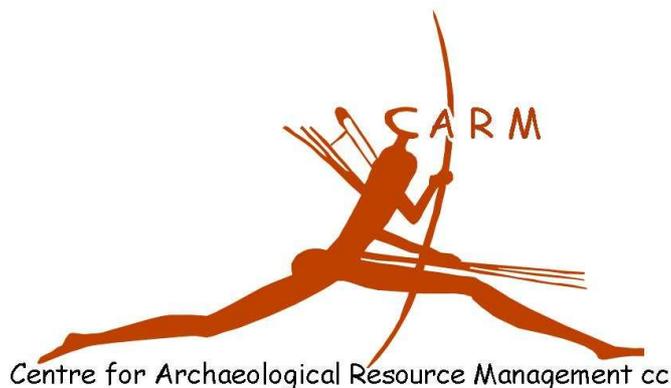


# Archaeological Heritage Scoping Survey

## Remainder Portion 7 of the Farm Eigendomsgrond 251, Pienaarstrand, George, Western Cape Province: Proposed Residential Development

prepared for  
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## **Executive Summary**

*An archaeological impact assessment could not be conducted because impenetrable vegetation restricts pedestrian access to the property and therefore, the fieldwork is presented here as an archaeological heritage scoping survey. A cursory foot survey of a neighboring property provided an opportunity to assess the potential archaeological sensitivity of the study area.*

*Archaeological traces occur as low density scatters and isolated Stone Age artifacts in the adjacent property. Similar archaeological traces may be present in the study area, but the steeply sloped and densely vegetated ravine – if latter similar in the prehistoric past - makes this an unlikely environment for human occupation. Consequently, it is anticipated that the affected area is not archaeologically sensitive. There is no indication that the study area contains any heritage-related resources.*

*Residential developments in the surrounds of the study area are already underway and the proposed development is unlikely to negatively impact the archaeological record. Nevertheless, since an archaeological impact assessment could not be conducted at this time, it is recommended that vegetation clearing and earthmoving activities be monitored on a part-time basis by a suitably qualified and/or trained person so as to avoid or minimize damage to archaeological material. 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).*

**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.....	7
Figures and Plates .....	8

## 1. Introduction

### 1.1 Background

Due to a proposed residential development on Remainder Portion 7 of the Farm Eigendomsgrond 251, Pienaarstrand, George, Western Cape Province (Figure 1 and Plates 1 & 2), Mr. Wikus van der Walt of EcoBound Environmental commissioned CARM to conduct an Archaeological Impact Assessment (AIA).

The proposal for development is as follows (see layout plan in Figure 2):

- The development comprises 9 variably sized single residential plots.
- Included are the installation of access roads and services.

### 1.2. Purpose and Scope of the Study

Objectives of the Archaeological Impact Assessment 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 the study area.
- b) Conduct a foot survey of the study area to identify archaeological resources.
- c) Assess the impact of the proposed development on archaeological materials.
- d) Recommend mitigation measures where necessary.
- e) Prepare and submit a report to Mr. Wikus van der Walt of EcoBound Environmental 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 site for the proposed residential development is situated between the N2 and railway line on Remainder Portion 7 of the Farm Eigendomsgrond 251, Pienaarstrand, George, Western Cape Province (Figures 1 & 2 and Plates 1 & 2). The study area was approached by vehicle via both the N2 and the coastal road between Great Brak River and Glentana (Plates 1 & 2). Unsuccessful attempts were then made to access the property on foot near boundary point 1 (Figure 2) and from the railway line in the vicinity of Pienaar Street (Plates 1 & 2; also see walk tracks in Figure 3). To the south east of the property lies the holiday village of Bothastrand (Plate 2). The study area is approximately 2.2 hectares in extent, and its main boundary points - rounded to the nearest meter - are as follows (map datum WGS 84; see Plate 2 and Figure 2):

- 1, S34.04889 E22.26350 (decimal degrees); 23 Y0068003 X3769329 (SA Grid)
- 2, S34.04814 E22.26719 (decimal degrees); 23 Y0067663 X3769243 (SA Grid)
- 3, S34.04992 E22.26347 (decimal degrees); 23 Y0068005 X3769443 (SA Grid)

As is evident by the closely spaced contour lines in Figure 2, the bulk of the property comprises steep slopes of a ravine, the bottom of which follows a roughly east west trajectory through the middle of the property. The vegetation is dominated by dense Fynbos thicket and shrub – though aliens are present in areas - making the study area near impossible to access (Plate 3). With such dense vegetation archaeological visibility is near zero, which makes an archaeological impact assessment unfeasible. No comment on the sedimentary nature of the property can be given at this time.

