

Archaeological Heritage Survey

Brewelskloof Quarry, A Portion of Erf 3604 Worcester, Western Cape Province: Proposed Proposed Extension of Quarry

by

Royden Yates



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

Company No. CK 2006\133900\23
VAT No. (in prep)

2 November 2006

Executive Summary

This study did not find any heritage in the study area protected under the National Heritage Resources Act of 1999.

The only observation relevant to heritage was a walled rock shelter of indeterminate but probably recent date (i.e. less than 100 years old). The absence of indigenous residues in the rock shelter site and the absence of evidence for use of a nearby source of flakable stone implied that indigenous people used the area ephemerally or for purposes other than residence and industry.

This report does not recommend further mitigation of the impacts of the proposed development as far as the law is concerned. However, avoidance of the koppie housing the walled rock shelter would retain an interesting feature of recent heritage as well as an aesthetic pleasing feature of the landscape.

The report recommends that Heritage Western Cape accept this scoping scale survey as sufficient for the entire study area based upon the entirely negative results of a survey focussing on the areas with the highest probability of having archaeological heritage.

Table of Contents

<u>Content</u>	<u>Page</u>
<i>Executive Summary</i>	
1. Introduction	1
1.1 Background	1
1.2 Purpose and Scope of the Study	1
1.3 Study Area	1
1.4 Approach to the Study	1
2. Results	2
3. Assessment of Archaeological Heritage	3
4. Sources of Risk, Impact Identification and Assessment	4
5. Recommended Mitigation Measures	4
Figures on following pages	5-9

1. Introduction

1.1 Background

Prima Klipbrekers (Pty) Ltd propose to extend an existing quarry on Erf 3604 in Worcester, Western Cape Province. The company consequently appointed CARM to undertake a Archaeological Heritage Impact Assessment (AIA) of the affected area.

1.2. Purpose and Scope of the Study

The objectives of the AIA were:

- to assess the study area for evidence of archaeological materials;
- to evaluate the significance of archaeological materials in the study area;
- to assess the significance of the impact of the proposed development on archaeological resources;
- if necessary, to recommend measures in mitigation of the impacts of the proposed development on the archaeological resources and
- to prepare and submit a report to the client that meets standards required by Heritage Western Cape (HWC) in terms of the National Heritage Resources Act , No. 25 of 1999 (NHRA of 1999).

1.3 Study Area

The study area was approximately 40 hectares in extent and lay directly north of the town of Worcester in the Western Cape Province (Figure 1). Lying at the foot slopes of the Audenberg Ridge Peaks, the topography of the study area was dominated by a tributary valley of the Brewelskloof river with high ground to the west and east (refer to Figure 2). Valley slopes varied from moderate to steep and the high ground presented relatively large and flat areas (refer to Figure 3). The substrate was predominantly either sandy (slopes) or a mix of gravel sized rock and sand (high ground) but there are small outcrops of bedrock (Bokkeveld Formation) both on the slopes and high ground (refer to Figure 4). One of these outcrops on the high ground was large enough to warrant being described as a koppie. Vegetation in the area essentially was indigenous. Plant growth consisted mostly of knee to waist high bushes and grassy species. The substrate was readily visible between the vegetation on the high ground but was not as visible on the east facing slopes as the growth was notably thicker there.

In relation to the potential archaeological record, development of the area would have entailed vegetation clearance and removal of all the sand / soil. The present-day quarry had utilised the high ground on the east side and the proposed extension was focussed on the hill to the west and proposed to reach from the valley bottom up to and including the high ground. The ground falling-off to the next valley would not be touched in order to preserve the skyline when viewed from the botanical reserve located to the west of the study area.

Within the quarried area, the impacts of the activities would be highly intensive and totally destructive of any archaeological heritage that may have occurred.

1.4 Approach to the Study

Initial discussions with Prima Klipbrekers (Pty) Ltd indicated that the proposed quarry extension would cover 5 hectares and the field programme was devised accordingly. Maps provided by the client at the time of the field work indicated that the mining plan in fact extended to between 20 and 30 hectares. The archaeologist undertook the fieldwork despite the discrepancy between the planned area of survey and the actual, indicating to Mr Monty Coleman (a representative of the client) that the author of this report would assess whether a case could be made to HWC that a

scoping type survey was sufficient. In this regard, Mr Coleman was informed that any substantive evidence of archaeological heritage in the study area would require the implementation of a full AIA.

The maps provided the coordinates of the boundary beacons, which were then loaded into a Garmin etrex vista hand held GPS. The hand held GPS provided both navigation to remain within the study area as well as a record, both of observations as well as walk paths.

