# PHASE 1 ARCHAEOLOGICAL IMPACT ASSESSMENT PROPOSED WATERFRONT DEVELOPMENT <br> PORTION OF ERF 40 <br> ST. HELENA BAY SALDANHA -VREDENBURG DISTRICT 

Prepared for<br>\section*{CK RUMBOLL EN VENNOTE}

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## Executive summary

CK Rumboll \& Partners requested that the Agency for Cultural Resource Management conduct a Phase 1 Archaeological Impact Assessment for a proposed waterfront development on Portion of Erf 40 in St. Helena Bay on the Cape West coast.

The subject property is currently zoned Fishing Industry, Business and Undertermined and will be rezoned to Sub-divisional Area, with General Business, Residential and Open Space I and II, in order to make provision for a waterfront development comprising residential and group housing, restaurants, shops, a museum and business enterprises, including internal roads and services.

The archaeological assessment has identified significant impacts to pre-colonial archaeological material that will need to be mitigated and managed prior to proposed development activities.

Archaeological heritage remains cover a large portion of vacant land on the subject property. These comprise sometimes fairly extensive scatters of shelfish, as well as stone artefacts, pottery and ostrich eggshell.

A large shell midden (probably the last remaining dune midden in St. Helena Bay) was also documented in the harbour area of the subject property. The archaeological site has been heavily impacted on by pedestrian activity, but is still largely in-tact.

A possible (pre-1920) historic dump, containing glass, glass bottles, ceramics, stoneware and earthenware was also documented on the proposed site.

In addition to the pre-colonial archaeological heritage remains, a number of Christian burials occur on the subject property, hidden among thick bush, scrub and trees. The developers have decided to conduct (on their own) the legally required public participation process around this sensitive issue and to investigate the origin and provenance of the burials. The intention is to clean up the cemetery site, and fence it off.

Heritage consultant Mr Graham Jacobs has been appointed to undertake a Heritage Impact Assessment (HIA) of the proposed project. The archaeological heritage study forms part of the HIA.

The Phase 1 Archaeological Impact Assessment of the proposed St. Helena Bay waterfront development has rated the potential impacts to pre-colonial archaeological material as being high.

With regard to the proposed waterfront development in St. Helena Bay, the following recommendations are made:

- The large dune midden in the harbour area must be retained within the current proposed site layout plan. The dune should be rehabilitated and revegetated. Pedestrian access over the dune should be prohibited, or via raised boardwalks. Appropriately placed signage should also be considered. The archaeological site represents one of the last known remaining substantial dune middens in St. Helena Bay, where much of the archaeological heritage has already been destroyed as a result of development activities.
- Evaluation of the significance of archaeological shellfish remains on the remainder of the property will require shovel testing, before development takes place. If the sites are found to have depth and undisturbed deposit, they will have to be sampled by way of controlled archaeological excavations.
- The heritage significance of the possible pre-1920 historic dump should be investigated by an appropriate specialist.
- Bulk earthworks and excavations must be monitored by a professional archaeologist during the construction phase of the project.
- 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 @ 021462 4502), or Heritage Western Cape (Dr A. Jerardino 021483 9692).
- The South African coastline has an exceptional record of humankind's relationship with the sea. Its abundance of marine resources has attracted people for tens of thousands of years, even up to this day. Evidence of this can be traced from Middle Stone Age times, some 200000 years ago, through San and Khoekhoe habitation, to colonial and contemporary times. Much of this (archaeological) information could be used in a proposed waterfront museum.


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## 1. INTRODUCTION

### 1.1 Background and brief

CK Rumboll \& Partners, on behalf of West Coast Miracles (Pty) Ltd requested that the Agency for Cultural Resource Management conduct a Phase 1 Archaeological Impact Assessment (AIA) for a proposed waterfront development on Portion of Erf 40 in St. Helena Bay on the Cape West Coast.

The subject property is currently zoned Fishing Industry, Business and Undertermined and will be rezoned to Sub-divisional Area, with General Business, Residential and Open Space I and II, in order to make provision for a waterfront development comprising residential and group housing, restaurants, shops, a museum and business enterprises, including internal roads and services.

The proposed development comprises Phase 4 of the planned St. Helena Views development. A Phase 1 AIA for Phases 1-3 of the planned housing development has already been done (Kaplan 2006a).

The extent of the proposed development (about 28 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 Graham Jacobs has been appointed to undertake a Heritage Impact Assessment (HIA) of the proposed project. The archaeological heritage study forms part of the HIA.

