

**A PHASE 1 ARCHAEOLOGICAL IMPACT ASSESSMENT (AIA) FOR THE PROPOSED  
SKIETKUIL QUARRIES 1 AND 2 ON THE FARM SKIETKUIL No. 3, VICTORIA WEST,  
CENTRAL KAROO DISTRICT, WESTERN CAPE PROVINCE**

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## A PHASE 1 ARCHAEOLOGICAL IMPACT ASSESSMENT (AIA) FOR THE PROPOSED SKIETKUIL QUARRIES 1 AND 2 ON THE FARM SKIETKUIL No. 3, VICTORIA WEST, CENTRAL KAROO DISTRICT, WESTERN CAPE PROVINCE

Note: This report follows the minimum standard guidelines required by the South African Heritage Resources Agency (SAHRA) for compiling a Phase 1 Archaeological Impact Assessment (AIA).

### EXECUTIVE SUMMARY

#### Purpose of the Study

The purpose of the study was to conduct a phase 1 archaeological impact assessment (AIA) for the proposed Skietkuil Quarries 1 and 2 on the farm Skietkuil No. 3, Victoria West, Central Karoo District, Western Cape Province. The survey was conducted to establish the range and importance of the exposed and *in situ* archaeological heritage materials and features, the potential impact of the development and, to make recommendations to minimize possible damage to these sites.

#### Brief Summary of Findings

The proposed quarry areas are located approximately 50 km south-east on the R63 from the small town of Victoria West and 3.5-4 km north-west from the N1 on the R63. Quarry 1 is situated about 150 m east of the R63 and Quarry 2 a further 450 m east of the Quarry 1. Quarry 1 is an already established stone quarry. Some previous prospecting has occurred around Quarry 2 and is proposed for further quarry activities.

No archaeological materials, sites or features were observed around the Quarry 1 area. Occasional and mostly isolated incidences of stone artefacts, lower grindstones and one piece of pottery were documented within the Quarry 2 area. Some historical features and kraals occur outside and adjacent to the Quarry 2 area.

No sites containing any depth of deposit or other archaeological material associated with the stone tool artefacts and archaeological material were observed within the area. The proposed area for development is considered as having a low cultural significance, although the following recommendations must be taken into consideration prior to the construction activities.

#### Recommendations

The area is of a low cultural sensitivity and development may proceed as planned, although the following recommendations must be considered:

1. It is unlikely that any *in situ* archaeological sites/remains, and human remains would be uncovered during construction. However, if concentrations of archaeological heritage material and human remains are uncovered during construction, all work must cease immediately and be reported to the Albany Museum (046 622 2312) and/or the South African Heritage Resources Agency (SAHRA) (021 642 4502) so that systematic and professional investigation/excavation can be undertaken.

2. Construction managers/foremen should be informed before construction starts on the possible types of heritage sites and cultural material they may encounter and the procedures to follow when they find sites.
3. The adjacent area where the historical settlement, stone-walling and kraals occur must be cordoned off and avoided when quarry activities begin.

## BACKGROUND INFORMATION

The phase 1 archaeological impact (AIA) assessment report is required as part of the environmental impact assessment (EIA).

Quarry 1 was established about 20 years ago to supply stone aggregate for the construction of the R63 road and has since not been functioning. Skietkuil Quarries CC proposes to re-establish the old quarry to supply approximately 40 000 m<sup>3</sup> of stone aggregate and gravel for the establishment of the nearby Eskom Gamma Sub-station and associated infrastructure.

Similarly Quarry 2 was established to supply stone aggregate for the construction of the R63, and has been non-functional for approximately 30 years. Skietkuil Quarries CC proposes to re-establish the old quarry to supply approximately 40 000 m<sup>3</sup> of stone aggregate and gravel for the establishment of the nearby Eskom Gamma Sub-station and associated infrastructure.

### Developer:

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### Terms of Reference

To conduct a survey of possible archaeological heritage sites within the area of the proposed Skietkuil Quarries 1 and 2 on the farm Skietkuil no. 3, Victoria West, Central Karoo district, Western Cape Province. The survey was conducted to establish the range and importance of the exposed and *in situ* archaeological heritage materials and features, the potential impact of the development and, to make recommendations to minimize possible damage to these sites.