The study area was accessed and inspected on foot by a qualified archaeologist. During the walk, the archaeologist searched for evidence of archaeological materials, paying particular attention to features of the landscape such as hilltops and rock shelters that experience shows were frequently utilised by people in the past.

Records of the search include an assessment of the viability of the survey with respect to vegetation and visibility, notes on the materials found and the context, a GPS fix and digital photography (a comprehensive photographic record is available from the author).

Any archaeological heritage located during the survey was assessed in terms of its significance and scale of importance as well as in terms of the potential impacts of the proposed development, both without and with the implementation of mitigation.

The survey methods employed in this study are standard to archaeology the world over. If conducted diligently and under reasonable conditions for the search, the results would be a comprehensive record of surface traces of archaeological heritage and will provide a means of satisfying the requirements of the NHRA of 1999.

As far as the writer knew, no previous archaeological work had been undertaken in the immediate vicinity of the affected area.

2. Results

Overall, the search visibility was moderate to poor. Areas of high ground provided better visibility (i.e it was moderate) than did the east facing slopes where vegetation in many places entirely obscured the ground (i.e. it was poor). Figure 5 presents the GPS walking trail and the location of observations. Breaks in the trail represent instances where the GPS signal was lost due to obstruction by a person, trees or topography. Please note that whilst the survey focussed on the high ground, prominent outcrops on the east facing slopes were examined as well.

The most significant observation made in this study was a negative one – the search failed to uncover a single piece of evidence for human activity within the archaeological past (defined by law as older than 100 years). Two findings in particular are of note in this regard. They are a rock shelter with stone walling (observation 052) and an exposure of rock suitable as a raw material for producing flaked stone tools (observation 053) (refer to Figure 5).

Observation 052 is an inclined outcrop of rock on a small koppie (refer to Figure 6) that forms a shelter of approximately 4 m width a small extent of overhang, and thus physical shelter, of about 1.5 m. Most salient feature of the shelter was a well-packed stone wall that began midway in front of the shelter and curved around to form a 1 m high structure on the south side (refer to Figure 7). Two phases of construction of the wall are evident, with a lower part made of large stones and an upper section of much smaller stones creating the high point of the wall. There appears to be quite a depth of sediment and rock behind the wall in the south - this almost formed a platform and may have been material dug out of shelter to create a level area within the walling.

The walling looked fresh – in particular the packing looked precarious rather than settled and there has been very little lichen growth since construction (what lichen there is appears to have been on the stones when packed).

The author of this report did not see any signs of pre-colonial heritage within the shelter or on the talus below. Nor was there evidence suggesting use of the shelter at a time greater than 100 years. Some green glass with a seam and rusted metal in fact point to a younger age.

Observation 053 is a level area of gravel and sand, where the gravel component was formed by chert (fine –grained siliceous rock) (refer to Figure 8). This rock must be derived from a now covered stratum or strata of the local bedrock. The author conducted an intensive search of this area and did not see a single piece of stone that had been definitely flaked by humans.

Table 1: Geodetic and Cartesian coordinates for observations in the proposed Brewelskloof Quarry Extension study area

Observation	Datum: WGS84		Datum: Hartebeesthoek94 Central Meridian 19°	
	Latitude (°S)	Longitude (°E)	X (metres)	Y (metres)
052	33.59897	19.46564	3719277.12	-43219.28
053	33.59769	19.46711	3719135.94	-43356.41

3. Assessment of Archaeological Heritage

The searched portions of the study area do not appear to contain detectable heritage afforded protection under the NHRA of 1999.

The rock shelter (observation 052) presented an enigmatic observation. Clearly, someone devoted a great deal of effort in the construction of the wall and this suggests repeated or sustained use of the locality. There was however no other evidence for repeated or sustained use of the shelter (the modern glass could be a later addition) and this meant that the walling cannot be dated by association. The balance of probability however points to date of use within the Colonial Period (last 300 years) and very likely within the last 100 years. This argument rests on three facts: 1) use of shelters by indigenous people tended to leave very characteristic evidence, which is either not present at observation 052 or is not detectable; 2) the walling appears recent as outlined above; and 3) what material culture (the things humans make) is present is recent (see above).

This report concluded that the the NRA of 1999 most likely does not protect the rock shelter known as observation 052. Whilst observation 052 is not legally protected heritage, it nonetheless is part of the heritage of the area, albeit undocumented and low-key.

