

**ARCHAEOLOGICAL IMPACT ASSESSMENT
OF THE PROPOSED EXTENSION OF A BORROW PIT ON
WATERKLOOF 1092 NEAR MAMRE, 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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MARCH 2013

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 extension of borrow pit DR01145/2.5/R/60 (Vidamemoria pit no. 185). The proposed pit is situated in hilly, mainly agricultural land some 4.5 km to the north of Mamre, West Coast District Municipality, Western Cape. Material excavated from the proposed extension will be used for the resurfacing 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 gate. The area surrounding the proposed extension will be smoothed out and vegetation will be returned to the area once quarrying has ceased.

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 24 November 2012. Visibility of archaeological material on the ground varied from good in the exposed lower slope to poor in more densely-vegetated patches.

Fewer than 20 dispersed stone artefacts were observed in the eastern half of the affected area. These consisted of Later Stone Age flakes (mostly silcrete), as well as a few artefacts of indeterminate age. The latter included two flaked quartzite pebbles. No other archaeological remains such as fragments of pre-colonial pottery which could indicate the presence of herders were noted. The stone artefacts appear to have been washed down the slope and are thus in a secondary context.

The low density scatter of archaeological remains in a secondary context in the eastern half of the polygon indicates that the site of 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 Nadeson Consulting Services to undertake an Archaeological Impact Assessment (AIA) of the proposed extension of borrow pit DR01145/2.5/R/60 (Vidamemoria pit no. 185). The proposed pit is situated in hilly, mainly agricultural land some 4.5 km to the north of Mamre, West Coast District Municipality (Figure 1). Material excavated from the proposed extension will be used for the resurfacing 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 gate. The area surrounding the proposed extension will be smoothed out and vegetation will be returned to the area once quarrying has ceased.

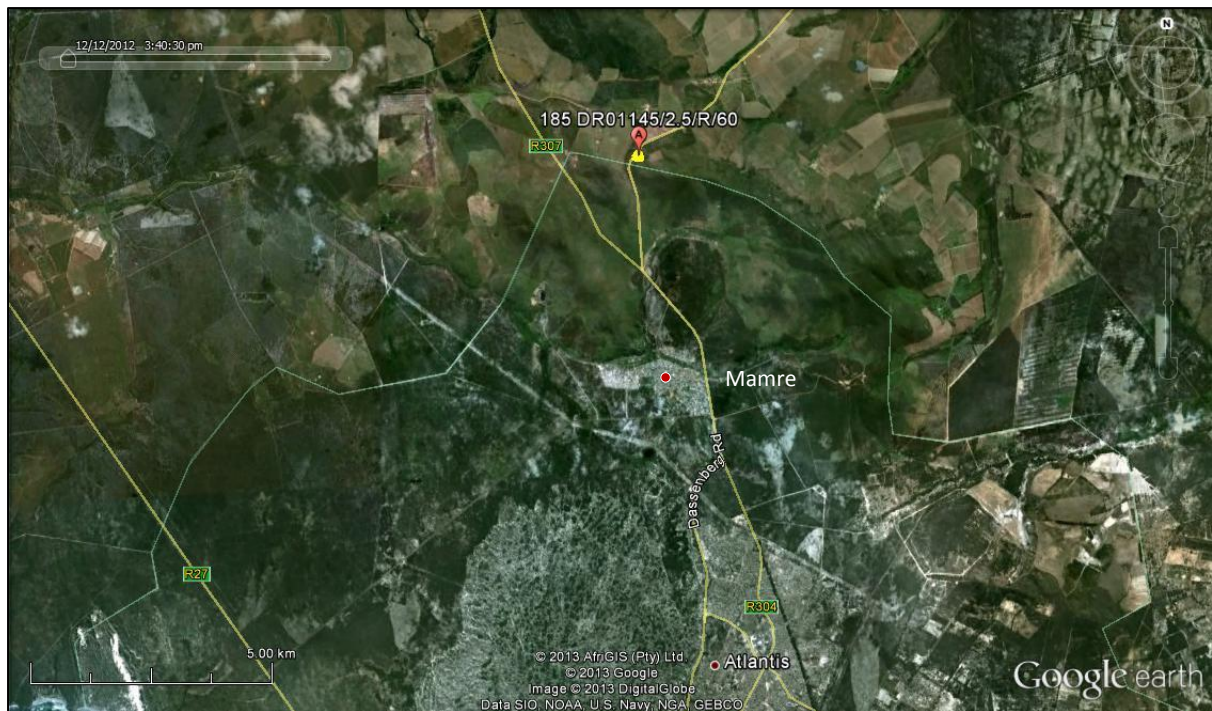


Figure 1: Google earth image showing the location of the proposed extension DR01145/2.5/R/60 (Vidamemoria pit no. 185) to the north of Mamre. The relevant 1:50 000 topographical map is 3318AD Darling.