The property immediately east of the study area, a part of farm Posen 272, consists of gently sloping hills – in marked contrast with the steep slopes of the study area - that are currently used for grazing, but which were cultivated in the past (Plates 2 & 4). Vegetation in the formerly cultivated area consists mostly of grass and the ground surface is visible in patches (Plates 2 & 4). A few erosion gullies provide a window on sediments that include topsoil and aeolian dune sands (Plate 4). No exposed profiles included sediments below the dune sands.

## **1.4 Approach to the Study**

Archaeological impact assessments in the broader area - including Mossel Bay and George - revealed that the coastal zone is archaeologically sensitive bearing materials of Early, Middle and Later Stone Age origin as well as the pottery/herder period. No archaeological work was conducted in the immediate vicinity of the study area.

Mr. Wikus van der Walt of EcoBound Environmental provided a layout plan and surveyor's coordinate data indicating the location and extent of the study area. The study area was located by means of this information, but dense vegetation covering the bulk of the study area precluded an archaeological impact assessment. The walk track - as fixed by hand held GPS - shows that the study area was skirted mainly along the railway line, but not entered (Figure 3). After several failed attempts to access the property from the N2 near boundary point 1 and from the railway line in the vicinity of Pienaar Street, permission was obtained to inspect the neighboring part of the farm Posen 272 (which was accessed on 9 March 2007 by vehicle and then on foot [see Plate 2 and Figure 3]).

GPS fixes were taken of the area covered during the foot survey as well as locations of archaeological occurrences (Figures 3 & 4 respectively). Dictated notes and a high quality digital photographic record were also made (available from author). Due to severe limitations an AIA could not be conducted and therefore the study is reported here as an Archaeological Heritage Scoping Survey. Inspected ground surfaces of the adjacent property provide some information for a provisional comment concerning the potential archaeological sensitivity of the study area.

## **2. Results**

Figure 3 shows the walk trail - in yellow and purple - as fixed with a hand held GPS during the foot survey. In little less than 4 hours of survey a distance of 3.8 km was walked covering an area of around 2.3 hectares. Due to dense grass cover a much smaller area was archaeologically visible.

No traces of historic archaeology were seen. No rock shelters or caves were seen in the inspected area though these may be obscured by dense vegetation on the steep slopes of the ravine in the study area.

Low density scatters and isolated occurrences of Stone Age artifacts were recorded at flagged points labeled 004 through 015 in Figure 4. Some recorded "artifacts" are questionable as they occur as isolated pieces and others as they occur in the vicinity of the railway line, which contains a lot of gravel. Nevertheless, as shown in Plate 5, a few indisputable artifacts were recorded. Coordinate data for recorded occurrences are as follows (map datum WGS 84; see Figure 4):

Point Name	SA Grid	Decimal Degrees
4	23 Y0067773 X3769335	S34.04896 E22.26599
5	23 Y0067918 X3769449	S34.04997 E22.26441
6	23 Y0067048 X3769266	S34.04838 E22.27384
7	23 Y0067083 X3769206	S34.04784 E22.27348
8	23 Y0067285 X3769217	S34.04793 E22.27128
9	23 Y0067319 X3769208	S34.04784 E22.27091
10	23 Y0067314 X3769206	S34.04782 E22.27097
11	23 Y0067325 X3769205	S34.04782 E22.27085
12	23 Y0067349 X3769199	S34.04776 E22.27059
13	23 Y0067372 X3769197	S34.04774 E22.27035
14	23 Y0067665 X3769237	S34.04808 E22.26716
15	23 Y0067054 X3769304	S34.04872 E22.27378

Raw materials of stone artifacts include quartzite, quartz and shale. The stone artifacts include cores, hammer stones, upper grindstones and flakes that are likely of mixed origin including Early, Middle and Later Stone Ages. No formal stone tools were seen. Materials occur mostly in previously disturbed contexts such as the railway line and formerly cultivated fields. A few sedimentary profiles – railway line, erosion gullies and edges of cultivated fields - were inspected, but none contained archaeological materials.

