

**ARCHAEOLOGICAL IMPACT ASSESSMENT  
OF THE PROPOSED EXTENSION OF A BORROW PIT  
ON FARM NO. 581 (KEURBOS), CLANWILLIAM 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 Nadeson Consulting Services to undertake an Archaeological Impact Assessment (AIA) for the proposed extension of an existing roadside-cutting borrow pit DR2182/17.32/R/10/A (Vidamemoria pit no. 106) located close to the Olifants River Valley, approximately 11 km to the south-east of Clanwilliam. Material excavated from the proposed extension will be used to re-gravel the DR2182. The site will be rehabilitated and re-vegetated once the gravel 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 existing borrow pit is known to be of great palaeontological significance for the conodont (early vertebrate) and other Ordovician faunal specimens described from the Soom Member of the Bokkeveld Group rocks. Besides the palaeontological significance of the site, the proposed extension occurs in an area which has a rich archaeological heritage, particularly in terms of rock art sites.

The field assessment was conducted on foot on 13 August 2012. During the survey, one large sandstone boulder with potential surfaces for rock paintings was examined but none was noted. No other archaeological remains were observed either within the proposed extension.

The absence of any archaeological remains in the affected area indicates that the proposed extension is of low archaeological heritage significance, although the surrounding area does obviously have sites of interest and research potential. No further archaeological studies or mitigation are however recommended for this particular pit as there will be no direct impact on archaeological heritage resources.

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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) for the proposed extension of an existing roadside cutting borrow pit DR2182/17.32/R/10/A (Vidamemoria pit no. 106) located close to the Olifants River Valley approximately 11 km to the south-east of Clanwilliam and about 2 km to the east of an inlet of the Clanwilliam Dam (Figure 1). Material excavated from the proposed extension will be used to re-gravel the DR2182. The site will be rehabilitated and re-vegetated once the gravel material has been removed.

