

*Approved from HWC  
January 2007*

**PHASE 1 ARCHAEOLOGICAL IMPACT ASSESSMENT  
PORTION OF PORTION 19 OF THE FARM WITTEKLIP NO. 123  
VREDENBURG**

Prepared for

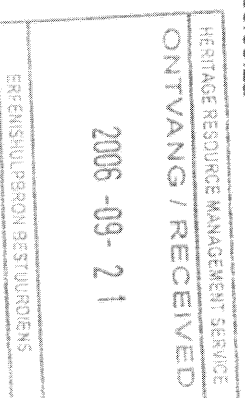
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### Executive summary

A Phase 1 Archaeological Impact Assessment of a Portion of Portion 19 of the Farm Witteklip No. 123 in Vredenburg has identified no significant impacts to pre-colonial archaeological material that will need to be mitigated prior to proposed development activities.

Apart from one quartz chunk and one quartz flake, no archaeological heritage remains were located during the baseline study.

The specialist archaeological impact assessment of a Portion of Portion 19 of the Farm Witteklip No. 123 in Vredenburg has rated the potential impacts to archaeological material as being low provided that:

- A professional palaeontologist is appointed to assess the possible palaeontological significance of fossiliferous material on the property if underlying limestone deposits are intercepted during earth-moving operations.
- Should any unmarked human remains be disturbed, exposed or uncovered during earthworks, these should immediately be reported to the South African Heritage Resources Agency (Mrs Mary Leslie 462 4502), or Heritage Western Cape (Dr. A. Jerardino 483 9687).

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## 1. INTRODUCTION

### 1.1 Background and brief

BVZ Professional Planning Consultants, on behalf of Silver Crow Properties 22, requested that the Agency for Cultural Resource Management conduct a Phase 1 Archaeological Impact Assessment (AIA) for a proposed housing development on a Portion of Portion 19 of the Farm Witteklip No. 123 in Vredenburg on the Cape West Coast.

The proposed rezoning and subdivision of the affected property is for the purpose of a residential housing development consisting of 292 single residential and group housing units, including public open space, ~~internal streets and services~~. The property is currently zoned Agricultural.

The extent of the proposed development (nearly 27 ha) falls within the requirements for an archaeological impact assessment as required by Section 38 of the South African Heritage Resources Act (No. 25 of 1999).

The aim of the study is to locate and map archaeological heritage sites/remains that may be negatively impacted by the planning, construction and implementation of the proposed project, to assess the significance of the potential impacts and to propose measures to mitigate against the impacts.

Heritage Consultant Mr Chris Snelling has submitted a NID (Notification of Intent to Develop) checklist to Heritage Western Cape Built Environment and Landscape Committee (BELCOM). The BELCOM Record of Decision dated 10-08-2006 recommended that an archaeological impact assessment be done, and submitted to Heritage Western Cape for comment.

## 2. TERMS OF REFERENCE

The terms of reference for the archaeological study were:

- to determine whether there are likely to be any archaeological sites of significance within the proposed site;
- to identify and map any sites of archaeological significance within the proposed site;
- to assess the sensitivity and conservation significance of archaeological sites within the proposed site;
- to assess the status and significance of any impacts resulting from the proposed development, and
- to identify mitigatory measures to protect and maintain any valuable archaeological sites that may exist within the proposed site

22 ha

NID

### 3. THE STUDY SITE

A locality map is illustrated in Figure 1.

An aerial photograph of the proposed site is illustrated in Figure 2.

The subject property is located south west of the town of Vredenburg. Access to the site is via Welgemoed Street. The proposed site slopes gently to the north west and comprises terraced agricultural lands that are currently planted with Canola (Figures 3-9). Other than two small, flat granite domes in the south western portion of the property, there are no significant landscape features on the site. The Bok River is located alongside the south western boundary of the property (i.e. on the remainder of Portion 19 of the Farm 123). The proposed site is severely degraded and disturbed having been farmed for many years. Surrounding land use comprises rapidly increasing residential development to the north and east, and rural farmland to the south and west.

