

**APPENDIX 3**

9/2/101/0014

**PHASE 1 ARCHAEOLOGICAL IMPACT ASSESSMENT  
PORTION 11 OF FARM KLIPRUG 282  
SALDANHA BAY**

Prepared for

**WITHERS ENVIRONMENTAL CONSULTANTS**

By

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## Executive summary

Withers Environmental Consultants requested that the Agency for Cultural Resource Management undertake a Phase 1 Archaeological Impact Assessment of Portion 11 of the Farm Kliprug No. 282, Saldanha Bay on the Cape West Coast.

The proposed rezoning and subdivision of the affected property is for the purpose of a residential housing development.

The extent of the proposed development (some 20 ha of a 76 ha property) 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 site visit and assessment took place on the 17<sup>th</sup> and 18<sup>th</sup> February 2005.

The aim of the study is to locate and map archaeological heritage 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.

Currently, the affected property is vacant, but has been extensively farmed in the past.

The original Kliprug farmhouse occurs on a portion of the property, and will be retained and lived in by the current owner.

Stone Age tools were located during the baseline study, but are very thinly dispersed over the surrounding landscape. Most of the archaeological remains occur on the higher east-facing slopes of the property, in old agricultural lands, in a very disturbed and degraded context.

A very small scatter of shellfish remains and one tiny piece of ostrich eggshell was located among a prominent outcropping of granite on the southern slopes of the property.

The Phase 1 Archaeological Impact Assessment has, however, identified no significant impacts to pre-colonial archaeological material that will need to be mitigated prior to development activities.

The specialist Phase 1 Archaeological Impact Assessment of Portion 11 of the Farm Kliprug No. 282, Saldanha Bay, has rated the potential impacts to archaeological material as being low.

Pleistocene archaeological and fossil remains may, however, be uncovered or exposed during earthworks and excavations in underlying calcrete and limestone deposits on the hill-washed upper slopes of the property. It is well established that vertebrate fossils and archaeological occurrences occur in the Langebaan Limestone (calcrete) formations and associated deposits in the Saldanha Bay area.

Human remains may also be uncovered or exposed during excavations and earthworks.

With regard to the proposed development of Portion 11 of the Farm Kliprug No. 282, Saldanha Bay, the following recommendations are made:

- A professional palaeontologist must be appointed to assess the possible palaeontological significance of the fossiliferous material on the property if underlying calcrete deposits are intercepted during earth-moving operations.
- Should any human remains be disturbed, exposed or uncovered during earthworks, these should immediately be reported to the South African Heritage Resources Agency (Mrs Mary Leslie @ 021 462 4502).

## **1. INTRODUCTION**

### **1.1 Background and brief**

Withers Environmental Consultants requested the Agency for Cultural Resource Management to undertake a Phase 1 Archaeological Impact Assessment (AIA) of Portion 11 of the Farm Kliprug No. 282, Saldanha Bay on the Cape West Coast.

The extent of the proposed development (some 20 ha of the 76 ha property) 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 site visit and assessment took place on the 17<sup>th</sup> and 18<sup>th</sup> February 2005.

The proposed rezoning and subdivision of the affected property is for the purpose of a Group Housing and Single Residential Housing development.

Alternative development proposal includes the residential component and 14 smallholdings.

The aim of the study is to locate, identify and map archaeological remains that may be negatively impacted by the planning, construction and implementation of the proposed project, and to propose measures to mitigate against the impact.

## **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

## **3. THE STUDY SITE**

A site locality map is illustrated in Figure 1.

A site development plan is illustrated in Figure 2.

The large, vacant property is located on the lower slopes of Prospect Hill, in Saldanha Bay, on the Cape West Coast (Figures 3-7) Access to the site is from the main road between Saldanha Bay and Vredenburg.

The site comprises old, agricultural lands, which have been extensively terraced and worked. A prominent outcropping of granite occurs just below the 75m contour height in the southern portion of the property. A few small outcroppings of granite boulders occur above the 75 m contour height in the northwestern portion of the property.