## Legislative requirements

Parts of sections 35(4) and 38(1) (8) of the National Heritage Resources Act 25 of 1999 apply:

*35 (4) No person may, without a permit issued by the responsible heritage resources authority—*

- (a) destroy, damage, excavate, alter, deface or otherwise disturb any archaeological or palaeontological site or any meteorite;*
- (b) destroy, damage, excavate, remove from its original position, collect or own any archaeological or palaeontological material or object or any meteorite;*
- (d) bring onto or use at an archaeological or palaeontological site any excavation equipment or any equipment which assist in the detection or recovery of metals or archaeological and palaeontological material or objects, or use such equipment for the recovery of meteorites.*

*38. (1) Subject to the provisions of subsections (7), (8) and (9), any person who intends to undertake a development categorized as -*

- (a) the construction of a road, wall, powerline, pipeline, canal or other similar form of linear development or barrier exceeding 300m in length;*
- (b) the construction of a bridge or similar structure exceeding 50m in length;*
- (c) any development or other activity which will change the character of the site -*
  - (i) exceeding 5000m<sup>2</sup> in extent, or*
  - (ii) involving three or more erven or subdivisions thereof; or*
  - (iii) involving three or more erven or divisions thereof which have been consolidated within the past five years; or*
  - (iv) the costs of which will exceed a sum set in terms of regulations by SAHRA or a provincial resources authority;*
- (d) the re-zoning of a site exceeding 10 000m<sup>2</sup> in extent; or*
- (e) any other category of development provided for in regulations by SAHRA or a provincial heritage resources authority,*  
*Must as the very earliest stages of initiating such a development, notify the responsible heritage resources authority and furnish it with details regarding the location, nature and extent of the proposed development.*
- (8) The provisions of this section do not apply to a development as described in subsection (1) if an evaluation of the impact of such development on heritage resources is required in terms of the Environment Conservation Act, 1989 (Act No. 73 of 1989), or the integrated environmental management guidelines issued by the Department of Environmental Affairs and Tourism, or the Minerals Act, 1991 (Act No. 50 of 1991), or any other legislation: Provided that the consenting authority must ensure that the evaluation fulfils the requirements of the relevant heritage resources authority in terms of subsection (3), and any comments and recommendations of the relevant heritage resources authority with regard to such development have been taken into account prior to the granting of the consent.*

## BRIEF ARCHAEOLOGICAL BACKGROUND

### Literature review

Little is known about the archaeology of the immediate area, mainly because no systematic research has been conducted there. Garth Sampson (1985) has conducted a long-term archaeological research project in the Seacow River Valley situated about 150 km north-east of Victoria West between the towns of Middelburg, Richmond, Noupoort and Hanover, following a holistic recording approach of all archaeological and historical sites and features. Sparsely distributed Early Stone Age (ESA) stone scatters, Middle Stone Age (MSA) artefacts and Later Stone Age (LSA) stone tool scatters predominantly manufactured from hornfels have been documented on previous Cultural Resource Management (CRM) work done within the Karoo area (Morris 2006; Morris 2007).

During the 1920's, A.H.J. Goodwin (1926, 1946) identified the Victoria West Industry which occurred in the Karoo and along the Vaal River, which comprised mainly a prepared core technique, transitional between the ESA and MSA. It is thought that the Victoria West cores are the 'evolutionary step' before the Levallois or the prepared core industry, indicating an outward spread of this technological change (Lycett 2009: 175).

Rock art, mainly in the form of rock engravings occur widespread over the Karoo landscape. Morris (1988) and Parkington *et al.* (2008) have conducted several research investigations into the occurrence of both rock paintings and engravings within the Western Cape area of the Karoo. Historical sites are also be found in the landscape, such as shepherd rest camps.

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- Sampson, C. G. 1985. Atlas of Stone Age settlement in the central and upper Seacow River Valley. Bloemfontein: National Museum Memoirs NO. 18.

## DESCRIPTION OF THE PROPERTY

### Area surveyed

#### Location data

The proposed quarry areas are located approximately 50 km south-east on the R63 from the small town of Victoria West and 3.5-4 km north-west from the N1 on the R63. Quarry 1 is situated about 150 m east of the R63 and Quarry 2 a further 450 m east of the Quarry 1. Quarry 1 is an already established stone quarry. Some previous prospecting has occurred around Quarry 2 and is proposed for further quarry activities.

#### Map

1:50 000 3123CB BULBERG (Map 1)

## ARCHAEOLOGICAL INVESTIGATION

### Methodology

The survey was conducted by three people on foot around the boundary fence of Quarry 1 and around the already disturbed area of Quarry 2. GPS readings were taken using a Garmin Plus II. The GPS readings have been plotted on Maps 2 and 3.

The proposed area for Quarry 1 and Quarry 2 is covered in mainly succulent Karoo vegetation and occasional occurrences of low shrub. The archaeological visibility is relatively good as the vegetation is sparse and archaeological materials are easily identifiable. Although visibility around the Quarry 1 area is slightly more obscured by the small stones and pebbles that cover the landscape surrounding the fence, this is due to the stone crushing activities taking place at Quarry 1 (Figs 1-2). Each quarry will be dealt with separately.

