

Archaeological Impact Assessment

**Proposed construction of a dwelling on Erf 167 Kleinbrak, Mossel
Bay Municipality, Eden, Western Cape**

prepared for

Ms. Cathy Avierinos
HilLand Associates Environmental Management Consultants
PO Box 590, George, 6530, Tel: (044) 889 0229, Fax 086 5425248
cathy@hilland.co.za

by



Centre for Heritage and Archaeological Resource Management cc

Peter Nilssen, CHARM, PO Box 176, Great Brak River, 6525
044 620 4936 | 0827835896 | peter@carm.co.za | www.carm.co.za

Executive Summary

In accordance with an ROD issued by Heritage Western Cape (HWC) on 20 April 2010 (ROD ID 914, Case ID 1049) for the above-named project, an Archaeological Impact Assessment (AIA) was conducted on 23 April 2010. The study area was accessible on foot and adequate ground surface was exposed for archaeological inspection and assessment.

The study area is partially disturbed by recent human activities including minor earthmoving, scattered refuse and building rubble, pedestrian tracks and evidence of old mole heaps were noted. Vegetation covers the bulk of the property and includes grasses, bush and a few small trees. Several alien species occur.

No earlier archaeological work was conducted in the study area or in similar contexts in the immediate surroundings. No tangible archaeological or heritage related resources were recorded in the study area. The study area is around 20m above mean sea level, so a substantial depth of dune sand deposits underlies the surface sediments. It cannot be ruled out that subsurface sediments contain currently undetected archaeological resources.

Provided that the below mitigation measures – if and as approved by HWC – are implemented, it is recommended that the proposed activity be approved.

The following is recommended;

- Because the presence of subsurface archaeological remains cannot be ruled out, archaeological monitoring of vegetation clearing and earthmoving activities should be conducted by a professional archaeologist in order to avoid or minimize potential negative impact. This monitoring will include that for palaeontological resources.*

Note that;

- If archaeological materials or heritage related resources are exposed during earth moving activities, HWC must be informed immediately and they must be dealt with in accordance with the National Heritage Resources Act (No. 25 of 1999).*
- If human remains are exposed during construction, the matter will fall into the domain of Heritage Western Cape (Mr. Nick Wiltshire – if prehistoric) or the South African Heritage Resources Agency (Ms Mary Leslie – if historic) and will require a professional archaeologist to undertake mitigation if needed.*

Table of Contents

Content	Page
Executive Summary _____	2
1. Introduction _____	4
1.1. Background _____	4
1.2. Purpose and scope of the Study _____	4
1.3. Study Area _____	4
1.4. Approach to the Study _____	5
2. Results _____	5
3. Sources of Risk, Impact Identification and Assessment _____	6
4. Required and Recommended Mitigation Measures _____	6
Figures and Plates _____	7

1. Introduction

1.1 Background

On 20 April 2010, Heritage Western Cape (HWC) issued an ROD for the proposed construction of a dwelling on Erf 167, Kleinbrak, Mossel Bay (ROD ID 914, Case ID 1049; see Figures 1 through 3). HWC requested that an Archaeological Impact Assessment (AIA) be conducted.

The proposed activity entails the construction of a single dwelling and the installation of associated services including a septic tank. Earthmoving activities will penetrate previously undisturbed sediments.

On behalf of the client, Ms. Cathy Avierinos of HilLand Associates Environmental Management Consultants appointed CHARM to conduct the required AIA (see contact details on title page). The AIA survey covered the residential Erf. Activities associated with the proposed activity may have a permanent negative impact on heritage related resources.

1.2. Purpose and Scope of the Study

Objectives of the Archaeological Impact Assessment are:

- To assess the study area for traces of archaeological and heritage related resources;
- To identify options for archaeological mitigation in order to avoid or minimize potential negative impacts; and
- To make recommendations for archaeological mitigation where necessary.

Terms of Reference (ToR):

- a) Locate boundaries and extent of the study area.
- b) Conduct a foot survey of the study area to identify and record archaeological and heritage related resources.
- c) Assess the impact of the proposed development on above-named resources.
- d) Recommend mitigation measures where necessary.
- e) Prepare and submit a report to the client that meets standards required by Heritage Western Cape (HWC) in terms of the National Heritage Resources Act, No. 25 of 1999.

1.3 Study Area

The coastal village of Kleinbrak is situated some 17km (10.5km in straight line) NNE of Mossel Bay on the Cape South Coast (Figure 1). The study area was reached by vehicle by taking the Klein Brak Rivier/Little Brak River exit from the N2 between Mossel Bay and George (see Figure 1 and red arrows in Figure 2).

