

**PROPOSED REZONING AND DEVELOPMENT OF REMAINDER PORTION VYF-  
BRAKKEFONTEIN 220, HARTENBOS HEUWELS, MOSSEL BAY**

**ARCHAEOLOGICAL HERITAGE IMPACT ASSESSMENT**

**FINAL REPORT**

**Prepared For:**

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## **Executive Summary**

A foot survey conducted on 9 April 2005 Remainder Portion Vyf-Brakkefontein 220, Hartenbos Heuwels, Mossel Bay revealed that archaeological resources are all but absent and that only a few isolated Middle Stone Age (MSA) stone artefacts were identified. Artefact scatters may be located in currently vegetated areas or in the ground though the assessment made here indicates this to be unlikely. No rock shelters or caves were seen and no traces of Later Stone Age or Pottery Period (Herder) occupation were found. No structures relating to the built environment or marked graves occur in the study area.

Due to the near absence of archaeological resources in the study area, it is recommended that archaeological mitigation is not required. Artefacts may be exposed during vegetation clearing and earthmoving activities and therefore recommendations are made to avoid and/or minimize destruction of currently undetected archaeological materials. Since archaeological occurrences were found during this study a permit must be obtained from Heritage Western Cape to damage and/or destroy material as the National Heritage Resources Act No. 25 of 1999 protects them.

The proposed development at Remainder Portion Vyf-Brakkefontein 220, Hartenbos Heuwels will have no obvious negative impact on archaeological resources provided that requirements and recommendations are considered.

## **1. Introduction**

### **1.1 Background**

Due to the proposed rezoning and development of Remainder Portion Vyf-Brakkefontein 220, Hartenbos Heuwels, Mossel Bay; SRK Consulting Engineers & Scientists (SRK) appointed the Mossel Bay Archaeology Project: Cultural Resources Management CC (MAPCRM CC) to undertake an Archaeological Heritage Impact Assessment (AHIA) as part of the Environmental Impact Assessment (EIA).

The proposal for development includes construction of:

- 150 – 200 middle income houses;
- 5 group housing schemes comprising approximately 120 units;
- Internal access roads; and
- Associated infrastructure, e.g. sewerage, electrical and water connections.

### **1.2. Purpose and Scope of the Study**

Archaeological heritage resources differ in a fundamental and crucial way from most other environmental assets; they are entirely irreplaceable and not renewable. Rapid and widespread development is a serious threat to such resources. Unless long-term conservation, mitigation and management plans are put in place, where necessary, archaeological heritage resources are in danger of being lost forever.

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 the property boundaries of Remainder Portion Vyf-Brakkefontein 220, Hartenbos Heuwels, Mossel Bay.
- b) Conduct a foot survey of the above-named property in order to identify archaeological resources.
- c) Assess the impact of the proposed rezoning and development on archaeological materials.
- d) Recommend mitigation measures where necessary.
- e) Prepare and submit a report to SRK that meets standards required by Heritage Western Cape in terms of the National Heritage Resources Act, No. 25 of 1999.

### **1.3 Study Area**

The study area of some 54 hectares is situated approximately 5km northwest of Mossel Bay and about 1.5km west of Bayview and Hartenbos with the property's eastern boundary about 200m from the N2 (Figures 1 & 2). Immediately north of the eastern half of the property is the relatively new development of Hartenbos Heuwels (Plate 1) and to the south are new developments including Seemeeu Park (Plate 2). A quarry lies immediately south of the eastern extent of the property and a railway line runs along the southwestern boundary (Figure 3).

The topography includes rolling hills and valleys as well as an extensively damaged valley in the northern half of the study area (Plates 1 & 3). The damage appears to be the result of substantial earthmoving activities and subsequent erosion. Apparently the central plateau was recently “brush cut” and probably ploughed in recent history (Plate 4). Traces of Enon Conglomerate appear across most of the area and makes up the immediate substrate (Plate 4). The central part of the property is a plateau with an east-west trajectory and slopes descend to the north and south of it.

