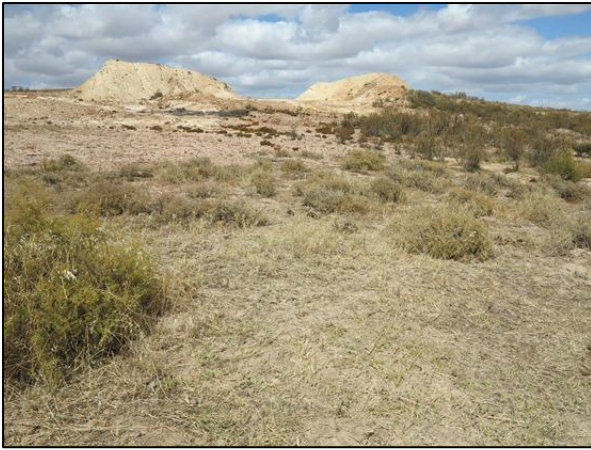
Location: S 32° 48' 47.03" E 18° 34' 32.93"

Farm name and number: Stinkfontein A 97

Environment: The proposed extension to existing borrow pit 188 is located on a roughly triangular piece of north and northeast-facing land bounded by the DR02162 on the east, a fence to the northeast and cultivated fields to the south and west (Figure 2). A farm track separates the southern edge of the polygon from the fields to the south. The Boesmans River lies some 350 m to the west, beyond the wheat fields (Figures 4 and 8). Circular patches of 'heuweltjies', ancient termitaria, are evident in the satellite image and on the ground (Figures 2 and 7). The existing pit and adjacent heaps of quarried gravel and blocks are located along the southern boundary of the affected area (Figures 2, 3, 8 and 9). The ground surface of the eastern part of the polygon has previously been scraped and the underlying colluvial gravelly sand with ferruginised gravel is evident (Figure 5). Pebbles, cobbles, small and large angular clasts mainly of sandstone, some quartz and occasional silcrete and quartzite occur (Figure 6). Patches of quartz gravel are found in several areas (Figure 10). The slopes are covered by dried grass and scattered bushes such as *Galenia africana*, *Pteronia* sp. *Euryops* sp. and other Asteraceae (Figures 3, 4, 7 to 12).



Figure 2: Google earth image showing the polygon of the proposed extension, the southern farm track, the existing borrow pit, the gravel heaps and the scraped area, as well as the author's tracks of the field survey. Other parts of the polygon were inspected by the assistants. The presence of 'heuweltjies' is evident in the image.



Figures 3 and 4: View towards the southwest with the scraped area to the left of the gravel heaps; view towards the west with vegetation lining the river visible in the background.



Figures 5 and 6: View towards the southwest of the scraped area; detail of the sandy gravel with ferruginised sandstone clasts.



Figures 7 and 8: View towards the northeast over the eastern part of the polygon, with the pale circular 'heuweltjies' evident on the adjacent slope; view from the north-western part of the polygon towards the gravel heaps in the southeast.



Figures 9 and 10: View towards the west of the existing borrow pit; view towards the northwest from the northern edge of the existing pit.

Results of the survey: Four artefacts – three silcrete flakes and one blade fragment - were observed within the affected area. They were noted on the western and southern margins of the polygon. No flaked material was seen amongst the cobbles exposed by previous scraping and quarrying. Heaps of cobbles and ferricrete blocks (Figure 12) removed from the neighbouring fields were inspected for artefacts and a single crudely flaked piece of silcrete was observed. Several artefacts were seen in a strip of clasts between the southern farm track and the adjacent field (Figure 11). Except for one quartz flake, all the artefacts are made of silcrete. Some of the material is of indeterminate age (Figures 15 and 16), but others are clearly either ESA or MSA. For example, Figures 13 and 14 show flaked ESA silcrete artefacts, including a possible scaper, whereas those in Figures 17 and 18 have MSA characteristics. The fact that the ESA material is heavily patinated and the edges are often rounded indicates that it has been exposed for some time and has also been transported.



Figures 11 and 12: View towards the east showing the clasts at the edge of the field to the south of the polygon; view towards the northwest of the stone heaps located outside the north-eastern corner of the polygon.



Figure 13: silcrete artefacts; Figure 14: possible silcrete scraper; Figure 15: silcrete flake. The scale is in cm.



Figure 16: 3 silcrete flakes and one quartz flake (top left); Figure 17: silcret blade fragment; Figure 18: silcrete flakes and proximal end of a blade. The scale is in cm.

6. SIGNIFICANCE AND RECOMMENDATIONS

The near absence of archaeological remains within the polygon and the low density of material in disturbed contexts outside the affected area indicate that the site of the proposed extension is of low archaeological heritage significance. No further archaeological studies or mitigation are therefore recommended.

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

7. REFERENCES

Kaplan, J.M. 2006. Phase 1 Archaeological Impact Assessment: proposed development Sterkfontein Farm No. 97/0 Piketberg. Unpublished report prepared for Cape Lowlands Environmental Services. Agency for Cultural Resource Management.

Manhire, A. 1987. Later Stone Age settlement patterns in the Sandveld of the south-western Cape Province, South Africa. British Archaeological Reports International Series 351. Oxford.

Orton, J. 2007. Archaeological Impact Assessment of fourteen borrow pits in the Aurora and Redelinghuys areas, Piketberg and Clanwilliam Magisterial Districts, Western Cape. Unpublished report prepared for Jeffares & Green (Pty) Ltd. Archaeology Contracts Office.

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

8. ACKNOWLEDGEMENTS

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