

# **ARCHAEOLOGICAL IMPACT ASSESSMENT FOR ERF 4870, KARBONKELBERG, HOUT BAY, WYNBERG MAGISTERIAL DISTRICT, WESTERN CAPE**

(AIA conducted as part of an HIA)

Prepared for

**CCA Environmental (Pty) Ltd**  
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## EXECUTIVE SUMMARY

The Archaeology Contracts Office was requested by CCA Environmental to undertake a desktop Archaeological Impact Assessment on part of Erf 4870 based on the findings of an earlier baseline report conducted in 2005. The initial report considered three erven (namely Erven 4869, 4870 & 4871), while this report is focussed only on the relevant part of Erf 4870. Rezoning and subdivision of the site has been proposed to allow for the development of a hotel and residential estate.

This site lies on the steep slope above the Hout Bay harbour. The substrate is mainly white aeolian sand, which is thickly vegetated with a combination of indigenous and exotic vegetation. Visibility was poor over much of the area and, despite a few open spaces and the road cutting, the vegetation and aeolian sand cover was a limitation that made it difficult to assess the site.

The baseline survey revealed the presence of four Later Stone Age (LSA) sites on Erf 4870 and a further one bordering the access road further to the south. One of these sites (HB2) may not be impacted by development and that along the access road to the south (HB5) would only receive minor impact depending on the extent of cutting into the embankment during the road upgrade. The other three sites would require sampling which should be tailored to suit the type and quantity of finds recovered during the initial excavation work. These sites are generally of **low** to **medium** significance but HB1, with the burial, is of **very high** significance. Mitigation of these sites would result in impacts of **LOW** to **VERY LOW** significance.

In terms of the archaeology present on site, satisfactory mitigation could be easily implemented. As such the project should be allowed to proceed from an archaeological point of view, but is still subject to the findings of the Heritage Impact Assessment. The following recommendations pertaining to the archaeology on Erf 4870 are made:

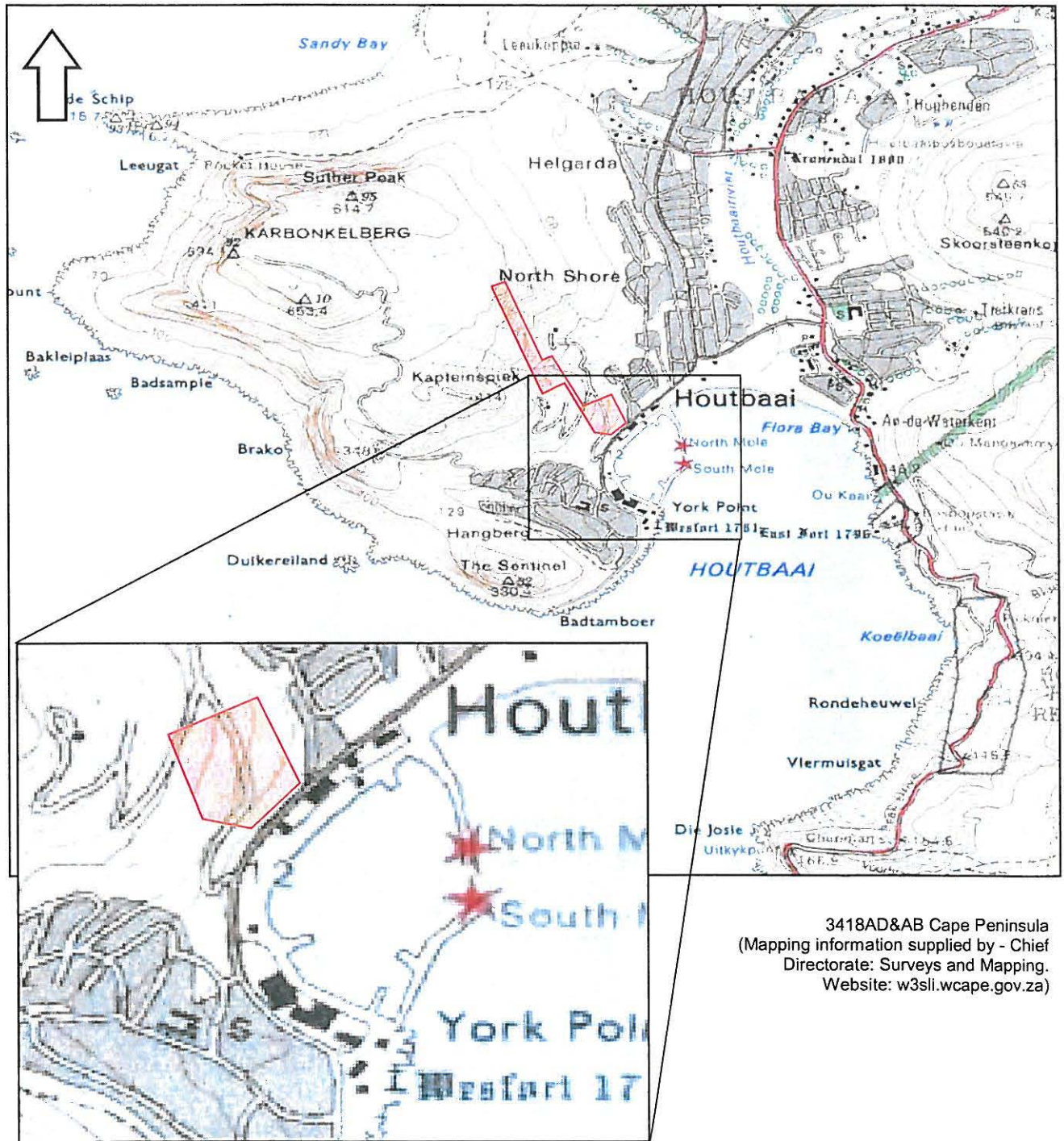
- Further survey must be carried out focussing on the lower slopes and including limited shovel testing as deemed appropriate;
- Mitigation of known sites and any others found should be conducted;
- An excavation permit must be obtained from Heritage Western Cape to allow the excavations and exhumation; and
- After archaeological mitigation is complete, monitoring of earth moving should be conducted; and
- It should be noted that further unmarked burials could still be located and that these should be protected and reported to the archaeologist and/or the South African Heritage Resources Agency immediately upon discovery. They would need to be removed by an archaeologist.

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# 1. INTRODUCTION

The Archaeology Contracts Office (ACO) was requested by CCA Environmental (Pty) Ltd to undertake an Archaeological Impact Assessment of Erf 4870, Karbonkelberg, Hout Bay (Figure 1). This assessment follows an earlier preliminary archaeological feasibility study which assessed the development potential of Erven 4869, 4870 & 4871, Hout Bay (Orton & Hart 2005). The current report focuses the assessment on the lower part of Erf 4870 and assesses the potential impacts of the development that has now been proposed for the site.

