

# Archaeological Impact Assessment

## Proposed Construction of a Hotel on Gansevallei 444/38 (Plettenberg Bay), District Knysna, Western Cape Province

prepared for  
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082 568 4719, on behalf of  
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by



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## **Executive Summary**

*An Archaeological Impact Assessment was conducted on 25 March 2009. Due to thick ground cover, impenetrable vegetation and areas of wetland, only portions of the property were open to archaeological assessment. Recent disturbances to surface and near surface sediments include construction of a large house, landscaping and gardening associated with the house, a single track driveway, paddocks for domestic stock, pedestrian tracks and animal burrowing. Were heritage related resources to occur in formerly disturbed sediments, their context and significance are irreparably compromised.*

*Archaeological visibility was restricted to areas where vegetation was cleared and/or disturbed, paddocks, mole heaps and pedestrian tracks. A shallow profile, resulting from minor water erosion was inspected.*

*The only potential archaeological resources identified during the study are two small stone features that might represent burials of small children or some animals. No other heritage related resources were observed.*

*Given the presence of two potential graves and that pre-colonial archaeological materials may occur in subsurface dune sands where development is planned, it is recommended that the below mitigatory measure be implemented. If mitigatory measures - approved by Heritage Western Cape - are implemented, then it is recommended that the proposed project be approved.*

- Activities associated with the proposed hotel development including the operational phase will almost certainly have a negative impact on potential burials. Therefore, these should be investigated via all available sources for the historic period pertaining to Gansevallei and if deemed necessary, through archaeological excavation. If these are burials, they should be dealt with according to legislation and heritage guidelines.*
- Substantial disturbance of dune sands will be caused by construction activities and since the presence of subsurface archaeological remains cannot be ruled out, it is recommended that archaeological monitoring be conducted by a suitably qualified professional.*
- If archaeological materials are exposed during vegetation clearing and/or earth moving activities, then they must be dealt with in accordance with the National Heritage Resources Act (No. 25 of 1999) and at the expense of the developer. In the event of exposing human remains during construction, the matter will fall into the domain of Heritage Western Cape (Mr. Nick Wiltshire) or the South African Heritage Resources Agency (Ms Mary Leslie) and will require a professional archaeologist to undertake mitigation if needed.*

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# **1. Introduction**

## **1.1 Background**

As a result of the proposed construction of a hotel on a portion of Gansevallei 444/38, Plettenberg Bay, Western Cape Province (Figures 1 & 2), Mr. S de Kock of Perception Environmental Planning, on behalf of Mr Joep van Almenkerk – property owner, appointed CHARM to conduct an Archaeological Impact Assessment (AIA) of the affected property. Background and locality information as well as layout plans were provided by Mr. de kock and the client (see Figure 2).

Proposed construction and operational activities that may affect archaeological and heritage related resources include:

- vegetation clearing
- substantial earth moving activities
- construction activities
- increased pedestrian traffic

## **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 minimize potential negative impacts; and
- To make recommendations for archaeological mitigation

Terms of Reference (ToR):

- a) Locate alignment and boundaries 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 Mr. S de Kock of PERCEPTION Environmental Planning that meets standards required by Heritage Western Cape in terms of the National Heritage Resources Act, No. 25 of 1999.

## **1.3 Study Area**

Situated some 4km northeast by north of Plettenberg Bay, the property lies immediately north and east of the Goose Valley golf estate, is flanked to the east by a wetland, a low coastal dune system and the Keurbooms River while another, adjoining wetland and “small holding” lie to the northeast and north of a gravel road and turning circle that border the northern boundary (Figures 1 & 2). The proposed hotel development will be situated west of the existing house, on the landward side of a hill-like dune (Figure 2 & 3 and Plates 1a & 2f). Coordinate data for the property boundary points, indicated in Figure 3, are given in Table 1.