## 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 locality map is illustrated in Figure 1.
An aerial photograph of the proposed site is illustrated in Figure 2.
A proposed site layout plan is illustrated in Figure 3.
The subject property is located in St Helena Bay, approximately 20 km north of Vredenburg. The site is located directly in front of the St. Helena Bay Hotel. The area is known by local residents as 'The Cove', the name taken after the original Cove Hotel built on the property. The proposed site is characterised by a number of land uses. A small (abandoned) harbour supports several buildings and structures, some vacant and falling into disrepair, and several currently occupied by small, light industrial enterprises. Numerous residential buildings occupy the remainder of the site, including a row of historic tin houses, as well as the historic 'Cove' Hotel. Vacant land in the northern and southern portion of the property, are undeveloped. The receiving environment is quite heavily disturbed as a result of pedestrian traffic. Dune mole rat activity is also extensive. The shoreline area is characterised by a rocky coastline and sandy beach (Figures 4-10).

The proposed site is situated within an area characterised by rapid urban development of a residential, commercial and industrial (harbour, fish processing) nature.


Figure 1. Site locality map ( 3218 CA \& CC Veldriff).


Figure 2. Aerial photograph of the property


Figure 3. Proposed waterfront development St. Helena Bay: Site layout plan


Figure 4. View of the southern portion of the property View facing south west


Figure 5. View of the southern portion of the property. View facing north west


Figure 6. View of the southern portion of the property. View facing south


Figure 9. View of the northern portion of the property. View facing north west


Figure 10. View of the northern portion of the property. View facing south


Figure 7. View of the northern portion
of the property. View facing north west


Figure 8. View of the northern portion
of property. View facing north west

## 4. STUDY APPROACH

## 4. 1 Method of survey

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

Archaeological heritage remains were recorded using a hand-held Garmin Geko 201 GPS unit set on map datum WGS 84.

The site visit and assessment took place on the $8^{\text {th }}$ November, 2006.
A desktop study was also undertaken.

### 4.2 Constraints and limitations

There were no constraints or limitation associated with the study. However, there are areas on the property that are quite well vegetated, resulting in low archaeological visibility.

### 4.3 Results of the desk-top study

Archaeological heritage remains occur in the surrounding area, but until the current study, appeared to be scattered quite thinly and unevenly over the landscape (Kaplan 2005a, b, c, 2006a, b). Most of the recent archaeological studies to date have, however, been undertaken on properties lying to the east of the Main Road.

Extensive scatters of shellfish remains were once present along the rocky and sandy shoreline at Sandy Point, a few kms further to the north of the study area (personnel observation). Sadly, much of this archaeological heritage has been destroyed as a result of a current housing development. A relatively large scatter of shellish and fairly large numbers of stone artefacts (in quartz, quartzite and silcrete) was also located on a vacant piece of land next to Sandpiper Village (personnel observation). This site has also very recently been destroyed as a result of a housing development. It is well known that large numbers of archaeological sites occur along the rocky shoreline around Duyker Eiland and Britannia Bay, about 8 kms south of St. Helena Bay (Halkett \& Hart 1995; Kaplan 1993, 2003, 2006c.d; Thackeray \& Cronin 1975).

With its rocky shoreline, the St. Helena Bay region clearly 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 shelfish, while the local shales and granites provided vital nutrients for domestic stock. Shellish 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, also 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 large granite outcroppings that are ubiquitous in Vredenburg, Paternoster and the St. Helena Bay area (see also Kaplan 2006e). Extensive scatters of shellfish, stone tools, pottery and reused colonial-era artefacts have also recently been found in Britannia Bay, providing, for the first time, compelling evidence of near-coastal herder sites (Kaplan 2006c).

## 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 $5000 \mathrm{~m}^{2}$, or the rezoning or change of land use of a site exceeding $10000 \mathrm{~m}^{2}$, requires an archaeological impact assessment"

The relevant sections of the Act are briefly outlined below.

### 5.1 Structures (Section 34 (1))

Section 34 (1) of the NHRA stipulates that no person may, without a permit issued by HWC, may alter or demolish any structure or part of a structure, which is older than 60 years.

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

Section 35 (4) of the NHRA 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 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

## WFD 1 (GPS reading $\mathrm{S}^{\circ} 3245448 \mathrm{E}^{\circ} 1801$ 586)

Archaeological heritage remains cover a large portion of the vacant land on the subject property (refer to Figure 2).

