ARCHAEOLOGICAL IMPACT ASSESSMENT OF A PROPOSED BORROW PIT ON OUDEKRAAL AND THE PROPOSED EXTENSION OF A BORROW PIT ON MELKHOUTRIVIER 492, OVERBERG DISTRICT, WESTERN CAPE

(Assessment conducted under Section 38 (8) of the National Heritage Resources Act as part of a Heritage Impact Assessment)

Prepared for:

Vidamemoria Heritage Consultants
Att: Ms Quahnita Samie
E-mail: quahnita@vidamemoria.co.za

On behalf of:

Aurecon South Africa (Pty) Ltd

Prepared by:
Madelon Tusenius
Natura Viva cc
PO Box 12410
Mill Street, Cape Town
8010
Phone: (021) 462 3622
E-mail: naturaviva@universe.co.za

JUNE 2012

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 development of a new borrow pit MR00268/40.0/0.02R (Vidamemoria pit no. 74) and the proposed extension of an existing borrow pit, MR00268/46.65/0.15L (Vidamemoria pit no. 75), in agricultural land in the Overberg District. The affected areas lie approximately 37 and 42 km south-east of Swellendam respectively. Material excavated from the pits will be used for the re-gravelling of the MR268. Pit 74 will be re-created as a self-draining, cultivatable field and Pit 75 will be retained as a stock watering feature.

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 30 and 31 May 2012. Archaeological visibility was good at proposed Pit 74, but problematic in parts of the proposed extension to Pit 75 which were covered by dense coastal fynbos vegetation.

A few isolated quartzite artefacts were observed at both sites. Although the flaked material is of indeterminate age it is likely that they are of Early Stone Age (ESA) origin.

As both affected areas have been disturbed by agricultural activity in the past, the stone artefacts occur in a secondary context and are therefore of low archaeological heritage significance. No significant impact on such resources is expected if the proposed borrow pit and extension are developed. No further archaeological studies or mitigation are recommended.

TABLE OF CONTENTS

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 development of a new borrow pit MR00268/40.0/0.02R (Vidamemoria pit no. 74) and the proposed extension of an existing borrow pit, MR00268/46.65/0.15L (Vidamemoria pit no. 75), in agricultural land in the Malgas area of the Overberg District, to the north of the De Hoop Nature Reserve (Figure 1). The proposed pit and extension lie approximately 37 and 42 km south-east of Swellendam respectively. Material excavated from the pits will be used for the re-gravelling of the MR268. Access to the affected areas will be by existing roads and farm tracks. It is proposed that Pit 74 will be re-created as a self-draining, cultivatable field and Pit 75 will be created as a stock watering feature.