The study area was accessed by vehicle via the N2 from Plettenberg Bay and by turning right onto a gravel road immediately north of the Goose Valley golf estate (Figure 2). The property is around 8.6 ha in extent and the area to the east of the existing house is vegetated by indigenous species including thick bush, thicket and various grasses. Vegetation around the house and to the west is extensively disturbed and altered (Figure 2 and Plates 1 through 3).

The topography of the study area consists of variably undulating dunes with the highest point forming the base of the existing house. This dune slopes steeply toward the wetland in the east (Plates 1 & 2). Apart from silt and mud associated with the wetlands, geological sediments visible at the surface, in a small profile and in mole heaps are restricted to aeolian dune sands (Figure 2 and Plate 3g & k-m). No hard geological sediments were seen.

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

Two important archaeological repositories in the area include Matjies River Rock Shelter at Keurboomstrand to the North and numerous pre-colonial sites on the Robberg Peninsula including Nelson Bay Cave. The latter is especially significant as it houses a long archaeological record as well as evidence for climate change over a long period (Deacon & Deacon 1999). More recently, AIA's conducted in the area have identified archaeological materials of Middle Stone Age (MSA), Later Stone Age (LSA), Colonial and possible Early Stone Age (ESA) origin (Webley, 2004 and Yates 2006). The above demonstrate the archaeological sensitivity of this portion of the South African coastline.

On behalf of Mr. Almenkerk, PERCEPTION Environmental Planning provided background and locality information as well as layout plans for the proposed development. On 25 March 2009, the study area was accessed by vehicle and located by means of mapping and coordinate data. Due to thick ground cover, impenetrable vegetation and areas of wetland, only portions of the property were open to archaeological assessment (Figure 3 and Plates 1 through 3). Recent disturbances to surface and near surface sediments include construction of a large house, landscaping and gardening associated with the house, a single track driveway, paddocks for domestic stock, pedestrian tracks and animal burrowing. Archaeological visibility was restricted to areas where vegetation was cleared and/or disturbed, paddocks, mole heaps and pedestrian tracks (Figures 2 & 3 and Plate 3g & k-m). A shallow profile, resulting from minor water erosion was inspected.

Survey tracks – all on foot - were fixed with a hand held Garmin Camo GPS to record areas covered during the survey (Figure 3, gpx tracking file available from author). Observations, photo localities and potential archaeological occurrences were also fixed by GPS (Figure 3). Notes and a high quality, comprehensive digital photographic record were made (full data set available from author).

## **2. Results**

In about 2.5 hours of survey a distance of 5.2 km was walked, covering an area of some 3 ha, of which around 50% provided good archaeological visibility. That 50%, however, includes sediments disturbed by various agents as described above. As a result, any heritage related resources that might occur in these disturbed surfaces and near surface sediments are not likely in primary context.

The only potential heritage resources identified on the property are two small cobble stone features that might represent burials of small children or some animals (see red dots numbered 1 and 2 in Figure 3, and see Plate 3n-p). Both stone features appear older than any of several dumps of cobbles almost certainly associated with more recent construction activities on the property. Lower stones are well embedded in sands and several have patches of lichen on exposed surfaces (Plate 3n-p). No other heritage related resources were observed.

**Table 1. Coordinate data for property boundary points and potential archaeological occurrences (see Figure 3).**

Name Description		Grid: South African Datum: WGS 84	Elevation
A	boundary point	23 Y-035705 X3766371	
B	boundary point	23 Y-035911 X3766439	
C	boundary point	23 Y-036161 X3766406	
D	boundary point	23 Y-035975 X3766674	
E	boundary point	23 Y-035647 X3766549	
1	stone feature	23 Y-035760 X3766400	9 m
2	stone feature	23 Y-035766 X3766405	11 m

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

- The proposed development of a hotel and associated services and infrastructure will involve vegetation clearing, earthmoving activities and increased pedestrian traffic that could have a permanent negative impact on archaeological resources.
- Development activities will penetrate sediments unaffected by previous disturbances as well as previously undisturbed areas. It cannot be ruled out that archaeological materials occur in undisturbed sands. Archaeological monitoring of vegetation clearing and earthmoving activities associated with the proposed project will avoid and/or minimize negative impacts.

