

**A PHASE 1 ARCHAEOLOGICAL IMPACT ASSESSMENT FOR THE PROPOSED
CLEARING OF INDIGENOUS VEGETATION FOR THE CONSTRUCTION OF A
BOUNDARY FENCE AROUND THE SOUTH AFRICAN POLICE SERVICE'S
TRAINING FACILITY AT SLAGBOOM, NEAR ADDO, SUNDAYS RIVER VALLEY
MUNICIPALITY, EASTERN CAPE PROVINCE**

Prepared for: CEN Integrated Environmental Management Unit
36 River Road
Walmer
Port Elizabeth
6070
Tel: 041 5812983/5817811
Fax: 041 5812983
Contact person: Dr M. Cohen
email: steenbok@aerosat.co.za

Compiled by: Dr Johan Binneman
On behalf of: Eastern Cape Heritage Consultants
P.O. Box 689
Jeffreys Bay
6330
Tel: 042 2960399
Cell: 0728006322
Email: kobusreichert@yahoo.com
jnfbinnean@gmail.com

Date: September 2013

CONTENTS

EXECUTIVE SUMMARY	1
Purpose of the study	1
The location of the development	1
Type of development	1
The investigation	1
Cultural sensitivity	1
Recommendations	2
PROJECT INFORMATION	2
The type of development	2
The Developer	2
The Consultant	2
Purpose of the study	2
Site and Location	2
Relevant impact assessments, databases and collections	3
BRIEF ARCHAEOLOGICAL BACKGROUND	3
Literature review	3
ARCHAEOLOGICAL INVESTIGATION	4
Methodology	4
Limitations and assumptions	4
Results	4
DISCUSSION AND MITIGATION	7
GENERAL REMARKS AND CONDITIONS	9
APPENDIX A: brief legislative requirements	10
APPENDIX B: Guidelines and procedures for developers	11
MAPS	12-13

A PHASE 1 ARCHAEOLOGICAL IMPACT ASSESSMENT FOR THE PROPOSED CLEARING OF INDIGENOUS VEGETATION FOR THE CONSTRUCTION OF A BOUNDARY FENCE AROUND THE SOUTH AFRICAN POLICE SERVICE'S TRAINING FACILITY AT SLAGBOOM, NEAR ADDO, SUNDAYS RIVER VALLEY MUNICIPALITY, EASTERN CAPE PROVINCE

Compiled by: Dr Johan Binneman
On behalf of: Eastern Cape Heritage Consultants
P.O. Box 689
Jeffreys Bay
6330
Tel: 042 962096
Cell: 0728006322
email: kobusreichert@yahoo.com

Note: This report follows the minimum standard guidelines required by the South African Heritage Resources Agency for compiling Archaeological Phase 1 Impact Assessment (AIA) reports. The report is part of an Environmental Impact Assessment.

EXECUTIVE SUMMARY

Purpose of the study

The original proposal was to conduct a survey of possible archaeological sites for the proposed construction of a fence along the boundary of the South African Police Service's Training Facility at Slagboom near Addo, Sundays River Valley Municipality, Eastern Cape Province; to establish the range and importance of the archaeological sites/remains, the potential impact of the development and to make recommendations to minimize possible damage to these sites.

The location of the development

The proposed site for development is situated approximately 16 kilometres north of the town Addo as the crow flies and about 6 kilometres from the gravel road between Kirkwood and the R335 Zuurberg Road.

Type of development

The proposed development comprises the construction of a fence along the boundary of the SAPS's Training Institution over a distance of approximately 8 kilometres.

The investigation

Due to the dense thicket vegetation it was difficult to find archaeological sites/materials, but occasional Middle Stone Age stone tools were observed in areas where the dense vegetation has been cleared.

Cultural sensitivity

The development is near the Witrivier and freshwater shell middens may be exposed during the clearing of the dense vegetation. In general the proposed property for development appeared to be of low archaeological sensitivity. Development may proceed as planned (see recommendations).

Recommendations

1. If freshwater shell middens or any other concentrations of other archaeological material are uncovered during the development it should be reported immediately to the nearest archaeologist, museum and/or the South African Heritage Resources Agency.
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. It is suggested that a person be trained to be on site to report to the site manager if sites are found.
3. It is suggested that an archaeologist should conduct a walkthrough when the areas for the construction of the fences are cleared of vegetation.