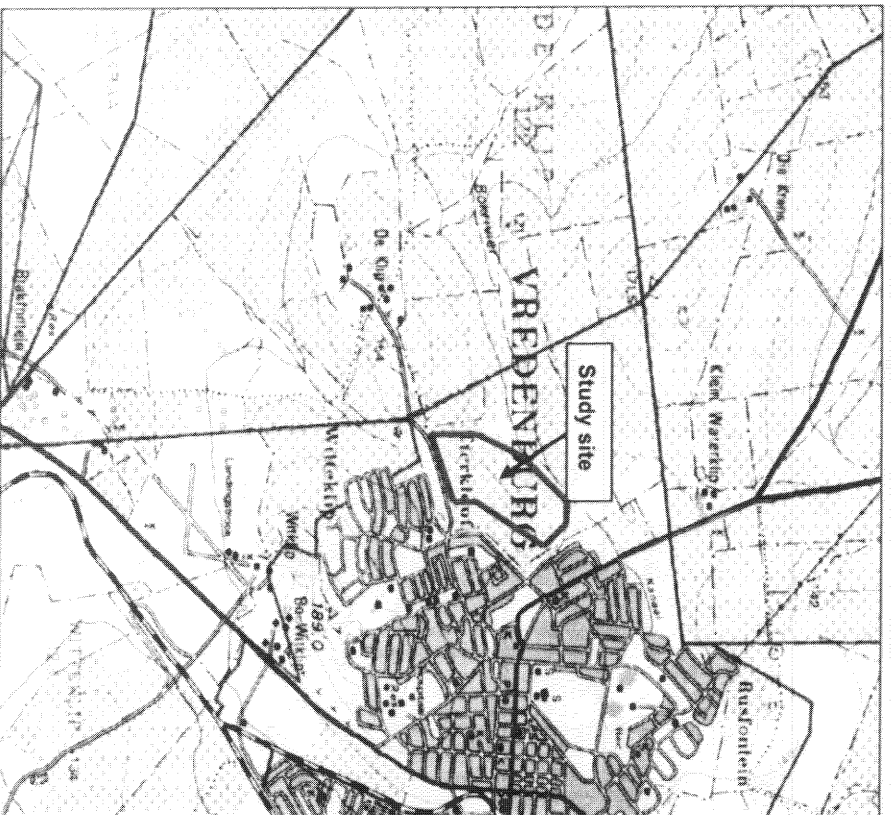


Figure 1. Locality Map (3217 DB & DD Vredenburg)