Although the study area was not inspected, the above results indicate that Stone Age implements may occur in the study area. As mentioned above, this is unlikely as the study area consists predominantly of steep slopes and the latter are unlikely places for human occupation. While it is unlikely that the proposed development will impact significant archaeological materials, it is currently impossible to speculate about the nature and significance of such materials.

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

- The proposed residential development as outlined in 1.1 above will involve vegetation clearing and earthmoving activities that could have a permanent negative impact on archaeological resources. The presence of disturbed archaeological traces of Stone Age origin in an adjacent property suggests that archaeological materials – probably of low significance - may occur in the affected area. Part time archaeological monitoring of vegetation clearing and earthmoving activities associated with development should avoid and/or minimize negative impact on archaeological remains. 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**

	With Mitigation	Without Mitigation
<b>Extent</b>	Local	Local
<b>Duration</b>	Permanent	Permanent
<b>Intensity</b>	Low	Unknown
<b>Probability</b>	Low	Medium to Low
<b>Significance</b>	Low	Unknown
<b>Status</b>	Low	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:

- Because an Archaeological Impact Assessment cannot be performed at present due to limitations described above, vegetation clearing and earthmoving activities should be monitored by a suitably qualified and/or trained person on a part time basis.
- 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).

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

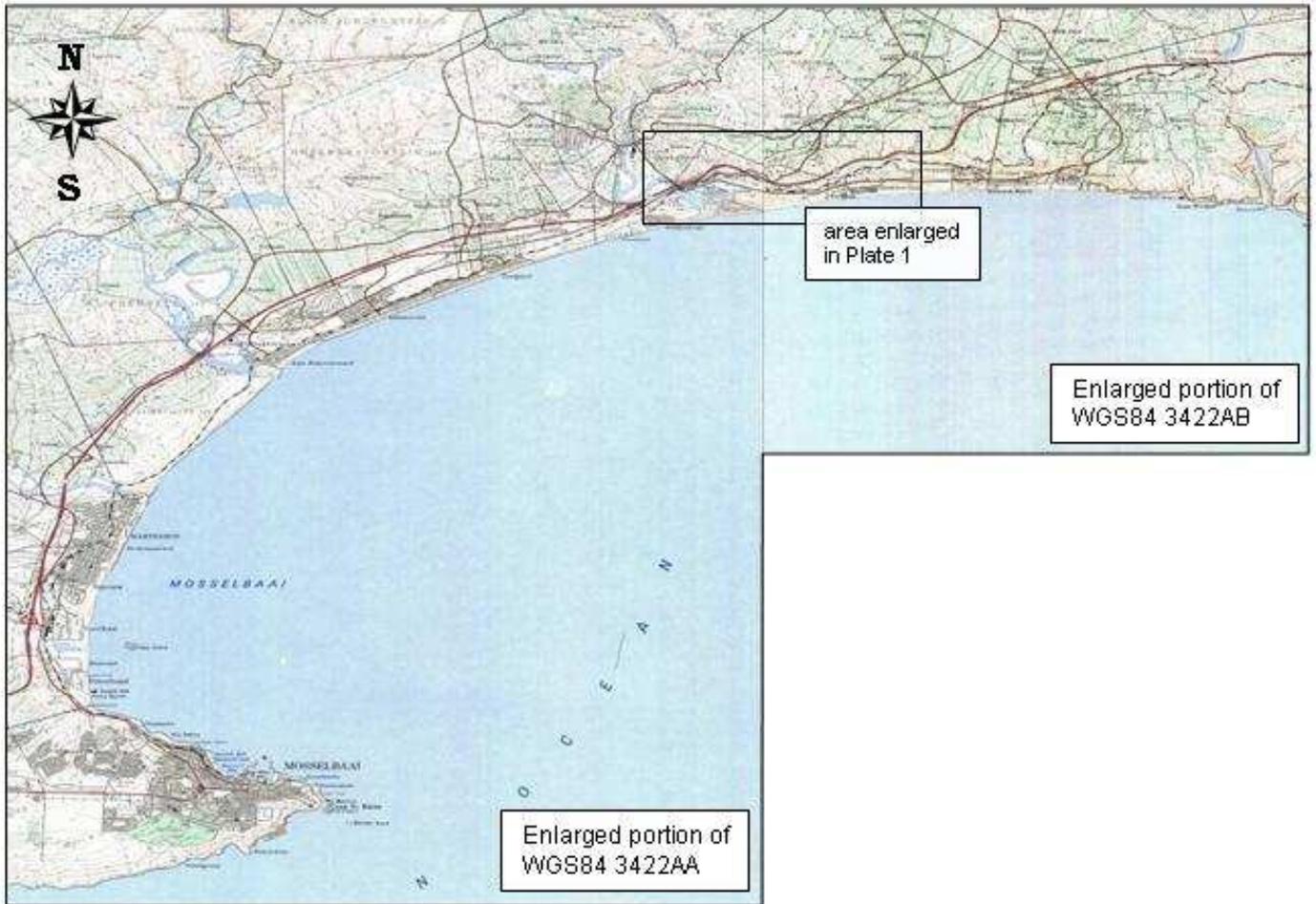


Figure 1. General location of the study area relative to Mossel Bay, Western Cape Province. The framed area is enlarged in Plate 1.



Plate 1. Enlarged area as indicated in Figure 1 showing the general location of the study area east of Great Brak River. The framed area is enlarged in Plate 2.



Plate 2. Enlarged area as indicated in Plate 1 showing the location and extent of the study area in red and the inspected property – dashed red - immediately east of the study area.