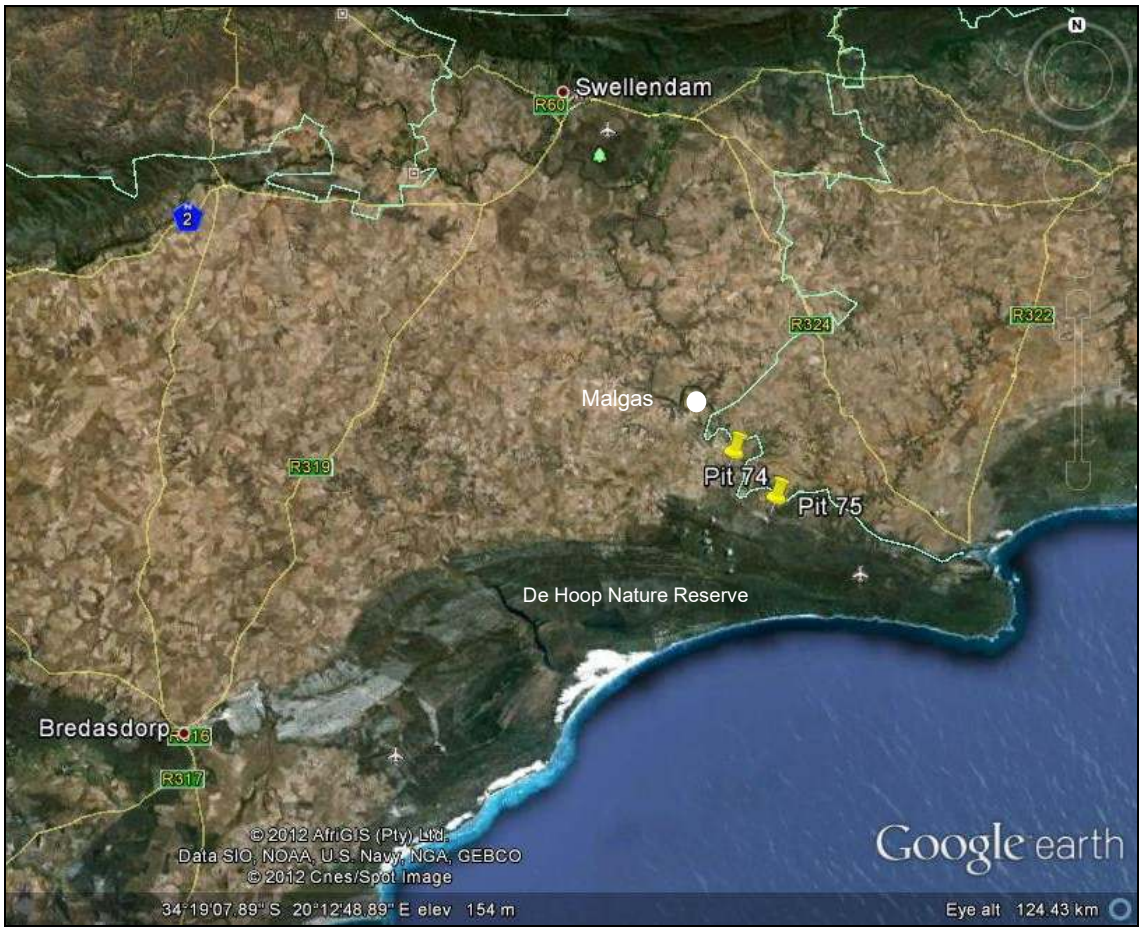


Figure 1: Google earth image showing the location of the proposed pit MR00268/40.0/0.02R (Pit 74) and the extension of an existing borrow pit MR00268/46.65/0.15L (Pit 75) approximately 40 km south-east of Swellendam. The relevant 1:50 000 topographical map is 3420BC Malgas.

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 120130JL05) 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 pits was undertaken by the author on 30 and 31 May 2012. Site plans indicating the affected areas were provided by Aurecon for the Phase 1 survey. Each area was covered on foot and archaeological occurrences and tracks were recorded by a Garmin GPSMAP 62s set on the WGS84 datum (Figures 2 & 9). Both sites were extensively photographed.

4.2 Limiting factors

Visibility of archaeological remains on the ground was good at Pit 74 but fading light necessitated a return visit the following day. Visibility was problematic in parts of the affected area for Pit 75. See 5.3 for specific mention of the limiting factors for the latter.

5. DESCRIPTION OF AFFECTED ENVIRONMENT AND SITES

5.1 Archaeological background:

There are several archaeological impact studies which have been undertaken in fairly similar, inland settings in the Overberg and Southern Cape region and can provide background on the types of archaeological material which could be expected in the Malgas area. Nilssen & Yates (2007) examined six proposed borrow pits in the Vermaaklikheid area, approximately 40 km to the north-east and east of the Malgas pits. Stone tools were common at only one of the proposed sites. Of the rest, two sites had no archaeological

remains, two had thin and poor quality scatterings of stone tools and one had a thin and widespread scatter. The cores, flakes and a chopper-like tool observed were ESA and predominantly made of quartzite. Seventeen proposed Overberg borrow pits examined by Kaplan (2007) included 11 in the greater Malgas area. Archaeological remains were noted at 6 of these Malgas sites. Sparse ESA material, usually made of quartzite, was found at 5 sites. One MSA quartzite flake was also found and the sixth site with material had two silcrete LSA artefacts.

A survey done along a proposed new power line between Bredasdorp and Struisbaai by Avery & Avery (2004) reported a few MSA-like artefacts; flaked quartzite cobbles, probably ESA; and LSA silcrete and quartz artefacts. No archaeological material was observed (Avery 2007a, 2007b) in the area of The Drifters Adventure Camp or the Falcon Ridge Private Wildlife Sanctuary, approximately 19 km to the south-west of the proposed pit and extension in this study. Of the fifteen borrow pits examined during the Heritage Impact Asssessment of the Gansbaai - Bredasdorp road upgrade, Hart (2005) recorded very thin scatters of ESA/MSA material, with possible ESA/MSA material at a further three, as well as a silcrete quarry site. Subsequent sampling at the quarry (Hart 2006) revealed technologically fairly crude ESA irregular cores, chunks, very large flakes and modified pieces, with the only formal tool being a handaxe found outside the study area

A survey undertaken by Chris Henshilwood and his colleagues concerns sites in the De Hoop Nature Reserve (Karen van Niekerk, pers.comm.), rather than the adjacent inland region so is less relevant to the present study.