Taken in combination, the lack of other evidence and observations 052 and 053 point to the study area not being well-favoured by people in the course of the past covered by the NHRA of 1999. Concerning the Pre-Colonial past, the absence of evidence for use of either the rock shelter or the raw material source was particularly telling. In the event that indigenous people were active in the immediate area, both are items that archaeological experience shows were generally used. In other words, if there were two places with the best chance of locating evidence covered by the NHRA, they were the localities of observations 052 and 053.

As a consequence of this circumstance, this report concludes that it is probable that the entire study area does not contain heritage evidence either of value or protected under the NHRA.

4. Sources of Risk, Impact Identification and Assessment

Development will involve vegetation clearing and earthmoving activities that will have a permanent and negative impact on any archaeological and palaeontological resources intercepted by the machinery.

As present plans stand, the locality of observation 052 could be destroyed or damaged by development of the extension of the Brewelskloof Quarry. However, In terms of knowledge gleaned from this survey, the development and use of the extension of the Brewelskloof Quarry will have no discernible impact on heritage covered under the NHRA of 1999 (summarised in Table 1 for a situation without measures of mitigation).

Table 2: Potential Impacts of the proposed development on Archaeological Heritage Resources without Implementation of Measures of Mitigation

Resource	Significance	Status	Confidence	Intensity	Extent	Duration	Probability
Archaeology	None	Neutral	High	None	None	Permanent	High

The development of the quarry could however, impact on the “recent heritage” documented as observation 052, and this impact could be the total destruction of the occurrence. In addition, the koppie is a marked geomorphological feature of the landscape and removal of it would represent a diminution of aesthetic value.

5. Recommended Mitigation Measures

It is recommended that:

- HWC accept this report as sufficient study for the entire study area for reasons detailed above, and
- in terms of the NHRA of 1999, that there be no further legally obligated mitigation of heritage issues.

The author of this report nonetheless requests that Prima Klipbrekers Pty (Ltd) consider avoiding damaging or destroying the koppie containing observation 052. This shelter is part of the historical texture of the hilltop, however trivial and it would be laudable if conserving the shelter and koppie could be meshed with the undertaking to maintain an aesthetic or “natural” skyline with respect to the Brewelskloof quarry extension.

As is the norm for all development projects, the following undertakings also are required of the client should the development proceed:

- In the event that vegetation clearing and earthmoving activities expose archaeological or palaeontological materials, such activities must be halted and HWC 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).