An extensive scatter of shellifish, as well as stone artefacts, pottery and ostrich eggshell, occur in the southern portion of the property. WFD 1 measures about 180 m long and about 30 m wide, but is not a continuous scatter of archaeological remains. Shellfish is dispersed widely over the area, however. The shell comprises mainly small and crushed fragments (testament to heavy pedestrian activity in the area), but larger pieces of shell and some whole shell also occur. The shellfish is located among thick bush and scrub and in larger open patches of loose beach sand on a slightly elevated rise above the high water mark (Figures 11-14). Much shellfish is also contained within an old cemetery located on the property (refer to Figure 2).

The shelfish is dominated by Cymbula and Scutellastra species, with some Black Mussel (Choromytilus meridionalis) and whelk also occurring. White mussel (most probably recent) is present in small numbers. There is also some processing of modern shell (both Scutellastra and Cymbula sp ) over the site.

Stone artefact densities are fairly low and include quartz flakes, chunks and irregular cores ( $n=3$ ), as well as quartzite and silcrete flakes and chunks. Small quartzite beach pebbles and cobbles, several which display worked or damage tips were also found. A few pieces of undecorated Cape Coastal pottery were also found, including one fairly large, slightly burnished piece of fine-ware. The pottery is all body sherds. Two small pieces of ostrich eggshell were found.

Modern litter is also scattered widely over the area. Some older blue glass and a few small fragments of white porcelain were also documented.

Dune-mole rat activity is extensive over the southern portion of the property. While most of the shellfish appears to be confined to the surface, dune mole rats are known to bring up buried shell from several meters deep under the sand.

The archaeological remains have been rated medium local significance.


Figure 11. WFD 1


Figure 12. WFD 1


Figure 13. WFD 1


Figure 14. WFD 1

WFD 2 (GPS reading $S^{\circ} 3245430 E^{\circ} 1801$ 492)
A scatter of fragmented shellfish occurs among a thick patch of bush and scrub about $30-40 \mathrm{~m}$ east of WFD 1. The shellfish is dominated by Scutellastra and Cymbula sp ., while some Black Mussel was also noted. The site measures about $15 \times 15 \mathrm{~m}$ in extent. A few quartz flakes and chunks, and quartzite beach pebbles were counted. No pottery was found. Scattered bits of shell were also located in the surrounding area, but WFD 2 in Figure 2 represents the main concentration of shellfish in this area.

The archaeological remains have been rated medium local significance.
WFD 3 (GPS reading $S^{\circ} 3245474 E^{\circ} 1801$ 555)
A very small scatter of fragmented and crushed shellfish (Scutellastra and Cymbula sp.) occurs alongside a footpath next to a small dam. A few quartz and silcrete flakes and chunks were found. The remains occur in a very disturbed context.

The archaeological remains have been rated low local significance.
WFD 4 (GPS reading $S^{\circ} 3245502$ E $^{\circ} 1801$ 524)
A thin, dispersed scatter of fragmented shellfish occurs on a slight rise about 25 west of the Main Road, alongside a barely visibly 2 -track road and next to a small dam. The site measures about $10-12 \mathrm{~m}$ long and just a few meters wide. The shellfish is dominated by Cymbula and Scutellastra sp. Some large whole shell (Scutellastra argenvillei) is also present. A few small pieces of weathered Venus Clams (Venerupis corrugate) were also noted. Several stone artefacts were found, including one utilised and partially backed silcrete bladelet, one silcrete thumbnail scraper, one quartzite flake, and a handful of quartz chunks, flakes and a few tiny chips. Several round quartzite beach cobbles were also found. The remains occur in a fairly disturbed context.

## The archaeological remains have been rated medium local significance.

WFD 5 (GPS reading $S^{\circ} 3245617 E^{\circ} 1801703$ )
A small, dispersed scatter of fragmented shellish occurs on patch of sand and scrub in the north eastern corner of the subject property, about $10-15 \mathrm{~m}$ south of a small residential home. Some diggings and dumping of litter are present. The shellfish is dominated by Scutellastra and Cymbula sp. Dune mole rat activity is extensive in the surrounding area and the archaeological remains occur in a disturbed and degraded context. No stone artefacts were found.

The archaeological remains have been rated low local significance.

## WFD 6 (GPS reading S 3245604 E $^{\circ} 1801719$ )

Although not as extensive as WFD 1, shellfish remains are scattered and dispersed quite widely in the northern portion of the subject property (refer to Figure 2). The archaeological remains appear to be more concentrated in the eastern (or back) portion of the site (Figures 14-16). A few flat outcrops of granite are present. Fragmented shellish is also associated with extensive dune mole rat activity (Figure 15). The shelfish is dominated by fragments and larger pieces of Scutellastra and Cymbula sp , while some whole shell such as Scutellastra argenvillei, Cymbula granatina, and Scutellastra cochlear, was also noted. Pedestrian traffic is very visible in this area, and litter occurs over a wide area.