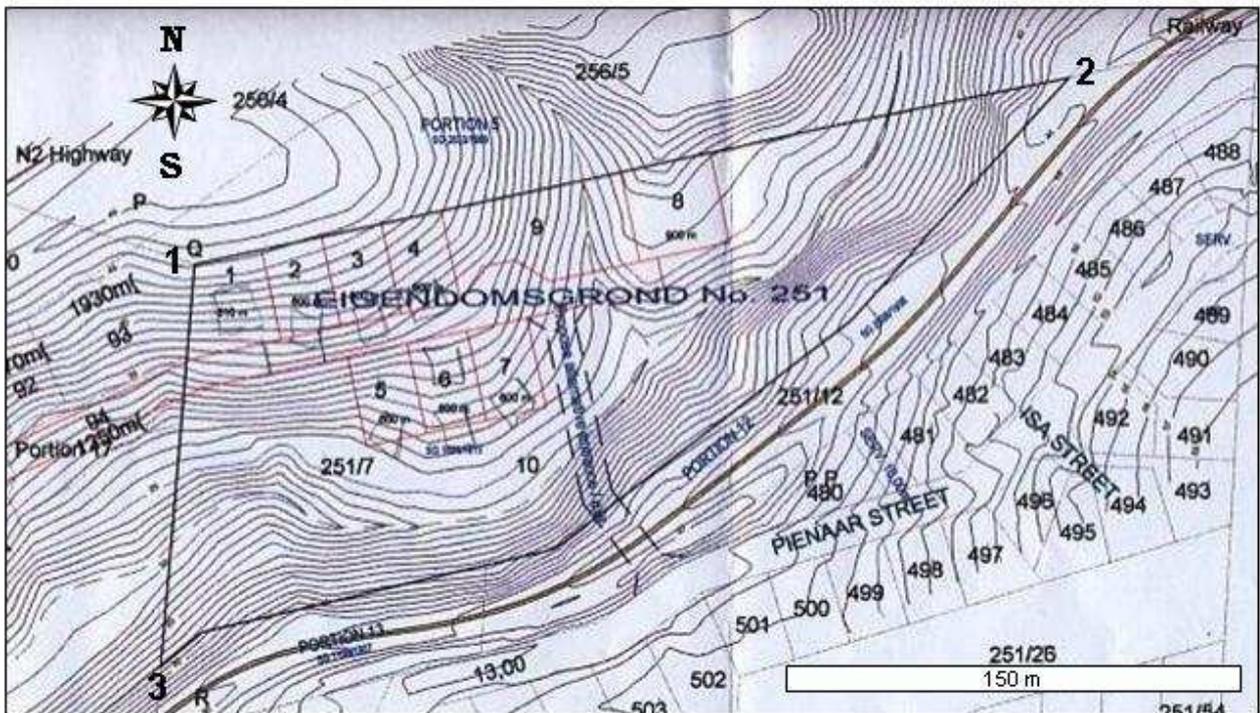


Figure 2. Shown are the extent of the study area – boundary points labeled 1, 2 & 3 - and the layout of residential plots. Note by the closely spaced contour lines that the bulk of the property includes steep slopes from top to base of ravine.



Plate 3. Examples of vegetation cover in study area. Photographs, clockwise from top left, show impenetrable vegetation cover near boundary points 1, 2 and 3 (see Figure 2).



Plate 4. Top image taken from the southern portion of adjacent property showing grass covered, gently sloping hills. Bottom images show exposed profile of dune sands. One liter drinking bottle for scale.