5.2 Borrow pit MR00268/40.0/0.02R (Vidamemoria pit no. 74)

Approximate area: 17 500 m²
Location: S 34˚ 19' 39.00" E 20˚ 35' 18.96"
Farm name and number: Oudekraal (no farm number)

Environment: The affected area is located on a hill and consists of a triangular piece of disturbed agricultural land bounded by the MR268 on the east and a farm track on the western side (Figures 2, 3 and 4). There is no fence defining the southern limit of the proposed borrow pit but the gently southward-sloping terrain starts to dip more steeply down to a little stream bed. The medium to coarse gravelly, silty sand derived from Tertiary alluvial gravels caps weathered Bokkeveld mudrocks. Quartzite cobbles and blocks, mudrock blocks and occasional chunks of vein quartz and silcrete are evident (Figures 4 and 5). The remains of an alluvial gravel-capped pediment lie at the top of the hill, to the north of the affected area. The land has previously been cultivated but is fallow at present so, with the exception of the sloping south-east corner, there is a light covering of grasses and sparse bushes. Archaeological visibility on the ground is thus good.

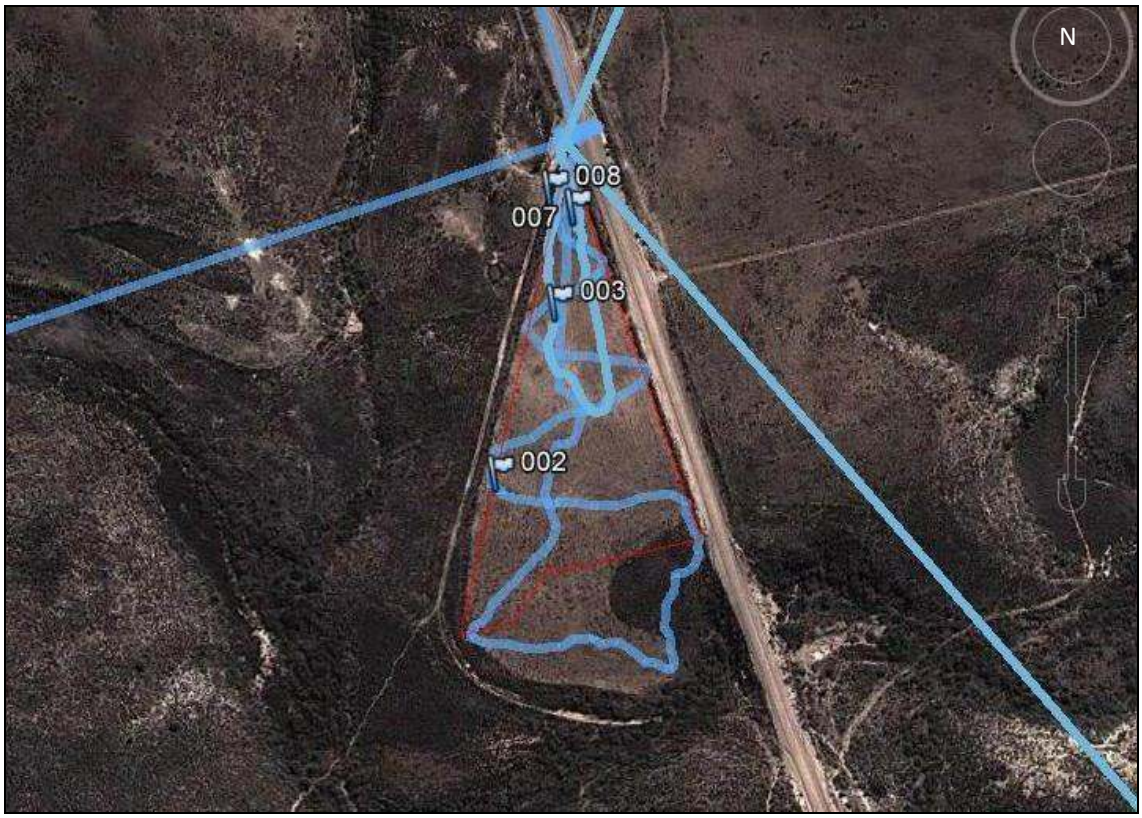


Figure 2: Google earth image showing the proposed borrow pit 74, waypoints and tracks of the field survey. Please note that the straight blue lines do not indicate survey tracks.