While indigenous vegetation makes up the bulk of flora (Plate 5), certain areas include a substantial component of Rooikranz, particularly in the damaged area referred to above (Plates 1 & 3).

The property is easily accessed by; turning off from the old N2 (now the R328) at the signpost for Hartenbos Heuwels and Seemeeu Park; crossing the N2 by bridge, and then taking the first left and then the first road left again. After a sharp bend to the right this road runs parallel to the N2 and a gravel road to the right is currently signposted as “Highlands Estate”. This gravel road runs on the southern edge of the heavily damaged valley and onto the central plateau referred to above (see Figure 2).

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

No previous archaeological study was conducted in or near the property in question and therefore no reports were consulted. While the property is part of a farm – Vyf-Brakkefontein 220 - built structures are entirely absent and therefore no heritage/historical investigation was conducted. Although numerous archaeological sites and deposits occur on the plateau and in cliffs from the point of Mossel Bay to Danabaai, the environment and geology of the current study area is notably different from the above-mentioned area. No assumptions or predictions could be made, therefore, regarding the potential presence of archaeological occurrences in this study.

SRK provided maps showing the location and extent of the property, but coordinate data for boundary points were not obtained. Due to this and because the northwest boundary points of the study area are not demarcated, these were difficult to estimate even from a topographic map. The southern boundary was easily located as it is fenced. GPS readings taken during the study show that the entire property was investigated during the AHIA.

The property was accessed by vehicle as described above and areas not covered by dense vegetation were inspected on foot on 9 April 2005. An area of approximately 70 hectares was covered during the study. The area covered is somewhat larger than the extent of the property as it was difficult to locate the north and northwest boundary points (Figure 3). The main limitation to the study was poor visibility of the ground surface due to a high percentage of vegetation cover (>70%). Nevertheless, inspection of the quarry, clearings, damaged and eroded areas as well as vehicle tracks allowed for a good assessment of the archaeological sensitivity of the study area.

GPS readings of the surveyed area, features/landmarks (for rectification purposes), and an MSA artefact were taken with a handheld instrument (Garmin Etrex Summit) using the Map Datum WGS 84 and a digital photographic record of the study were made. Complete records of these data are available on request. The few additional artefacts seen were clearly in secondary context and are not included here.

## **2. Description of the Affected Environment**

A basic description of certain aspects of the study area and access to it are given in section 1.3 above. As mentioned above, the northern part of the property - roughly 25% of the total area – is heavily damaged by earthmoving activities and subsequent erosion

(see Figure 3 and Plates 1 & 3). The large plateau, roughly in the centre of the property, is also disturbed by former farming activities and numerous vehicle tracks and roads were seen (Plate 4).

Although vegetation cover is high, enough ground is visible in most parts of the study area to report that there are outcrops of water worn cobbles originating from Enon conglomerates. Surface sand in the un-vegetated and disturbed areas is very thin and the bulk of visible ground surfaces include outcrops of Enon conglomerates.

Indigenous flora dominates on the property though stands of alien Rooikrans are present and are particularly common in the disturbed and eroded ravine in the northern part of the property. Plate 5 shows examples of the variety of vegetation in the study area and lower case letters in Figure 3 denote the locations where labeled thumbnails were taken.

### 3. Results

The foot survey focused on closer inspection of ground surfaces that were not thickly covered with vegetation. As mentioned above, the surface of the ground is not visible for the vast part of the property. GPS readings were taken at regular intervals and where an isolated MSA artefact was found.

1. The only archaeological occurrence that may be in reasonable proximity to its original place of deposition is an isolated MSA stone artefact in quartzite (Plate 6). This artefact was located at S34.13476 E22.09742 in a patchily vegetated area close to the southeastern boundary fence (red dot [1] in Figure 3). This artefact was not in association with other archaeological materials. Due to former farming activities and vehicular traffic, it is possible that the artefact is in secondary context.