The original Kliprug farmhouse, which has been significantly altered, occurs on Portion 11 of the property, and will be retained and lived in by the current owner (Figures 8 & 9). A large storage shed, modern prefabricated, timber, and corrugated iron buildings and farm-related structures are located within the immediate farmhouse precinct.

#### 4. APPROACH TO THE STUDY

##### 4.1 Method of survey

The approach followed in the archaeological study entailed a baseline survey of Portion 11 of the Farm Kliprug No. 282.

Particular attention was paid to searching the area around the prominent granite outcropping in the southern portion of the property. Such outcroppings are known locations for precolonial herder sites (Sadr *et al* 1992).

The more visible archaeological occurrences were recorded and given a co-ordinate using a Garmin Gecko GPS set on map datum WGS 84.

A desktop study was also undertaken.

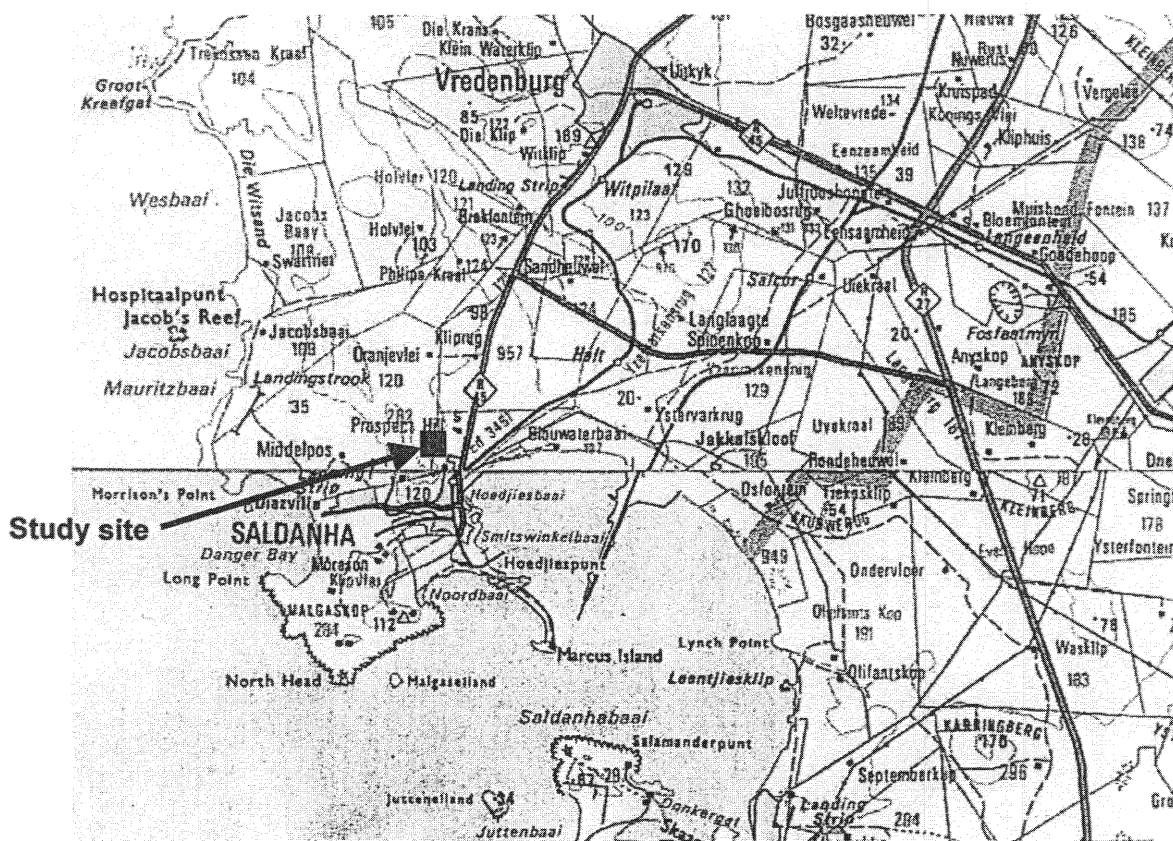
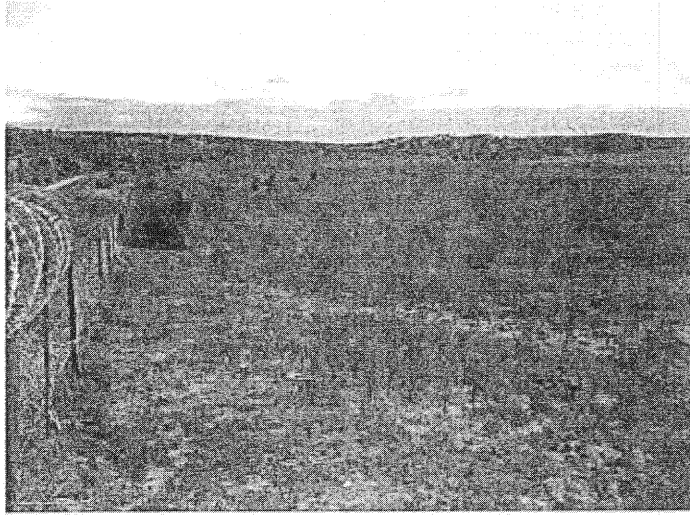
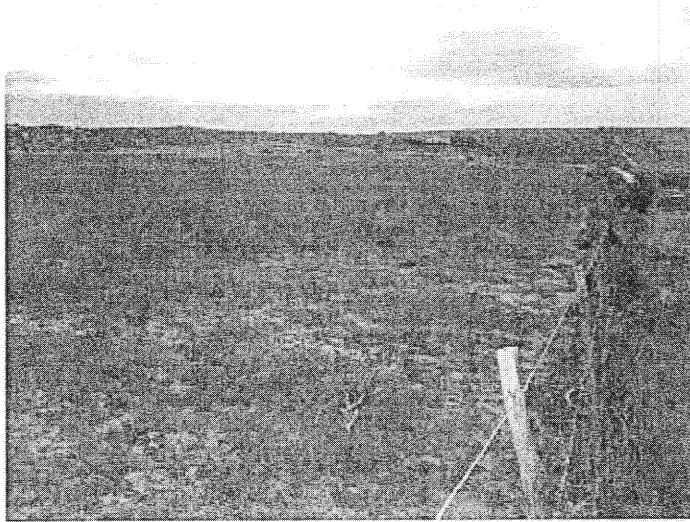