Figure 3: Pit 74 – view towards the north taken from a hill to the south of the affected area. The MR268 and road cutting with alluvial gravel-capped pediment are visible in the top right corner.

Figure 4: Pit 74 – view towards the south showing the ploughed Tertiary alluvial gravels.

Figure 5: Pit 74 – detail of one of the areas with a denser concentration of quartzite cobbles and blocks, with occasional quartz chunks. View towards the south-east.

Results of the survey: Although there was a fairly dense scatter of quartzite cobbles across most of the affected area, very few flaked cobbles and artefacts were observed (see Table 1 of the Appendix and Figures 6 to 8). Early Stone Age (ESA) affiliation seems most likely for some of these artefacts.

Figures 6 and 7: Pit 74 – flaked quartzite cobble; bifacially flaked quartzite piece, probably ESA. The scale is in cm.

Figure 8: Pit 74 – quartzite core with other flaked cobbles. The ruler is about 15 cm in length.

5.3 Borrow MR00268/46.65/0.15L (Vidamemoria pit no. 75)

Approximate area: 26 500 m²
Location: S 34° 21' 55.80" E 20° 37' 45.84"
Farm name and number: Melkhoutrivier 492

Environment: Pit 75 is the proposed extension to an existing, un-authorised borrow pit which is orientated in an east-west direction on relatively flat-lying terrain which slopes very gently to the west (Figures 9 and 10). The area to the south and west of the existing pit has clearly been disturbed by ploughing in the past and has since been re-vegetated by grass and invasive rooikrans (*Acacia cyclops*) shrubs (Figure 11). The areas to the north and east of the existing quarry have dense coastal fynbos vegetation which was difficult to walk through (Figures 14 and 15) and archaeological visibility on the ground was poor. Where grass and invasive shrubs were present, the surface of ferricrete gravels was clearly visible (Figure 12). The gravels, of alluvial and colluvial terrace origin, consist of sub-rounded to sub-angular clasts of Table Mountain sandstone and quartzite, as well as silcrete and vein quartz. The sandstone has been heavily impregnated with iron and manganese. Excavated holes and heaps of gravel have been left on the northern side of the existing pit (Figure 13). There are no boundary fences delimiting the proposed extension. Access for the extension will be through an existing gate and farm track.