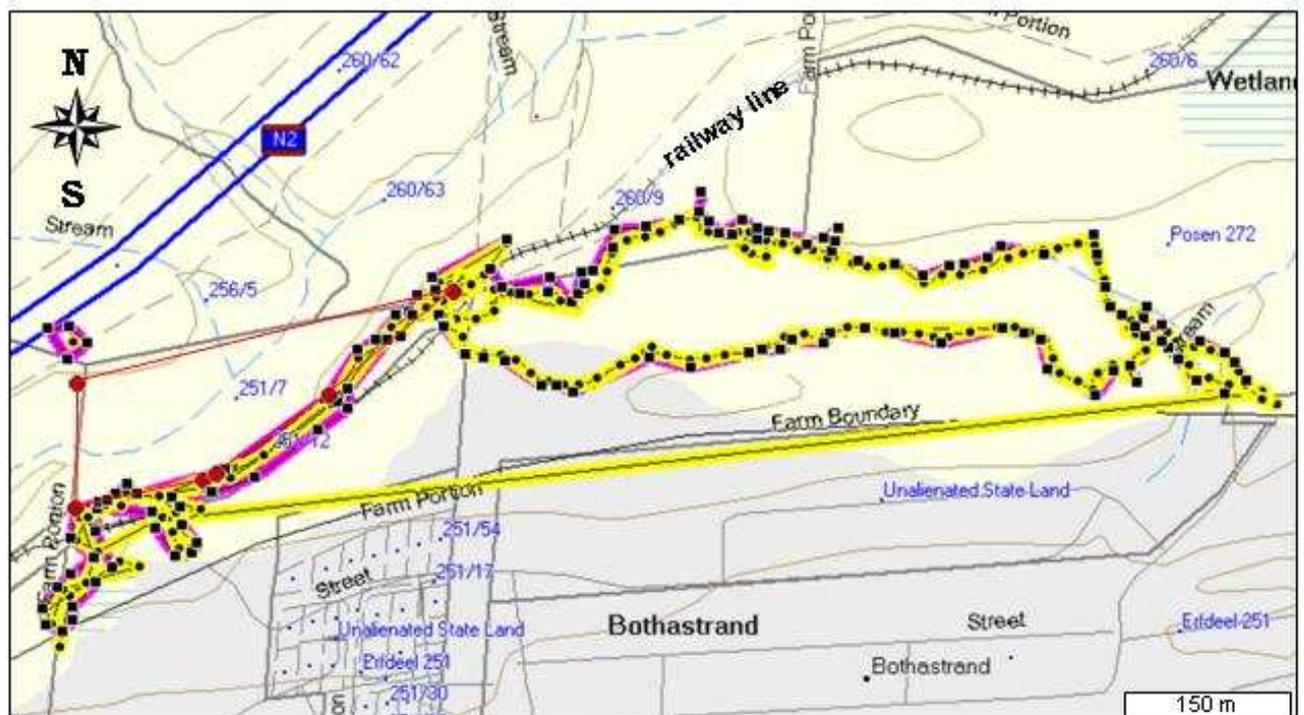


Figure 3. Enlarged area as indicated in Plate 1 showing the location and extent of the study area in red. The walk track is shown in yellow and purple (except long straight yellow line of vehicle movement).