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

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

	With Mitigation	Without Mitigation
<b>Extent</b>	Local	Local
<b>Duration</b>	Permanent	Permanent
<b>Intensity</b>	Low	Unknown
<b>Probability</b>	Low	Unknown
<b>Significance</b>	Unknown	Unknown
<b>Status</b>	Unknown	Unknown
<b>Confidence</b>	High	High

Provided that mitigatory measures - approved by Heritage Western Cape - are implemented, it is recommended that the proposed project be authorized.

#### **4. Required and Recommended Mitigation Measures**

The following measures are required in terms of the NHRA of 1999:

- In the event that vegetation clearing and earthmoving activities expose archaeological or paleontological materials, such activities must stop and Heritage Western Cape must be notified immediately.
- If archaeological materials are exposed through vegetation clearing or earthmoving activities, then they must be dealt with in accordance with the National Heritage Resources Act (No. 25 of 1999) and at the expense of the developer(s) and/or property owner(s).
- Unmarked human burials may occur anywhere in the landscape and are often exposed during earthmoving activities. Human remains are protected by law and are dealt with by Heritage Western Cape (Mr. Nick Wiltshire 021 483 9685) or 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:

- Activities associated with the proposed hotel development, including the operational phase, will almost certainly have a negative impact on potential burials identified during the AIA. Therefore, these should be investigated via all available sources for the historic period pertaining to Gansevallei and if deemed necessary, through archaeological excavation. If these are burials, they should be dealt with according to legislation and heritage guidelines.
- Full time archaeological monitoring of vegetation clearing and earthmoving activities should be conducted by a suitably qualified professional. This measure will ensure that potential negative impact on archaeological materials is avoided or minimized

#### **References**

Deacon, H. J & Deacon. J. 1999. Human Beginnings in South Africa: Uncovering the secrets of the Stone Age. David Philip: Cape Town.

Webley, L. 2004. Phase 1 Archaeological Impact Assessment of Portions 8 and 43 of Ganse Vallei 444, Plettenberg Bay. Unpublished report prepared for Grant Johnston Associates cc.

Yates, R. 2006. Archaeological Heritage Scoping Report: Dune Park Resort Upgrade - Part of Portion 9 of the farm Matjiesfontein No. 304, Plettenberg Bay: Unpublished report prepared for Sharples Environmental Services by Mossel Bay Archaeology Project: Cultural Resource Management.