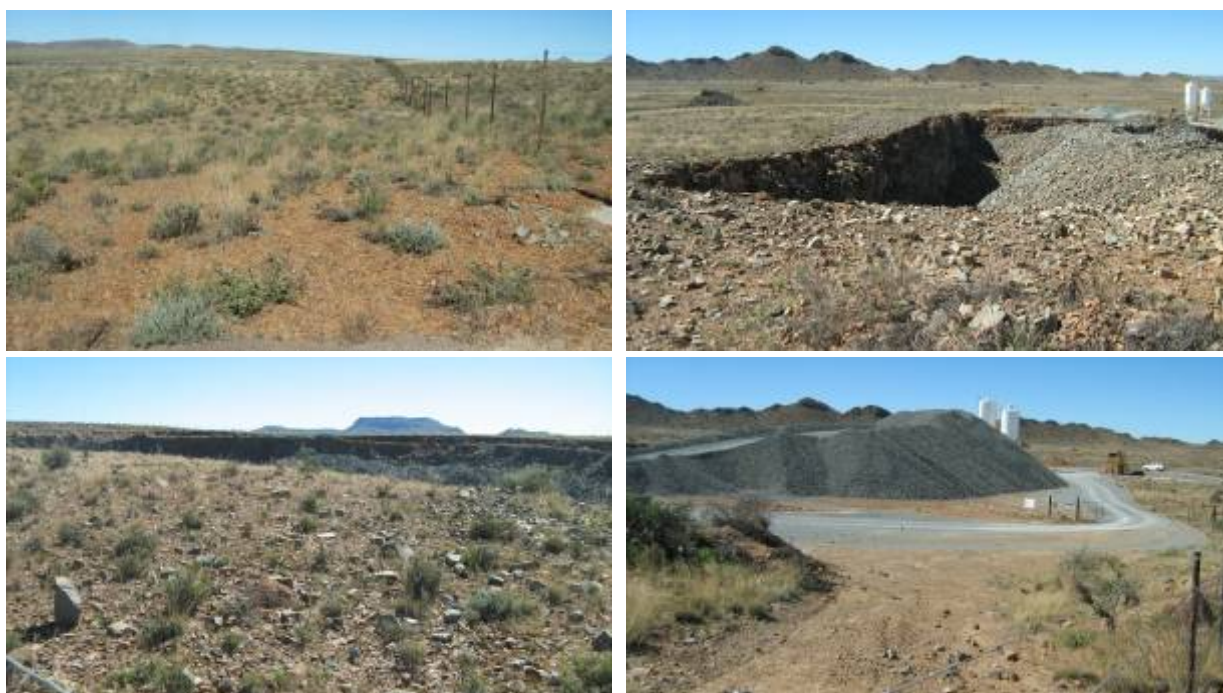
### Quarry 1:

Quarry 1 is situated approximately 150 m to the east of the R63 road and is 1.5 ha in extent; the processing area (crushing, screening and stockpiling of the crushed rock) is approximately 1 ha making the total footprint of the quarry activities about 2.5 ha in extent. The area has been heavily disturbed by the construction of a fence around the quarry activities, by the actual quarry activities and by the construction of crushers and access roads. Five GPS readings GPS27 (31°42'25.32"S; 23°25'0.06"E), GPS28 (31°42'23.04"S; 23°24'48.25"E), GPS29 (31°42'28.68"S; 23°24'47.82"E), GPS30 (31°42'29.76"S; 23°24'54.60E) and GPS31 (31°42'27.84"S; 23°25'0.66"E) were taken, each at the corner of the fence immediately surrounding the quarry activity area (Map 3).

No archaeological material and features were observed within the area surveyed, approximately 2 m out from fence. It is unlikely that archaeological materials would be found *in situ* owing to the previous disturbances.



Figs 1-2. Views of the landscape surrounding Quarry 1.



Figs 3-6. Disturbances caused by the existing quarry activities.

### Quarry 2:

Quarry 2 is situated approximately 450 m to the east of Quarry 1. Only a relatively small area, approximately 50 m x 50 m, has been disturbed, the proposed area for the quarry being 1.5 m in extent. As mentioned above the sparse vegetation was conducive to archaeological visibility (Figs 7-8).

A few isolated stone tool artefacts (scrapers and flakes) predominantly made on hornfels were observed within the proposed quarry area, one piece of pottery and two possible lower grindstones, however, the latter may be associated with the historical settlement which was documented adjacent to, but outside of the proposed quarry area. The proposed quarry boundary area is marked by the following GPS points (Map 3): GPS1 (31°42'31.68"S; 23°25'11.88"E), GPS2 (31°42'29.16"S; 23°25'11.04"E), GPS9 (31°42'26.28"S; 23°25'11.04"E), GPS12 (31°42'24.36"S; 23°25'15.06"E), GPS14 (31°42'24.42"S; 23°25'17.58"E), GPS16 (31°42'28.75"S; 23°25'22.44"E) and GPS 18 (31°42'32.70S; 23°25'18.96"E), the latter reading also marking the area where the piece of pre-colonial pottery was observed.