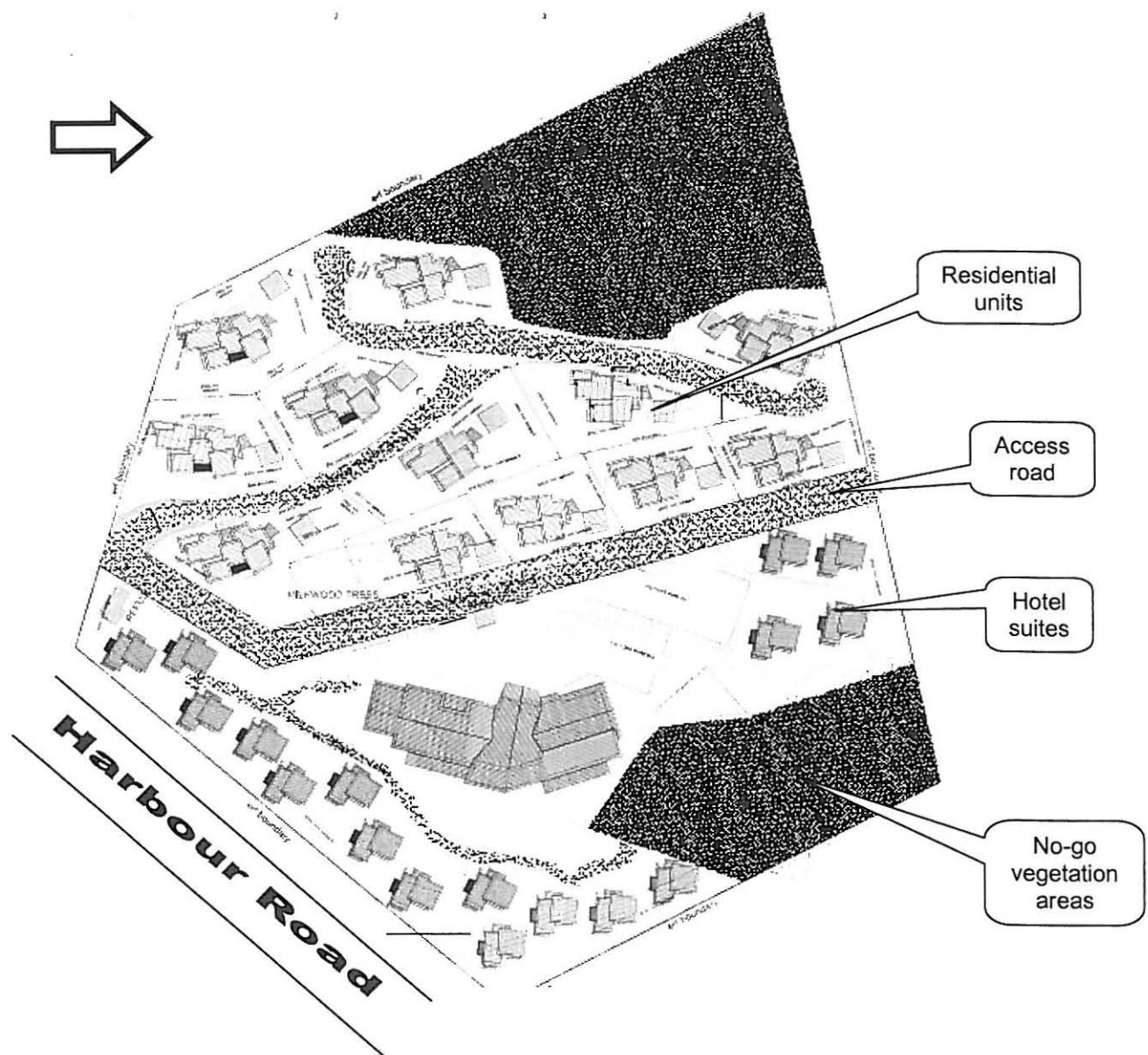


**Figure 1:** Map showing the location of the study site. The main map shows the entire area of Erf 4870, while the inset shows the area for which subdivision and rezoning is proposed.



## 2. PROJECT PROPOSAL

The proponents intend subdividing the 21.6061 ha property into three portions, with the upper portion (11.2387 ha) being ceded to South African National Parks. The middle portion (6.1917 ha), which has a single residential dwelling, would maintain the current zoning of 'rural'. The lower portion (4.1757 ha) would be rezoned and subdivided to allow for the proposed development. The proposed zonings on the lower portion would be 'single residential' and 'general residential (conditional use)', the latter being for the proposed hotel. The proposal incorporates approximately 12 single residential erven, a 34 suite boutique hotel and associated facilities (including a restaurant, spa, pool, function room, lounge, reception area and administration), road, parking and open spaces. While the houses would be served by a road, the hotel suites would be linked only by paths suitable for golf carts. The hotel facilities would be collected together into a central area just below the access road (Figure 2).



**Figure 2:** Proposed layout of the development (modified from Background Information Document provided by CCA).

The single residential properties would range in size from approximately 800 to 1 300 m<sup>2</sup> and each erf would accommodate a single storey, 220 to 260 m<sup>2</sup> house. The hotel suites would be accommodated in the form of double storey simplex clusters, with the lower floor cut into the slope.