Although a few additional MSA and possibly ESA artefacts were seen, they were unequivocally in disturbed contexts and are therefore not reported here. No rock shelters or caves were seen and no traces of Later Stone Age or Pottery Period (Herder) occupation were found. No structures concerning the built environment or marked graves occur in the study area. Table 1 summarizes the results of the foot survey and presents recommendations for mitigation.

**Table 1. Age, significance and recommended mitigation (mandatory in bold) for discovered archaeological occurrence. HWC = Heritage Western Cape**

Site Number	Period/Age	Significance	Mitigation
1	MSA	Local	Archaeologist to provide guidelines for identification and action re Stone Age artefacts. <b>Obtain permit from HWC for damage/destruction</b>

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

- The proposed development 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. No significant sites were identified during this study however, and the assessment made is that the property is not archaeologically sensitive.
- Associated impact of development in the form of increased vehicular and pedestrian traffic may impact archaeological resources that are not currently visible. The

environment and geology of the study area strongly indicate that the presence of archaeological sites of significance is unlikely.

This assessment concludes that archaeological mitigation is not required, but that a professional archaeologist should provide guidelines for the identification of archaeological materials and actions to take if archaeological materials are identified during construction-related activities. Table 2 summarizes the potential impacts of the proposed development on archaeological heritage resources.

**Table 2. Potential Impact on and Loss of Archaeological Heritage Resources**

	<b>Without Mitigation</b>	<b>Assuming Mitigation</b>
<b>Extent</b>	National	Local
<b>Duration</b>	Permanent	Permanent
<b>Intensity</b>	Indeterminate	Medium to low
<b>Probability</b>	Low	Low to none
<b>Significance</b>	Medium to low	Low to none
<b>Status</b>	Indeterminate	Indeterminate
<b>Confidence</b>	High	High

## 5. Required and Recommended Mitigation Measures

The following measures are required:

- The National Heritage Resources Act, No. 25 of 1999, protects archaeological occurrences and therefore a permit for damage and/or destruction must be obtained from Heritage Western Cape prior to any vegetation clearing and earthmoving activities.
- 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:

- An archaeologist provides the appointed Environmental Control Officer with guidelines and regulations concerning identification of Stone Age artefacts. This document should be used to educate contractors and employees about the identification of stone artefacts if any are exposed by construction-related activities. This recommendation ties in with the second requirement above.
- If significant archeological materials are exposed as a result of construction activities, archaeological mitigation in the form of collection and/or excavation and basic analyses will be required at the expense of developers.

## Acknowledgements

We thank SRK Consulting Engineers & Scientists for supplying maps indicating the location and extent of the study area.

## Figures and Plates (on following pages)

Figure 1. Location of study area – framed - in relation to Mossel Bay, Western Cape Province.

Figure 2. Enlarged area as indicated in Figure 1. The study area and proposed site for rezoning and development is shaded in green. Dashed line indicates access route.

Figure 3. Enlarged area as indicated in Figure 2. The area covered during the AIA is shaded orange and includes the area shaded blue. The red dot represents GPS coordinates for an isolated MSA stone artefact (details in text and plates). Severely damaged and eroded area is indicated with blue shading.

Plate 1. View toward the northern boundary of the study area showing the damaged valley and the location of Hartenbos and Hartenbos Heuwels. The gravel road at the right is the access road used to get onto the plateau in the centre of the property. Dense stands of alien Rooikranz are visible in the valley and foreground.

Plate 2. View toward the southern boundary (dashed yellow line) of the study area showing the new development of Seemeeu Park and the location of the point at Mossel Bay. The gravel road at the right is an access road to get onto the property and plateau.

Plate 3. View toward the south with the central plateau in the background. Large areas of disturbance and erosion can be seen in the valley and northern slopes of the plateau. Dense stands of alien Rooikranz are visible in the valley and foreground.