PROJECT INFORMATION

The type of development

The proposed development will entail the construction of a 2.4 metre high fence over a distance of approximately 8 kilometres along the boundary of the South African Police Service's Training Institution. An area of vegetation up to 3.5m wide will be cleared along the fence line to facilitate construction and maintenance of the fence.

The Applicant

National Department of Public Works

The Consultant

CEN Integrated Environmental Management Unit
36 River Road
Walmer
Port Elizabeth, 6070
Tel: 041 5812983/5817811
Fax: 041 5812983
Contact person: Dr M. Cohen
Email: steenbok@aerosat.co.za

Purpose of the study

The original proposal was to conduct a Phase 1 Archaeological Impact Assessment (AIA) of the proposed clearing of indigenous vegetation for the construction of a boundary fence around the South African Police Service's Training Facility at Slagboom near Addo, Sundays River Valley Municipality, Eastern Cape Province. A survey was conducted to establish;

- the range and importance of possible exposed and *in situ* archaeological sites, features and materials,
- the potential impact of the development on these resources and,
- to make recommendations to minimize possible damage to these resources.

Site and Location

The development is located within the 1:50 000 topographic reference map 3325 BC Coerney (Map 1). The proposed development on Portion 11 of Farm 39 is situated approximately 16

kilometres north of Addo and some 20 kilometres east of Kirkwood as the crow flies (general GPS reading: 33.22.16,72S; 25.40.2,43E). It is located about 6 kilometers north of the gravel road between Kirkwood and the R335 Zuurberg Road. The main section of the South African Police Service's Training Facility is situated on the southern embankment of the Slagboomdam, which is constructed in the Witrivier. The far northern side of the property borders on farm land, but the rest comprises rugged terrain covered by dense thicket vegetation and game farms (Maps 1-2). The proposed development is located in the foothills of the Suurgberg range near the Addo Elephant National Park.

Relevant impact assessments, databases and collections

Binneman, J. 2012a. A phase 1 archaeological impact assessment for the proposed expansion of the existing agricultural activities on River Bend citrus farm, remainder of Farm 82 Wolve Kop, Portion 1 of Farm 77 Wellshaven and Portion 3 of Farm 77 Honeyvale, near Addo, Sundays River Valley Municipality, Eastern Cape Province. Prepared for Public Process Consultants, Greenacres.

Binneman, J. 2012b. A phase 1 archaeological impact assessment for the proposed expansion of agricultural activities on Portion 23 of Farm 104 Swanepoels Kraal and the remainder of Farm 650, Kirkwood, Sundays River Valley Municipality, Eastern Cape Province. Prepared for Public Process Consultants, Greenacres.

The Albany Museum in Grahamstown houses collections and information from the wider region.

BRIEF ARCHAEOLOGICAL BACKGROUND

Literature review

Little systematic archaeological research has been conducted in the Addo/Kirkwood area, but several archaeological impact assessments have been conducted in the wider area in recent years. The oldest evidence of the early inhabitants are large stone tools, called hand axes and cleavers, which can be found amongst river gravels of the Sunday's River and in old spring deposits in the region. These large stone tools are from a time period called the Earlier Stone Age (ESA) and may date between 1,5 million and 250 000 years old. In a series of spring deposits at Amanzi Spring near Addo, a large number of stone tools were found *in situ* to a depth of 3-4 metres. Remarkably, wood and seed material preserved in the spring deposits, possibly dating to between 250 000 to 800 000 years old (Inskeep 1965; Deacon 1970).

The large hand axes and cleavers were replaced by smaller stone tools called the Middle Stone Age (MSA) flake and blade industries. Evidence of MSA sites occur throughout the region and date between 250 000 and 30 000 years old. These stone artefacts, like the Earlier Stone Age tools are also found in the gravels along the banks of the Sunday's River and like hand axes are mainly in secondary context. Fossil bone may in rare cases be associated with MSA occurrences.

The majority of archaeological sites found in the area date from the past 10 000 years (called the Later Stone Age) and are associated with the campsites of San hunter-gatherers and Khoi pastoralists. These sites are difficult to find because they are in the open veld and often covered by vegetation and sand. Sometimes these sites are only represented by a few stone tools and fragments of bone (Deacon & Deacon 1999). The preservation of these sites is poor and it is not always possible to date them. There are many San hunter-gatherers sites in the nearby Suurgberg and adjacent mountains. Here caves and rock shelters were occupied by the San during the Later Stone Age with well-preserved living deposits and paintings along the walls (Deacon 1976).

