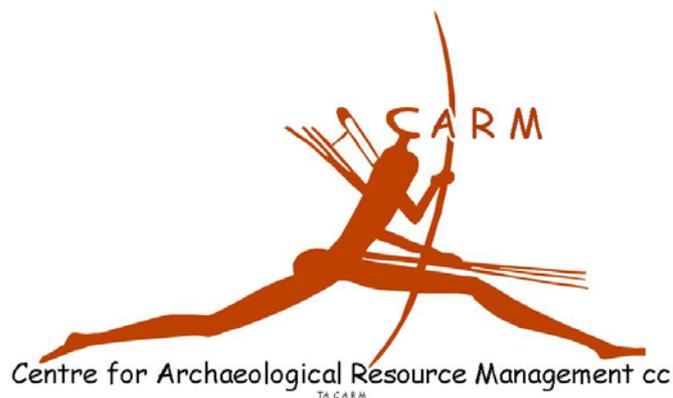


# Archaeological Heritage Impact Assessment

## Erf 1634, Sedgefield, Western Cape Province: Proposed Rezoning, Subdivision and Development

by

**Peter Nilssen**



**C A R M**  
PO Box 176  
Great Brak River  
6525

Company No. CK 2006\133900\23  
VAT No.

4 September 2006

**Executive Summary**

*The study area is densely vegetated with grass, shrub, bush, and thickets of indigenous and alien trees. As a result, the study was severely restricted by impenetrable vegetation. Inspection of ground surfaces was limited to existing pedestrian tracks, woodcutters' trails and a few clearings. No archaeological traces were observed.*

*If the proposed rezoning, subdivision and development is approved, then it is recommended that vegetation clearing and earthmoving activities are monitored by a professional archaeologist.*

## Table of Contents

<u>Content</u>	<u>Page</u>
Executive Summary .....	2
1. Introduction .....	4
1.1. Background .....	4
1.2. Purpose 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
Acknowledgement .....	6
References .....	7
Figures and Plates .....	7

# 1. Introduction

## 1.1 Background

Due to proposed rezoning, subdivision and development of Erf 1634, Sedgefield, HillLand Associates – Environmental Management Consultants appointed CARM to undertake an Archaeological Heritage Impact Assessment (AHIA) of the affected area as part of an Environmental Impact Assessment (EIA).

The proposal for development on the affected property is as follows:

- 70% for public open space that will be used for rehabilitation of vegetation and communal recreational purposes.
- 30% for residential erven of varying sizes and densities and a small zone for business and recreational purposes.

## 1.2. Purpose and Scope of the Study

The objectives of the AHIA are:

- To assess the study area for traces of archaeological materials;
- To identify options for archaeological mitigation in order to minimize potential negative impacts; and
- To make recommendations for archaeological mitigation.

Terms of Reference (ToR):

- a) Locate boundaries of Erf 1634, Sedgefield.
- b) Conduct a foot survey of the affected area in order to identify archaeological resources.
- c) Assess the impact of the proposed rezoning, subdivision and development on archaeological materials.
- d) Recommend mitigation measures where necessary.
- e) Prepare and submit a report to HillLand Associates – Environmental Management Consultants that meets standards required by Heritage Western Cape in terms of the National Heritage Resources Act, No. 25 of 1999.

## 1.3 Study Area

A detailed description of the study area including results of specialist studies is available at [www.hilland.co.za/eidownloads.htm](http://www.hilland.co.za/eidownloads.htm) Myoli Beach, Erf 1634, Sedgefield. Erf 1634 is situated in the south east portion of the existing coastal town of Sedgefield (Figures 1 and 2). The site is most readily accessible from Galjoen Road (via Kingfisher Dr and Leervis Road) in the south west and Volstruis Road in the north west. The western boundary of the property is some 400 m east of the Swartvlei river bank, while its southern and northern boundaries abut on existing residential developments (Myoli Beach to the south) as does a portion of its eastern boundary (Cola Beach). Erf 1634 is approximately 50 ha in extent and its boundary points, rounded to the nearest meter, are as follows (map datum WGS 84; see Figure 2):