Plate 4. View toward the east standing atop the central plateau with Hartenbos, Bayview and the point at Mossel Bay indicated. In the foreground the gravel road is littered with Enon-derived, water worn cobbles. Numerous vehicle tracks occur on the brush cut plateau.

Plate 5. A variety of vegetation types occurring on the property are shown. The views are toward the northwest (a), west (b), east (c) and west-southwest. Lower case letters in Figure 3 indicate the locations where thumbnails were taken.

Plate 6. Top picture shows context of the MSA core (bottom) and its location is indicated in Figure 3 (1).

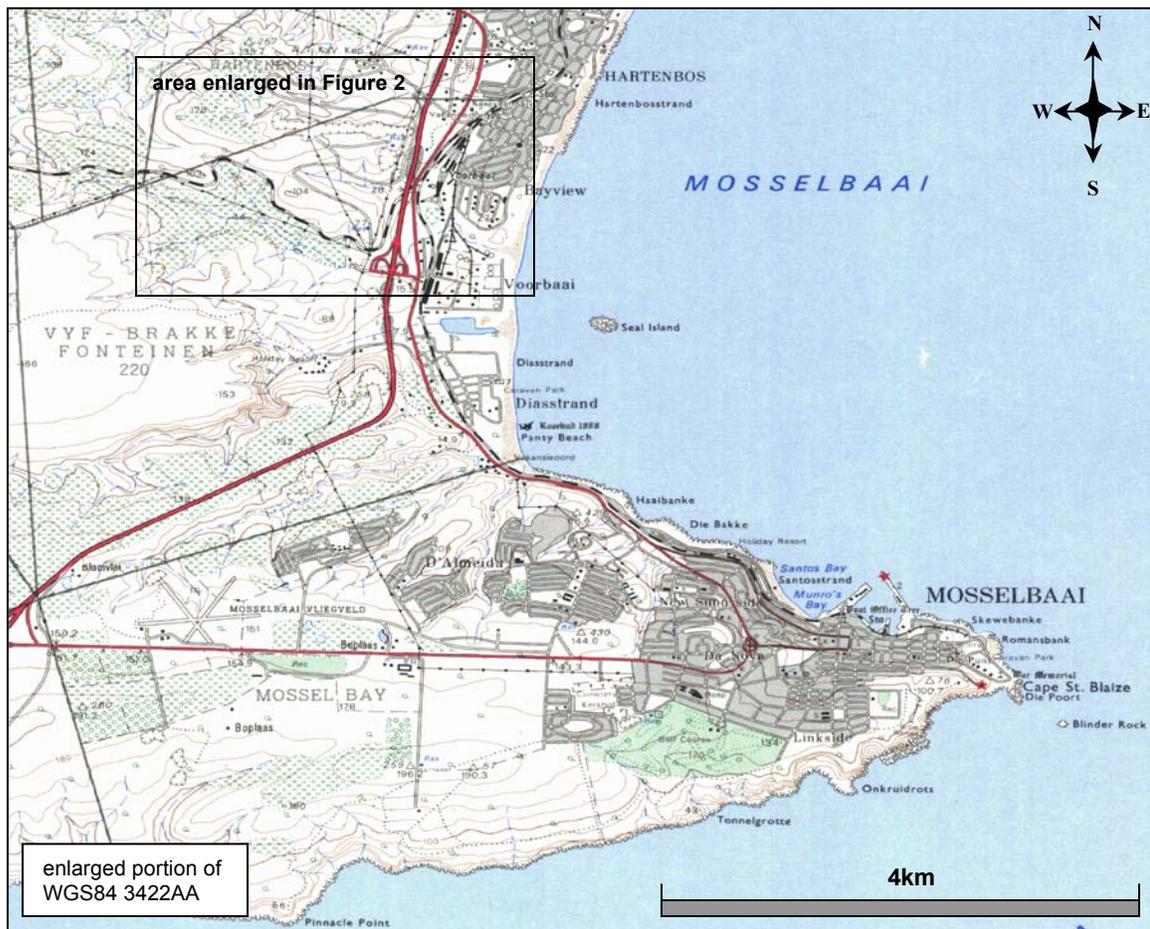


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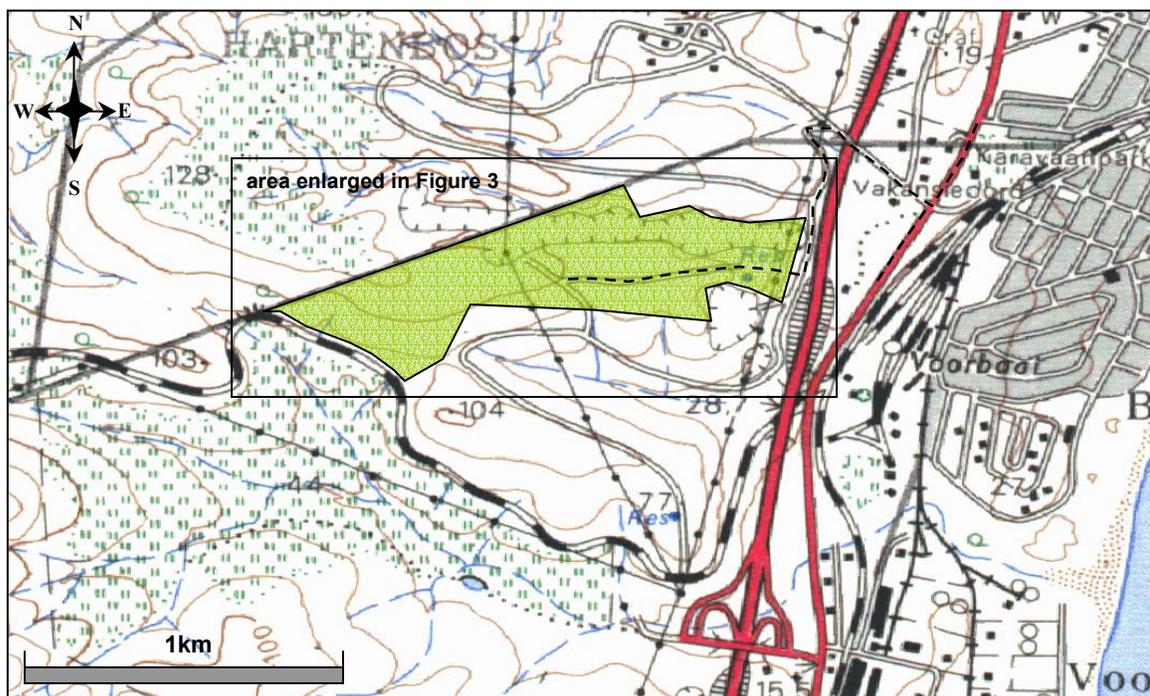


