

**PHASE 1 ARCHAEOLOGICAL IMPACT ASSESSMENT  
PROPOSED DEVELOPMENT  
REMAINDER ERF 460 (PORTION A)  
ST. HELENA BAY**

Prepared for

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**MAY  
2007**

## Executive summary

Enviro Dinamik requested that the Agency for Cultural Resource Management conduct a Phase 1 Archaeological Impact Assessment for a proposed housing development on Remainder Erf 460 (Portion A) St Helena Bay on the Cape West coast.

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

The subject property is located on the inland side of Golden Mile Drive in Britannia Bay.

The following findings were made:

Scatters of marine shellfish and very low-density scatters of stone artefacts occur across much of the western half of the study site, but these are spread very thinly and unevenly over the surrounding landscape.

Large numbers of small fragments of water worn shellfish, including fragments and pieces of fossil shell, flattened and small rounded pebbles in the western half of the site are also most likely features of Late Pleistocene Last Interglacial shoreline beach deposits.

With regard to the proposed development of Remainder Erf 460 (Portion A) St. Helena Bay, the following recommendations are made.

- Trial excavations, shellfish sampling and dating of the archaeological deposits is required. If some of the surface scatters are found to have depth and undisturbed deposits they will have to be sampled by way of controlled archaeological excavations.
- Bulk earthworks and excavations must be monitored by a professional archaeologist.
- Excavations and cuttings must be inspected by a professional palaeontologist during the Construction Phase of the project.
- Should any unmarked human remains be disturbed, exposed or uncovered during earthworks, these must immediately be reported to the South African Heritage Resources Agency (Mrs Mary Leslie (021) 462 4502) or Heritage Western Cape (Mr N. Ndlovu (021) 483 9692).

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## **1. INTRODUCTION**

### **1.1 Background and brief**

Enviro Dinamik, on behalf of Mr Liam Fisher, requested that the Agency for Cultural Resource Management conduct a Phase 1 Archaeological Impact Assessment for a proposed housing development on Remainder Erf 460 (Portion A) St Helena Bay.

The proposed rezoning and subdivision of the subject property (currently zoned Agriculture), provides for the development of 185 single residential and 46 group housing units, including associated infrastructure such as roads and services.

The extent of the proposed development (16.46 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 and 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.

## **2. TERMS OF REFERENCE**

The terms of reference for the study were:

- to determine whether there are likely to be any archaeological sites of significance within the proposed site;
- to identify sites of archaeological significance within the proposed site;
- to assess the sensitivity and conservation significance of archaeological sites potentially affected by the proposed subdivision and development;
- to assess the 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 locality map is illustrated in Figure 1.

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

The subject property is located on the inland side of Golden Mile Drive in Britannia Bay, about 5 kms south of St. Helena Bay (Figures 3-8) on the Cape West coast, in the Western Cape Province.

The western half of the site has recently been cleared of alien vegetation and tractor damage is quite widespread. Much grass, bush and scrub cover the remainder of the site. The central portion of the site is slightly depressed. The eastern half is quite open. Deep sandy soils dominate the site, derived from a mix of windblown marine sands and weathered granites further inland. No significant landscape features occur on site, which is virtually level. There are no buildings or structures on the property.

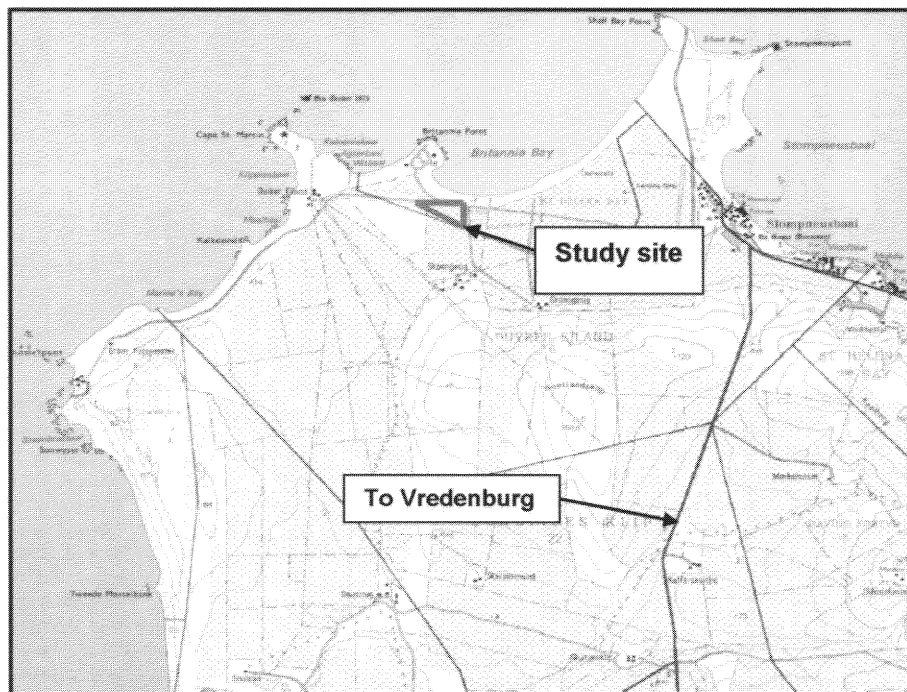


Figure 1. Locality map (3217 DB & DD Vredenburg)



Figure 2. Aerial photograph of the study site.