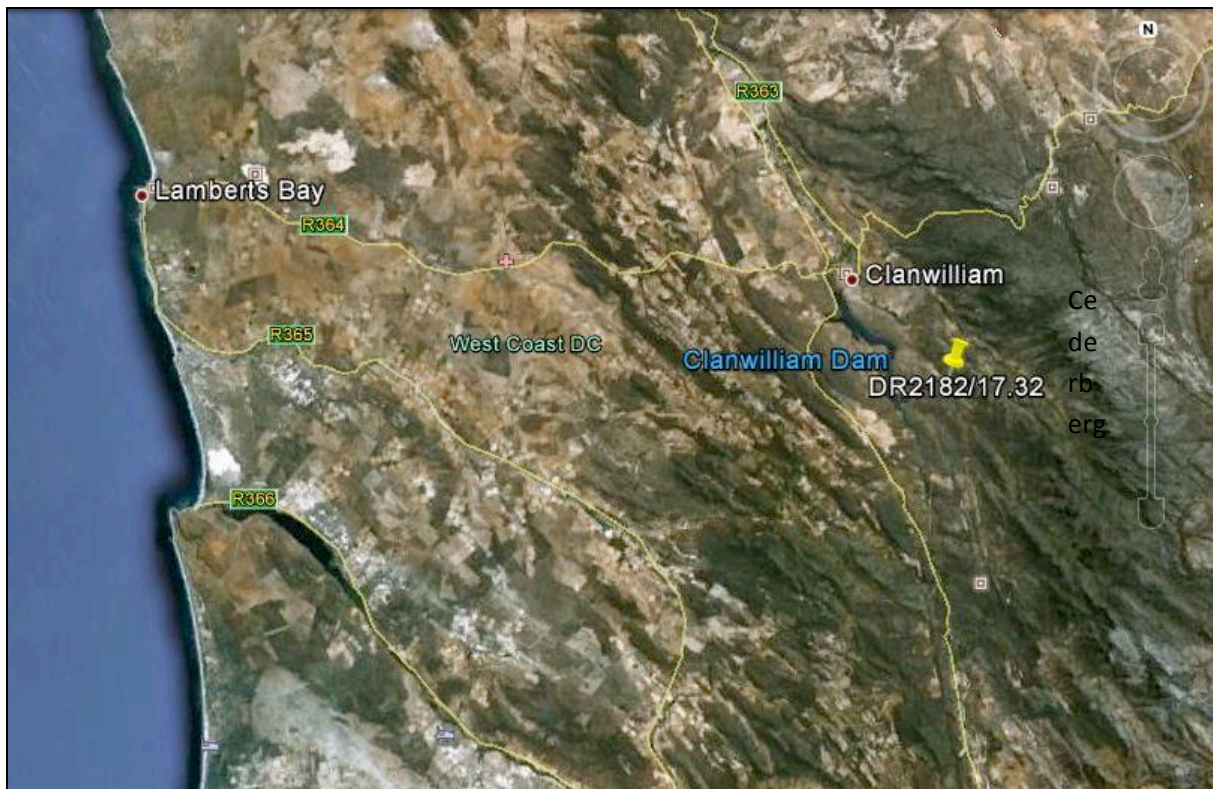


Figure 1: Google earth image showing the location of the proposed extension of the existing borrow pit DR2182/17.32/R/10/A (Vidamemoria pit no. 106) close to the Olifants River Valley. Clanwilliam lies approximately 11 km to the north-west. The site lies in the western margins of the Cederberg range. The relevant 1:50 000 topographical map is 3218BD Oliewenboskraal.

## 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 000m<sup>2</sup>, 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 111115JB26) 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 13 August 2012. A site plan indicating the affected area was provided by Nadeson 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 any finds were photographed.

#### **4.2 Limiting factors**

Visibility of archaeological remains on the ground was somewhat limited in places due to patches of dense shrubs and some luxuriant grass cover as a result of good rains in the region. However, the areas where visibility was good give an indication of what is likely to be encountered in the rest of the proposed extension.

### **5. DESCRIPTION OF AFFECTED ENVIRONMENT AND SITES**

#### **5.1 Archaeological background:**

The Olifants River Valley area has been a focus of human habitation for well over five hundred thousand years as evidenced by the archaeological remains dating from the Early Stone Age (ESA), Middle Stone Age (MSA), Later Stone Age (LSA) hunter-gatherers and pastoralists and colonial times (Orton & Hart 2005). Most Stone Age archaeological material observed has been scatters of artefacts lying on the current land surface, usually as a result of erosion or disturbance, but some MSA and many LSA sites are also found in primary context in rock shelters. Rock art is prevalent in the rocky outcrops in the region and researchers from the Dept. of Archaeology, UCT, and Iziko: South African Museum have recorded many paintings over the past four to five decades, for example, Yates & Manhire (1991) and Van Rijssen (1984). As part of some of these surveys, Stone Age sites have also been documented and artefact collections made. Excavations have particularly been undertaken at LSA sites such as Renbaan and Andriesgrond to the west of the Clanwilliam Dam (Parkington 1980).

Several archaeological impact studies have been undertaken in the Olifants River Valley and western Cederberg region close to proposed Pit 106, for example, Halkett (2003), Kaplan (2002a, 2002b), Manhire (2004) and Orton & Hart (2005). The latter study, involving an extensive survey of the area which would be affected by the proposed raising of the Clanwilliam Dam to a height of 15 m above present day full supply level, recorded 3 structures of historical interest round the inlet of the dam, approximately 1.5 to 2 km to the southwest of Pit 106. The affected area of the present study in fact lies within the area of Manhire's 2004 survey of the farm Jan Dissels River 270, known as Dwarsrivier. The 16 archaeological sites recorded by Manhire included 6 rock art sites with human and animal figures, 3 open stone artefact scatters (two MSA and one LSA), 5 buildings and one structure older than 60 years, as well as one rock engraving possibly related to the Anglo-Boer War. One of the rock shelters with paintings has some depth of deposit with MSA and LSA artefacts, whereas the others either had no deposit or a thin scatter of LSA material on the rocky floor. Besides stone artefacts (flakes, blades, cores, chunks and the occasional formal tool), other items observed included pottery, ochre, upper and lower grindstones, grinding areas on the rock floor of an overhang and bone. Silcrete, quartzite and cryptocrystalline silicate were the most common raw materials used. Glass and ceramic sherds dating to the 20<sup>th</sup> century were also noted at a few sites.

## **5.2 Borrow pit DR2182/17.32/R/10/A (Vidamemoria pit no. 106)**

**Approximate area:** 11 000m<sup>2</sup>

**Location:** S 32° 15' 2.18" E 18° 57' 59.03"

**Farm name and number:** No.581 (Keurbos)

**Environment:** The proposed extension concerns an existing roadside-cutting borrow pit which is known to be of great palaeontological significance for the conodonts (early vertebrates) and other Ordovician fauna described from the Soom Member of the Bokkeveld Group rocks (J. Almond, pers. comm.). The quarry is situated in a steep, southeast-facing hillside on a bend of the DR2182 and the proposed extension is to the north-east of the existing quarry (Figure 2). The Rondegatrivier, which drains into the Clanwilliam Dam, lies less than 1 km to the southwest of the affected area. The closest rocky outcrops which may contain rock art sites are situated outside the study area, namely at the top of the steep slope and several hundred metres away (Figures 3 to 6).

