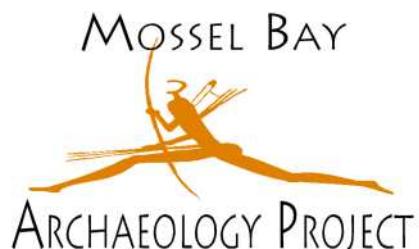


# **Proposed Upgrading of Road Sections and Relocation of an Intersection in the Uniondale Area: Archaeological Heritage Impact Assessment**

by

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### ***Executive Summary***

*The study area at the proposed site for a borrow pit is markedly disturbed as a result of activities associated with cultivation and road construction. Archaeological visibility is very low in the study area for the proposed new intersection, which also includes a stream channel. If archaeological materials are present in the area, their context is likely compromised by stream action. While archaeological heritage materials protected under the National Heritage Resources Act (NHRA) of 1999 occur within the study area for the borrow pit, these artifacts occur in very low numbers and are not in primary context and therefore of no scientific or heritage value.*

*The proposed borrow pit and intersection do not appear to threaten archaeological heritage resources. It is recommended, therefore, that the ROD be issued for the proposed location of a borrow pit and construction of a new intersection.*

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## **1. Introduction**

### **1.1 Background**

Due to proposed upgrading of road sections in the Uniondale area and subsequent need for a borrow pit as well as construction of a new intersection, CCA Environmental (Pty) Ltd appointed MAPCRM to undertake an Archaeological Heritage Impact Assessment (AHIA) of the affected areas as part of an Environmental Impact Assessment (EIA).

The proposal for resurfacing and upgrading road sections includes:

- Extension of an existing borrow pit;
- Relocation of an intersection.

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

The objectives of the AHIA are:

- To assess the study areas 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 proposed extension of an existing borrow pit as well as the proposed location of an intersection in the Uniondale area.
- b) Conduct a foot survey of the above-named areas in order to identify archaeological resources.
- c) Assess the impact of the proposed borrow pit and intersection on archaeological materials.
- d) Recommend mitigation measures where necessary.
- e) Prepare and submit a report to CCA Environmental (Pty) Ltd that meets standards required by Heritage Western Cape in terms of the National Heritage Resources Act, No. 25 of 1999.

### **1.3 Study Areas**

The site of the proposed extension of an existing borrow pit is situated immediately east of the R339, some 1.6km north of the intersection between the R339 and R62 (Figures 1 and 2). The proposed borrow pit is about 1.2 hectares in extent. The existing borrow pit currently doubles as a dam and the immediate surroundings show clear evidence of former cultivation. The latter included activities associated with clearing fields of stone and plowing. The south western corner of the study area was cleared and plowed while the remainder is very stony and lacking vegetation (Plates 2 and 3 respectively). The topography constitutes gentle sloping hills descending from north to south.

The proposed site for the relocation of the eastern intersection of the R62 and Haarlem road (DR1834) is some 60m west of the current intersection (Figures 1, 2, 3 and 4 and Plate 4). The study area is approximately 1.5 hectares in extent (Figure 4). Archaeological visibility is very low as some 95% of the ground surface is covered by grass, bush and shrub (Plate 4). The area includes a small stream channel running in a roughly west to east trajectory (Plate 4). Gentle sloping hills culminate in the small stream channel

as they descend from north to south in the northern part of the study area and from south to north in the southern portion of the study area.

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

No previous archaeological study was conducted in or near the affected areas.

ACC Environmental (Pty) Ltd provided maps and coordinate data showing the location and extent of the study areas. The study area is marked with metal stakes and these markers were used as reference points on the ground and overshot during the study to ensure that the entire area was inspected.

Study areas were accessed by vehicle and then inspected on foot. Hand held GPS fixes were taken where archaeological occurrences were recorded. Records also include notes and digital photography (a comprehensive photographic record is available from the author). Archaeological visibility is good at the borrow pit site, but poor at the site for the new intersection.

### **2. Results**

#### **Borrow Pit**

1. Isolated Early Stone Age (ESA) or Middle Stone Age (MSA) core (Plate 5).

Hand held GPS fix:  $33^{\circ} 71147$  S,  $23^{\circ} 16618$  E

2. Pile of stones from clearing area for plowing. No artifacts were recorded in the mound of stones (Plate 6).

Hand held GPS fix:  $33^{\circ} 71053$  S,  $23^{\circ} 16551$  E

3. Isolated ESA core (Plate 7).

Hand held GPS fix:  $33^{\circ} 71052$  S,  $23^{\circ} 16508$  E

4. Isolated MSA or Later Stone Age (LSA) radial core (Plate 8). A few meters south of this artefact a large retouched quartzite flake was seen.