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



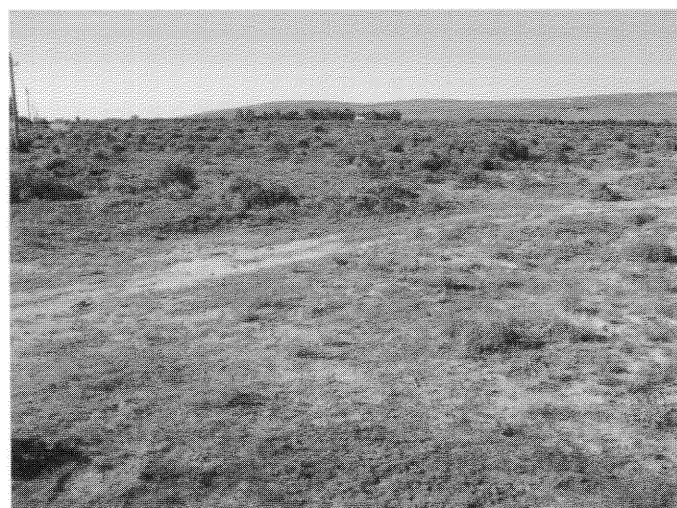
**Figure 6. View of the site facing south east**



**Figure 4. View of the site facing east**



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



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



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

## **4. APPROACH TO THE STUDY**

### **4.1 Method of survey**

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

The study took place on the 22<sup>nd</sup> May, 2007.

Archaeological heritage sites located during the study have been recorded using a Garmin Gecko 201 GPS unit set on map datum wgs 84.

A desktop study was also undertaken.

### **4.2 Constraints and limitations**

There were no major constraints or limitations associated with the study. However, where alien vegetation has been cut down and left on the ground, archaeological visibility is quite poor.

### **4.4. Identification of potential risks**

The following project actions will impact negatively on archaeological heritage remains in the study area.

- Earthmoving operations will impact on archaeological heritage remains over much of the western half of the proposed site.
- Earthmoving operations will impact on Late Pleistocene fossil beach deposits over much of the western half of the proposed site.
- Unmarked human burials may be uncovered or exposed during earthmoving operations.

### **4.4 Results of the desk-top study**

Several baseline studies have recently been undertaken in the immediate surrounding area. The nearby Britannia Bay Caravan Park has been searched, but the site is very disturbed and only thin, highly dispersed scatters of shellfish and a few stone tools were documented (Kaplan 2007 in prep.). Relatively well-preserved archaeological deposits and stone tools, including grindstones, bored stones, pottery and ostrich eggshell were documented in Erf 460 adjacent to the subject property (Kaplan 2996a & refer to Figure 2). Extensive scatters of Last Interglacial Pleistocene shoreline beach deposits have also been identified on the same property. A very large and extensive site, provisionally identified as a herder site, with large volumes of shellfish deposits, many stone tools, including an elliptical grindstone, bored stones, ostrich eggshell, pottery and (rare) re-used colonial era items, have been documented on Portion 7 of Duiker Eiland directly to the south of the subject property (Kaplan 2006b and refer to Figure 2).



In addition to the above, large numbers of archaeological sites have been recorded in the St. Helena Bay/Britannia Bay area (Kaplan 1993, 2003; Halkett & Hart 1995; Thackeray & Cronin 1975; Robertshaw 1979). With its rocky shoreline, the St. Helena Bay region acted as foci that attracted both LSA hunter-gatherers and later Khoekhoe herders as it offered greater opportunities for the exploitation of marine foods, particularly shellfish, while the local shales and granites provided vital nutrients for domestic stock. Shellfish meat was either cooked in pots or on open fires, but there is also evidence to suggest that meat was dried and smoked. Other marine resources exploited included sea birds, fish, crayfish, seal, dolphin, and even occasionally whales.

Research focussing 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 centred round the many large granite outcroppings that are ubiquitous in Vredenburg, Paternoster and the St. Helena Bay area.

## **5. LEGISLATIVE REQUIREMENTS**

The following section provides a brief overview of the relevant legislation with regard to the archaeology of the subject property.