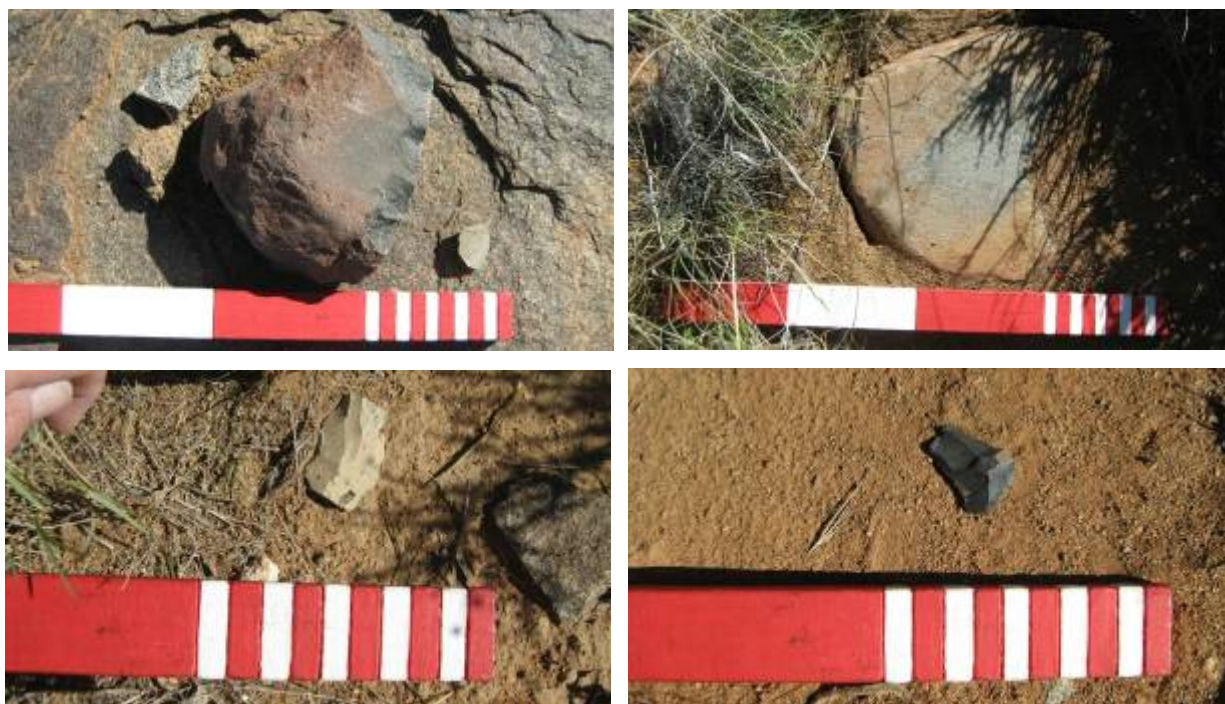


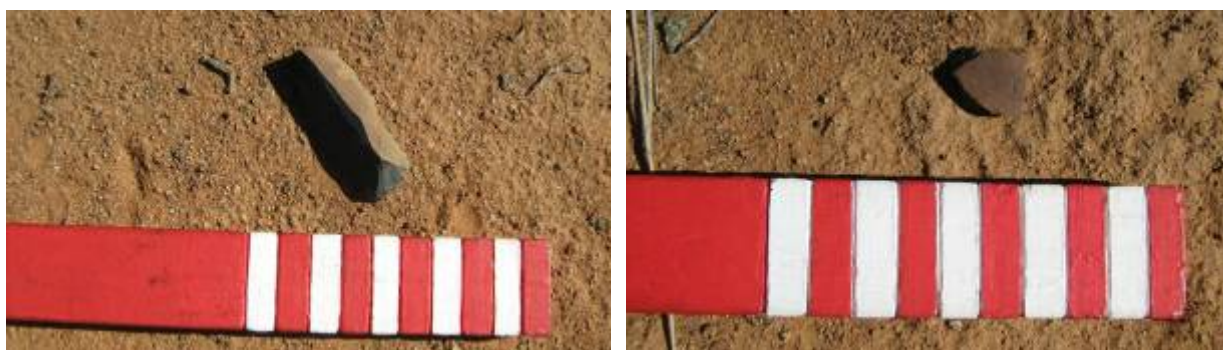


Figs 7-8. Views of the disturbed area (left) and the landscape surrounding Quarry 2.

