

ARCHAEOLOGICAL IMPACT ASSESSMENT
OF
THE PROPOSED EXTENSION OF A BORROW PIT IN THE
ROAD RESERVE, BELVEDERE 73, BEAUFORT WEST
MUNICIPALITY, CENTRAL KAROO 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) for the proposed extension of borrow pit MR587/27.0/rrR (Vidamemoria pit no. 328) in the Beaufort West Municipality of the Central Karoo District. The proposed pit extension area lies in the road reserve and access to it is thus directly from the MR587 road. Material excavated from the pit will be used for the maintenance of the MR587. All possible worked surfaces will be covered as soon as possible with any available and stockpiled soil.

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 14 June 2015. The proposed pit extension is fairly flat-lying but is largely disturbed by a man-made drainage channel, several roadside drains and sheet erosion. Visibility ranged from good to fairly poor depending on vegetation cover.

The survey of the site investigation area revealed a patchy, low density scatter of material on the surface. About 100 dispersed, isolated stone artefacts of various ages, but probably mostly associated with the Middle Stone Age, were recorded. One Early Stone Age handaxe was also noted. Most of the artefacts were made of local sandstone and quartzite. Several hornfels flakes and cores may pertain to the Later Stone Age. No other archaeological remains such as organic material, historical remains, graves or rock engravings were observed.

The background surface scatter of isolated stone artefacts, rather than a discrete site, in a disturbed context is considered to be of low archaeological heritage significance. No significant impact on such heritage resources is expected if the proposed extension is developed. No further archaeological studies or mitigation are therefore recommended.

If any human remains are found during the development of the proposed pit 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) for the proposed extension of borrow pit MR587/27.0/rrR (Vidamemoria pit no. 328) in the Beaufort West Municipality of the Central Karoo District (Figure 1). The MR587 road links Nelspoort to Murraysburg, over 74km further east-northeast (ENE). The proposed pit extension area lies in the road reserve and access to it is thus directly from the MR587. Material excavated from the pit will be used for the maintenance of the MR587. It is proposed to cover worked surfaces as soon as possible with any available and stockpiled soil.



Figure 1: Google earth image showing the location of the proposed extension to borrow pit MR587/27.0/rrR (Vidamemoria pit no. 328). Three Sisters lies approximately 25 km NNE of Nelspoort. The relevant 1:50 000 topographical map is 3223AA Nelspoort.

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 15040123GT0422E) 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 by the author on 14 June 2015. 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 was extensively photographed.

4.2 Limiting factors

Visibility of archaeological remains on the ground ranged from good to fairly poor in areas with denser vegetation.

5. DESCRIPTION OF AFFECTED ENVIRONMENT AND SITE

5.1 Archaeological background:

No reports of archaeological studies in the immediate vicinity of the proposed extension are indicated on the SAHRA Archaeology, Palaeontology and Meteorite Unit Report Mapping Project DVD of 2009, but two more recent studies are of relevance (Orton 2010; Tusenius 2015). Orton (2010) surveyed various sections along the N1 road between Beaufort West and Three Sisters and recorded scatters of Early, Middle and Later Stone Age (ESA, MSA and LSA respectively) artefacts, as well as many artefacts of uncertain age. The artefacts were dispersed rather than concentrated in discrete sites. Scatters of historical glass and ceramics were noted and a few historical buildings, including an Anglo-Boer fortification were recorded. Incised, scratched and pecked rock engravings of pre-colonial and colonial age, as well as scratched areas, on dolerite boulders were documented at two localities. Tusenius' study (2015) recorded a low density scatter of isolated Stone Age artefacts of indeterminate age, although probably mainly pertaining to the MSA, at a borrow pit some 37 km to the southwest of the present survey area.

Nelspoort, located some 14km to the west of Pit 328, is well known for its rock engravings of San, Khoekhoen and historical age depicting animals such as eland, elephant, rhinoceros, felines, possibly the extinct giant buffalo (*Pelorovis antiquus*), geometric forms, horses, women in dresses, trains and railway lines (pers. observation; Laurence Rathenam pers. comm. 2002, 2004; Ouzman 2001). Many of these occur in association with the hammered or pecked patches on boulders which characterise the rock gongs which were used as percussion musical instruments (Parkington et al 2008).

5.2 Borrow pit MR587/27.0/rrR (Vidamemoria pit no. 328)

Approximate area: 22 000m²

Location: S 32° 5' 40.99" E 23° 9' 35.84"

Farm name and number: Road Reserve, Belvedere 73

Environment: The proposed extension is located within the road reserve immediately south of the east/west aligned MR587 road and lies to the west and southwest of the existing pit (Figures 2, 4 and 5). A fence forms the southern border of the affected area (Figures 2 and 6). Part of the existing pit is filled with water. The area is fairly flat-lying but is largely disturbed by a man-made drainage channel and several roadside drains with berms which dissect the northern half of the proposed extension (Figures 2, 3 to 5, 7 and 8). The southern half of the area also shows signs of disturbance due to runoff from the road and sheet erosion (Figures 6 and 9). The vegetation cover consists of varying densities of low bushes, including *Salsola* sp., and scattered grass (Figures 3 to 9). Colluvial and alluvial surface gravels with calcrete, mudrock and sandstone clasts are visible in the exposed areas between more scattered plants (Figures 3, 4, 6 and 9). The gravels overlie weathered mudrock of the Teekloof Formation, Beaufort Group. Visibility of material on the ground was obviously better where the vegetation was less dense. No dolerite boulders occur in the vicinity of the site investigation area.



Figure 2: Google earth image showing the proposed borrow pit 328 and tracks of the field survey. The southern boundary lies along a fence line.