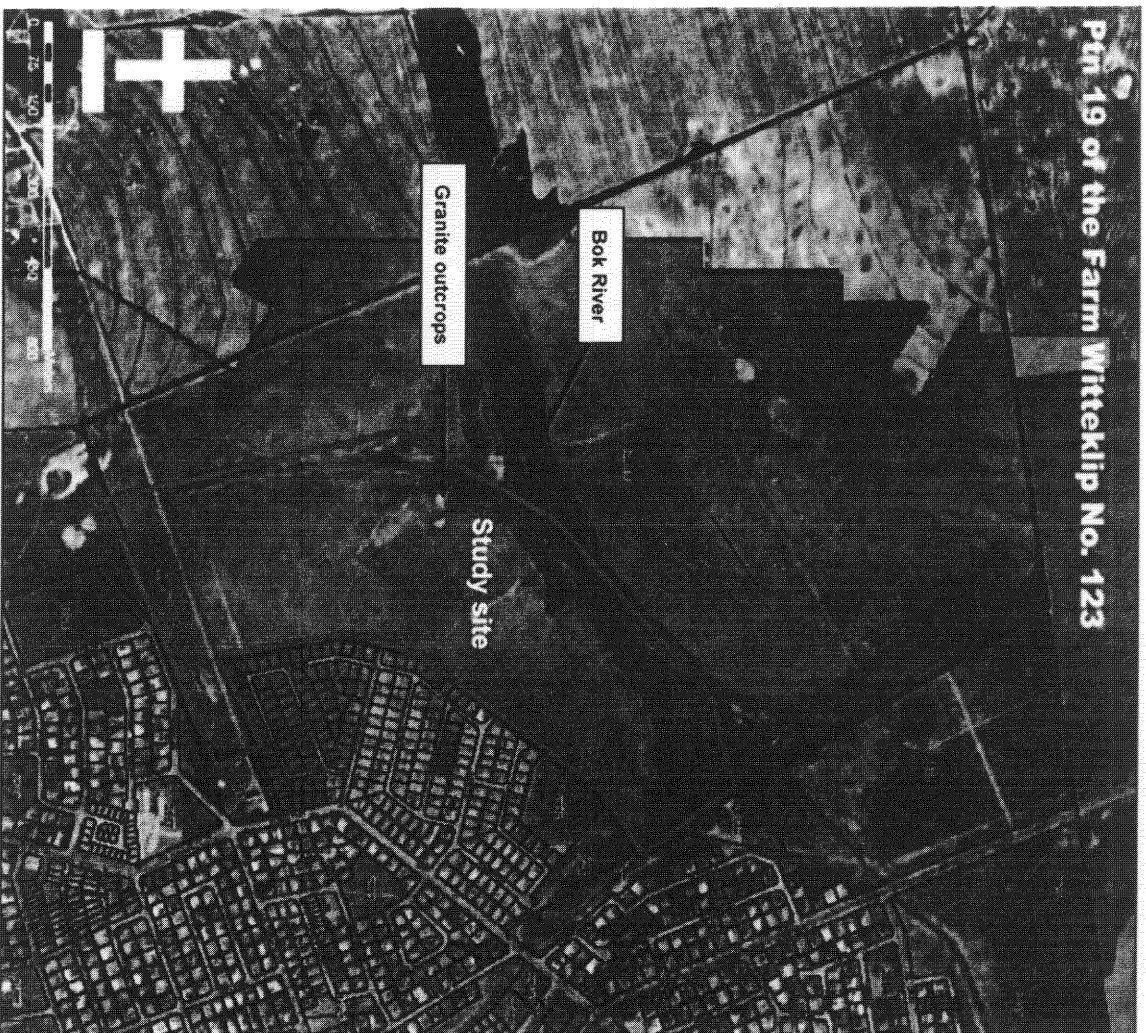
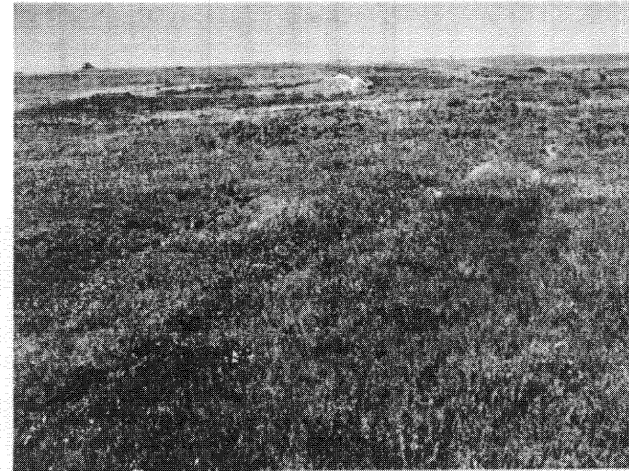


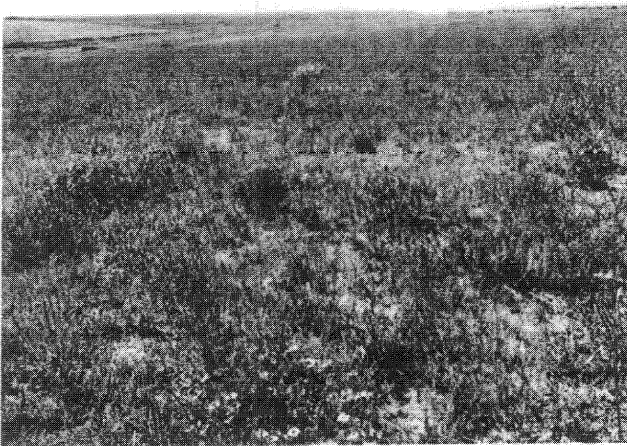
Figure 2. Aerial photograph of the proposed site



**Figure 3. View of the site facing north**



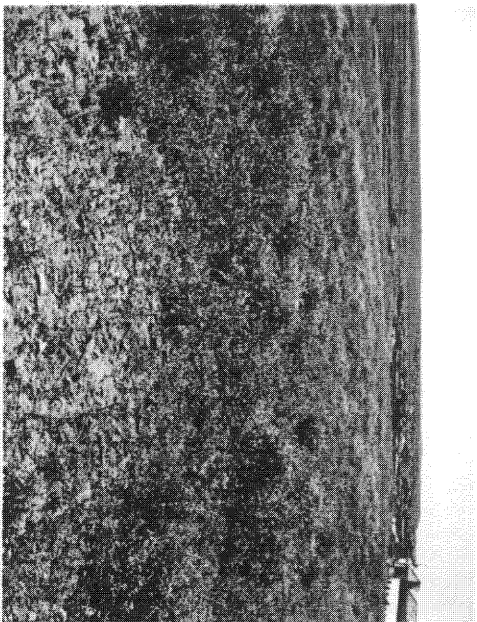
**Figure 5. View of the site facing north east**