Some 2 000 years ago Khoi pastoralists occupied the region and lived mainly in small settlements. They were the first food producers in South Africa and introduced domesticated

animals (sheep, goat and cattle) and ceramic vessels to southern Africa. Often archaeological sites are found close to the banks of large streams and rivers. Large piles of freshwater mussel shell (called middens) usually mark these sites. Prehistoric groups collected the freshwater mussel from the muddy banks of the rivers as a source of food. Mixed with the shell and other riverine and terrestrial food waste are also cultural materials. Human remains are often found buried in the middens.

References

- Deacon , H.J. 1970. The Acheulian occupation at Amanzi Springs, Uitenhage District, Cape Province. *Annals of the Cape Provincial Museums*. 8:89-189.
- Deacon, H. J., 1976. Where hunters gathered: a study of Holocene Stone Age people in the Eastern Cape. *South African Archaeological Society Monograph Series No. 1*.
- Deacon, H.J. & Deacon, J. *Human beginnings in South Africa*. Cape Town: David Phillips Publishers.
- Inskeep, R.R. 1965. Earlier Stone Age occupation at Amanzi: preliminary investigations. *South African Journal of Science*. 61:229-242.

ARCHAEOLOGICAL INVESTIGATION

Methodology

The command at the South African Police Service's Training Facility was contacted prior to the investigation to inform them about the visit and to gain access to the property. They were also consulted during the visit on possible locations of archaeological remains, graves and historical buildings and other features. Due to security protocol, dense vegetation and the rugged terrain we were taken around in a SAP 4x4 vehicle to view the different areas where the proposed boundary fences will be constructed. This enabled us to cover as much of the terrain as possible and to conduct spot checks on foot. Without this assistance of the SAP it would have been difficult, if not, impossible to conduct the investigation. GPS readings were taken with a Garmin and all important features were digitally recorded.

Limitations and assumptions

It was not possible to do a complete survey due to the extent of the boundary fence, rugged terrain and the dense vegetation (Figures 1-4). However, spot checks were conducted along most of the northern part of the proposed fence. The extreme southern part could not be visited because of logistical problems not anticipated before the site visit (access had to be arranged with a different landowner, but has not communicated with us beforehand). Notwithstanding, we were able to have viewed the fence line from a distance from high ground (indicated by a broken red line on Map 2) (Figure 4). This aspect as well as the experience and knowledge gained from other investigations in the wider surrounding area, enabled us to make assumptions and predictions on the incidences and significance of possible pre-colonial archaeological sites/material which may be covered by the dense vegetation.

Results

In most cases the proposed fence(s) around existing facilities such as the main building complex, access roads, shooting ranges and the total property will follow old existing fence lines (areas A, B and C, map 2). These areas have already been disturbed in the past by the construction of the Training Facility, the dam wall, buildings and shooting ranges, roads and fences, clearing and levelling activities. Furthermore, the proposed boundary fence will also follow existing fence lines which have already disturbed the area. Spot checks along the

existing fence line at the shooting range area (area B, map 2, figure 2) and one of a few open spaces available for investigation did not yield any archaeological material. The area is close to the river, but covered by a fine grey alluvial soil and disturbed by clearing and probably farming activities in the past. The remainder of the fence lines passes through dense thicket vegetation and made it difficult to locate archaeological material.

Only a few Middle Stone Age stone flakes (older than 30 000 years) were observed, but it is possible that more tools are buried under the soil and vegetation (Figure 4). Similar stone tools were also observed in nearby areas during investigations. These quartzite Middle Stone Age stone tools display typical faceted striking platforms and were found randomly without any recognised distribution patterns. Most of the tools were thick, small 'informal' flakes and chunks and were also in secondary context. The stone tools were not associated with any other archaeological material.

Apart from the occasional stone tools no other archaeological sites/materials were observed. In general it would appear that it is unlikely that any sensitive archaeological remains will be exposed during the development. This scenario is also predicted for the extreme southern fence line that could not be investigated, based on the observations of the northern fence line investigation and previous surveys in nearby areas. The proposed development is near the Witivier and it is possible that freshwater shell middens may be exposed during the clearing of the dense vegetation. There are graves on the property but the development will not have any impact on them. There are no buildings older than 60 years on the property.



Figure 1. General view of the SAPS's Training Institution at Slagboom near Addo (main image) and views of the rugged terrain and dense thicket vegetation in places through which the boundary fence will be constructed (inserts). The red lines indicate approximately where the fences will be constructed.



Figure 2. Views of the dense thicket vegetation in places near the shooting range (main image) through which the boundary fence will be constructed. The red lines indicate approximately where the fences will be constructed.