Mirroring WFD 1, stone artefact densities are low on the site. These comprise a few quartz and quartzite flakes and chunks, one quartz irregular core, a large quartzite flake and several small quartzite beach cobbles and pebbles. One small piece of blackened pottery was also found.

The archaeological remains have been rated medium local significance.


Figure 14. WFD 6


Figure 15. WFD 6.


Figure 15. WFD 6

WFD 7 (GPS reading $S^{\circ} 3245486 \mathrm{E}^{\circ} 1801633$ )
A large shell midden occurs on a remnant sand dune between a row of historic tin houses and Marine Diesel and Electronics, in the harbour area (refer to Figure 2). The archaeological site has been heavily impacted on and severely degraded as a result of pedestrian activity, posthole and Telkom excavations, widespread littering and activities related to the surrounding harbour development, but is still largely intact with much in-situ shellish present (Figures 17 \& 18). Crushed and fragmented shellfish is visible both on top of the dune, as well as in eroded and damaged sections of the dune alongside the road next to Marine Diesel and Electronics (Figures 19 \& 20). The shelfish is dominated by Scutellastra and Cymbula sp., with some Black Mussel occurring. Several quartz flakes and one silcrete flake was also found. No pottery was noted. There is also evidence of more recent layering of modern shellish and domestic litter. The archaeological site may, quite possibly, be the last remaining dune shell midden in St. Helena Bay, with much of the shoreline area already having been transformed as a result of residential development.

The archaeological remains have been rated high local significance.


Figure 17. WFD 7


Figure 18. WDF 7


Figure 19. WDF 7


Figure 20. WFD 7

## WFD 8 (GPS reading S ${ }^{\circ} 3245388$ E $^{\circ} 1801633$ )

A possible (pre-1920) historic rubbish dump, measuring about 15 m long and about 5 m wide occurs in the far southern portion of the proposed site (refer to Figure 2). Fragments of pre-colonial archaeological heritage remains (part of WFD 1) are also scattered about the surrounding area.

The dump is characterised by a raised mound, containing broken and burnt (melted) glass, broken bottles (including household glass), and pieces of ceramics, stoneware, earthenware, ash and charcoal. Modern refuse such as rusted metal, glass, plastic, road metal, asbestos and small amounts of building rubble also occur on the dump and are scattered over a fairly wide area (Figure 21).


Figure 21. WFD 8

### 6.1 Other finds

In addition to the pre-colonial archaeological heritage remains documented above, a number of Christian burials also occur on the subject property, hidden among bush, scrub and several large Minatoka trees (refer to Figure 2). The developers have decided to conduct (on their own) the legally required public participation process around this sensitive issue and to investigate the origin and provenance of the burials. The intention is to clean up the cemetery sites and fence it off.

## SAHRA

## 7. IMPACT STATEMENT

The impact of the proposed waterfront development on Portion of Erf 40 in St. Helena Bay, on archaeological heritage remains is likely to be high.

Proposed activities will impact negatively on archaeological heritage remains in the largely undeveloped land in the northern and southern portions of the property. And unless properly managed, proposed development activities will also impact negatively on the large dune midden in the harbour area (i.e. WFD 7)

Unmarked pre-colonial human burials may also be exposed or uncovered during earthworks and excavations.

## 8. RECOMMENDATIONS

With regard to the proposed Waterfront development on the Remainder of Portion Erf 40 St . Helena Bay, the following recommendations are made:

- The large dune midden (WFD 7) in the harbour area must be retained within the current proposed site layout plan. The dune should be rehabilitated and re-vegetated. Pedestrian access over the dune should be prohibited, or via raised boardwalks. Appropriately placed signage should also be considered. The archaeological site represents one of the last known remaining substantial dune middens in St. Helena Bay, where much of the archaeological heritage has already been destroyed as a result of development activities.
- Evaluation of the significance of archaeological shellish remains on the remainder of the property (i.e. WFD 1-6) will require shovel testing, before development takes place. If the sites are found to have depth and undisturbed deposit, they will have to be sampled by way of controlled archaeological excavations.
- The heritage significance of the possible pre-1920 historic dump (WFD 8) should be investigated by an appropriate specialist.
- Bulk earthworks and excavations must be monitored by a professional archaeologist during the construction phase of the project.
- 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 @ 021462 4502), or Heritage Western Cape (Dr A. Jerardino 021483 9692).
- The South African coastline has an exceptional record of humankind's relationship with the sea. Its abundance of marine resources has attracted people for tens of thousands of years, even up to this day. Evidence of this can be traced from Middle Stone Age times, some 200000 years ago, through San and Khoekhoe habitation, to colonial and contemporary times. Much of this (archaeological) information could be used in a proposed waterfront museum.