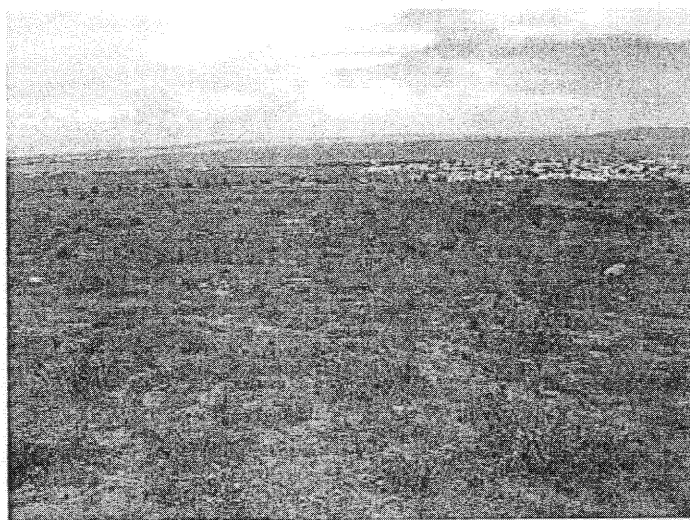
Figure 1. Site locality map (1:50 000 map Ref. No. 3317 BB & 3318 AA Saldanha).