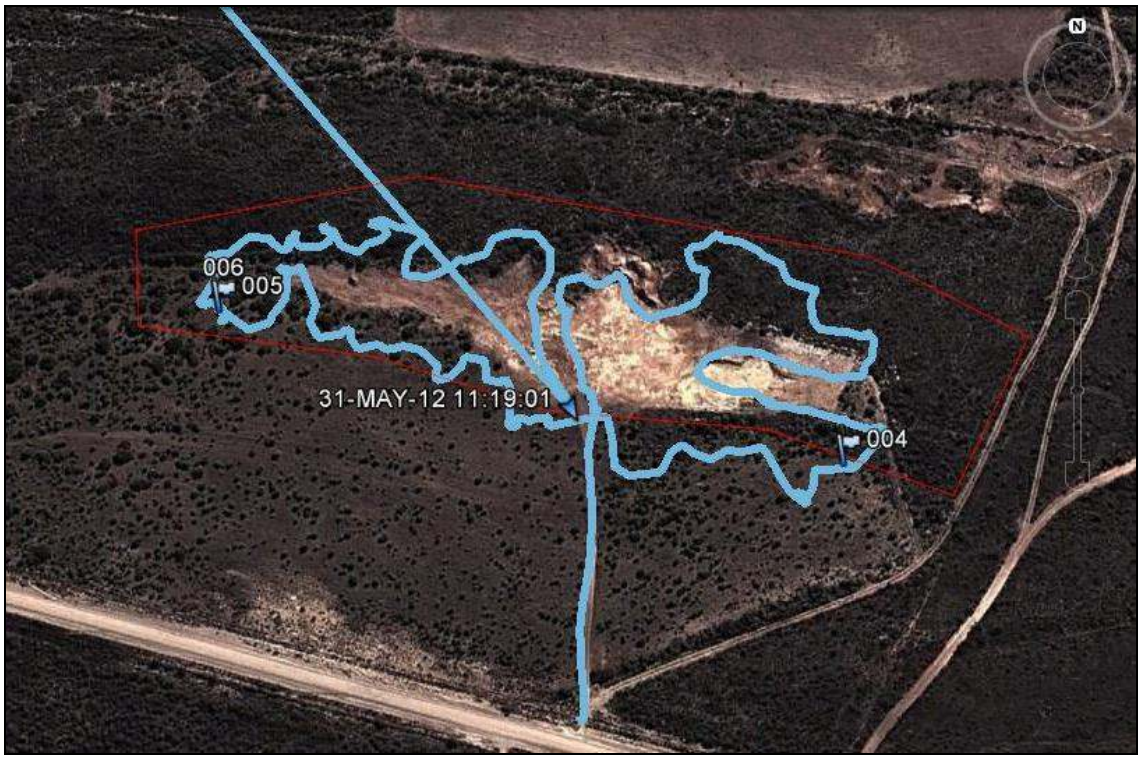
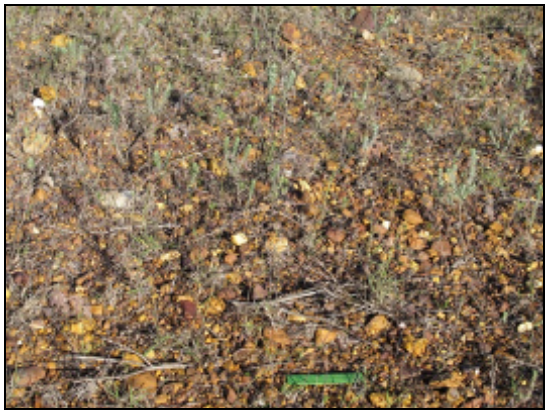


Figure 9: Google earth image showing the proposed extension to borrow pit 75, waypoints and tracks of the field survey.

Figure 10: View towards the east across the existing Pit 75. The area to the right of the pit, i.e. to the south, is covered by grass and *Acacia cyclops* shrubs whereas the area to the left (the north) and the east of the excavation is covered by dense coastal fynbos vegetation. The ferricrete gravels are evident.

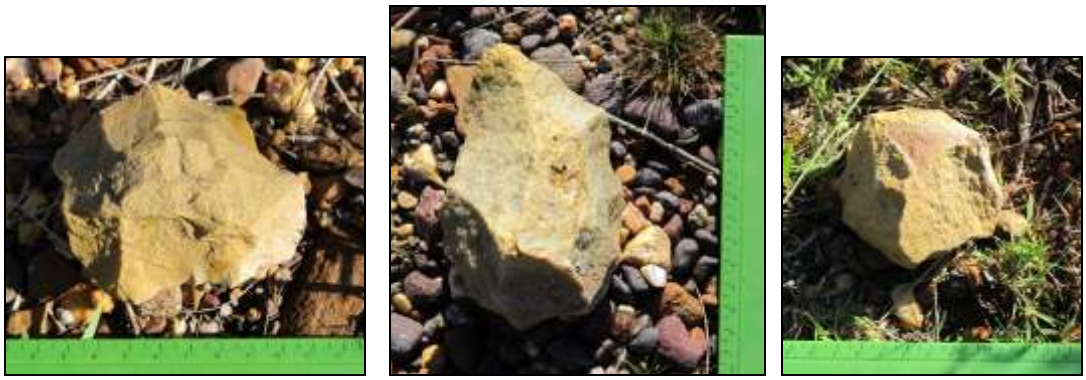


Figures 11 and 12: Pit 75 – looking towards the west in the southern area with its covering of grass and *Acacia cyclops*; detail of the ferricrete gravels. The ruler is about 15 cm in length.

Figures 13 and 14: Pit 75 – view towards the west of the excavated holes and heaps of gravel in the northern part; view towards the east of the dense coastal fynbos.

Results of the survey: During the survey, heaps of sandstone and quartzite blocks were observed amongst the fynbos bushes and shrubs in the northern part of the affected area (Figure 15). The blocks had obviously been removed from the disturbed area prior to ploughing in the past. The heaps were examined but no flaked blocks or artefacts were observed. The only artefacts found were an isolated quartzite core, chunk and flaked piece of indeterminate age which were found in the disturbed southern area (see Table 2 of the Appendix and Figures 16 to 18). Nothing was observed on the ground in the northern or eastern parts surveyed and it is not expected that the distribution of archaeological material would be any denser in the area not covered in the easternmost part of the site.