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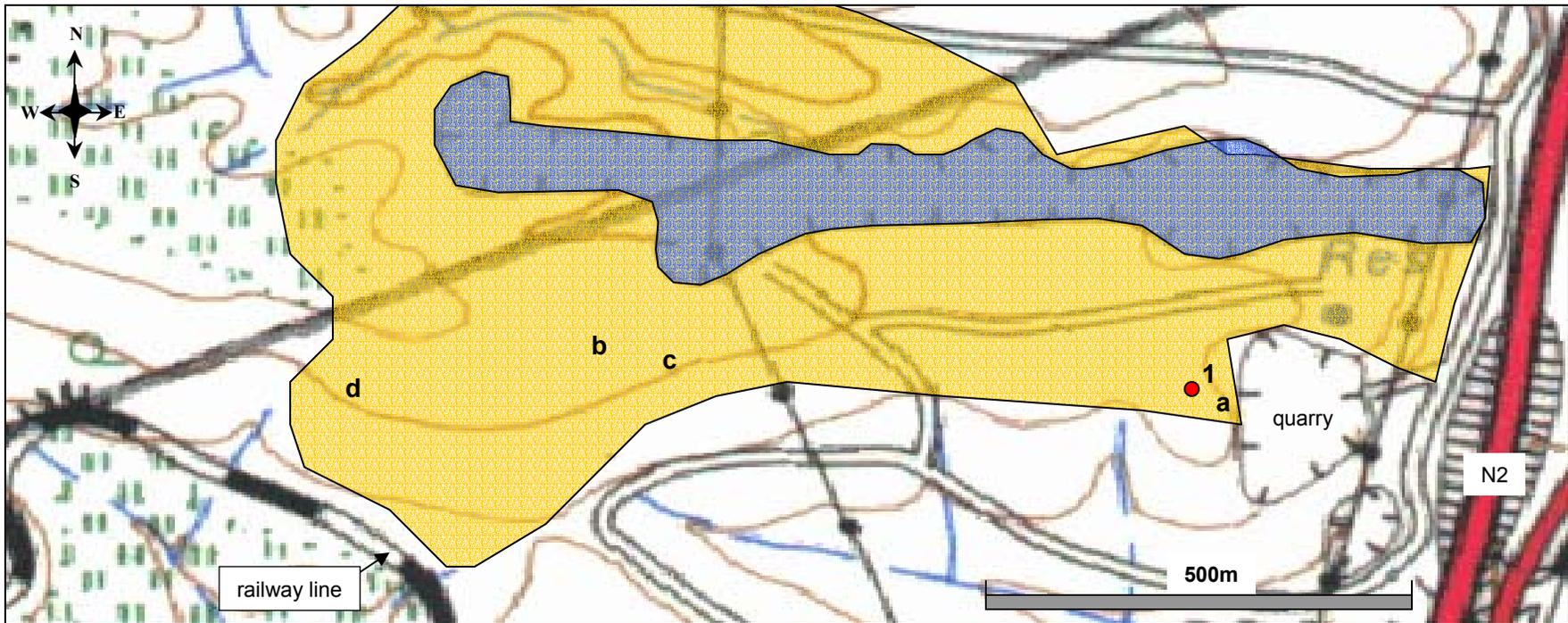


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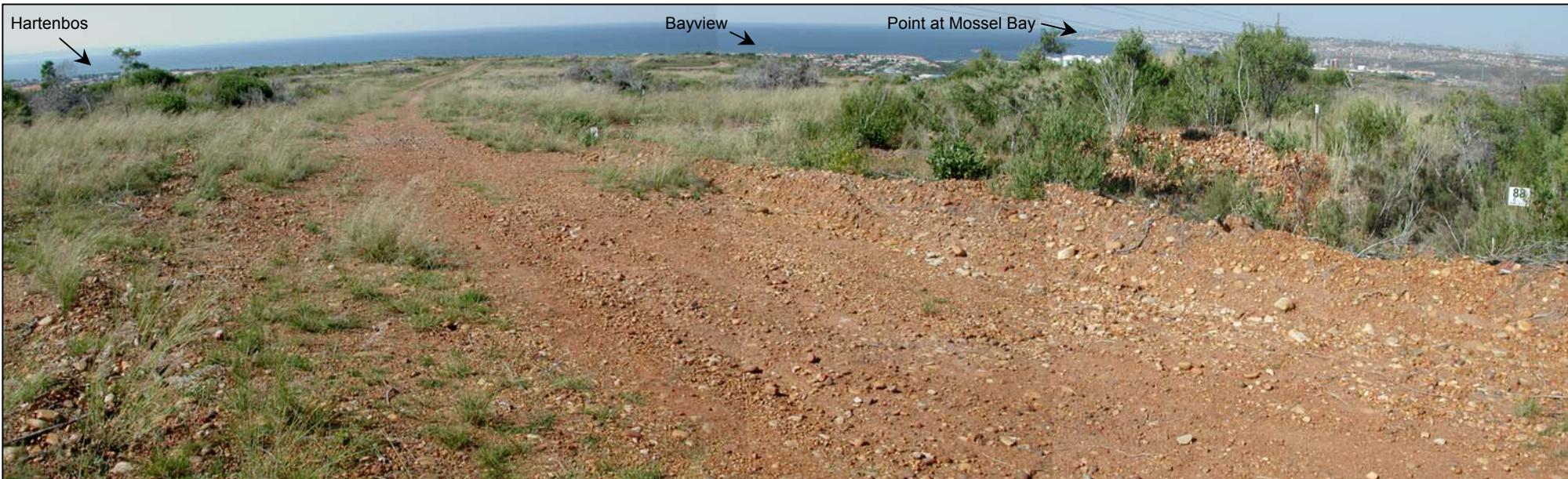