Figures on following pages

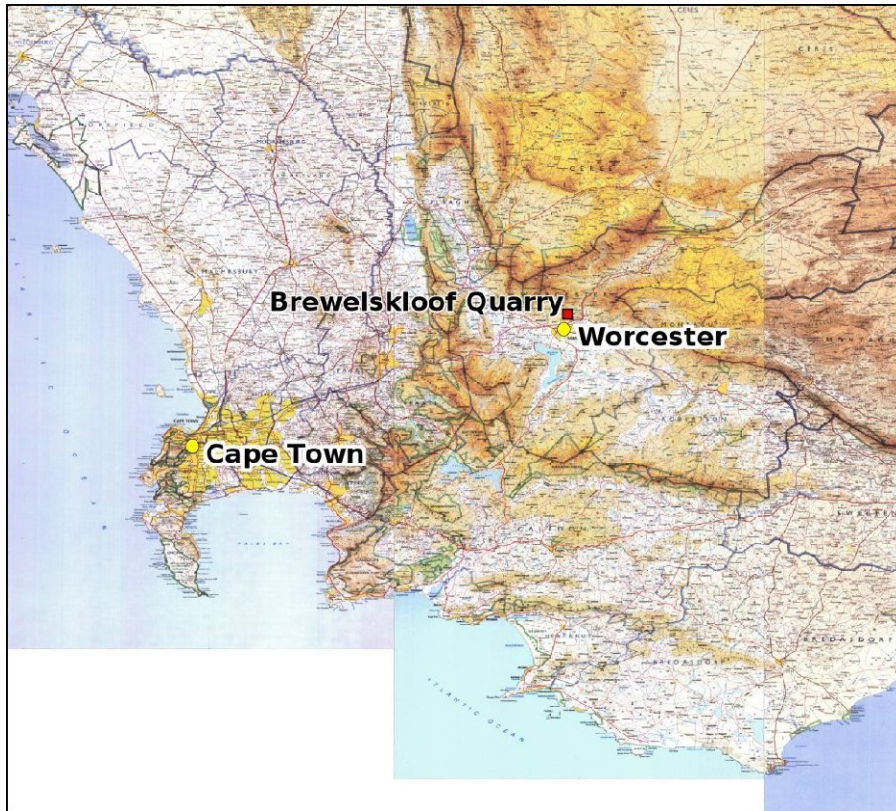


Figure 1: Location of Brewelskloof Quarry study area



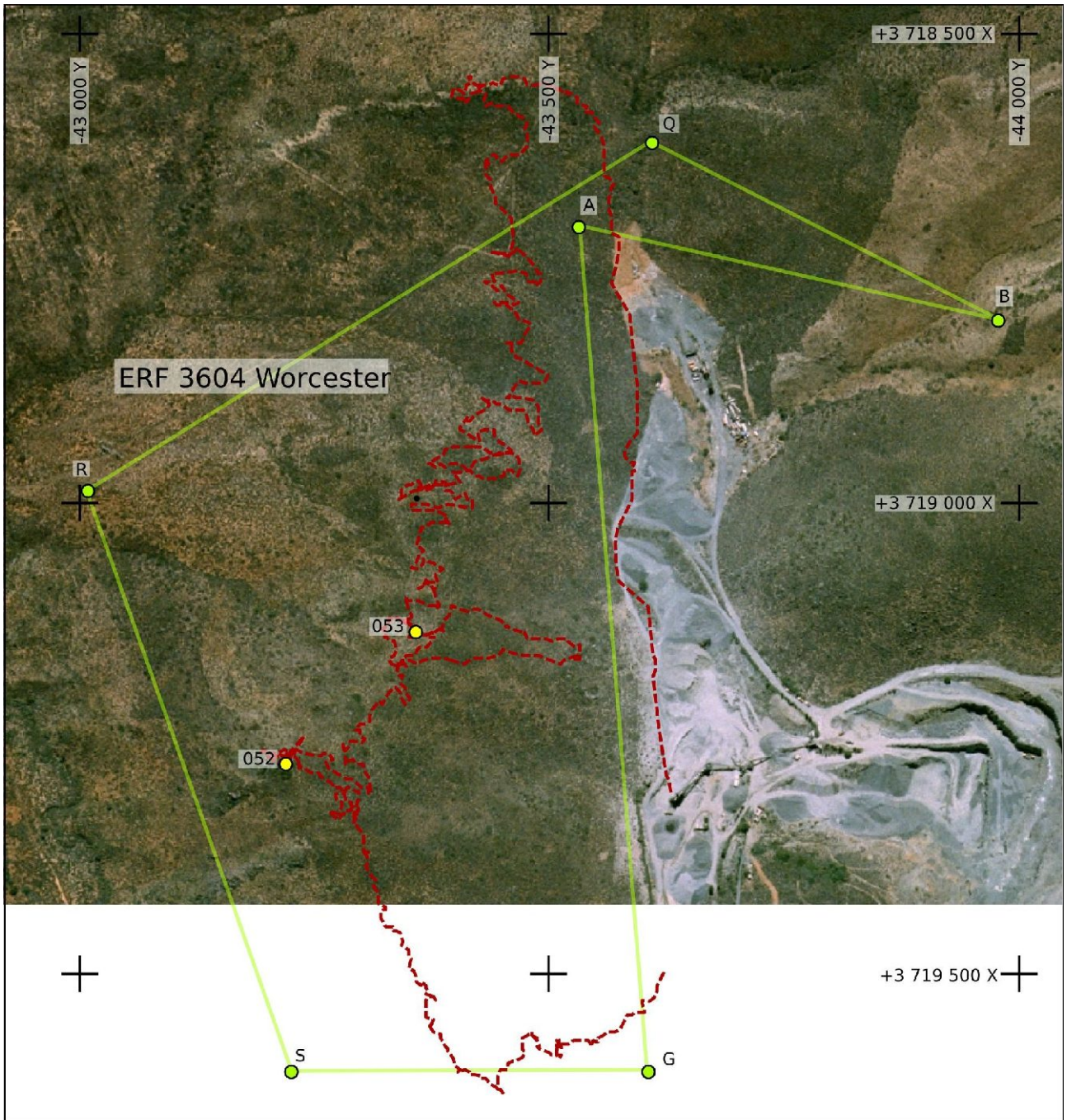
Figure 2: View north across study area. Present day workings in valley bottomn at right and moderately steep east facing slopes leading to high ground at left



Figure 3: View south across study area showing slopes flanking the high ground that formed the focus of the survey



Figure 4: East facing slopes showing thick bush growth and occasional low outcrops of rock



Key

- Observations
- - - Walk paths
- Boundary beacons
- Boundary

Hartebeesthoek 94
Central Meridian (Lo) 19°

Figure 5: Location of observations within study area as well as walk paths of field researcher



Figure 6: Koppie housing observation 052



Figure 7: View of shelter (observation 052) showing two phases of walling



Figure 8: 'Pavement' of cherty rock (observation 053)