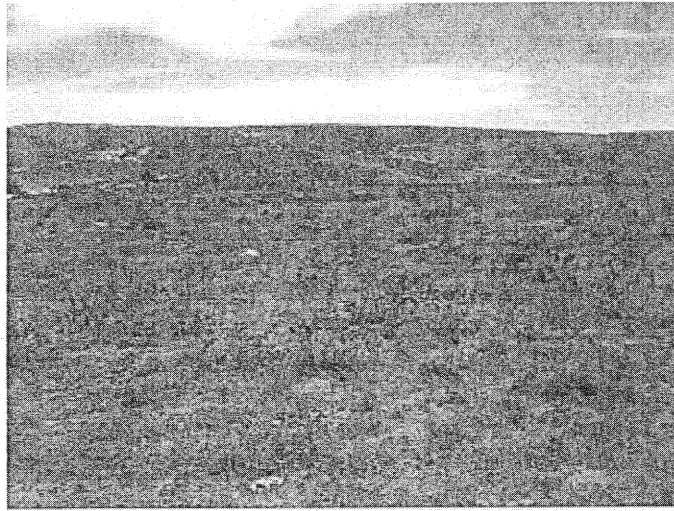
**Figure 3.** The site facing west. Note the prominent granite outcropping in the background of the plate.



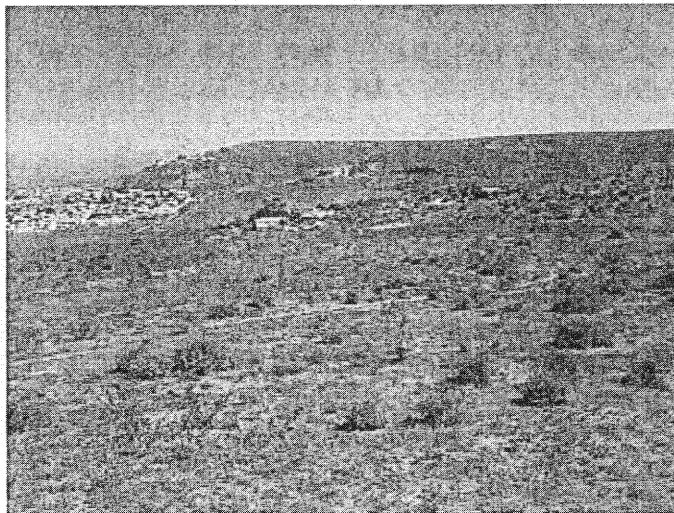
**Figure 4.** The site facing north.



**Figure 5.** The site facing southeast with Saldanha Bay in the background.



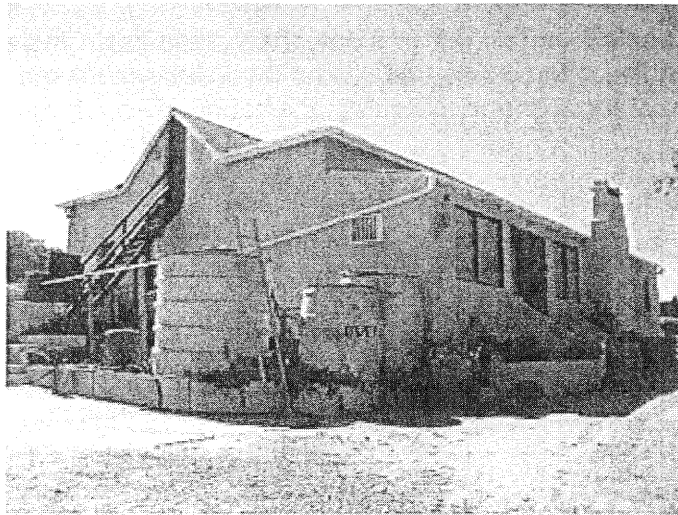
**Figure 6.** The site facing south.



**Figure 7.** The site facing south. The Kliprug homestead is in the middle of the plate.



**Figure 8.** The Kliprug farmhouse.



**Figure 9.** The Kliprug farmhouse.

## **5. A BRIEF OVERVIEW OF THE ARCHAEOLOGICAL AND FOSSIL SIGNIFICANCE OF THE SALDANHA BAY/VREDENBURG PENINSULA**

The Environmental Scoping Report highlights the archaeological and palaeontological significance of the Saldanha Bay region (Withers 2005).