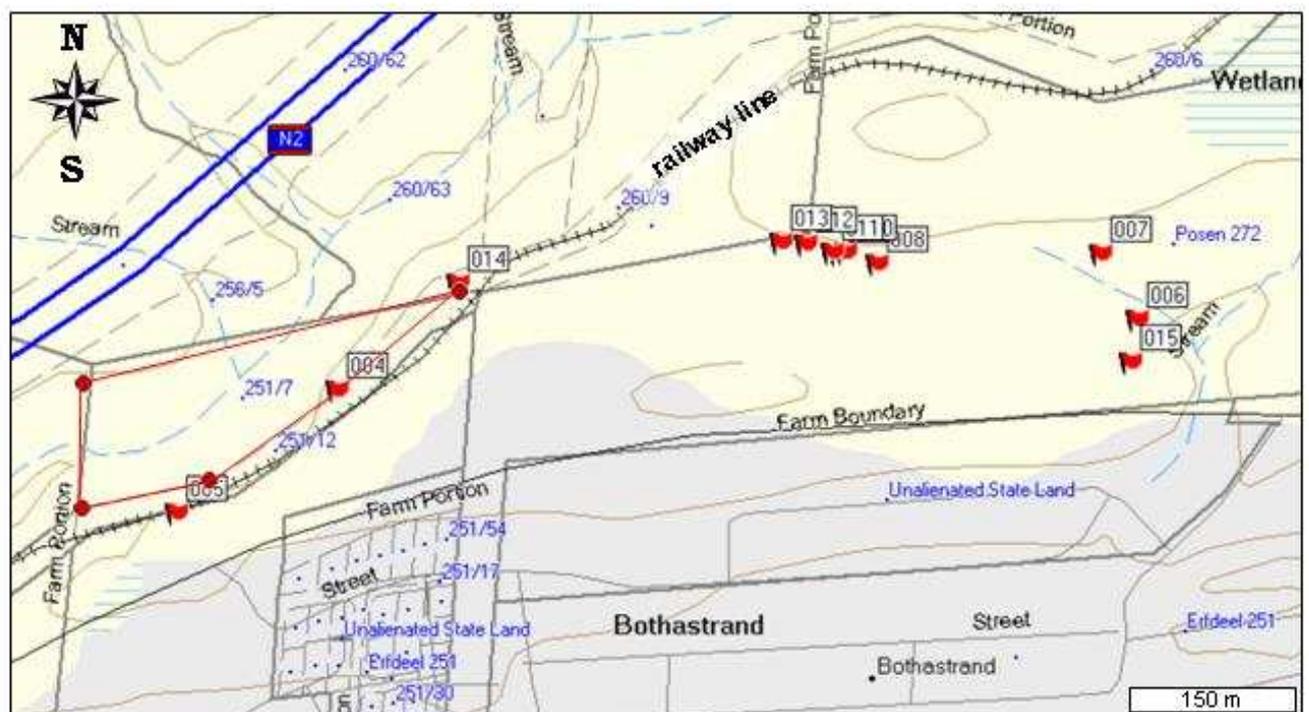


Figure 4. Enlarged area as indicated in Plate 1 showing the location and extent of the study area in red. Red flags represent archaeological occurrences (some artifacts are questionable – see text).