The stone tool artefacts were mainly observed closer to the small rocky outcrop, slightly east of GPS1-3, and then filtering out as one moves towards the north. One of the lower grindstones (broken) and one hornfels flake was documented at GPS3 ( $31^{\circ}42'28.98''\text{S}$ ;  $23^{\circ}25'10.92''\text{E}$ ). One lower grindstone was documented at GPS5 ( $31^{\circ}42'27.84''\text{S}$ ;  $23^{\circ}25'11.94''\text{E}$ ) and one edge-damaged hornfels flake at GPS6 ( $31^{\circ}42'27.30''\text{S}$ ;  $23^{\circ}25'11.94''\text{E}$ ). Two hornfels flakes and one scraper was documented at GPS7 ( $31^{\circ}42'26.88''\text{S}$ ;  $23^{\circ}25'11.88''\text{E}$ ) and one hornfels flake at GPS8 ( $31^{\circ}42'26.82''\text{S}$ ;  $23^{\circ}25'11.64''\text{E}$ ). One patinated hornfels edge-damaged flake was documented at GPS10 ( $31^{\circ}42'26.22''\text{S}$ ;  $23^{\circ}25'12.90''\text{E}$ ) and two hornfels flakes and one scraper at GPS12 ( $31^{\circ}42'24.36''\text{S}$ ;  $23^{\circ}25'15.06''\text{E}$ ) (Map 3). The stone tool artefacts are predominantly of the Later Stone Age (LSA), although the one patinated hornfels edge-damaged flakes may possibly be of Middle Stone Age (MSA) origin (Figs 9-14).

The stone tool scatters, lower grindstones and piece of pottery do not seem to be associated with other archaeological material except in the instance of GPS3. No possible depth of deposit seems evident as the area is earmarked for stone and aggregate quarrying and that bedrock at places protrudes above the ground.





Figs 9-14. Examples of the artefacts documented including the two lower grindstones, one flake, two endscrapers and the one piece of pottery.

In addition, but occurring outside the boundary of the proposed quarry area, is a historical settlement, adjacent dumping area and about four kraals positioned against the 'koppie' (hillock), situated between GPS24 ( $31^{\circ}42'35.88\text{S}$ ;  $23^{\circ}25'12.48\text{E}$ ) and GPS26 ( $31^{\circ}42'32.64\text{S}$ ;  $23^{\circ}25'12.78\text{E}$ ) (Map 3). Stone walling foundations that were presumably a cottage/s or rooms can be identified. A dumping area was also observed at GPS 21, fragments of various historical European ceramic wares were observed, including stoneware vessels, transfer print and willow pattern ceramics and glass bottles probably dating from late 19<sup>th</sup> century (Figs 15-18).



Figs 15-18. Examples of the historical settlement including stone-walling foundations, ceramics and an aerial view of the kraals.

## Survey/Description of sites

Isolated occurrences of Later Stone Age (LSA) stone tools were documented, predominantly made on hornfels, two lower grindstones and one piece of pottery, however, it is unlikely that the artefacts are *in situ* and occur in secondary context owing to the previous and present disturbances occurring within the area. In addition, no other archaeological materials were observed to be in association with stone tool surface scatters and no depth of archaeological deposit recorded.

## RECOMMENDATIONS

The area is of a low cultural sensitivity and development may proceed as planned, although the following recommendations must be considered:

1. The area has been highly disturbed in past and currently, therefore, it is unlikely that any *in situ* archaeological sites/remains, and human remains would be uncovered during construction. However, if concentrations of archaeological heritage material and human remains are uncovered during construction, all work must cease immediately and be reported to the Albany Museum (046 622 2312) and/or the South African Heritage Resources Agency (SAHRA) (021 642 4502) so that systematic and professional investigation/excavation can be undertaken.
2. Construction managers/foremen should be informed before construction starts on the possible types of heritage sites and cultural material they may encounter and the procedures to follow when they find sites.
3. The adjacent area where the historical settlement, stone-walling and kraals occur must be cordoned off and avoided when quarry activities begin.

## GENERAL REMARKS AND CONDITIONS

**Note:** This report is a phase 1 archaeological heritage impact assessment/ investigation only and does not include or exempt other required heritage impact assessments (see below).

The National Heritage Resources Act (Act No. 25 of 1999, section 35) requires a full Heritage Impact Assessment (HIA) in order that all heritage resources, that is, all places or objects of aesthetics, architectural, historic, scientific, social, spiritual linguistic or technological value or significance are protected. Thus any assessment should make provision for the protection of all these heritage components, including archaeology, shipwrecks, battlefields, graves, and structures older than 60 years, living heritage, historical settlements, landscapes, geological sites, palaeontological sites and objects.

It must be emphasized that the conclusions and recommendations expressed in this archaeological heritage sensitivity investigation are based on the visibility of archaeological sites/features and may not therefore, reflect the true state of affairs. Many sites/features may be covered by soil and vegetation and will only be located once this has been removed. In the event of such finds being uncovered, (such as during any phase of construction work), archaeologists must be informed immediately so that they can investigate the importance of the sites and excavate or collect material before it is destroyed. The onus is on the developer to ensure that this agreement is honoured in accordance with the National Heritage Act No. 25 of 1999.