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## PROPOSED DEVELOPMENT: PORTION OF ERF 40, ST HELENA BAY, VREDENBURG MAGISTERIAL DISTRICT

1) Previous work has shown the existence of substantial concentrations of shell middens along the northern coastine of the Vredenburg Peninsula, of which St Helena is part. Several of these sites have been destroyed illegally as a result of development activities within the last ten years. With the exception of work done by Peter Robertshaw at Duiker Eland in the 1970's, the indigenous pre-colonial history of this part of the Vredenburg Peninsula is largely unknown.
2) It is recommended that at least half (1/2) of site WFD1 be set aside as an archaeological reserve and conserved in perpetuity. The section of the site to be set aside will be determined after shovel testing (see below). In this way, this site will be available to research in the future when improved field and analytical techniques are available to archaeologists.
3) It is recommended that site WFD7 be conserved in its entirety. According to Mr. Kaplan's information during a site visit (27 Nov 2006) with Prof. J. Sealy, Prof. A. Smith and Ms B. Mutti. this site was not going to be impacted directly by development plans. Conservation measures proposed by J. Kaplan are supported (rehabilitation of dune, possible re-vegetation with shallow root grass cover, erection of information boards and closure of pedestrian paths or building of board walks in consultation with HWC).
4) Sites WFD $1-6$ to be excavated by means of shovel testing. Archaeological trial excavations must be undertaken on these sites in order to ascertain the extent of archaeological deposits below the surface and help confirm or re-appraise their heritage significance. If the significance of some of these sites increases as a result of these trial excavations, portions of other sites (e.g., WFD6 might be set aside and conserved in perpetuity as with WFD1. These test excavations must proceed with the following conditions:
a) Areas in question must be inspected in order to establish shell midden bearing areas where shovel test should be conducted.
b) Each test pit must be excavated by trowel or hand shovel to a depth until sterile deposit or bedrock is reached.
c) Any layers containing significant amount of archaeological material (marine shell, bone, artifacts... etc) must be sieved through a 3 mm mesh. The resulting samples must be collected for sorting and analysis (e.g., but not limited to, broad faunal categories and types of artifacts)
d) Stratigraphic sequence must be described through written notes and photography. Section drawings must be undertaken for all test pits where significant deposits or complex stratigraphy was encountered.
e) Column samples must be taken from selected test pits containing more archaeological deposits relatively to the rest of test pits for more detailed analysis.
f) Column samples should consist of:

- A $50 \times 50 \mathrm{~cm}$ column from a previously prepared section,
- With each stratigraphic layer excavated separately and sieved using a 3 mm mesh.
- The volume of each sample (then or later converted into cubic meters) must be recorded, and the resulting samples must be labeled and retained for further analysis.
- Photographs must be taken and section drawings must be recoded for each column sample.
- Attempts should be made to obtain in situ samples of organic material suitable for radiocarbon dating from a secure stratigraphic context. If no such in situ sample is possible to obtain, other suitable samples of organic material must be isolated from column samples. At least two such samples of material must be submitted for radiocarbon dating as soon as the test pit excavation is completed or when further sorting allows the extraction of such samples. This will allow further assessment of the significance of the site and better planning of Phase 2 excavations.
g) Test pits must be backfilled on completion with their position marked by numbered stakes for subsequent survey.
h) All excavated test pits must be surveyed and this survey data must be locked into the SA National grid and marked on an aerial photograph.

5) SAHRA must be informed about the existence of historical graves within the affected environment and possible impact on these as a result of proposed development.
6) An Historical Archaeologist must investigate the heritage significance of the possible pre-1920 historical dump (WFD 8).
7) Earth moving activities must be monitored by a professional archaeologists at all times.
8) Unmarked human burials, such as Khoisan graves, may be exposed or uncovered during earth moving activities. If any human remains are discovered during earth moving activities, they must be treated with respect, and HWC (Dr. A. Jerardino, 021-483 9687) must be notified immediately. An archaeologist will be required to remove the remains at the expense of the developer.
9) It is recommended that the archaeological information derived from test pit excavations and Robert Shaw's be used in a community museum that could form part of the proposed development.