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



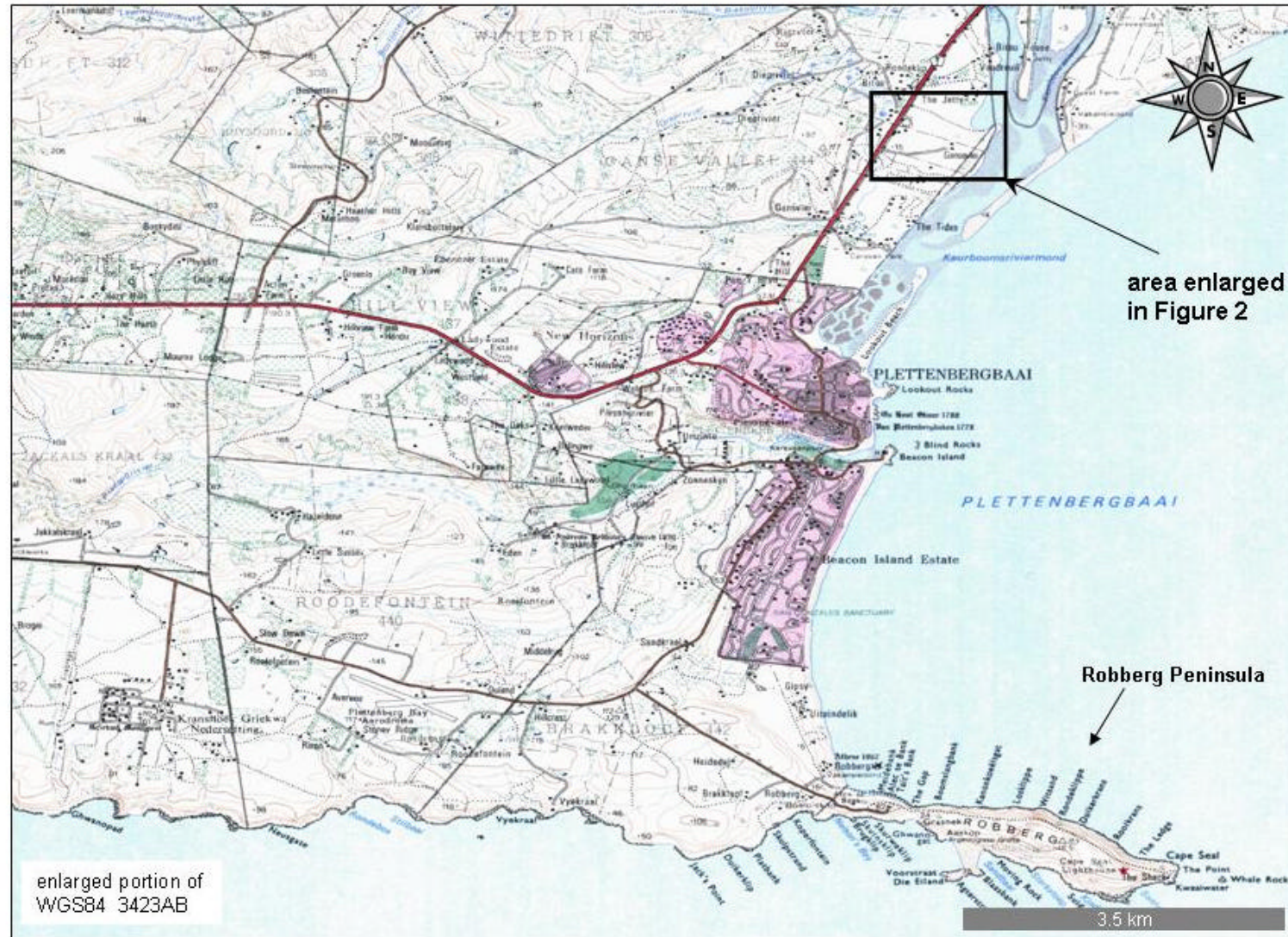


Figure 1. General location of study area – framed in black - relative to Plettenberg Bay and the Robberg Peninsula.