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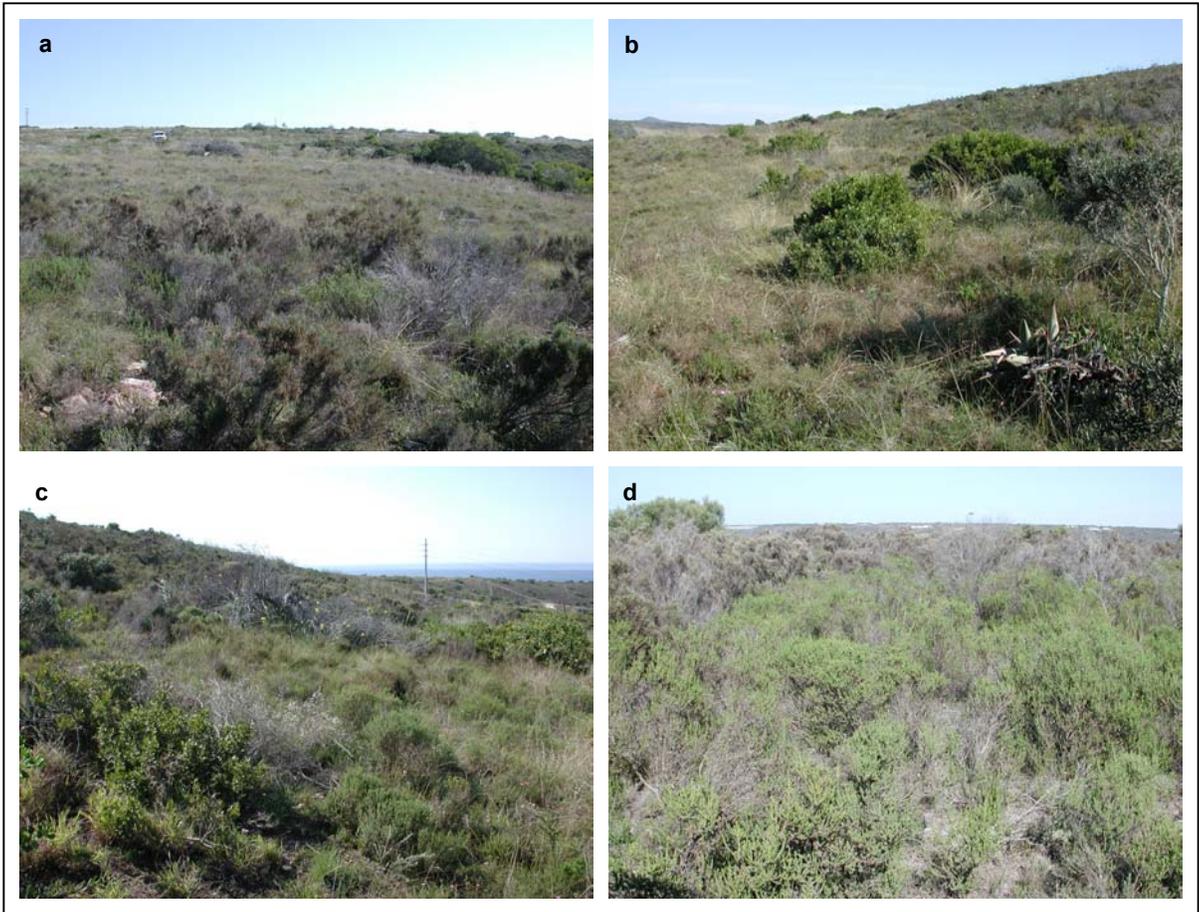