The Saldanha Bay/Vredenburg Peninsula is exceptionally rich in archaeological sites (Kaplan 1993; Sadr *et al* 1992). Its richness is determined largely by its unique rocky shoreline formation which was favoured by both Later Stone Age<sup>1</sup> (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.

It is also well established that vertebrate fossils and archaeological occurrences in the Langebaan Limestone (calcrete) formations and associated deposits in the Saldanha Bay 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<sup>2</sup> (MSA) and perhaps even the Early Stone Age<sup>3</sup> (ESA) (Avery 1997).

Middle Pleistocene occurrences and the recovery of human remains in the Langebaan Limestone deposit at Sea Harvest, in Saldanha Bay, has also 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).

<sup>1</sup> A term referring to the last 20 000 years of precolonial history in southern Africa.

<sup>2</sup> A term referring to the period between 200 000 and 20 000 years ago.

<sup>3</sup> A term referring to the period between 2 million and 200 000 years ago.



With regard to ancient fossil sites, earthworks at the nearby Saldanha Steel factory exposed rare and previously unknown crocodylian 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 in Saldanha Bay (Roberts 1997a).

An EIA for the proposed Alpha Saldanha Cement Project in Saldanha Bay, located immediately west of the study area, on the adjacent Prospect Hill property, revealed the presence of an unusual Mid-Miocene (~ 11-12 million years) fauna, including the shell of a giant extinct ostrich like bird (Kaplan 1997; Roberts 1997b).

The reasons for the abundance of fossil archaeological and palaeontological remains in the Saldanha - Langebaan area is in part related to the highly calcareous 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.

## **6. LEGISLATIVE REQUIREMENTS**

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

#### **6.1.1 Structures (Section 34 (1))**

No person may alter or demolish any structure or part of a structure which is older than 60 years without a permit issued by the South African Heritage Resources Agency (SAHRA), or Heritage Western Cape.

#### **6.1.2 Archaeology (Section 35 (4))**

No person may, without a permit issued by the SAHRA or Heritage Western Cape, destroy, damage, excavate, alter or remove from its original position, or collect, any archaeological material or object.

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

No person may, without a permit issued by SAHRA or Heritage Western Cape, 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.

## **7. IMPACT ASSESSMENT AND DESCRIPTION**

About 20 Early Stone Age tools and a handful of Middle Stone Age and Later Stone Age artefacts were located during the baseline study of the 76 ha property.

GPS co-ordinates for some of the more visible occurrences are indicated in Table 1. The contents of these scatters are similar, consisting exclusively of a few artefact scatters dispersed in the surrounding landscape.

**Table 1.** Location of occurrences of archaeological material.

DEGREES SOUTH	DEGREES EAST	CULTURAL AFFINITIES
32° 59 621	17° 56 243	ESA
32° 59 651	17° 56 165	LSA
32° 59 568	17° 56 111	ESA
32° 59 446	17° 56 446	ESA, MSA, LSA
33° 59 278	17° 55 960	ESA

All the stone tools were located in heavily ploughed and terraced old agricultural lands and fields, in both unconsolidated sandy soils on the lower slopes of the affected property, and among clay and calcareous (hill-washed) deposits on the middle and upper slopes of the property.

A collection of some of the stone tools located during the study, are illustrated in Figures 10, 12, 14 and 16. The tools belong to both single and multiple occurrences. These include mainly large ESA edge-stuck flakes, one or two smaller round cores, a few chunks and some split/flaked cobbles. One rough handaxe was also found (see Figure 16).

In addition, a few MSA and LSA flakes were also located during the study.

where? GPS fix

Figures 11, 13, 15 and 17 indicate the actual disturbed context in which the stone artefacts were found.

The ESA and MSA artefacts are made on both rough quartzites and finer-grained quartzitic feldspars. The quartzite's and finer-grained feldspars occur locally in the surrounding landscape (Aubrey Withers pers. comm.).