Erf 167 is less than 0.1 ha in extent, and centered on S34.08704 E22.15243 (WGS84, Lat/Lon dec.deg.). Coordinate data for boundary points were not available at the time of compiling this report, but coordinate data for estimated points fixed by GPS are given in Table 1. The study area is a near level surface atop a coastal dune at an elevation of 20m above mean sea level (See Figure 3, Plates 1 & 2 and Table 1). Surface sediments include a mix of dune sand, humic sand and disintegrated scattered building rubble. A very low density of modern marine shell including brown mussel and oyster occur among modern

debris. It is expected that beach rock – common along this stretch of shoreline – occurs some 15 to 20m below ground surface.

The study area is partially disturbed by recent human activities including minor earthmoving associated with the construction of neighbouring houses and a road. Scattered refuse and building rubble, pedestrian tracks and evidence of old mole heaps were also noted. Vegetation covers the bulk of the property and includes grasses, bush and a few small trees. It appears that most plant species are alien to this area.

1.4 Approach to the Study

No earlier archaeological work was conducted in the study area or similar contexts in the immediate surroundings. Studies conducted by CHARM to the North and South and further inland than Erf 167 involved notably different contexts and are not comparable.

Coordinate data for the boundary points of Erf 167 were not available at the time of compiling this report, but estimated boundary points were fixed via GPS and coordinate data are given in Table 1 (also see Figure 3). Survey tracks were fixed with a hand held Garmin Camo GPS – using map datum WGS84 - to record the searched area (Figure 3, gpx tracking file submitted to HWC and is available from author). Photo localities were also fixed by GPS (Figure 3 and Table 1). Digital audio notes and a high quality, comprehensive digital photographic record were also made (full data set available from author). Numbers on Plates denote waypoint names and compass bearing names on arrows indicate the direction of views. Photo locality information is given in Figure 3 and Table 1.

Table 1. Coordinate data for study area and photo localities.

Name	Description img=image file snd=sound file	Datum: WGS 84 Lat/Lon dec.degrees	Datum: WGS 84 SA National	Grid:	m above mean sea level
Erf 167	centre of Erf 167 Kleinbrak	S34.08704 E22.15243	23 Y0078224 X3773640		20 m
38	property boundary point	S34.08703 E22.15218	23 Y0078247 X3773639		22 m
37	property boundary point	S34.08684 E22.15243	23 Y0078224 X3773619		21 m
35	property boundary point	S34.08723 E22.15243	23 Y0078224 X3773661		18 m
34	property boundary point	S34.08706 E22.15267	23 Y0078202 X3773643		20 m
41	img6823	S34.08710 E22.15260	23 Y0078208 X3773647		21 m
40	img6824-7	S34.08722 E22.15244	23 Y0078223 X3773661		19 m
39	img6820-2	S34.08708 E22.15266	23 Y0078203 X3773645		20 m
36	img6828-31 snd6831	S34.08709 E22.15238	23 Y0078228 X3773646		20 m
33	img6817-9 snd6819	S34.08685 E22.15226	23 Y0078240 X3773620		25 m

2. Results

In about 45 minutes the entire study area was inspected on foot. Around 40% of the ground surface was visible for archaeological inspection and assessment.

No tangible archaeological or heritage related resources were recorded in the study area. Situated some 20m above mean sea level, a substantial depth of dune sand deposits underlies the surface sediments. Given the proximity to the shoreline and the nearby presence of a rocky intertidal, it is possible that subsurface sediments contain currently

undetected archaeological resources. While it is unlikely that subterranean, fossil bearing geological deposits occur, this cannot be determined at present.

3. Sources of Risk, Impact Identification and Assessment

The proposed activity on Erf 167, Kleinbrak will involve earthmoving activities associated with the construction of a dwelling and associated services. These activities will penetrate previously undisturbed sediments, and although no archaeological or tangible heritage related resources were recorded, such resources may occur in a subsurface context. Archaeological monitoring during the earthmoving phase of construction will avoid or minimize negative impact on potential subsurface materials.

Table 2. Potential impact on and loss of archaeological resources with and without mitigation.

	With Mitigation	Without Mitigation
Extent	Local	Local
Duration	Permanent	Permanent
Intensity	Low to none	Medium to low
Probability	Low to none	Medium to low
Significance	unknown	unknown
Confidence	High	Moderate

Provided that recommended mitigation measures – if and as approved by Heritage Western Cape - are implemented, it is recommended that the proposed construction of a dwelling on Erf 167 be approved.

4. Required and Recommended Mitigation Measures

It is required that;

- If archaeological materials or heritage related resources are exposed during earth moving activities, HWC must be informed immediately and these resources must be dealt with in accordance with the National Heritage Resources Act (No. 25 of 1999).
- If human remains are exposed during construction, the matter will fall into the domain of Heritage Western Cape (Mr. Nick Wiltshire – if prehistoric) or the South African Heritage Resources Agency (Ms Mary Leslie – if historic) and will require a professional archaeologist to undertake mitigation if needed.