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

The National Heritage Resources Act (NHRA) 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 NHRA stipulates that no person may, without a permit issued by Heritage Western Cape (HWC), destroy, damage, excavate, alter or remove from its original position, or collect, any archaeological material or object.

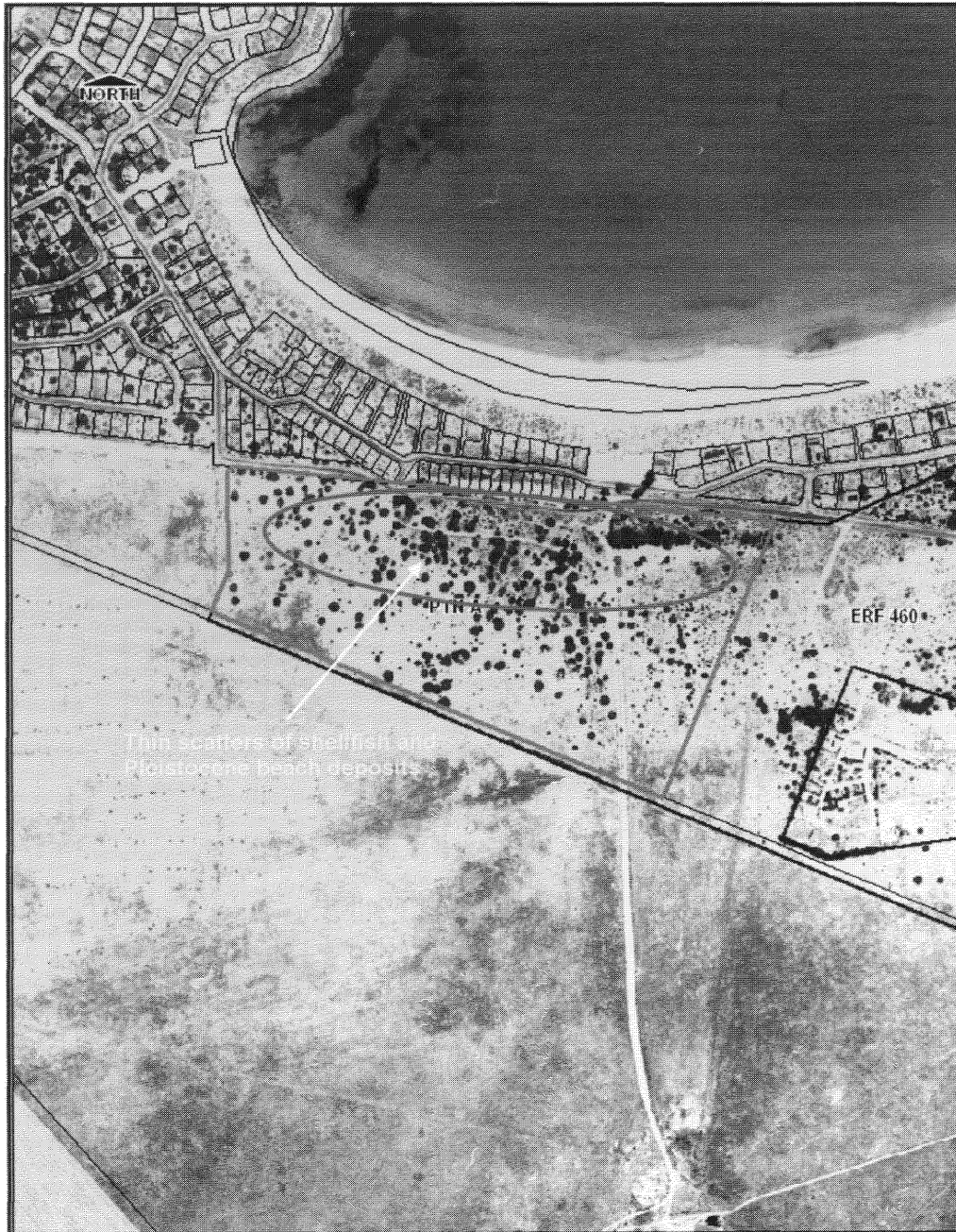
### **5.2 Burial grounds and graves (Section 36 (3))**

Section 36 (3) of the NHRA 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. IMPACT ASSESSMENT AND DESCRIPTION

The archaeological heritage remains described below are illustrated in Figure 9.

Scatters of archaeologically-derived marine shellfish and very low-density scatters of stone tools occur across much of the western half of the proposed site, but these are spread very thinly and unevenly over the landscape.