Hand held GPS fix:  $33^{\circ} 71161$  S,  $23^{\circ} 16607$  E

#### **Intersection**

Archaeological visibility is poor and no archaeological traces were seen in exposed patches or in profiles of the small stream channel.

**Table 1. Age, significance and recommended mitigation for discovered archaeological occurrence.**

<b>Number</b>	<b>Period/Age</b>	<b>Significance</b>	<b>Mitigation</b>
1, 3 and 4	Mixed Stone Age	Low to none	None required

### **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. No significant archaeological occurrences were identified during this study however, and the assessment made is that the property is not archaeologically sensitive.

This assessment concludes that archaeological mitigation is not required. Table 2 summarizes the potential impacts of the proposed borrow pit and new intersection on archaeological heritage resources.

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

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

- A professional archaeologist visits each site during the initial phases of earth movement to inspect sub-surface deposits for archaeological traces.
- If significant archaeological materials are exposed as a result of earthmoving 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 CCA Environmental (Pty) Ltd for supplying maps indicating the location and extent of the study areas.

### **Reference**

CCA Environmental (Pty) Ltd, 2006. Proposed upgrading of road sections in the Uniondale area. Background information document.

## Figures and Plates

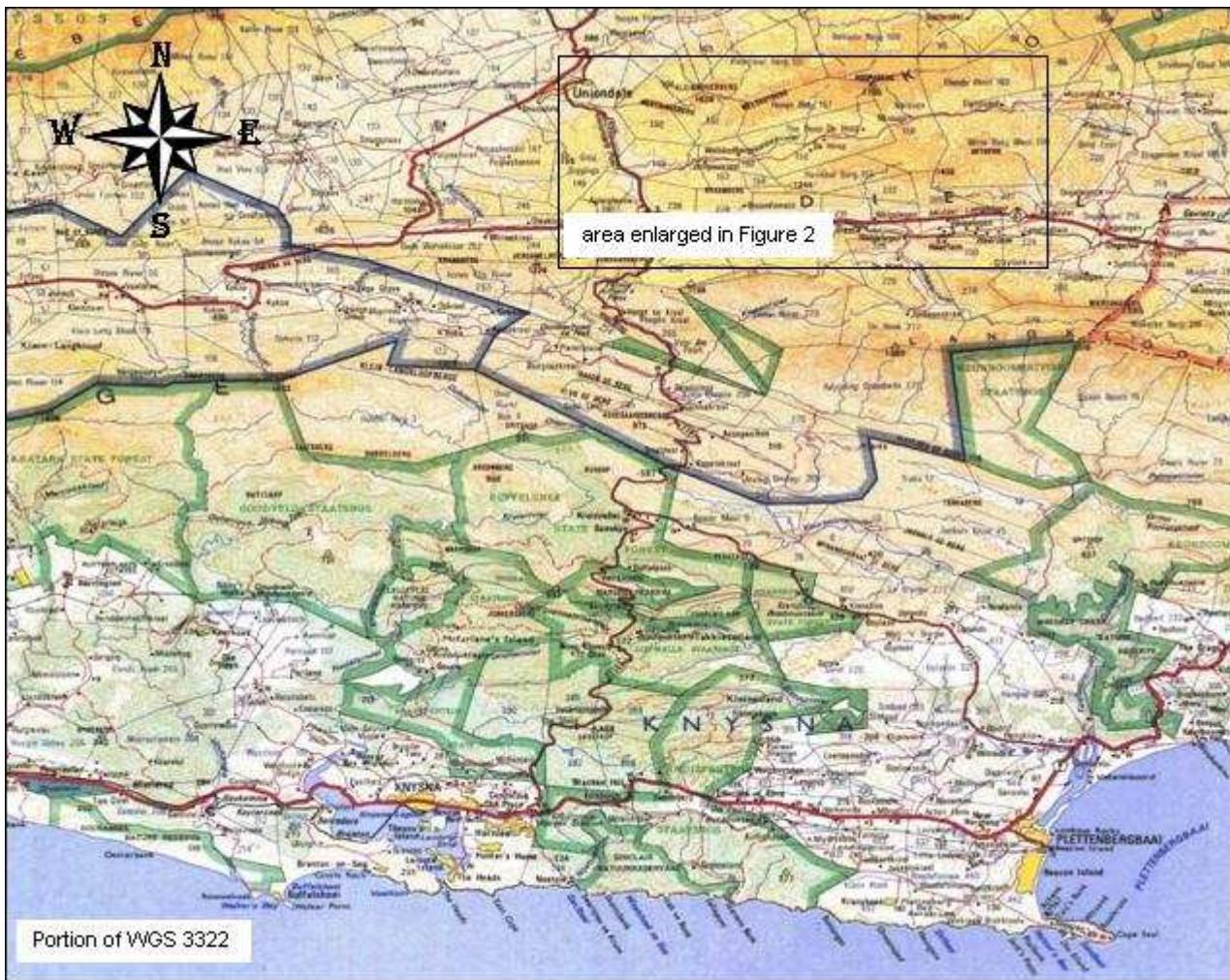


Figure 1. Location of Uniondale and study area. Framed area is enlarged in Figure 2.

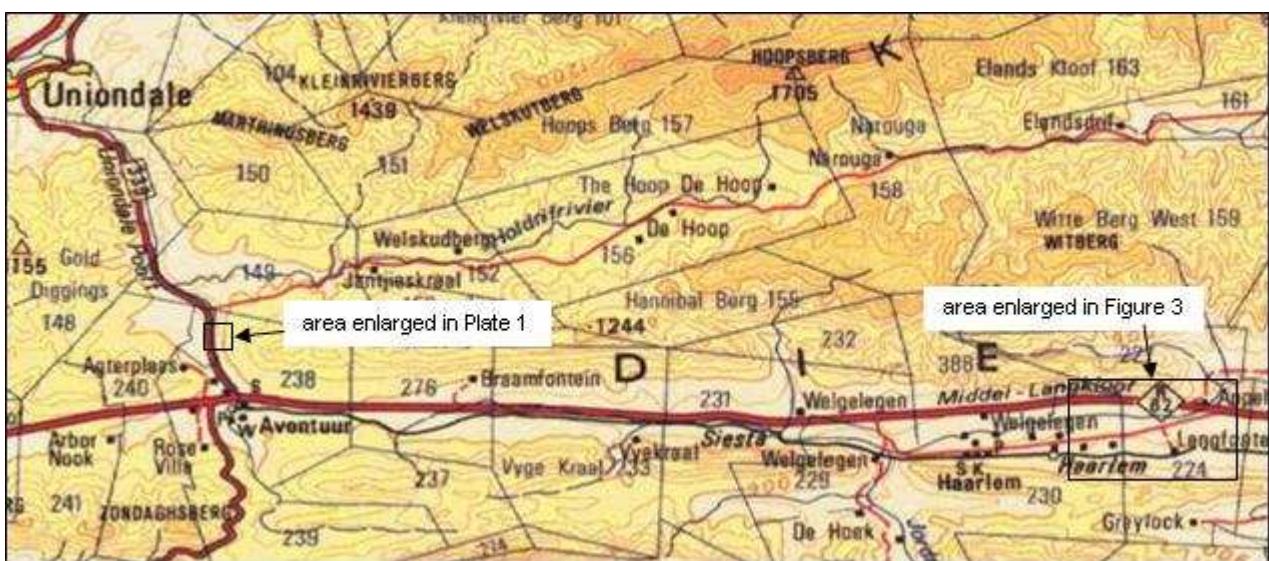


Figure 2. Enlarged area as indicated in Figure 1 showing the location of study areas.



Plate 1. Enlarged area as indicated in Figure 2 showing location and nature of study area and proposed site for borrow pit adjacent (north) of the R339. Note cultivated and formerly disturbed areas.