It must also be clear that Archaeological Specialist Reports (AIAs) will be assessed by the relevant heritage resources authority. The final decision rests with the heritage resources authority, which may grant a permit or a formal letter of permission for the destruction of any cultural sites.

## APPENDIX A: IDENTIFICATION OF ARCHAEOLOGICAL FEATURES AND MATERIAL FROM INLAND AREAS: guidelines and procedures for developers

### 1. Human Skeletal material

Human remains, whether the complete remains of an individual buried during the past, or scattered human remains resulting from disturbance of the grave, should be reported. In general the remains are buried in a flexed position on their sides, but are also found buried in a sitting position with a flat stone capping and developers are requested to be on the alert for this.

### 2. Rock art - engravings

Rock engravings are pictures scratched, scraped and pecked into the dark surface of rocks with sharp objects to expose the lighter under surface. Contact the nearest archaeologist to provide information and advice regarding the protection and conservation of rock art.

### 2. Freshwater mussel middens

Freshwater mussels are found in the muddy banks of rivers and streams and were collected by people in the past as a food resource. Freshwater mussel shell middens are accumulations of mussel shell and are usually found close to rivers and streams. These shell middens frequently contain stone tools, pottery, bone, and occasionally human remains. Shell middens may be of various sizes and depths, but an accumulation which exceeds 1 m<sup>2</sup> in extent, should be reported to an archaeologist.

### 3. Stone artefacts

These are difficult for the layman to identify. However, large accumulations of flaked stones which do not appear to have been distributed naturally should be reported. If the stone tools are associated with bone remains, development should be halted immediately and archaeologists notified

### 4. Fossil bone

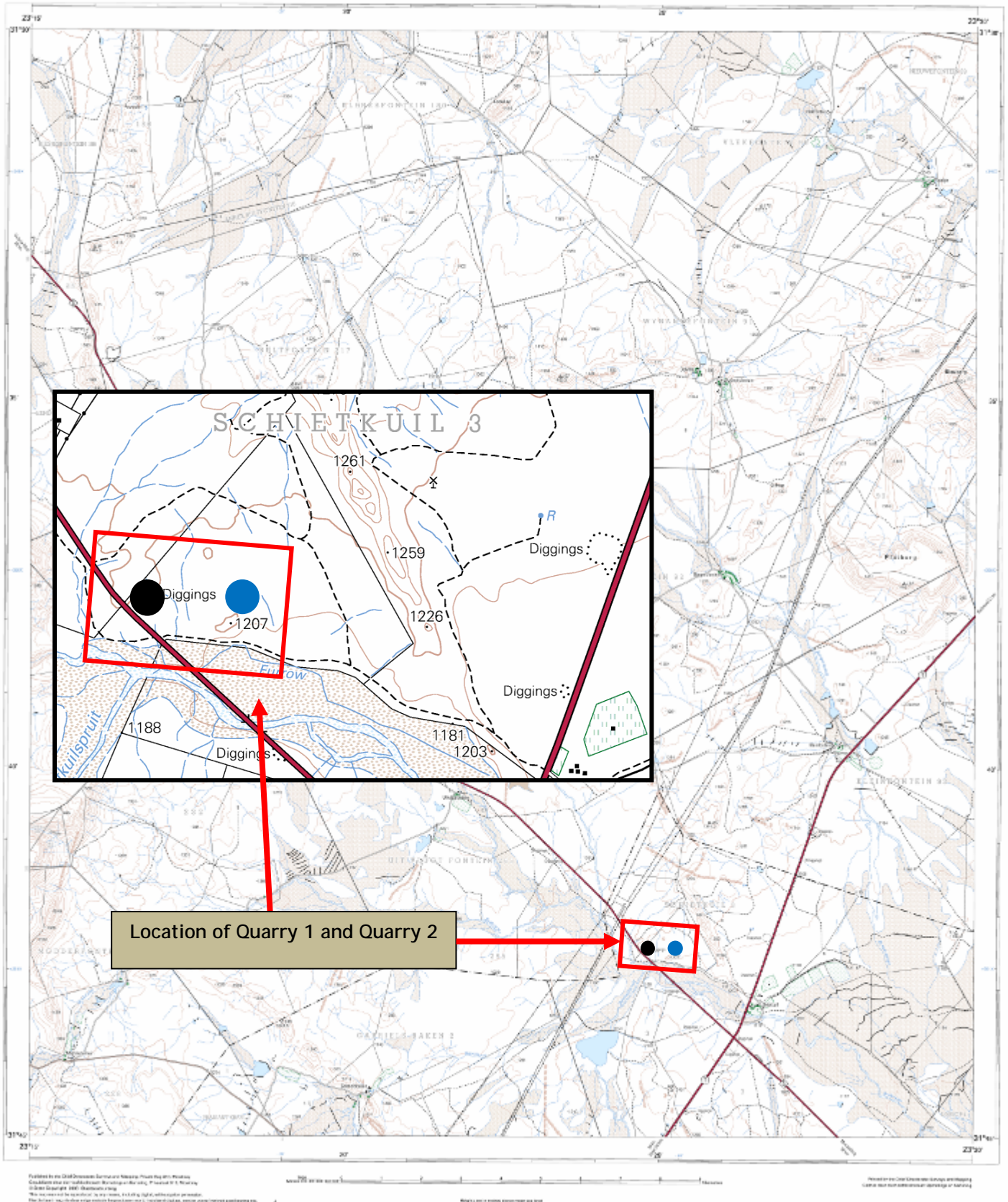
Fossil bones may be found embedded in geological deposits. Any concentrations of bones, whether fossilized or not, should be reported.