A new track has been bulldozed along the south-eastern boundary of the affected area and part of the northwest limit lies close to a gully (Figure 6), but the other boundaries of the polygon are not clear on the ground. A larger area than the affected polygon was thus surveyed (Figure 2). Colluvially transported bouldery, gravelly silty sand overlies thinly laminated mudrocks of the Soom Member, which in turn overlie sandy Pakhuis Formation tillite with sparse pebbles (J. Almond, pers. comm.). The surface colluvial gravel is partially ferruginised. Boulders and smaller blocks of sandstone are scattered on the slope. Apart from the cutting and the bulldozed road, the site is covered by fynbos vegetation. The visibility of archaeological material on the ground was limited in the dense patches of shrubs such as *Rhus*, *Wiborgia*, *renosterbos* (*Elytropappus*) and other Asteraceae which occur



amongst the general scatter of isolated shrubs (Figures 3, 4, 6). The recent rains resulted in a luxuriant growth of grass, weeds and bulbs in some parts of the proposed extension which also affected archaeological visibility.



Figure 2: Google earth image showing the proposed extension of the existing borrow pit 106 and the tracks recorded during the field survey. The yellow lines mark most of the outer boundaries of the proposed extension according to the site plans. Please note that the straight blue lines do not indicate survey tracks and that the vegetation on the ground in winter is thicker than it appears in this image.



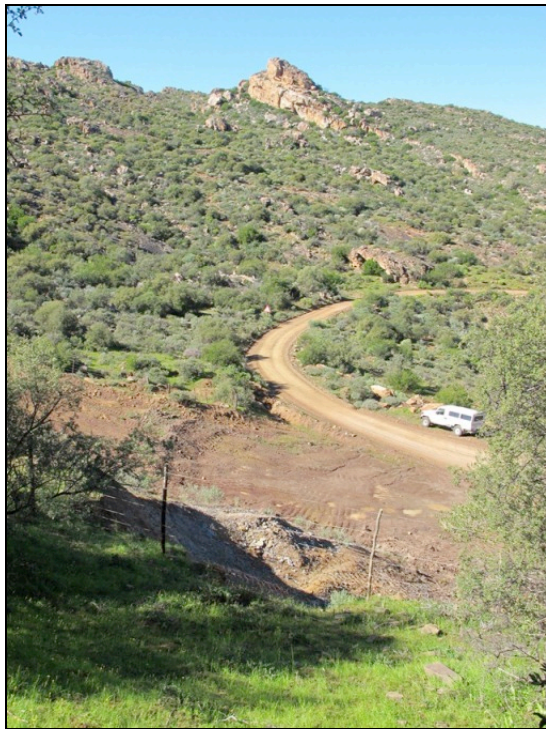


Figure 3: View towards the west of the existing roadside-cutting borrow pit and the proposed extension in the foreground. The photo was taken from the bulldozed track which forms the south-eastern boundary of the affected area.



Figure 4: View of the affected area at the base of the steep south-east facing slope. The rocky outcrops at the crest of the ridge lie outside the area. Patches of dense shrubs and grass are visible, as well as the large sandstone boulder examined for rock art.





Figures 5 and 6: View of rocky outcrop, probably with rock art, towards the south-east of the affected area; closer view of the proposed extension area lying between the gully in the foreground and the bulldozed track in the middle ground of the photo.

**Results of the survey:** No archaeological remains were observed within the affected area. One large sandstone boulder with potential surfaces for rock paintings was examined (Figure 4) but none was noted. One likely-looking piece of quartzite found outside the polygon was naturally fractured - there were no artefactual flake scars.

## 6. SIGNIFICANCE AND RECOMMENDATIONS

The absence of any archaeological remains in the affected area indicates that the proposed extension is of low archaeological heritage significance, although the surrounding area does obviously have sites of interest and research potential. No further archaeological studies or mitigation are however recommended for this particular pit as there will be no direct impact on archaeological heritage resources.

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**

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## **8. ACKNOWLEDGEMENTS**

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