The LSA tools are made on both rough quartzite and fine-grained limestone/calcrete.

Overall significance of finds: **LOW**

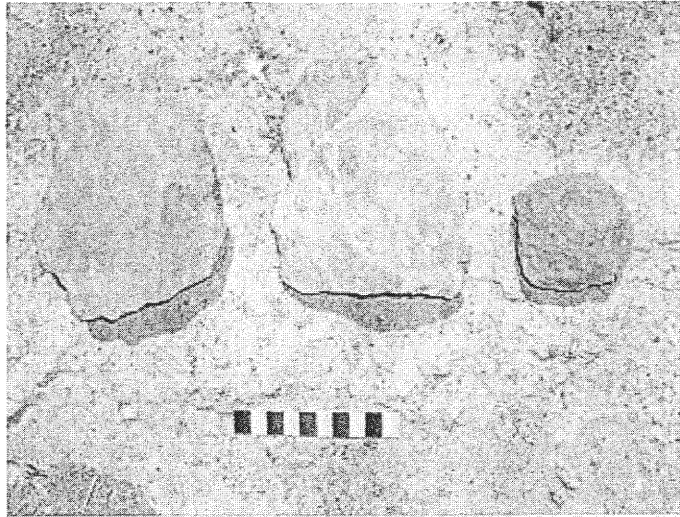
Suggested mitigation: **NONE REQUIRED**

A very thin scatter of fragments of shellfish (genus limpet) and one tiny piece of ostrich eggshell were located among the prominent ridge of granite in the southern portion of the property, just below the 75m contour height. The ridge was searched in detail, but only one limestone stone flake was found. No pottery was located. The area is bit degraded with some dumping of farm-related items occurring.

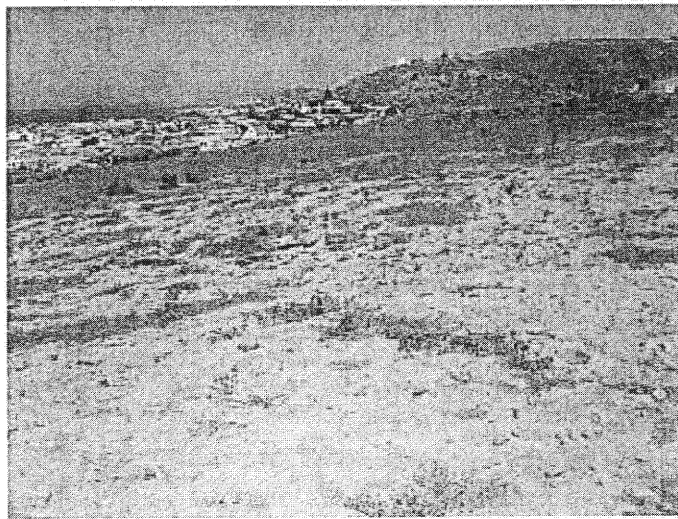
GPS fix?