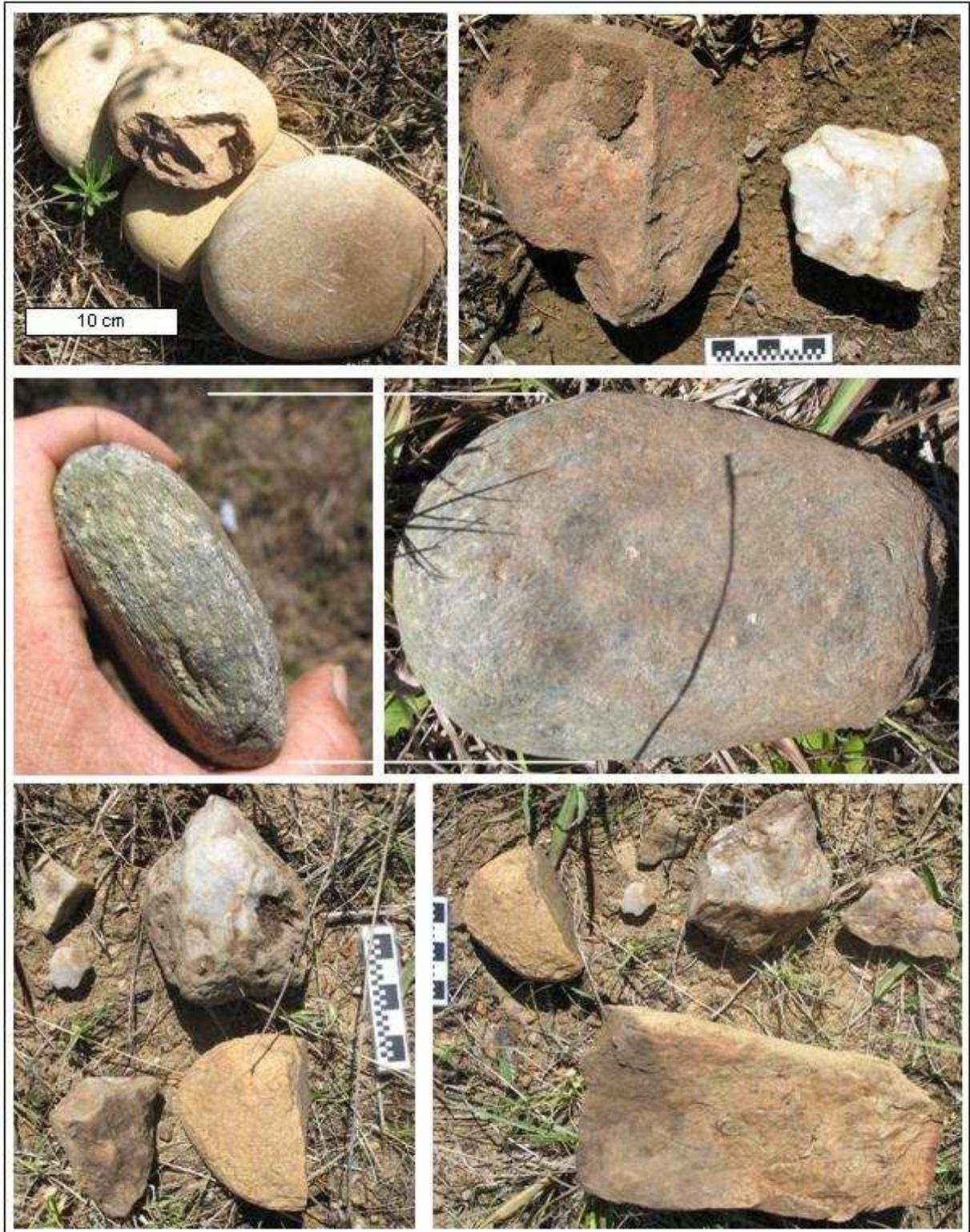


Plate 5. Examples of Stone Age artifacts recorded on property adjacent to study area. Clockwise from top left are manuports including "chopper" or damaged hammer stone, cores, upper grind stone/hammer stone, variety of flakes and flaked pieces. Scales in cm unless indicated otherwise.