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 1908-1996 ref 120726TS42) 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 24 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 varied throughout the affected area and ranged from good to poor. More detail is provided below in the description of the site and the results of the survey.

5. DESCRIPTION OF AFFECTED ENVIRONMENT AND SITE

5.1 Archaeological background:

The area of the proposed extension lies within the inland margin of the sandveld with its emergent granite hills. The SAHRA Archaeology, Palaeontology and Meteorite Unit Report Mapping Project DVD (2009) indicates two archaeological impact studies which have been done in the broader region of the proposed extension (Deacon 2006, 2007). This area is known to have been inhabited by Stone Age people as well as Khoekhoen herders (Deacon 2006). The archaeological and heritage impact assessment of the proposed development of a new winery and possible aircraft landing strip on the Burgerspost Wine Estate (some 7 km southeast of Pit 185) revealed no cultural remains, although the potential of locating camp sites and stock posts was recognised (Deacon 2006). The survey of archaeological resources along the route of the proposed road re-alignment to a section of the Darling Hills Road (Deacon 2007), over 3 km to the northwest of Pit 185, is not directly relevant as the study area lies on a substrate of deep aeolian sands, not the granite hills of the present study. The well-known site of Duinefontein 2 where archaeological excavations have revealed Acheulian (Early Stone Age) artefacts in association with animal bones (Cruz-Urbe et al. 2003) is not directly relevant either as it is located at the coast some 22 km to the south of Pit 185.

5.2 Borrow pit DR01145/2.5/R/60 (Vidamemoria pit no. 185)

Approximate area: 140m x 90 m

Location: S 33° 28 '21.04" E 18° 28' 13.81"

Farm name and number: Waterkloof 1092

Environment: The proposed extension lies at the foot and adjoining north-facing slope of a granite koppie to the southeast of the DR01145. The affected area is bordered by the road to the northwest, the edge of the existing pit to the north and erosion gully, faint track and wheat-fields to the east (Figures 2 to 4). The southern extent of the polygon is not clear on the ground but lies below the most prominent granite outcrops (Figures 3, 5 and 8). Colluvium of red clayey sand and gravelly sand overlying highly weathered granite is exposed in the disturbed area of the existing pit (Figures 3 and 5). The visibility of archaeological material on the ground was good here. Renosterveld vegetation and dry grass cover the rest of the affected area (Figures 3 to 8) and affect visibility, which ranged from good to poor. Although several patches of dense bushes occur (Figure 4), the fact that most bushes are scattered and the grass was dry facilitated the observation of material on the ground (for example Figure 6). Low-lying outcrops of granite occur amongst the vegetation on the lower slope of the koppie (Figure 7). Disturbance of the terrain by burrowing, probably by dune molerats, and the movement of water down the slope is evident.



Figure 2: Google earth image showing the polygon of the proposed extension, the author's tracks of the field survey and the granite boulders visible to the south of the polygon.



Figure 3: View towards the south showing the existing pit, the exposed lower slope of the kopie and the granite boulders outside the affected area.

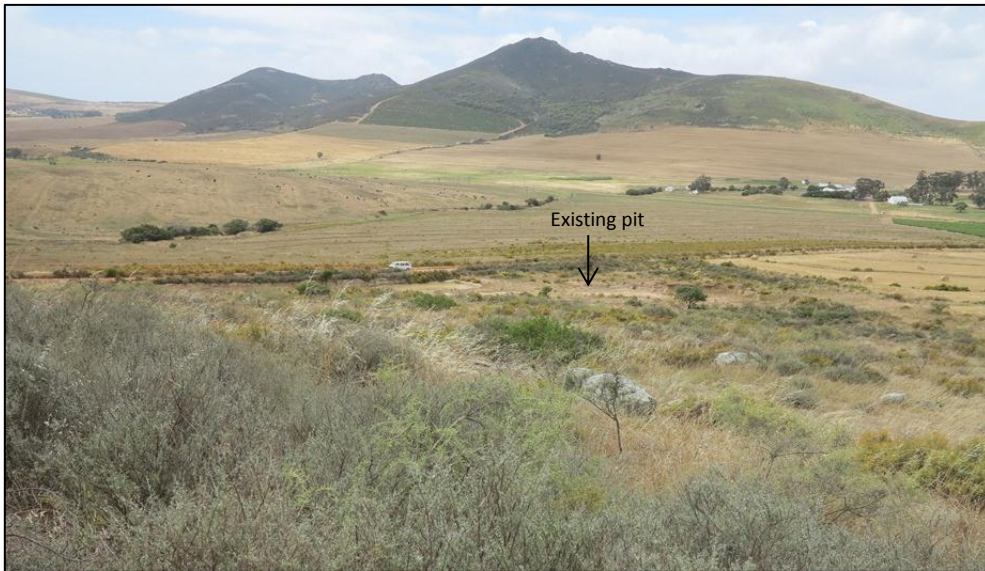


Figure 4: View towards the northwest with a dense patch of vegetation in the foreground and the existing pit in the middle ground. The parked vehicle indicates the position of the DR01145.