### 5. Large stone features

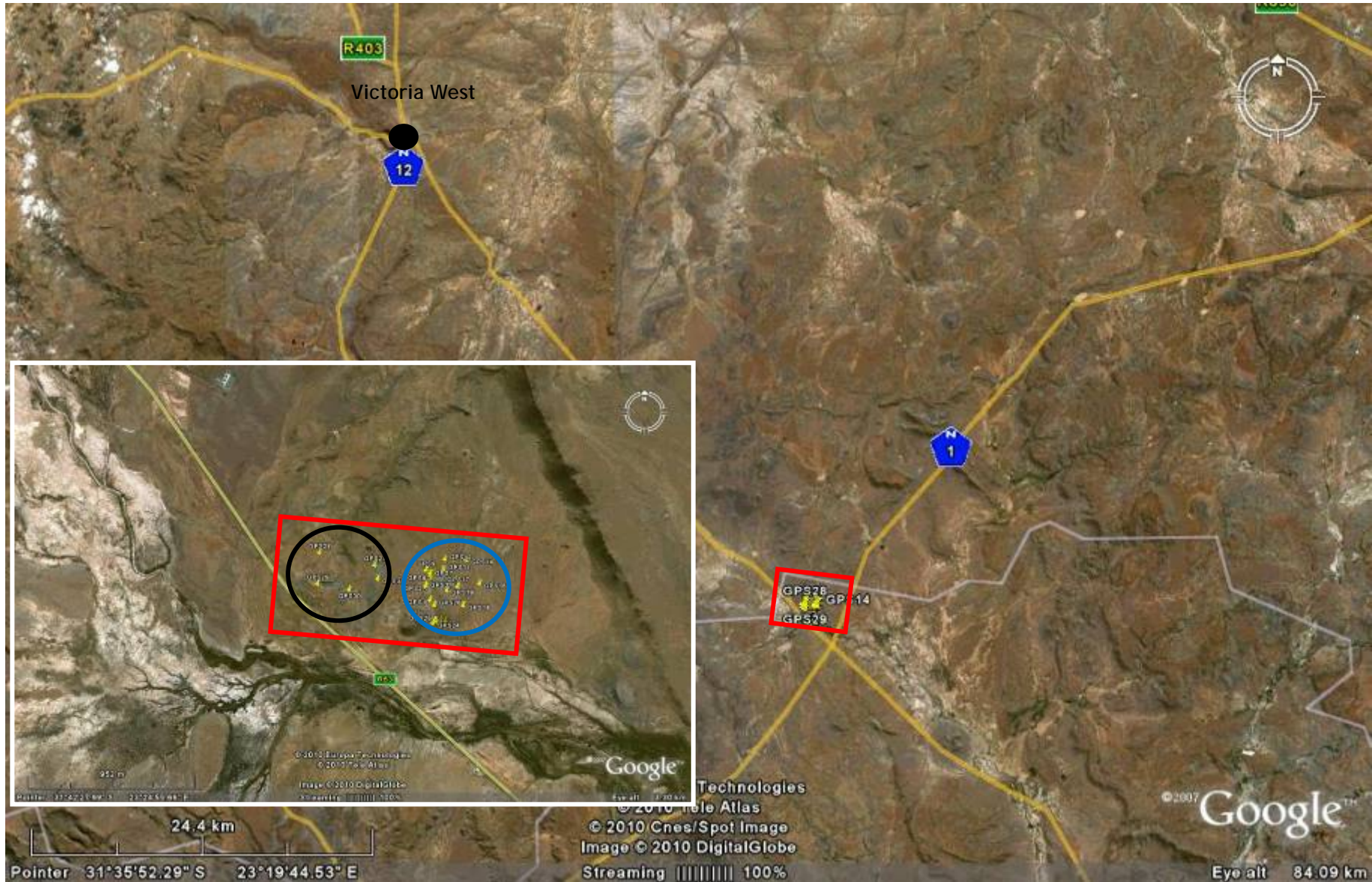
They come in different forms and sizes, but are easy to identify. The most common are roughly circular stone walls (mostly collapsed) and may represent stock enclosures, remains of wind breaks or cooking shelters. Others consist of large piles of stones of different sizes and heights and are known as *isisivane*. Their purpose and meaning is not fully understood, however, some are thought to represent burial cairns while others may have symbolic value.