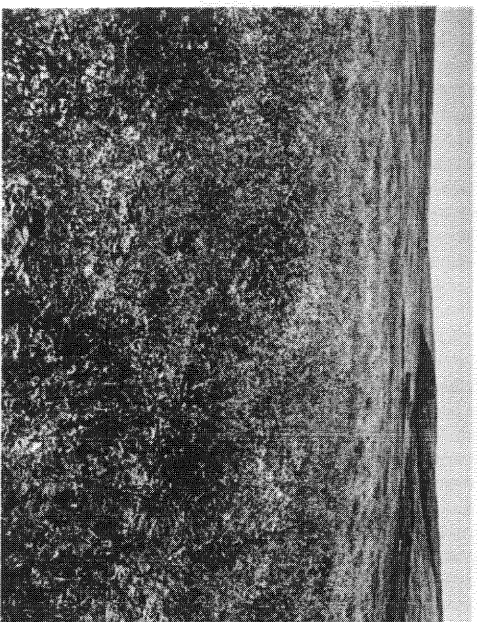
**Figure 4. View of the site facing north west**



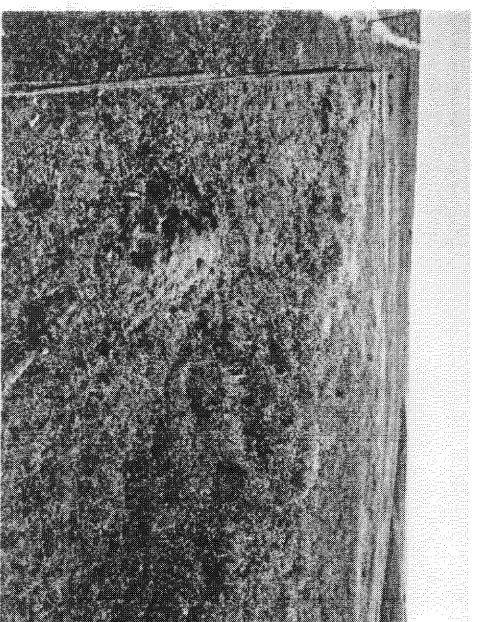
**Figure 6. View of the site facing north.**



**Figure 7. View of the site facing north**



**Figure 8. View of the site facing south west**



**Figure 9. View of the site facing south west**



## 4. STUDY APPROACH

### 4.1 Method

The approach followed in the archaeological study entailed a foot survey of the proposed site.

The site visit and assessment took place on the 30<sup>th</sup> August, 2006.

A desktop study was also undertaken.

### 4.2 Constraints and limitations

The subject property is covered with Canola, resulting in poor archaeological visibility.

### 4.3 Identification of potential risks

Unmarked human burials may be uncovered or exposed during earthworks and excavations.

Vertebrate fossils may possibly be uncovered or exposed during earthworks and excavations.

### 4.4 Results of the desk top study

The Saldanha Bay/Vredenburg region is exceptionally rich in archaeological sites (Kaplan 1993). Its richness is determined largely by its unique rocky shoreline formation which was favoured by both Later Stone Age (LSA) hunter-gatherers and Khoi herders in the past, as it offered greater opportunities for the exploitation of marine foods, while the local shales and granites provided vital nutrients for domestic stock.

Research focusing on the Khoekhoe herder economy around 2000 years ago in the Vredenburg Peninsula has, significantly, identified large numbers of sites up to several kilometres from the shoreline (Sadr *et al* 1992). Many of these sites, comprising substantial shellfish deposits with pottery and stone tools, are centered round the numerous large granite outcroppings that are ubiquitous in the Vredenburg, Paternoster and the St. Helena Bay area.