Significance of finds: **LOW**

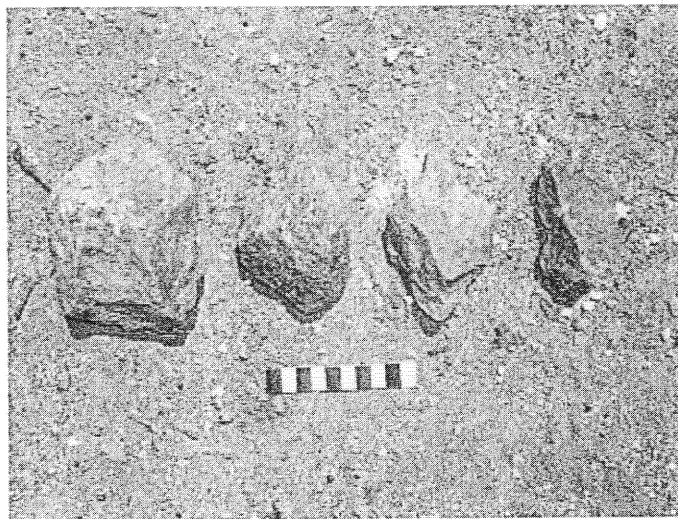
Suggested mitigation: **NONE REQUIRED**



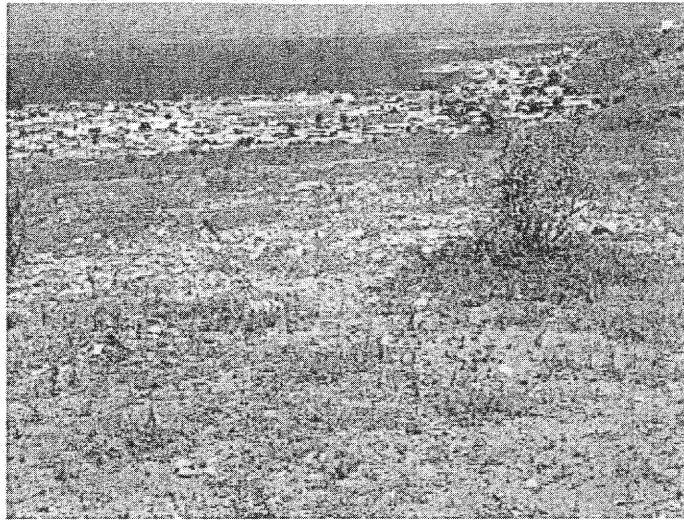
**Figure 10.** Collection of ESA tools. Scale is in cm.



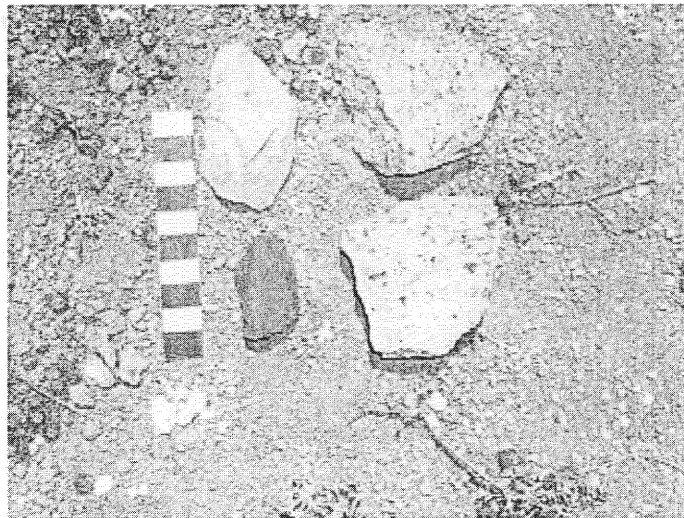
**Figure 11.** Actual disturbed context in which the stone tools were found.



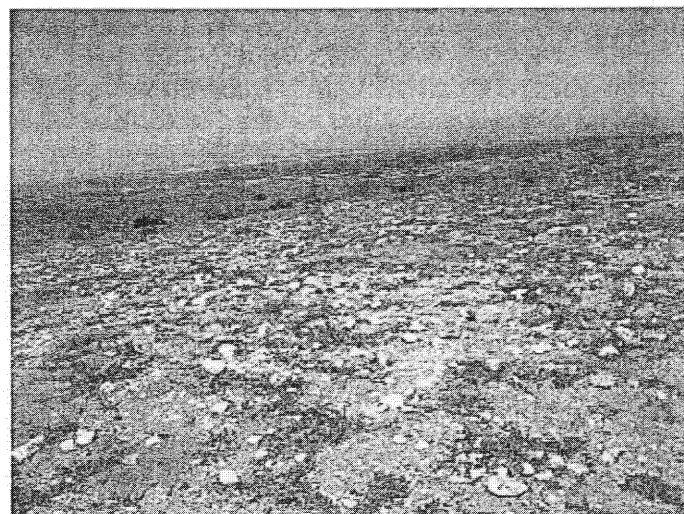
**Figure 12.** Collection of ESA tools. Scale is in cm.