The alignment of the current access road would be retained but would be upgraded in order to accommodate the predicted traffic flow. At present a 4 m wide gravel road exists but this would be widened to a 7 m surfaced road. The roads to service the 12 residential houses would be new.

### 3. HERITAGE LEGISLATION

The National Heritage Resources Act (NHRA) (No. 25 of 1999) protects a variety of heritage resources including palaeontological, prehistoric and historical material (including ruins) more than 100 years old (Section 35), human remains (Section 36) and non-ruined structures older than 60 years (Section 34). Landscapes with cultural significance are also protected. Under Section 38 (1) of the act the proposed development would "change the character of the site exceeding 5 000 m<sup>2</sup> in extent and therefore requires a Heritage Impact Assessment (HIA) to be undertaken. The initial survey of the affected property (Orton & Hart 2005) indicated that archaeology (Section 35) and human remains (Section 36) would be affected by development on the lower portion of the site. Landscape issues will be covered in the HIA, which is being undertaken by Quanita Samie of Vidememoria Heritage Consultants.

### 4. TERMS OF REFERENCE

The following specialist terms of reference were provided by CCA Environmental:

- 1 Describe the general archaeological and cultural heritage background of the area under consideration.
- 2 Provide a description of the archaeology and cultural heritage of the site and identify and map any sites of archaeological or cultural significance.
- 3 Assess the sensitivity and conservation significance of any sites of archaeological or cultural heritage significance affected by the proposed project.
- 4 Identify and assess the significance of the likely impacts of the proposed development on archaeology and cultural heritage.
- 5 Make recommendations on the protection and maintenance of any significant cultural heritage and/ or archaeological sites that may occur in the study area.
- 6 Identify practicable mitigation measures to reduce negative impacts on the archaeological resources and indicate how these can be incorporated into the construction and management of the proposed project.
- 7 Provide guidance for the requirement of any permits from the South African Heritage Resources Agency (SAHRA) that might become necessary.

## 5. DESCRIPTION OF THE AFFECTED ENVIRONMENT

Harbour Road is bordered to its northwest by a low cliff line. The study site lies above this cliff and extends between about 20 m and 90 m above sea level (Figure 2 & 3). The slope above the cliff is generally quite steep (slopes across the site vary from 1:5 from Harbour road to the top of site, 1:8 along the road servitude and 1:12 in other parts of the site) (Figures 4 & 5). The access road cuts the site from south to north angling upslope. This road has been cut into the slope to a depth of up to about 1 m and is approximately 4 m wide.

Dense vegetation is present over virtually the whole site and this varies in its composition. The preliminary botanical study undertaken on Erven 4869, 4870 & 4871, Hout Bay, identified patches of indigenous milkwoods on the lower slopes surrounded by Hangklip Sand Fynbos (Helme 2005). Several invasive alien species (e.g. Rooikrans and Australian myrtle) were also encountered but most have been cleared. Significantly, Helme (2005) also located a small spring near the 150 m contour. This would likely have provided drinking water to the prehistoric inhabitants of the area. The property is almost entirely undeveloped but a single unoccupied modern house is present in the middle portion of the site. The area around the house is generally quite disturbed.

The site is highly visible from Chapman's Peak Drive across the bay and also from the Hout Bay valley. It lies immediately upslope from the main part of the Hout Bay harbour.

## 6. ARCHAEOLOGICAL BACKGROUND

Outside of the Cape Point section of the Table Mountain National Park, intact Later Stone Age (LSA) shell middens on the peninsula are rare. A survey of the coastal areas of the Cape Peninsula in the late 1970s yielded a few sites (Olivier, n.d.), many of which are now either severely degraded or completely destroyed through development and other impacts. This review focuses on LSA sites in the Hout Bay valley.