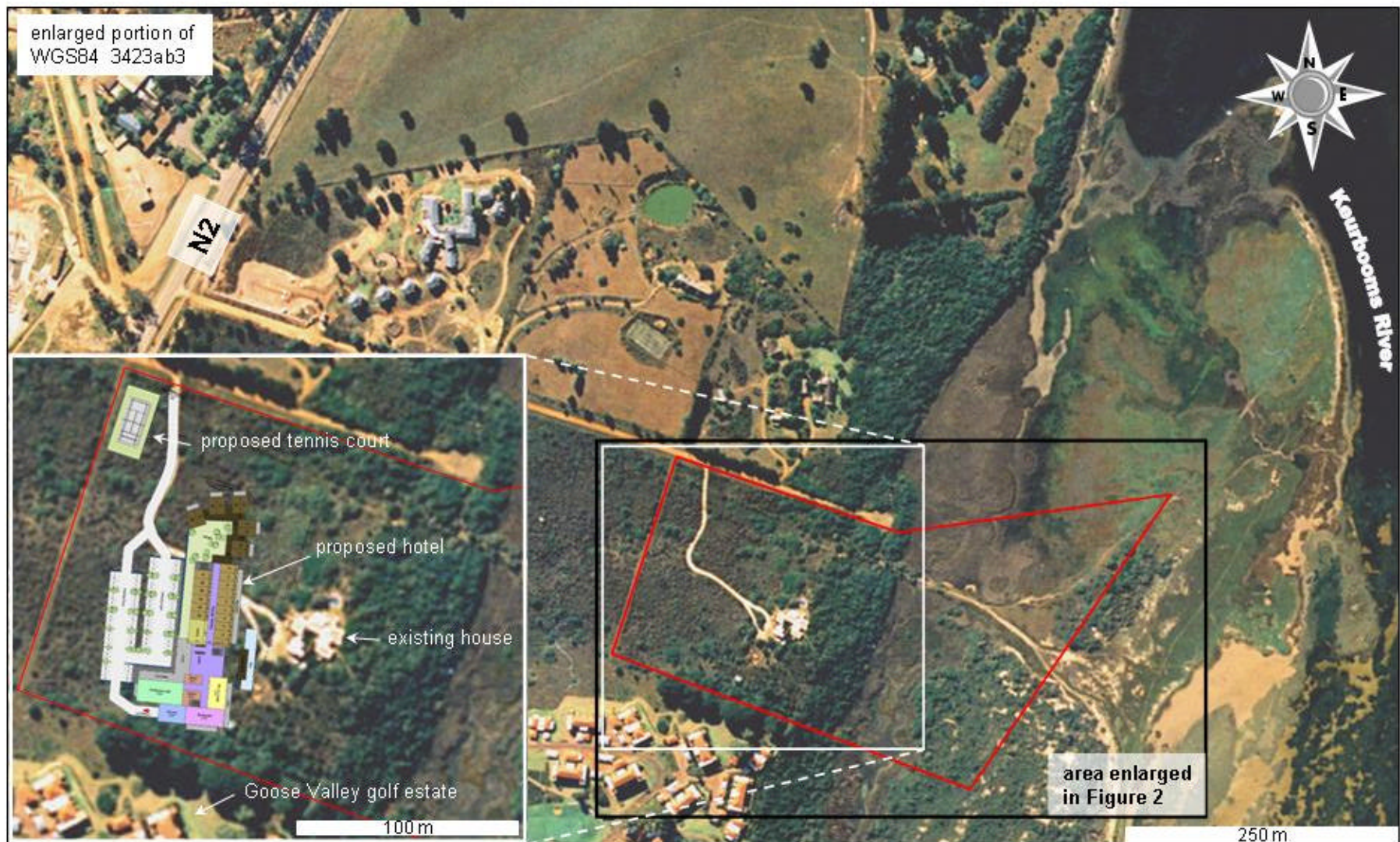


Figure 2. Enlarged area as indicated in Figure 1 showing outline of study area in red overlaid on DWAF aerial photograph. Insert illustrates position and layout plan of proposed hotel development overlaid on DWAF aerial photograph (layout plan from client).