Figure 3. Views of the rugged terrain and dense thicket vegetation through which the boundary fence will be constructed towards the south. The red lines indicate approximately where the fences will be constructed.

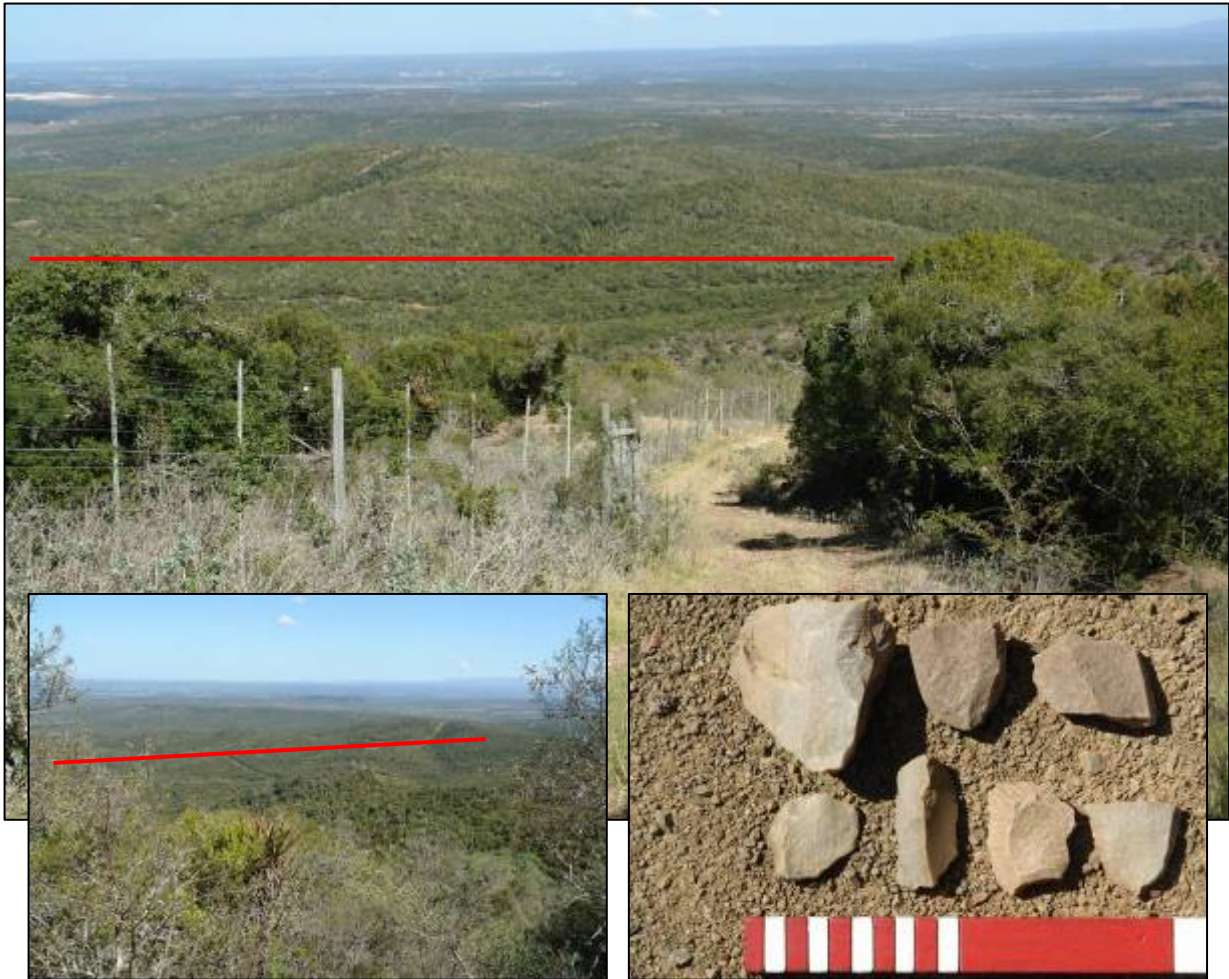


Figure 4. Views of the rugged terrain and dense thicket vegetation through which the southern boundary fence will be constructed. The red lines indicate approximately where the fences will be constructed. A small sample of Middle Stone Age stone tools observed during the investigation (right insert).