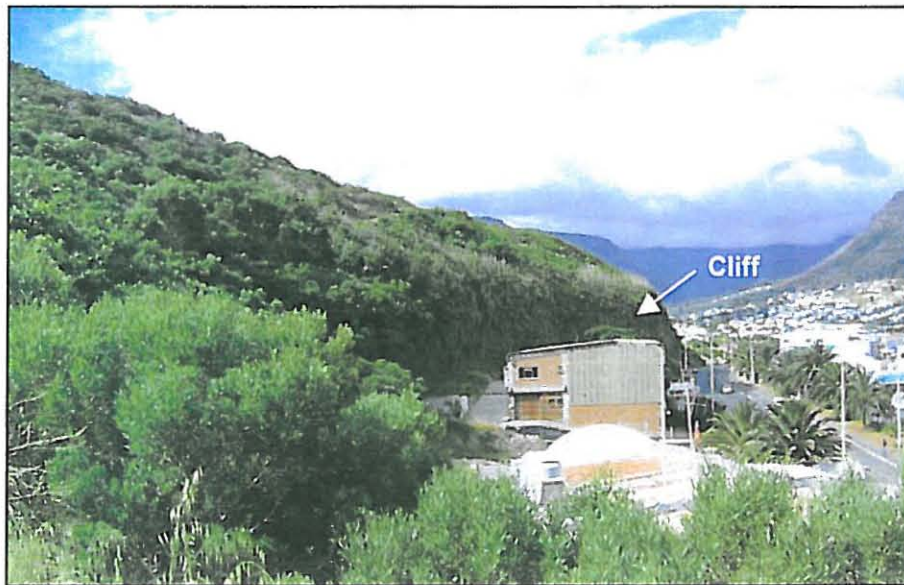
Few sites in the area have been excavated or sampled. One, Hout Bay Cave, is located directly below the proposed development site on Erf 4870. This site was badly disturbed by construction activities during enlargement of Harbour Road and a small rescue excavation of the remaining deposits was carried out by Buchanan (1977). He found limited material indicating LSA occupation within the last 2000 years. Radiocarbon dates obtained from Layers 5 and 2 respectively were about 240 AD (Pta-2037) and 640 AD (Pta-2035). The cultural finds included flaked stone artefacts a bored stone, ostrich eggshell and bone beads, a bone point, a single potsherd and two *Donax* scrapers (shell scrapers made on the edge of the shell of the white mussel, *Donax serra*).

The other excavated site in the area is Logies Rock Cave at Llandudno. This site was excavated by Rudner & Rudner (1956) in 1953. Many more items of material culture were found including many stone artefacts, ochre fragments, ostrich eggshell beads, perforated shells, bone tubes and beads, bone points and pottery. Their excavations showed that the site had been disturbed in recent times but nonetheless their collection remains a valuable comparative sample for peninsula archaeology.





**Figure 3:** View of the site from Hout Bay Beach. The dotted line indicates approximately where the development would be sited.



**Figure 4:** (left) View towards the northeast across the slope. The development would be situated on the slope above the structures in picture.

**Figure 5:** (right) View towards the southwest towards the cliff below the site. The approximate location of Hout Bay Cave, excavated by Buchanan (1977), is indicated by the red dot just above Harbour Road.

Rudner & Rudner (1954) also recorded sites in the dunes between Hout Bay and Sandy Bay where they found open shell middens rich in artefacts. Three burials were removed from a large midden by Townley Johnson while conducting amateur excavations. Unfortunately the poor quality of his work (shovelling without any sieving) resulted in the loss of vast amounts of valuable data. Rudner & Rudner (1954), in later visits to the remains of the site, were able to collect large numbers of pottery and stone artefacts including grindstones and bored stones. Recently a complete pot with four lugs was recovered from this area by local resident David Davies (pers. comm. 2007). This pot is the first whole pot to be found on the Cape Peninsula and demonstrates the value of finds that can still be made. A recent survey of Erf 3366, Hout Bay, found one small shell midden site on it (Halkett & Hart 1994). This site has since been destroyed without mitigation by residential development.