Figure 15: Pit 75 – one of the heaps of quartzite and sandstone blocks observed amongst coastal fynbos shrubs in the northern part of the affected area.



Figures 16 to 18: Pit 75 – the quartzite artefacts observed. The scale is in cm.

6. SIGNIFICANCE AND RECOMMENDATIONS

Only a few quartzite artefacts were found amongst the cobbles of the ploughed Tertiary alluvial gravels of proposed Pit 74. This was perhaps surprising given the availability of suitable raw material in the area and would thus indicate a generally low density of archaeological material in the immediate area. At the proposed Pit 75 extension only three artefacts were observed in a disturbed context. The sparse material at both sites was in a secondary context and are therefore of low archaeological heritage significance. No significant impact on such resources is expected if the proposed pit and extension of the existing borrow pit are developed. 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

Avery, G. 2007a. Development on the Falcon Ridge Private Wildlife Sanctuary (3420AD Wydgeleë) : Re-Alignment of Entry Road. Unpublished report prepared for Mr S. Lindberg. Iziko SA Museum.

Avery, G. 2007b. Archaeological, Palaeontological and Historical Assessment of The Drifters Adventure Camp on the Remaining Extent of Driefontein 58. Unpublished report prepared for Mr S. Lindberg. Iziko SA Museum.

Avery, G. & Avery, D.M. 2004. Survey for Archaeological Occurrences along Proposed New Eskom 66 kV Line between Bredasdorp and Struisbaai. Unpublished report prepared for SHE Cape Environmental (cc). Iziko SA Museum

Hart, T.J. 2005. Phase 1 Heritage Impact Assessment of Upgrading the Road from Gansbaai to Bredasdorp Western Cape Province. Unpublished report prepared for CCA Environmental. Archaeology Contracts Office.

Hart, T.J. 2006. Report on Sampling of a Prehistoric Silcrete Quarry at a Proposed Borrow Pit 55.3L Ptn 8 of Farm Zandvlakte No 250, Bredasdorp. Unpublished report prepared for HHO Africa Pty Ltd. Archaeology Contracts Office.

Kaplan, J. 2007. Archaeological Investigation Proposed Borrow Pit Development for the Regravelling of Trunk, Main and Divisional Road Sections in the Overberg District Western Cape. Unpublished report prepared for CCA Environmental (Pty) Ltd. Agency for Cultural Resource Management.

Nilssen, P.J. & Yates, R. 2007. Report of Phase 1 Archaeological Impact Assessments Proposed Borrow Pits for Roads in the Still Bay and Vermaaklikheid Environs, Hessequa Municipality, Western Cape Province. An unpublished report prepared for Site Plan Consulting. CARM.

8. ACKNOWLEDGEMENTS

Ms Quahnita Samie of Vidamemoria Heritage Consultants is thanked for commissioning this study and providing background information. Dr John Almond, Natura Viva cc, made helpful comments on the draft. Mr Jonathan Kaplan, Agency for Cultural Resource Management, kindly provided a copy of his report. Dr Karen van Niekerk, AHKR Institutt, Bergen, is thanked for her response to my query about the survey undertaken by Chris Henshilwood's team at the De Hoop Nature Reserve. Dr M Galimberti (SAHRA) kindly provided copies of some relevant reports'

9. APPENDIX

The waypoints below do not indicate sites but only occurrences of single artefacts or a small group of artefacts found in close proximity to each other.

Table 1: Pit 74 waypoints

Waypoint	South	East	Description of material found
002	S34 19 42.2	E20 35 16.2	Flaked quartzite cobble
003	S34 19 38.8	E20 35 17.7	Probably not artefactual
007	S34 19 36.9	E20 35 18.1	Possible ESA artefact, quartzite
008	S34 19 36.5	E20 35 17.5	Quartzite core & two flaked cobbles

Table 2: Pit 75 waypoints

Waypoint	South	East	Description of material found
004	S34 21 57.6	E20 37 50.4	Quartzite core
005	S34 21 55.1	E20 37 38.2	Quartzite chunk
006	S34 21 55.1	E20 37 38.2	Flaked quartzite piece