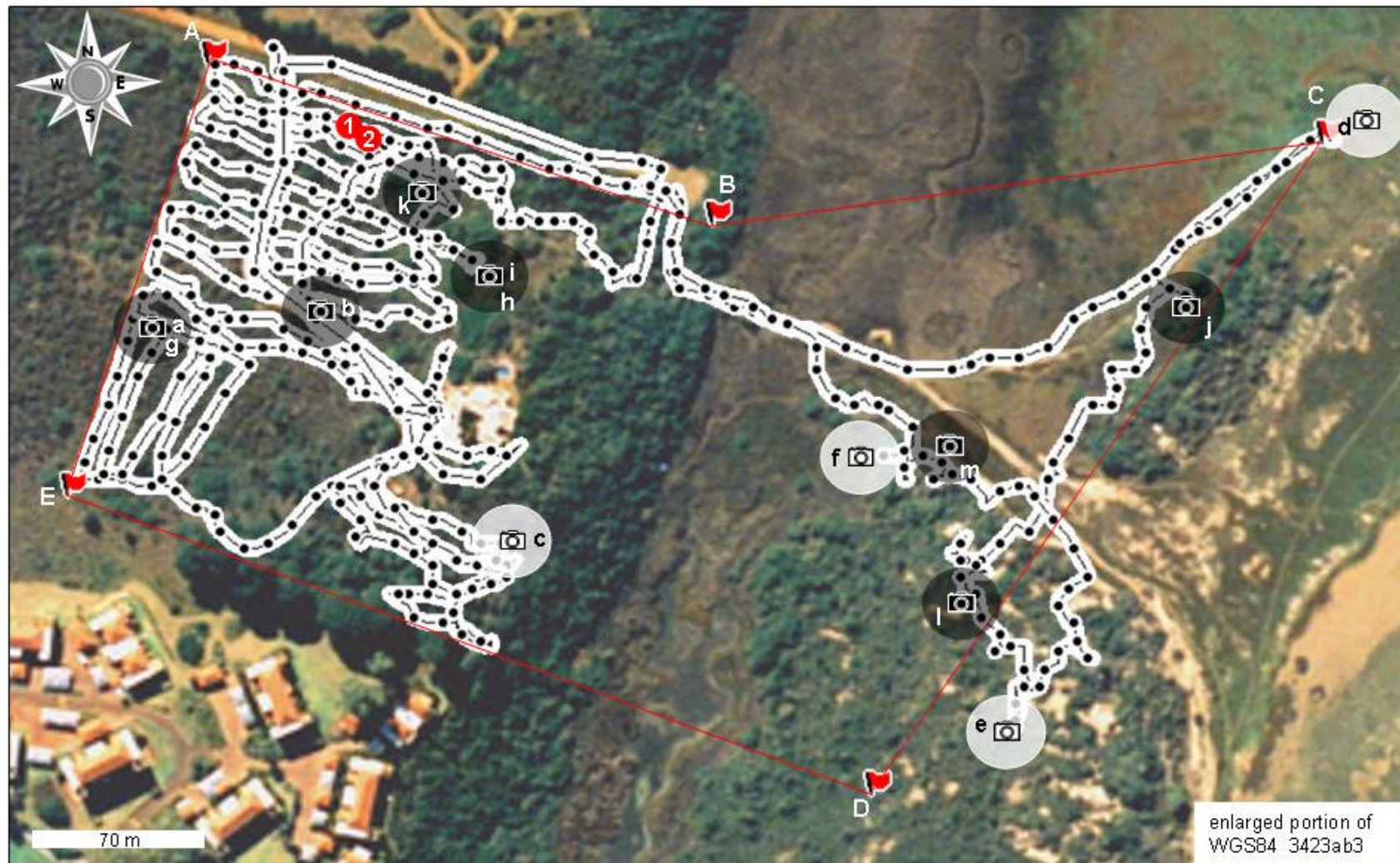


Figure 3. Enlarged area as indicated in Figure 2 showing study area outlined in red, boundary points marked with labeled red flags (coordinate data given in Table 1), survey tracks – white & black lines - fixed by GPS and waypoints (numbered red dots) representing potential heritage resources. Camera icons denote photo localities while associated lower case letters indicate direction of views shown in Plates 1 through 3.





Plate 1. Images a through c are panoramas consisting of 3 to 4 stitched photographs – line of stitching mediocre in middle top of image c - ranging from around 100° to 160° in extent. Images show topography, vegetation type and cover, as well as the general nature of the study area. See Figure 3 for photo localities and orientations.