ERF 1634 A, S34.02881 E22.80659 (decimal degrees), 23 Y0017862 X3766874 (SA Grid)  
ERF 1634 B, S34.02967 E22.80649 (decimal degrees), 23 Y0017871 X3766969 (SA Grid)  
ERF 1634 C, S34.02866 E22.81345 (decimal degrees), 23 Y0017229 X3766856 (SA Grid)  
ERF 1634 D, S34.03554 E22.81220 (decimal degrees), 23 Y0017343 X3767619 (SA Grid)  
ERF 1634 E, S34.03232 E22.80267 (decimal degrees), 23 Y0018223 X3767264 (SA Grid)  
ERF 1634 F, S34.03367 E22.80183 (decimal degrees), 23 Y0018301 X3767414 (SA Grid)

ERF 1634 G, S34.03287 E22.80112 (decimal degrees), 23 Y0018366 X3767325 (SA Grid)  
ERF 1634 H, S34.03026 E22.80324 (decimal degrees), 23 Y0018171 X3767035 (SA Grid)

The northern boundary of the property runs near the crest and along the seaward side of an east-west aligned dune. The height of this dune ranges from around 40 m in the west to around 60 m in the east. A second east-west oriented dune runs along the northern part of the property and its height ranges from 40 m in the west to around 80 m in the east. From the base of this steep-sided dune to the southern extent of the property is an undulating, thickly vegetated terrain that is some 5 to 10 m above mean sea level.

About 40% of the property is vegetated with indigenous flora while the remaining 60% includes alien species. Surface sediments in the study area consist exclusively of wind blown sands.

#### **1.4 Approach to the Study**

A heritage impact assessment conducted by Ms Kathleen Schultz concluded that no heritage or archaeological resources are present on the affected property ([www.hilland.co.za/eidownloads.htm](http://www.hilland.co.za/eidownloads.htm) [Myoli Beach, Erf 1634, Sedgefield]). No other archaeological work was conducted in the immediate vicinity of the affected area.

HilLand Associates – Environmental Management Consultants provided maps and coordinate data indicating the location and extent of the study area, which was readily located and accessed.

The study area was accessed by vehicle and then inspected on foot on 28 August 2006. Boundary points of Erf 1634 were located via a hand held GPS and GPS fixes were taken of the area covered during the foot survey (Figure 2). Records also include digital photography (a comprehensive photographic record is available from the author). Archaeological visibility is very poor and the vast bulk of the study area could not be inspected due to impenetrable vegetation (Plate 1). Nevertheless, pedestrian tracks, woodcutters' trails, some clearings and areas of earlier earthmoving activities were examined for archaeological traces (Plate 2).

## **2. Results**

Figure 2 shows the walking trail as fixed with a hand held GPS during the foot survey. Note that GPS signal is lost in areas with overhead bush and tree cover and therefore the walking trail in Figure 2 is not comprehensive. No traces of colonial or pre-colonial archaeological materials were recorded. Notwithstanding the severe limitation to visibility and access, the complete absence of marine shell is surprising. Inspection of the nearby shoreline revealed the lack of a rocky shoreline and hence absence of shellfish communities that could have provided human inhabitants with a source of marine protein (Plate 3).