### 6. Historical artefacts or features

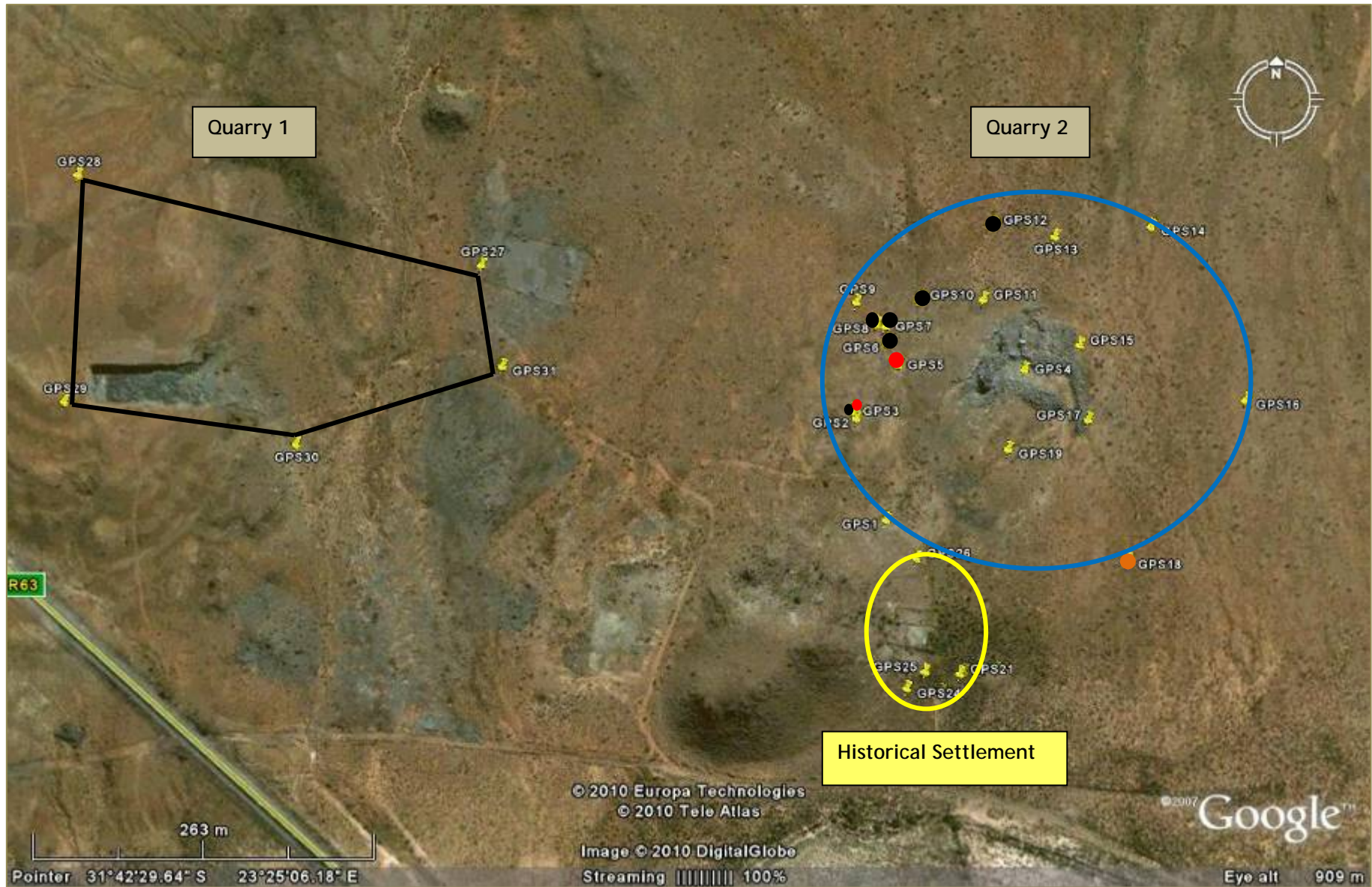
These are easy to identified and include foundations of buildings or other construction features and items from domestic and military activities.



Map 1. 1:50 000 Map: Indicating proposed areas for Quarry 1 (black dot) and Quarry 2 (blue dot).



Map 2. Aerial view of proposed areas for Quarry 1 (black circle) and Quarry 2 (blue circle).



Map 3. Aerial view indicating GPS points and artefact scatters (red dot: lower grindstone; black dot: stone artefacts; orange dot: pottery).