**Figure 9. Aerial photograph of the study site illustrating location of archaeological heritage remains**

A few, slightly more visible and coherent scatters of shellfish were documented on the site. One such scatter, about 10 m in extent, was located in an open patch of soft sand alongside Golden Mile Drive (Figures 10 and 11). The shellfish comprises mainly fragments of *Scutellastra argenvillei*, *Cymbula granatina*, some Black Mussel (*Choromytilus meridionalis*) and a few small whelks. One partially retouched fragment of White Mussel (*Donax serra*) was found, as well as one small hornfels flake and one quartz chunk.

The strip of land alongside Golden Mile Drive is also partially covered in what are most likely the remains of Later Pleistocene shoreline beach deposits. These comprise many fragments of water worn and edge rounded shell, including fragments of bivalve species such as White Sand Mussel (*Donax serra*), some Venus clams, ribbed mussel and single large Trough shells (*Lutraria lutraria*). Some fossil shell (mainly White Sand Mussel) was also recorded. A GPS reading for the site is S° 32 43 434 E° 17 56 584.

Almost the entire western half of the subject property is characterised by these thin scatters of fossil shell beach deposits. These same shoreline beach deposits were recently identified for the first time in St Helena Bay, on the adjacent property; Erf 460 (Kaplan 2006a). Last Interglacial beach deposits are of considerable palaeontological importance, as they provide a record of changes in faunal communities with time, record historical sea-level changes, as well as preserve fossil remains (Pether 2004).



Figure 10. Scatter of shellfish alongside Golden Mile Drive



Figure 11. Scatter of shellfish alongside Golden Mile Drive

Several more, thin scatters of shellfish were documented in open patches of soft sandy soils behind thick bush and scrub about 40 m east of Golden Mile Drive (Figures 12 and 13). Dispersed scatters of shellfish are also visible in large open grassy patches in the central portion of the study area (Figures 14 and 15). The shellfish is dominated by *S. argenvillei* and *C. granatina* with some fragments of Black Mussel also occurring. Several *S. cochlear* and a few small *C. miniata* were also seen. Very few whole shells were found over the site. Like the scatters described alongside Golden Mile Drive, much of the archaeologically-derived shellfish is 'contaminated' with Pleistocene raised beach deposits, comprising water worn and edge rounded shell, with fragments of fossilised White Sand Mussel, Venus Clams and large Trough shells.



Low density scatters of stone tools were documented in the western portion of the property. These include several quartz, quartzite and silcrete flakes, one utilised quartz flake, a large silcrete core, including several quartz (irregular n = 2, single platform n = 1 and bipolar cores n = 1) cores. One partially ground, broken upper grindstone fragment was also found. Numerous small, round and flattened beach pebbles occur over the remainder of the site; a further indication of the presence of raised beach deposits in the surrounding landscape. Tractor damage is quite visible and present over large parts of the site. No pottery was found, but one very weathered, small fragment of ostrich eggshell was documented.

Several GPS co-ordinates for the site were taken: S° 32 43 459 E° 17 56 531  
S° 32 43 466 E° 17 56 550  
S° 32 43 486 E° 17 56 511  
S° 32 43 484 E° 17 56 437



**Figure 12. Dispersed shellfish scatters**



**Figure 14. Dispersed shellfish in the central portion of the site**



**Figure 13. Dispersed shellfish scatters**



**Figure 15. Dispersed shellfish in the central portion of the site**

Surface shellfish is almost non-existent in the eastern half of the study site. A small tractor excavation in the back portion of the site has, however, revealed some sub-surface, highly fragmented shellfish; most likely the remains of raised beach deposits. It is more than likely that past, agricultural activities on the property, has erased much of the surface archaeological and Late Pleistocene raised beach deposits that were once present.

## **8. IMPACT STATEMENT**

The proposed development on Remainder Erf 460 (Portion A) St. Helena Bay will impact negatively on archaeological heritage remains, as well as Late Pleistocene Last Interglacial shoreline beach deposits.

Trial excavations at Erf 460 adjacent to the subject property have exposed in-situ shellfish deposits and stone tools more than 1 m below the surface (Mary Patrick Cape Archaeological Survey cc pers. comm.).

Bulk earthworks and excavations may also expose or uncover unmarked human burials.

## **9. RECOMMENDATIONS**

With regard to the proposed development on Remainder Erf 460 (Portion A) St. Helena Bay, the following recommendations are made:

- Trial excavations, shellfish sampling and dating of the archaeological deposits is required. If some of the surface scatters are found to have depth and undisturbed deposits they will have to be sampled by way of controlled archaeological excavations.
- Bulk earthworks and excavations must be monitored by a professional archaeologist.
- Excavations and cuttings must be inspected by a professional palaeontologist<sup>1</sup> during the Construction Phase of the proposed project.
- Should any unmarked 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) or Heritage Western Cape (Mr N. Ndlovu (021) 483 9692).

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<sup>1</sup> Consulting palaeontologist Mr John Pether can be contacted on 083 744 6295

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