Figures 5 and 6: View towards the south with exposure of the sandy colluvium and highly weathered granite bedrock; view towards the east showing gaps between the dried grass and scattered bushes.



Figures 7 and 8: View towards the east showing granite outcrop; view towards the south of the granite boulders on the crest of the hill outside the polygon.

Results of the survey:

Fewer than 20 dispersed stone artefacts were observed in the eastern half of the affected area. Ten silcrete flakes (e.g. Figures 9, 10 and 13), one quartz flake (Figure 13), a possible quartz chunk, one quartzite flake and two flaked quartzite pebbles (Figures 11 and 12) were noted. Most of these artefacts are LSA but several are of indeterminate age. No other archaeological remains such as fragments of pre-colonial pottery which could indicate the presence of herders were noted.

The stone artefacts appear to have been washed down the eastern part of the koppie which is adjacent to the erosion gully (Figure 2). If there had been a high density of material associated with the granite boulders on the crest of the hill, one would also expect to find archaeological material in the western half of the polygon. The area from which the artefacts derive may in fact be further away to the southeast. The artefacts observed at the proposed extension site are thus in a secondary context.

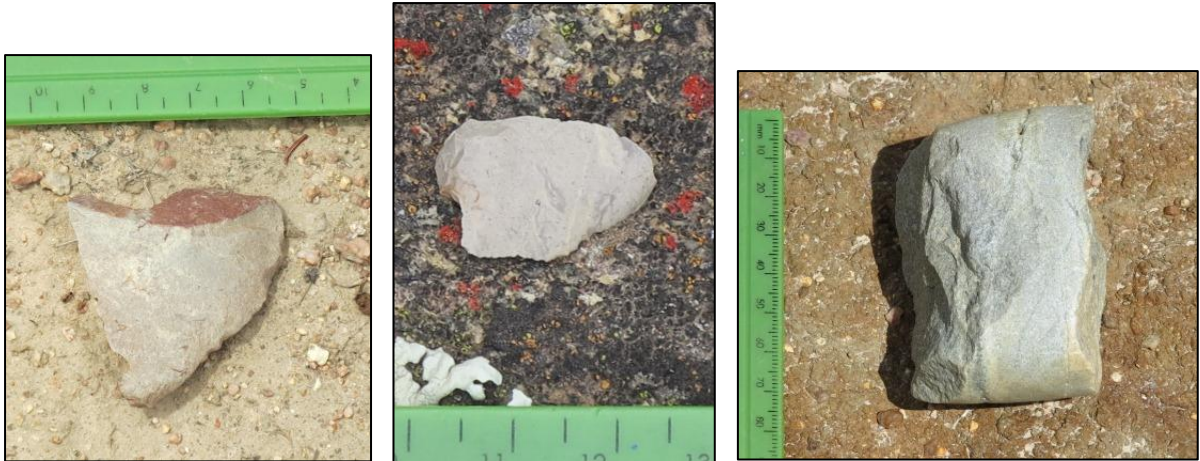


Figure 9: Silcrete flake; Figure 10: silcrete flake; Figure 11: flaked quartzite pebble. The scale is in cm.



Figure 12: Flaked quartzite pebble; Figure 13: three silcrete flakes and one quartz flake. The scale is in cm.

6. SIGNIFICANCE AND RECOMMENDATIONS

The low density scatter of archaeological remains in a secondary context in the eastern half of the polygon indicates 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 extension, work in that area must cease and the South African Heritage Resources Agency (SAHRA) must be notified immediately.

7. REFERENCES

Cruz-Uribe, K., Klein, R.G., Avery, G, Avery, D.M., Halkett, D., Hart, T., Milo, R.G., Sampson, C.G. & Volman, T.P. 2003. Excavation of buried late Acheulean (Mid-Quaternary) land surfaces at Duinefontein 2, Western Cape Province, South Africa. *Journal of Archaeological Science* 30: 559 – 575.

Deacon, H.J. 2006. Phase 1 Archaeological and Heritage Impact Assessment Report: Burgerspost Wine Estate. Unpublished report prepared for Cape Lowlands Environmental Services. Stellenbosch.

Deacon, H.J. 2007. Archaeological Impact Assessment: Re- Routing Darling Hills Road (Divisional Road 1148 & Minor Road 147). Unpublished report prepared for Cape Lowlands Environmental Services. Stellenbosch.

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. The assistance of Hedi and Erwin Stummer in the field is gratefully acknowledged.