In the central part of the Hout Bay valley Hart & Halkett (1995) located two prehistoric shell midden sites. These were mitigated prior to development and found to contain pottery and beads but no stone artefacts (Hart 1995). Their study suggested that milkwood groves provided good shelter and that prehistoric sites are quite likely to be found under them. Not far from these sites another two LSA shell scatters were found (Hart 2004). One of these sites has since been destroyed by development while the other was deemed unworthy of sampling (Kaplan 2006a, 2006b). One other small open site has been excavated by M. Wilson in Hout Bay but this was never reported (Hart 1995).

Of more direct relevance to the current project, another LSA shell midden was recorded at the start of the access road to Erf 4870 where it meets Harbour Road (Halkett & Hart 1997). This site consisted primarily of a dense lens of shell, ash and charcoal. Given the realignment of the entrance to the access road and construction of the large retaining wall there, it is likely that this site has either been destroyed or severely compromised.

Middle Stone Age (MSA) artefacts have also been reported in the Hout Bay area (Inskeep 1976).

## **7. METHODS**

### **7.1. Site visit**

A foot survey of the site was conducted on 15<sup>th</sup> November 2005. At that stage a wider area was being considered for possible development and land outside of the currently proposed development footprint was also examined. In general we focussed more heavily on the lower reaches of the properties where Stone Age shell middens and scatters were more likely to be located, but limited survey of the higher slopes was also conducted.

Sites, features and the general landscape were recorded photographically and GPS positions of the sites were taken using a handheld GPS receiver on the WGS84 datum. Further photography of the property was conducted on 25 November 2007.

#### **7.1.1. Limitations**

Dense vegetation on site made it very difficult to examine the ground surface both from the point of view of impenetrability and also the thick leaf litter present in places. Aeolian dune sand is also likely to have obscured archaeological material that might be more deeply



buried. Given the sites that were recorded, it is considered likely that other sites will be present buried by sand and/or heavy leaf litter and that those reported are likely to be only a representative sample of the overall archaeological potential of the property. LSA sites will almost certainly be focussed on the lowermost slopes immediately above Harbour Road; the upper part of the property is of far less concern.

## 7.2. Assessment methodology and reporting

Since an initial survey and report had already been compiled, ACO were requested to limit this study to a desktop report based on the findings of the previous work undertaken.

The assessment has been conducted following the usual criteria employed by environmental practitioners. Intensity has been moderated to reflect the amount of impact that would occur (e.g. if only part of a site would be impacted then the intensity has been lowered). Due to the fact that impacts to archaeological sites are generally of high intensity and are always permanent, the significance ratings without mitigation always come out quite high when worked out in the standard way (i.e. a combination of extent, duration and intensity). Since archaeological sites have variable importance within their broader context, these significance ratings have been adjusted slightly to incorporate some idea of their general archaeological value.

## 8. FINDINGS

Four LSA sites were found on Erf 4870 and a further site was found adjacent to the access road to the south on Erf 4869. These are described in turn and numbered following Orton & Hart (2005), and their locations are plotted on Figure 6. The fifth site (which does not lie on Erf 4870) is also included, since it may well be impacted through the upgrading of the access road.

### 8.1. HB1

GPS co-ordinates: S 34° 02' 56.4" E 18° 20' 41.5"

Description: This site has been disturbed by the access road that crosses the property (Figure 7). It consists of a dispersed shell scatter on a low angled slope. The scatter appears to be quite large and is visible for at least 20 m in the road cutting. A burial was noted eroding from the edge of the road cutting.

Shell content: *S. argenvillei*, *C. granatina*, *S. barbara*, *Crepidula*, sp., *Burnupena* sp.

Other finds: Quartz and quartzite flakes.

Burial: Only the very top of the cranium was visible and it is certain that the entire burial is still intact. The cranium is in an upright position and facing approximately due north indicating that the body has been placed in a sitting position – typical of pre-colonial burial styles. The burial is located right on the edge of the existing access road and is therefore in a vulnerable position.

## 8.2. HB2

GPS co-ordinates: S 34° 02' 53.8" E 18° 20' 45.4"

Description: This site is a very large shell scatter with some patches having quite dense shell visible (Figure 8). The site is at least 30 m by 40 m in size and extends along the cliff top above Hout Bay Cave.