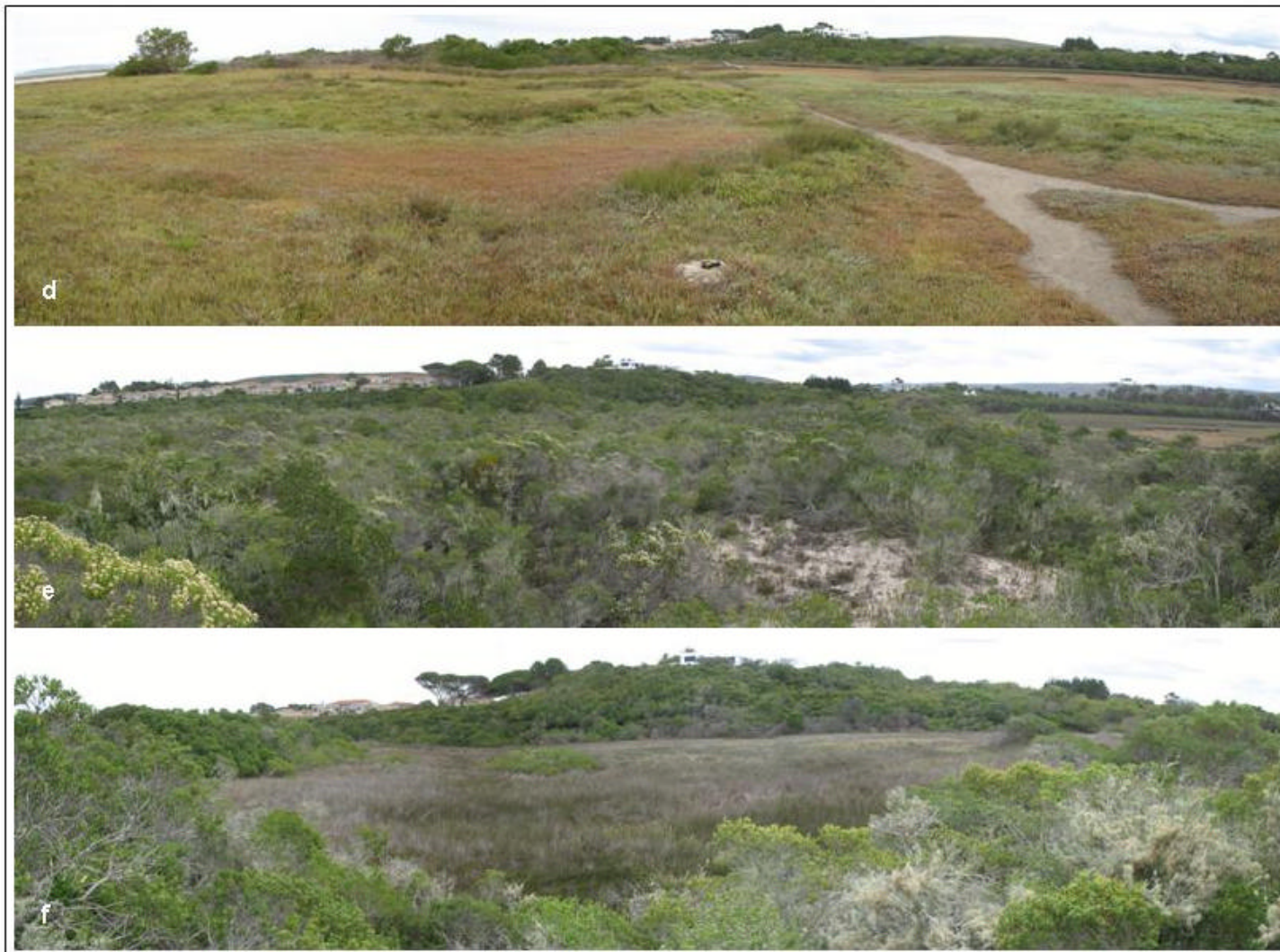


Plate 2. Images d through f are panoramas consisting of 2 to 3 stitched photographs ranging from around 70° to 140° in extent. Images show topography, vegetation type and cover, as well as the general nature of the study area. See Figure 3 for photo localities and orientations.





Plate 3. Images g (panorama), k, l & m show mole activity and exposed sediments whilst h through j show examples of vegetation and ground cover. Potential heritage resources are shown in images n, o & p and are represented by numbered red rods in Figure 3. Garmin Camo hand held GPS for scale. See Figure 3 for photo localities and orientations.