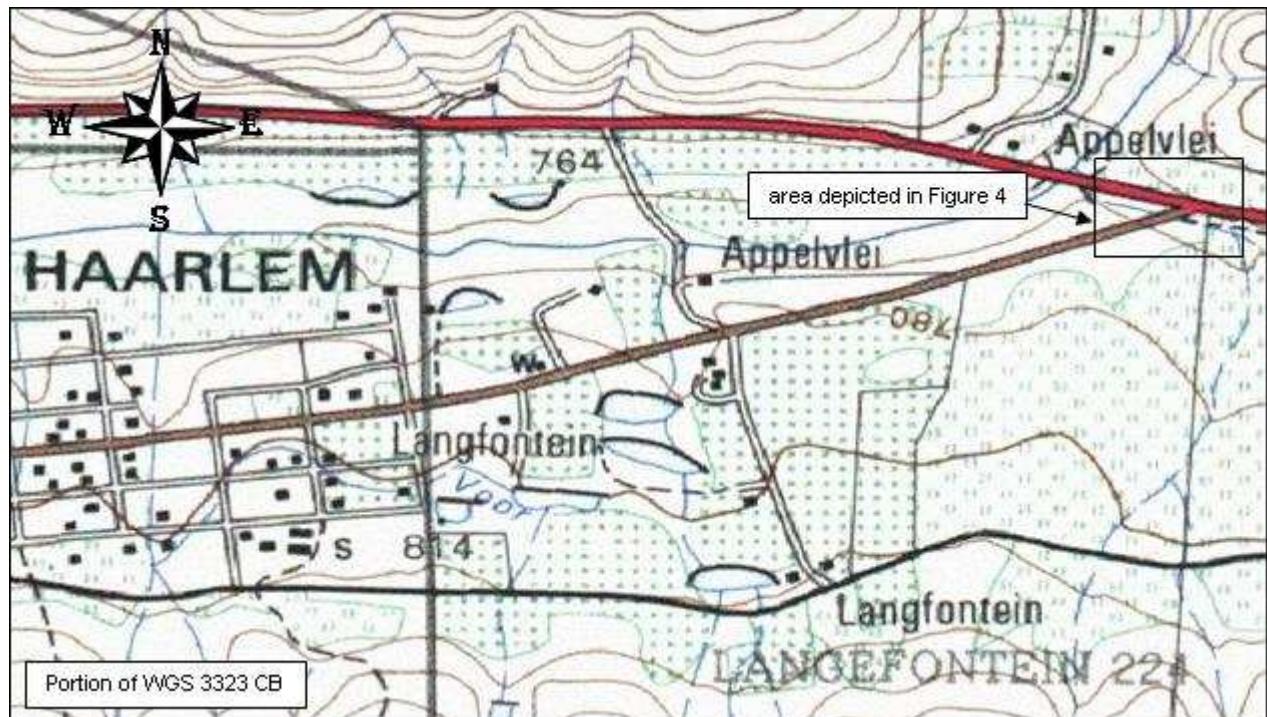


Figure 3. Enlarged area as indicated in Figure 2 showing the location of the proposed new intersection (framed) relative to the village of Haarlem.