Figure 3: View towards the west. The man-made drainage channel is located in the middle ground and the roadside drains lie between it and the road. The surface gravels are evident in the foreground.

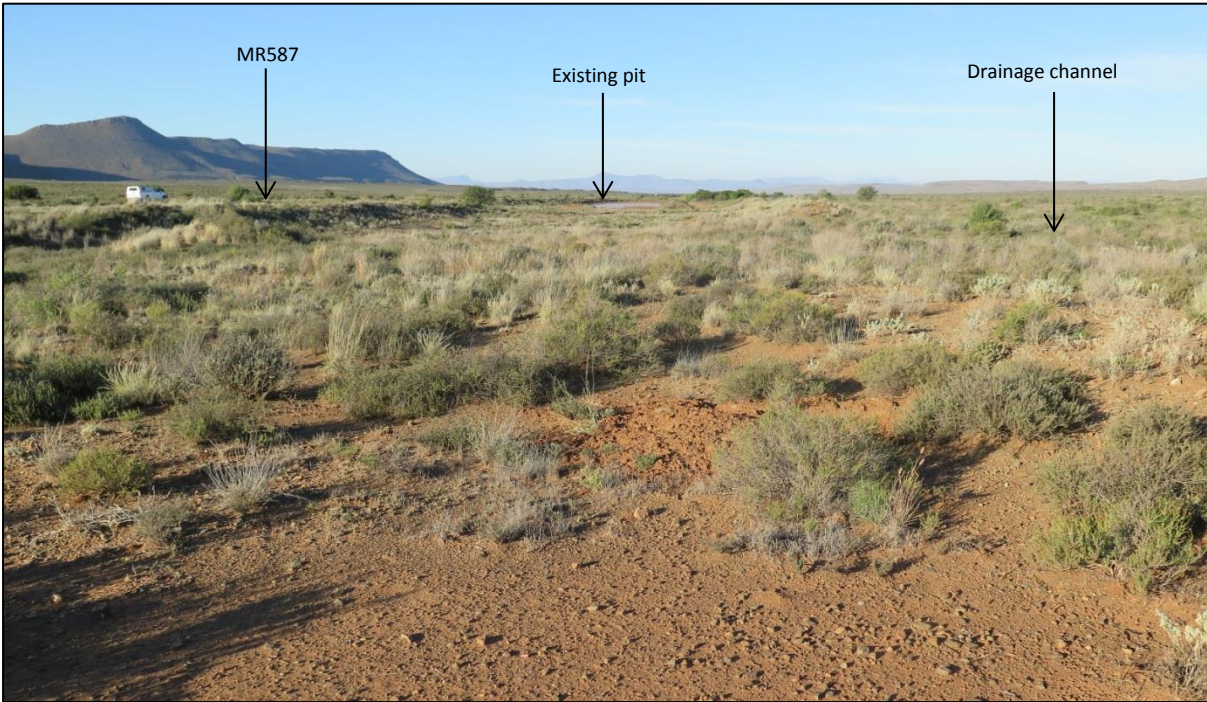


Figure 4: View towards the east showing the gravels in the exposed patches.



Figure 5: View towards the east from the western part of the affected area. Disturbance due to roadside drains adjacent to the road is visible on the left of the image.



Figure 6: View towards the east of the southern part with the fence visible on the right of the image.

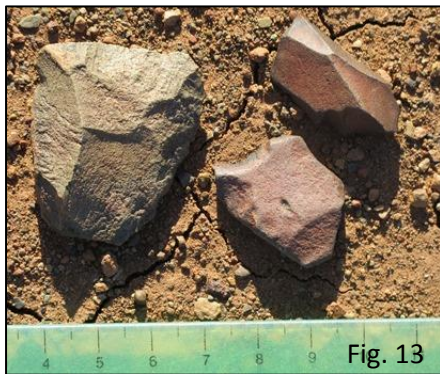


Figure 7: View towards the northwest showing one of the roadside drains with berm.
Figure 8: View towards the southeast along one of the berms.

Results of the survey: The survey of the site investigation area revealed about 100 dispersed stone artefacts of various indeterminate ages but probably mostly MSA (Figures 10 to 19). Diagnostic elements included an ESA handaxe (Figure 10) and MSA blades, convergent flakes and cores (e.g. Figures 11 to 16, 18). Some of the artefacts are weathered and patinated (e.g. Figures 12 and 13) so in some cases it is difficult to identify the type of raw material used. It appears that most of the artefacts have been manufactured from local fine-grained sandstone and quartzite from the Beaufort Group (John Almond, pers. comm.), although some hornfels was also used (examples amongst the artefacts in Figures 14 to 16). Some of the hornfels flakes and cores may pertain to the LSA. The artefacts form a patchy background scatter of material on the surface. There is no stratigraphic context and many of the artefacts have been transported by sheet erosion. No other archaeological remains such as organic material, historical remains, graves or rock engravings were observed.



Figure 9: Detail showing evidence of sheet erosion and the down-wasting of artefacts and clasts. The green ruler is about 15cm in length. Figure 10: ESA handaxe, probably of fine-grained sandstone. The scale is in cm.



Figures 11 to 19: Examples of the artefacts – cores, chunks, flakes and blades - recorded during the survey. Most are probably of MSA origin and are made of fine-grained local sandstone and quartzite, although hornfels is also present (the small dark grey flakes in Figures 14 to 16). The scale is in cm.

6. SIGNIFICANCE AND RECOMMENDATIONS

The background surface scatter of isolated stone artefacts, rather than a discrete site, in a disturbed context is considered to be of low archaeological heritage significance. No significant impact on such heritage resources is expected if the proposed extension is developed. No further archaeological studies or mitigation are therefore recommended.

If any human remains are found during the development of the proposed pit extension, 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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