It is important to note that several such sites have been identified on the Farm Witklip 123. The Witklip LSA site is located about 450m north east of the subject property, below the water tower in Vredenburg. The site has been dated to about 3000 BP (Smith *et al* 1991). The site is surrounded by rapidly increasing residential development, and has already been seriously impacted on by human activity.

More recently, substantial numbers of LSA tools and some pottery was documented on a Portion of Portion 7 of the Farm Witteklip 123 (Kaplan 2005). And well-preserved archaeological deposits were recorded in the lee of a small granite boulder during the course of a survey of a proposed housing development on Erf 8995<sup>1</sup> (part of the Witteklip Farm). Relatively large numbers of LSA stone tools and pottery were also documented on the talus in front of the round boulder.

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<sup>1</sup> The development application proposal was withdrawn, and the relevant archaeological impact report was therefore not submitted to Heritage Western Cape.

It is also well established that vertebrate fossils and archaeological occurrences in the Langebaan Limestone (calcrete) formations and associated deposits in the Saldanha Bay/Vredenburg area, are extremely valuable sources of information on the sedimentary, chronological, palaeoenvironmental and palaeoecological context of the development of modern human behaviour during the Middle Stone Age (MSA) and perhaps even the Early Stone Age (ESA) (Avery 1997).

Middle Pleistocene occurrences and the recovery of human remains in the limestone deposits at Sea Harvest, in Saldanha Bay, for example, has provided some of the earliest evidence we have in the world for the human exploitation of coastal resources, more than 100 000 years ago (Grine & Klein 1993; Volman 1978). Beside evidence of well preserved bone, ostrich eggshell, ochre and MSA stone implements, the Hoedjiespunt limestone sediments in Saldanha Bay also contains evidence of early modern human about 125 000 years ago (Berger & Parkington 1995).

With regard to even more ancient fossil sites, earthworks at the Saldanha Steel Project exposed rare and previously unknown crocoidilian and other fossil remains from the Miocene Period, from deposits underlying calcareous formations during excavations for descaling pits (Roberts 1997a).

Several fossil hyena lairs have also provided glimpses of past Pleistocene (1.6 million – 200 000 years) faunas, including herbivores and carnivores, at Hoedjiespunt and Sea Harvest (Roberts 1997a).

An EIA for the proposed Alpha Saldanha Cement Project in Saldanha Bay revealed the presence of an unusual Mid-Miocene (~ 11-12 million years) fauna, including the shell of a giant extinct ostrich like bird (Kaplan 1999; Roberts 1997b).

The reasons for the abundance of fossil archaeological and palaeontological remains in the Saldanha – Vredenburg area is in part related to the highly calcareous <sup>content?</sup> character of the aeolianites (fossil dunes) and shallow marine sediments. Bones and implements are readily preserved by the rapid carbonate cementation of the strata in which they become entombed.

## 5. LEGISLATIVE REQUIREMENTS

The following section provides a brief overview of the relevant legislation with regard to the archaeology of a Portion of Portion 19 of the Farm Witteklip No. 123.

### 5.1 The National Heritage Resources Act (Act No. 25 of 1999)

The National Heritage Resources (NHR) Act requires that "...any development or other activity which will change the character of a site exceeding 5 000m<sup>2</sup>, or the rezoning or change of land use of a site exceeding 10 000 m<sup>2</sup>, requires an archaeological impact assessment"

The relevant sections of the Act are briefly outlined below.

### 5.2 Archaeology (Section 35 (4))

Section 35 (4) of the NHR stipulates that no person may, without a permit issued by HWC, destroy, damage, excavate, alter or remove from its original position, or collect, any archaeological material or object.

### **5.3 Burial grounds and graves (Section 36 (3))**

Section 36 (3) of the HHR stipulates that no person may, without a permit issued by the South African Heritage Resources Agency (SAHRA), destroy, damage, alter, exhume or remove from its original position or otherwise disturb any grave or burial ground older than 60 years, which is situated outside a formal cemetery administered by a local authority.

### **6. FINDINGS**

Other than one quartz chunk and one quartz flake, found in a gravel road alongside the boundary fence in the southern portion of the property, no coherent archaeological sites or remains were located during the baseline study.

### **7. IMPACT STATEMENT**

The impact of the proposed development on pre-colonial archaeological heritage remains is likely to be low.

The probability of locating significant pre-colonial archaeological heritage remains during implementation (i.e. the Construction Phase) of the proposed project is likely to be improbable.