The following is recommended;

- Because the presence of subsurface archaeological remains cannot be ruled out, archaeological monitoring of vegetation clearing and earthmoving activities should be conducted by a professional archaeologist in order to avoid or minimize potential negative impact. This monitoring will include that for palaeontological resources.

Figures and Plates (on following pages)

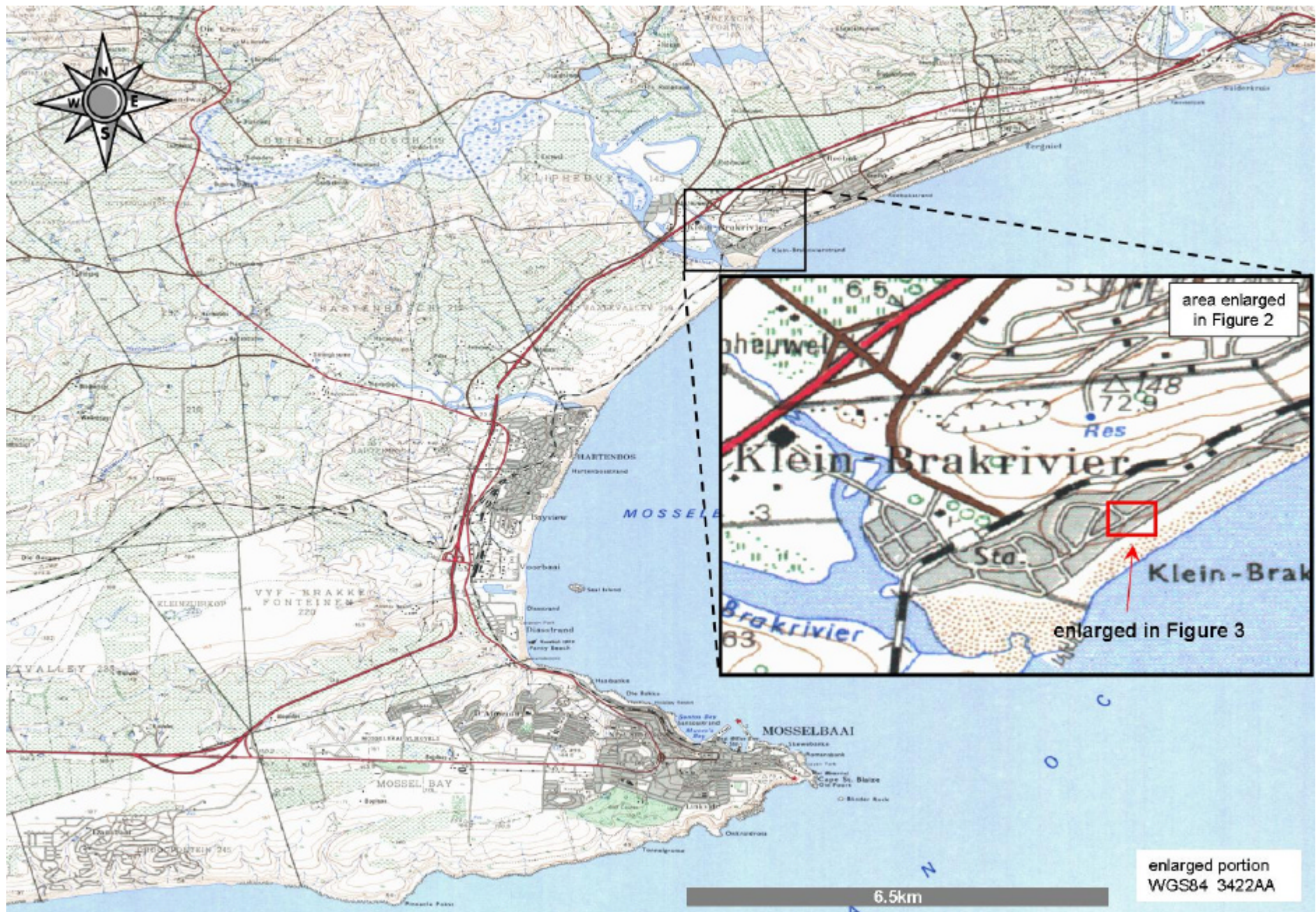


Figure 1. General location of Kleinbrak and the study area (red) NNE of Mossel Bay, Western Province.



Figure 2. Enlarged area as indicated in Figure 1 showing the access route, Kleinbrak and the study area (white frame).



Figure 3. Enlarged area shown in Figures 1 & 2 displaying the study area (red), walk tracks, waypoints and photo localities.



Plate 1. Panoramas of the study area showing surroundings, topography and vegetation cover. See Figure 3 and Table 1 for photo localities.



Plate 2. Examples of ground surfaces, modern marine shell and old building rubble.