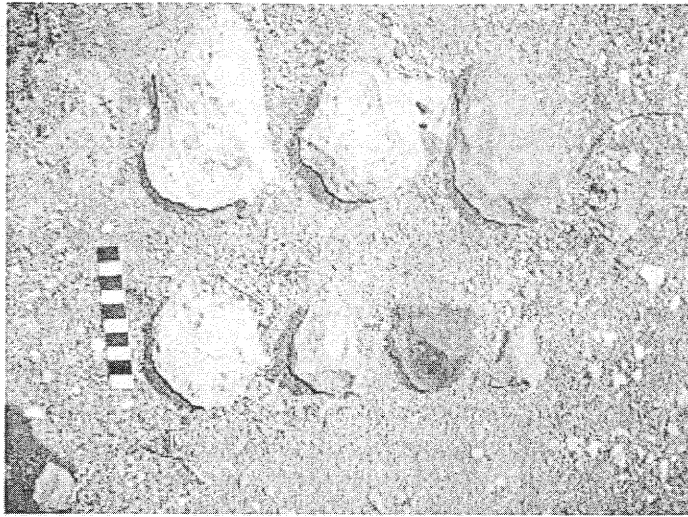
**Figure 13.** Actual disturbed context in which the stone tools were found.



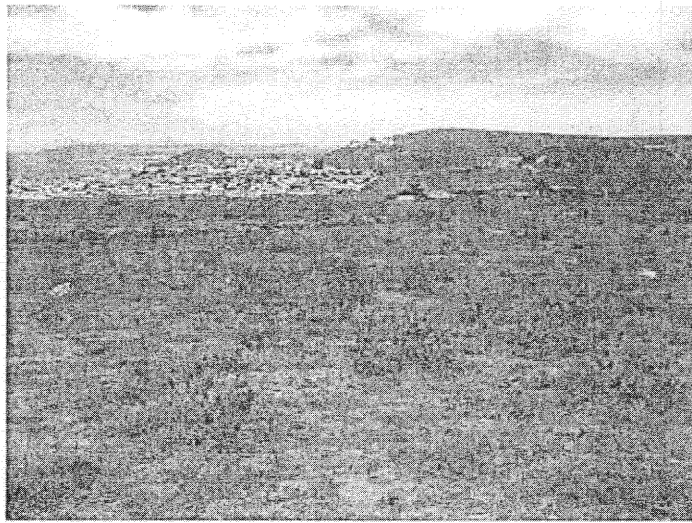
**Figure 14.** Collection of tools. Scale is in cm.



**Figure 15.** Actual disturbed context in which the stone tools were found.



**Figure 16.** Collection of tools. Scale is in cm



**Figure 17.** Actual disturbed context in which the stone tools were found.

## **8. IMPACT STATEMENT**

The impact of the proposed development of Portion 11 of the Farm Kliprug No. 282 Saldanha Bay on archaeological heritage remains is likely to be low.

The probability of locating significant archaeological heritage remains during implementation of the project is likely to be improbable.

Fossil archaeological and palaeontological remains may, however, be exposed in underlying calcrete/limestone deposits, during bulk excavations.

Human burials may also be exposed or uncovered during earthworks and excavations.

## 9. RECOMMENDATIONS

The archaeological impact assessment of Portion 11 of the Farm Kliprug No. 282, Saldanha Bay, has rated the potential impacts to archaeological material as being low provided that:

- A professional palaeontologist must be appointed to assess the possible palaeontological significance of the fossiliferous material on the property if underlying calcrete deposits are intercepted during earth-moving operations. (monitor)
- Should any human remains be disturbed, exposed or uncovered during earthworks, these should immediately be reported the South African Heritage Resources Agency (Mrs Mary Leslie @ 021 462 4502).

- 1 - Doesn't this need an HIA given that the proposed development involves 20ha of land?
- 2 - Palaeontologist to monitor earth moving operations. This area is too sensitive to have trenches inspected afterwards. Palaeont. should be able to stop works.
- 3 - Recomm about human burials apply

## 10. REFERENCES

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