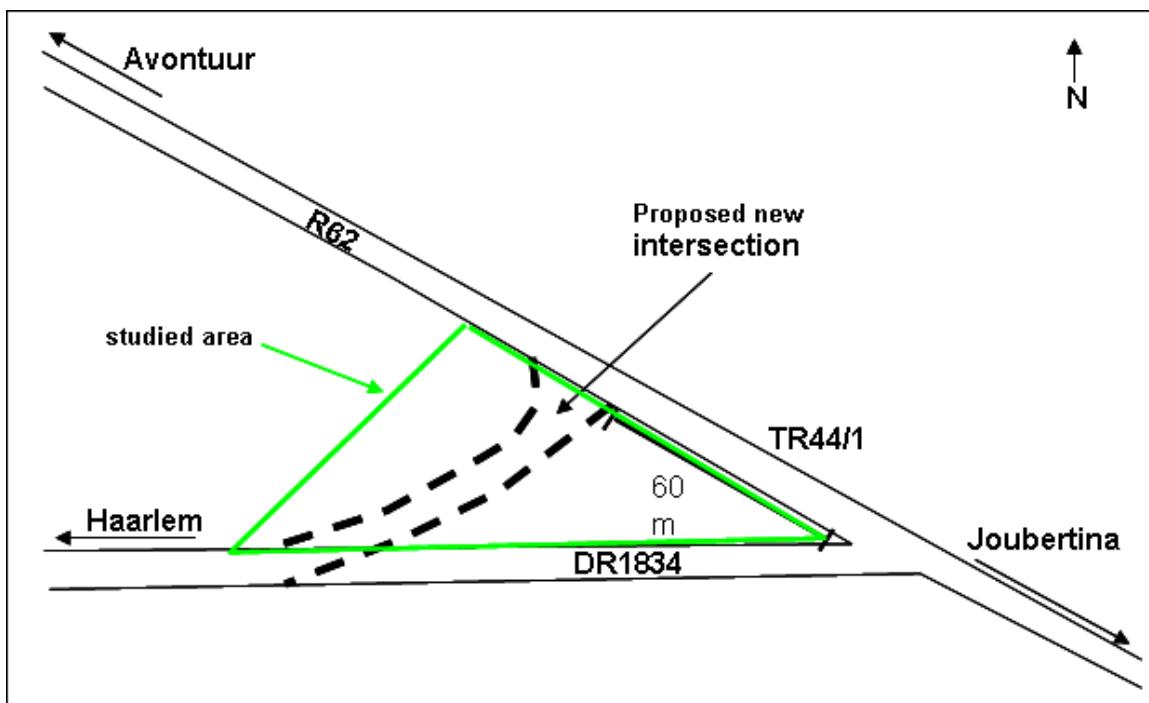


Figure 4. Enlarged area as indicated in Figure 3 (redrawn from Figure 2, CCA Environmental (Pty) Ltd 2006).



Plate 2. Formerly cleared and plowed portion in the south west corner of the study area at the site of the proposed borrow pit (south to south east view).



Plate 3. The bulk of the study area is very stony, as is clear in the foreground (picture taken from the north).

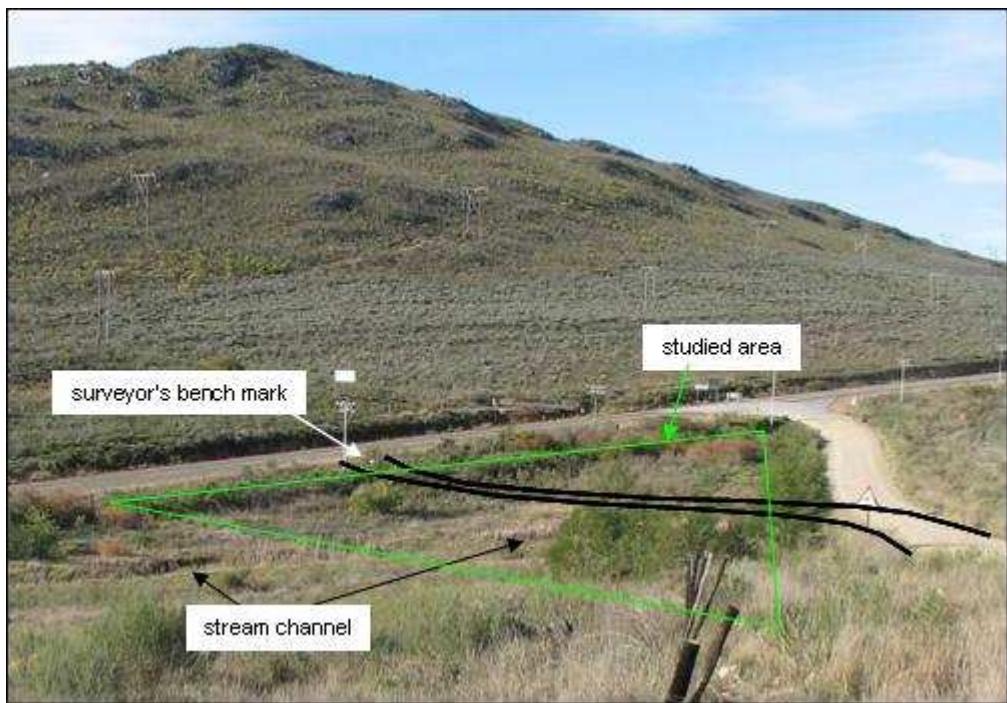


Plate 4. Study area for the proposed new intersection with the R62 in middle of picture and DR1834 at the right. The black lines indicate the approximate position and alignment of the proposed road (see Figure 4). Picture taken from the south, south west.



Plate 5. Stone artifact (core) of Early or Middle Stone age origin showing ventral and dorsal surfaces (left and right respectively). Hand held GPS (Magellan SporTrak) for scale.



Plate 6. Pile of stone from former activity associated with clearing fields for plowing and cultivation. No artifacts were seen among these stones.



Plate 7. Stone artifact (core) of Early Stone age origin showing dorsal and ventral surfaces (left and right respectively). Hand held GPS (Magellan SporTrak) for scale.



Plate 8. Stone artifact (radial core) of Middle or Later Stone age origin showing dorsal and ventral surfaces. Hand held GPS (Magellan SporTrak) for scale.