DISCUSSION AND MITIGATION

Most of the proposed fence lines will follow existing fences and therefore any archaeological sites/materials have already been disturbed or destroyed. The fence lines also run through areas covered with dense thicket vegetation which made it difficult to find archaeological sites. Although only a few Middle Stone Age stone artefacts were observed, possible archaeological sites/materials may be covered by soil and vegetation. The stone tools were not associated with other archaeological remains and were in secondary context and of low significance. Although it is unlikely that any sensitive archaeological remains will be exposed during the development, there is always a possibility that human remains and/or other archaeological and historical material may be uncovered during the development. Should such material be exposed then it must be reported to the nearest museum, archaeologist or to the Eastern Cape Provincial Heritage Resources Authority (see general remarks and conditions below). Usually one would expect to find freshwater shell middens close to and along the banks of rivers and streams such as the Witrivier. These are important archaeological sites and special care must be taken during development not to damage or to destroy them when exposed. The development may proceed, but it is recommended that;

1. The proposed development will take place close to the Witivier, in an area where one would expect to find fresh water shell middens. If such features are exposed, work should stop immediately and reported to the Albany Museum and/or the South African Heritage Resources Agency.
2. If human remains or any other concentrations of archaeological or historical remains are uncovered during the development, then work must stop immediately and reported to the archaeologist at the Albany Museum (046 6222312) or to the Eastern Cape Provincial Heritage Resources Authority (043 6422811) so that systematic and professional investigation can be undertaken. Sufficient time should be allowed to remove/collect such material (See Appendix B for a list of possible archaeological sites that maybe found in the area).
3. 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. It is suggested that a person be trained to be on site to report to the site manager if sites are found.
4. It is suggested that an archaeologist should conduct a walkthrough after the vegetation is cleared and before the construction of the fence line starts.

GENERAL REMARKS AND CONDITIONS

Note: This report is a phase 1 archaeological 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) (see Appendix A) 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 emphasised 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 (AIA's) will be assessed by the relevant heritage resources authority. The final decision rests with the heritage resources authority, which should grant a permit or a formal letter of permission for the destruction of any cultural sites.

APPENDIX A: brief legislative requirements

Parts of sections 35(4), 36(3) and 38(1) (8) of the National Heritage Resources Act 25 of 1999 apply:

Archaeology, palaeontology and meteorites

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.*

Burial grounds and graves

36. (3) *(a) No person may, without a permit issued by SAHRA or a provincial heritage resources authority—*

- (a) destroy, damage, alter, exhume or remove from its original position or otherwise disturb the grave of a victim of conflict, or any burial ground or part thereof which contains such graves;*
- (b) destroy, damage, alter, exhume, remove from its original position or otherwise disturb any grave or burial ground older than 60 years which is situated outside a formal cemetery administered by a local authority; or*
- (c) bring onto or use at a burial ground or grave referred to in paragraph (a) or (b) any excavation equipment, or any equipment which assists in the detection or recovery of metals.*

Heritage resources management

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 5000m² 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 000m² 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.*

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

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 human remains are buried in a flexed position on their side, but are also found buried in a sitting position with a flat stone capping. Developers are requested to be on alert for the possibility of uncovering such remains.

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 m² in extent, should be reported to an archaeologist.

Large stone cairns

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*. They are usually near river and mountain crossings. Their purpose and meaning is not fully understood, however, some are thought to represent burial cairns while others may have symbolic value.