An additional factor worth considering in an attempt to explain the invisibility and/or absence of pre-colonial archaeological traces is the depositional environment. The affected area includes two dune systems; 1) the 40 to 80 m high dunes are tentatively dated to 120 000 years ago and 2) the undulating landscape – at 5 to 10 m above mean sea level - south of these dunes is dated to around 6000 years ago (Hellstrom & Randall 2006 [in prep]). Aerial photography shows that, as recently as 1936, the area comprised a dynamic parabolic dune system that was stabilized during the 1940's by human interference (Hellstrom & Randall 2006 [in prep]). With respect to the deposition and preservation of anthropogenic materials, two potential scenarios are envisaged. Firstly, anthropogenic materials pre-dating the 120 000 year old dune sands – resulting from the associated low sea stand - lie deeply buried beneath the high dunes or were scoured and destroyed by the associated high sea stand. Secondly, anthropogenic deposits pre-dating the mid-Holocene high sea stand were

weathered and/or destroyed during that high sea stand and subsequent evidence for habitation is either buried within the now-stabilized dune sands or the dynamic dune environment was not suitable for human habitation.

**3. Sources of Risk, Impact Identification and Assessment**

- The proposed construction activities as outlined in 1.1 above will involve vegetation clearing and substantial earthmoving activities that could have a permanent and negative impact on archaeological resources. Although no archaeological occurrences were identified during this study, the limited nature of the investigation requires that vegetation clearing and earthmoving activities be monitored by a professional archaeologist.

Table 1 summarizes the potential impact of the proposed development on archaeological heritage resources with and without mitigation.

**Table 1. Potential Impact on and Loss of Archaeological Heritage Resources**

	<b>With Mitigation</b>	<b>Without Mitigation</b>
<b>Extent</b>	Local	Local
<b>Duration</b>	Permanent	Permanent
<b>Intensity</b>	Low to none	Unknown
<b>Probability</b>	Low to none	Unknown
<b>Significance</b>	Low to none	Unknown
<b>Status</b>	Low to none	Unknown
<b>Confidence</b>	High	High

**4. Required and Recommended Mitigation Measures**

The following measures are required:

- In the event that vegetation clearing and earthmoving activities expose archaeological materials, such activities must be halted and Heritage Western Cape must be notified immediately.
- Unmarked human burials may occur anywhere in the landscape and are often exposed during earthmoving activities. Human remains are protected by law and, if older than 60 years, are dealt with by the State Archaeologist at the South African Heritage Resources Agency (Mrs. Mary Leslie who can be reached at 021 462 4502).

It is recommended that:

- Vegetation clearing and earthmoving activities be monitored by a professional archaeologist. If significant archeological materials are exposed as a result of earthmoving activities, then archaeological mitigation in the form of collection and/or excavation and basic analyses may be required at the expense of developers.

**Acknowledgements**

We thank HilLand Associates – Environmental Management Consultants for supplying maps indicating the location and extent of the study areas.

## References

HillLand Associates – Environmental Management Consultants, 2006.  
([www.hilland.co.za/eidownloads.htm](http://www.hilland.co.za/eidownloads.htm)) [Myoli Beach, Erf 1634, Sedgefield].

Hellström, G.B. & Randall, J. 2006 (In Prep). Recent changes to a coastal parabolic dune system, Southern Cape Coast, South Africa.

**Figures and Plates** (on following pages)



Figure 1. Location of the study area relative to George, Western Cape Province. Portions of maps comprising this figure include – clockwise from top left - 3322c, 3322d, 3422b and 3422a.



Figure 2. Location of the study area relative to the Swartvlei River to the west. This map is an enlarged portion of 3422b. The purple line represents the boundary of the study area and the yellow line represents the tracks walked during this study. Letters A through H are boundary points.



Plate 1. Examples of vegetation cover in the study area. Top and bottom images were taken of the northern and southern portions of the property respectively.



Plate 2. Examples of areas where the ground surface is exposed for inspection. Top left shows the pedestrian trail that runs between the two high dunes in the northern part of the property while the top right image shows a clearing on the landward slope of the southernmost high dune. Bottom left and right images show a woodcutters' trail and area of former earthmoving activity respectively.



Plate 3. Views of the shoreline adjacent to the study area. Note the absence of rock and reef (pictures taken near time of low tide). Top and bottom pictures are views to the west and east respectively.