Shell content: *S. argenvillei*, *C. granatina*, *C. meridionalis*, *C. oculus*, *Burnupena* sp.

Other finds: Quartz, quartzite and cryptocrystalline silica (CCS) flakes and aeolianite fragments. One adze-like piece was observed in CCS (right-hand artefact in Figure 9). Some historical glass and ceramics are also present and seem to be an overprint relating to a later occupation of the area.

## 8.3. HB3

GPS co-ordinates: S 34° 02' 54.6" E 18° 20' 43.8"

Description: This site is a fairly ephemeral shell scatter occurring just below a branch off of the main access road. It is located down slope of another site (HB4) which lies above the road and the two may well be separate exposures of the same site.

Shell Content: *S. argenvillei*, *C. granatina*, *C. meridionalis*, *Burnupena* sp.

Other finds: Quartz flake.

## 8.4. HB4

GPS co-ordinates: S 34° 02' 53.7" E 18° 20' 43.0"

Description: This site is an extensive shell scatter located in and around a small borrow pit (Figure 10). The material revealed in section (Figure 11) indicates that the scatter may develop into a proper midden in places. The main horizon is located more than a meter below the surface but scattered shell seems to occur throughout the exposed depth, no doubt as a result of bioturbation.

Shell content: *S. argenvillei*, *C. granatina*, *S. granularis*, *C. meridionalis*, *S. cochlear*, *C. miniata*, *C. oculus*, *Burnupena* sp.

Other finds: Quartzite flakes, an upper grindstone, ochre, ostrich eggshell.





**Figure 6:** Google Earth aerial photograph of the development footprint indicating the positions of the four sites located on erf 4870. A further site that could be impacted by the road upgrade is also shown.





**Figure 7:** Site HB1 exposed in the cutting for the access road.



**Figure 8:** (left) The surface of part of HB2 showing the dense shell scatter.

**Figure 9:** (right) A glass fragment and three stone artefacts from HB2. Scale in cm.





**Figure 10:** The borrow pit in which the buried site of HB4 was located. The shell is in the standing sections of the pit.

### 8.5. HB5

GPS co-ordinates: S 34° 03' 01.1" E 18° 20' 37.6"

**Description:** This site is an extremely large scatter located on a very steep and thickly wooded section of hillside immediately above the lowermost portion of the access road on Erf 4869. It appears as though people may have been living on the slope under the trees and throwing all waste material down slope such that extensive scatters of shell built up amongst the trees.

**Shell content:** *S. argenvillei*, *C. granatina*, *S. barbara*, *S. granularis*, *S. cochlear*, *C. meridionalis*, *Burnupena* sp.

**Other finds:** Quartz and quartzite flakes, quartzite grindstones (including one very well worn upper grindstone), bone.





**Figure 11:** Part of the *in situ* shell layer at HB4. Scale in cm.



**Figure 12:** The shell scatter on the slope beneath the trees at HB5.



## 9. IMPACT ASSESSMENT AND CONCLUSIONS

Five LSA sites were found during the survey and, of these, four lie on Erf 4870 with the fifth being immediately alongside the access road further to the southwest. The proposed development would directly impact on three of these sites (HB1, HB3 & HB4) and mitigation would be required. HB5, although located off Erf 4870, may receive minor impacts during the road upgrade. Only HB2 may not be impacted by the current proposal as laid out in Figure 2 but this should be verified prior to mitigation. A summary of impacts related to the five sites is presented in Table 1.

During the last few decades, development on the Cape Peninsula has resulted in the loss of many archaeological sites, including several in the Hout Bay area. As such, the sites reported on here are seen as being important to the understanding of local archaeology and thus worthy of mitigation. Even very ephemeral sites far smaller than those found here have been shown to be of value in the interpretation of prehistoric land use (Orton 2007) and their importance should thus not be underestimated.