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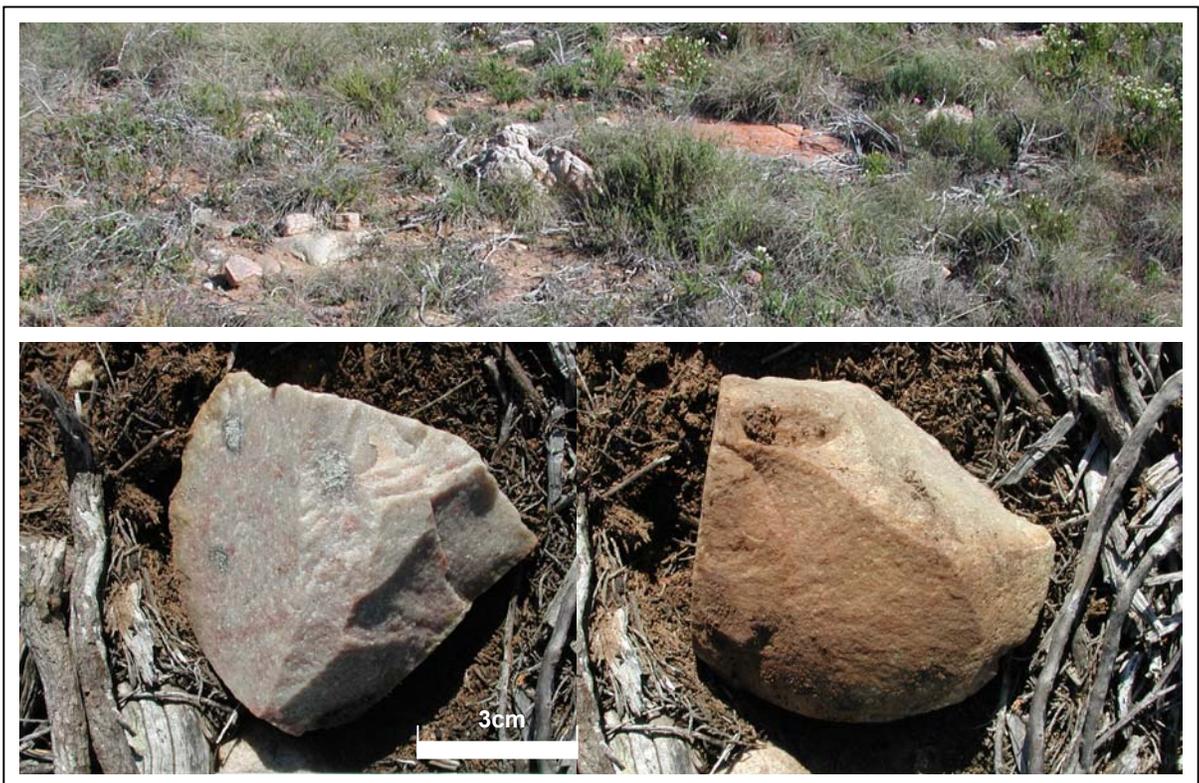


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