Unmarked human burials may, however, be uncovered or exposed during earthworks and excavations.

Vertebrate fossils may, possibly, be exposed in underlying limestone deposits, during bulk excavations and civil works.

### **8. RECOMMENDATIONS**

The specialist archaeological impact assessment of a Portion of Portion 19 of the Farm Witteklip No. 123 in Vredenburg has rated the potential impacts to archaeological material as being low provided that:

- A professional palaeontologist is appointed to assess the possible palaeontological significance of the fossiliferous material on the property if underlying limestone deposits are intercepted during earth-moving operations.
- Should any unmarked human remains be disturbed, exposed or uncovered during earthworks, these should immediately be reported to the South African Heritage Resources Agency (Mrs Mary Leslie 462 4502), or Heritage Western Cape (Dr. A. Jeraldino 483 9687).

## 9. REFERENCES

- Avery, G. 1997. Alpha Saldanha Cement Project: archaeological potential of limestone and other calcareous deposits. Report prepared for Mark Wood Consultants.
- Berger, L.R., & Parkinson, J.E. 1995. A new Pleistocene hominid-bearing locality at Hoedjiespunt, South Africa. *American Journal of Physical Anthropology* 98:601-609.
- Grine, F.E., & Klein, R.G. 1993. Late Pleistocene human remains from the Sea Harvest site, Saldanha Bay, South Africa. *South African Journal of Science* 88:145-152.
- Kaplan, J. 1993. The state of archaeological information in the coastal zone from the Orange River to Ponta do Ouro. Report prepared for the Department of Environmental Affairs and Tourism. Agency for Cultural Resource Management.
- Kaplan, J. 2005. Phase 1 Archaeological Impact Assessment Portion of Portion 7 of the Farm Witteklip 123 Vredenburg. Report prepared for Chand Environmental Consultants. Agency for Cultural Resource Management.
- Roberts, D.L. 1997a. Fossil occurrence at the Saldanha Steel site. Report prepared for Saldanha Steel Project (Pty) Ltd. Pretoria. Council for Geoscience Geological Survey.
- Roberts, D.L. 1997b. Palaeontological impact assessment Alpha Saldanha Cement Project. Report prepared for Mark Wood Consultants. Pretoria: Council for Geoscience Geological Survey.
- Sadr, K., Gribble, J. & Euston-Brown, G. 1992. The Vredenburg Peninsula survey, 1991/92. In Smith, A.B. & Muti, B (eds) *Guide to archaeological sites in the south western Cape*. Department of Archaeology, University of Cape Town.
- Smith, A.B., Sadr, K., Gribble, J. & Yates, R. 1991. Excavations in the southwestern Cape, South Africa, and the archaeological identity of prehistoric hunter-gatherers within the last 2000 years. *South African Archaeological Bulletin* 46:71-91.
- Volman, T.P. 1978. Early archaeological evidence for shellfish collecting. *Science* 201:911-913.

## 8. RECOMMENDATIONS

With regard to proposed sand mining operations on the Farm No. 1122 Bordeaux, situated in the Malmesbury District, the following recommendations are made

- Monitoring of sand mining operations is required in case Early Stone Age tools are exposed on underlying ferruginous gravels and clay. → *How frequent?*
- Should any human remains be disturbed, exposed or uncovered during excavations, and earthworks for the proposed project, these should immediately be reported to the South African Heritage Resources Agency (Mrs Mary Leslie 462 4502), or Heritage Western Cape (Dr A. Jerardino 483 9692). Burial remains should not be disturbed or removed until inspected by the archaeologist.

*- No objections*

## 9. REFERENCES

- Halkett, D. 2006. EIA for a new regional landfill site to service the City of Cape Town. Archaeological and cultural heritage specialist study. Report prepared for CCA Environmental. Archaeology Contracts Office, University of Cape Town
- Kaplan, J. 2006a. Phase 1 Archaeological Impact Assessment proposed sand mining on a part of the Farm Olyvenhoek 818, Remainder Malmesbury Western Cape Province. Report prepared for Amathemba Environmental Management Consulting cc. Agency for Cultural Resource Management
- Kaplan, J. 2006b. Phase 1 Archaeological Impact Assessment proposed Glen Lossie Quarry, Malmesbury. Report prepared for Corobrik. Agency for Cultural Resource Management