Due to the presence of a prehistoric burial on site HB1, it is the only site deemed to be of **HIGH** significance without mitigation. All the others should, however, still be regarded as having value in the context of local archaeology. Given the nature of the terrain the entire lower part of the property should be regarded as archaeologically sensitive, since buried material is very likely to be present. A review of available information from other sites suggests that it is unlikely that any such material would be of a nature that might prevent development of the site.

## 10. RECOMMENDATIONS

Based on the currently available field observations it is not easy to ascertain exactly the extent and nature of mitigation that will be required at each site. It is therefore suggested that a 'sliding scale' based on the excavated finds be employed during excavations. Three levels of mitigation are possible:

1. Initially each site should be subjected to limited sampling at multiple locations, primarily for shellfish. This would enable the content, richness and variability to be assessed. If remains other than shell are very poorly represented then this sampling would be adequate. One to three square meters at each tested location would probably suffice, depending on the shell densities encountered.
2. Should initial sampling reveal limited cultural material then the excavations should be expanded in order to capture a representative sample of this material.
3. Should initial excavations reveal extensive cultural material then the site(s) would be deemed to be of greater significance and should be subjected to larger scale excavations. Such sites have the potential to yield much information on the lives of their prehistoric occupants and are better suited to comparisons with sites in other areas.

Of course the possibility of uncovering further buried middens such as HB4 cannot be discounted and this might increase the amount of time required at such sites.

**Table 1:** Summary of archaeological impacts with and without mitigation.

Site	HB1		HB2		HB3		HB4		HB5	
	Without Mitigation	With Mitigation	Without Mitigation	With Mitigation	Without Mitigation	With Mitigation	Without Mitigation	With Mitigation	Without Mitigation	With Mitigation
<b>Extent</b>	Local	Local	Local	Local	Local	Local	Local	Local	Local	Local
<b>Duration</b>	Permanent	Permanent	Permanent	Permanent	Permanent	Permanent	Permanent	Permanent	Permanent	Permanent
<b>Intensity</b>	High	Medium	Medium	Low	High	Medium	High	Medium	Medium	Low
<b>Probability</b>	Definite	Definite	Probable	Definite	Definite	Definite	Definite	Definite	Probable	Definite
<b>Degree of confidence</b>	High	High	High	Medium	High	High	High	High	High	Medium
<b>Status of impact</b>	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative
<b>Significance</b>	High	LOW - MEDIUM	Low - Medium	VERY LOW	Medium	VERY LOW	Medium	VERY LOW	Low - Medium	VERY LOW

The nature of the visible archaeological material located during the survey suggests that all could be easily mitigated to make way for the proposed development on Erf 4870. It should be remembered, however, that subsurface excavation may reveal the presence of further valuable archaeological material. For this reason it is recommended that, from a purely archaeological point of view, the project should be allowed to proceed, but with provision for suitable mitigation being put in place. Of course final approval from Heritage Western Cape for the proposed development would be subject to the findings of the HIA.

The following recommendations are made with regards to the archaeology on Erf 4870:

- Further detailed survey of the lower slopes should be conducted in case of any omissions during the initial survey. Limited shovel testing should accompany this. Any new sites found will need to be incorporated into the mitigation program.
- Mitigation of the sites that would be impacted on Erf 4870 should be carried out as described above.
- An archaeological permit would need to be obtained from Heritage Western Cape to allow the excavations and exhumation to take place.
- Monitoring of all earth moving on the lower half of the site would need to take place after completion of archaeological excavations. This would enable any further archaeological occurrences to be identified at the earliest possible stage and sampled as necessary. The possibility of uncovering further prehistoric burials is also of concern here. Monitoring is deemed necessary due to the high likelihood of finding buried material.
- It should be noted that if any further burials are found during the course of development at a time when the monitoring archaeologist is not on site, work in the immediate vicinity of the bones should be halted and the skeleton reported to the archaeologist or SAHRA (Contact Mary Leslie on 021-462 4502). The burial would then need to be exhumed at the cost of the developer.

The above recommendations and extent of mitigation are subject to the approval of the Heritage Western Cape Archaeology Palaeontology and Meteorites (APM) committee.

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## **12. INVESTIGATION TEAM**

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Report:	J. Orton