Stone artefacts

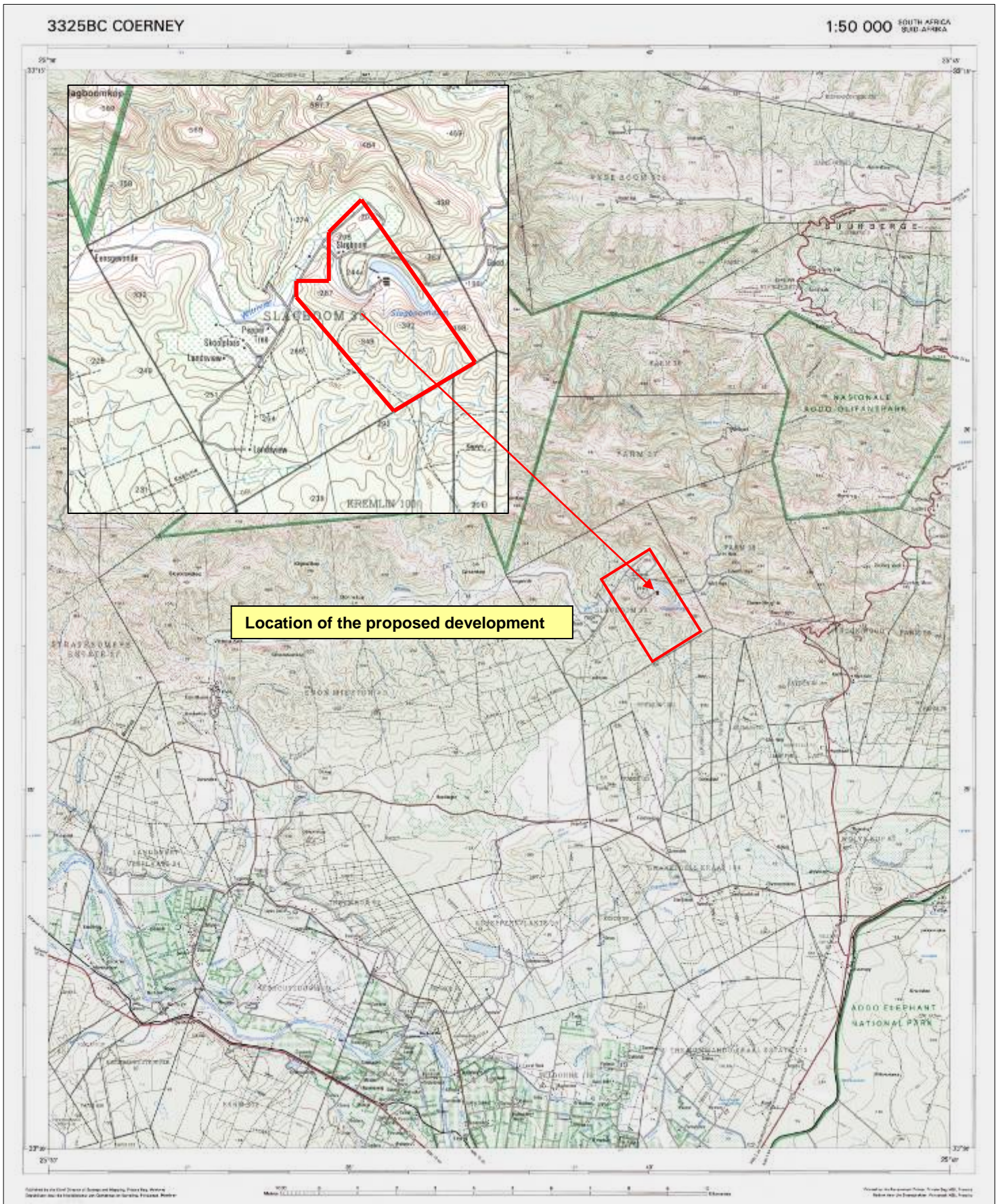
These are difficult for the layman to identify. However, large accumulations of flaked stones which do not appear to have been distributed naturally should be reported. If the stone tools are associated with bone remains, development should be halted immediately and archaeologists notified.

Fossil bone

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

Historical artefacts or features

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



Map 1. 1:50 000 Maps indicating the location of the proposed boundary fence. The red lines outline the approximate size of the development.



Map 2. Aerial images indicating the location of the proposed boundary fence. The red lines outline the approximate size of the development. The broken red lines mark the proposed fence line not investigated due to logistical problems.



**PROVINCE OF THE EASTERN CAPE
DEPARTMENT OF ECONOMIC DEVELOPMENT
ENVIRONMENTAL AFFAIRS AND TOURISM**

DETAILS OF SPECIALIST AND DECLARATION OF INTEREST

	(For official use only)
File Reference Number:	12/12/20/
NEAS Reference Number:	DEAT/EIA/
Date Received:	

Application for authorisation in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended and the Environmental Impact Assessment Regulations, 2010

PROJECT TITLE

PROPOSED CLEARING OF VEGETATION FOR FENCE CONSTRUCTION AT SAPS TRAINING INSTITUTION, ADDO, SUNDAYS RIVER LOCAL MUNICIPALITY
DEDEAT REF. NO.: EC06/C/LN3/M/16-2013

Specialist:	Eastern Cape Heritage Consultants		
Contact person:	Dr J Binneman		
Postal address:	P.O. Box 689, Jeffreys Bay		
Postal code:	6330	Cell:	072 800 6322
Telephone:	042 296 0399	Fax:	042 296 0399
E-mail:	jnbinneman@gmail.com		
Professional affiliation(s) (if any)	Association of South African Professional Archaeologists South African Society for Archaeologists Society for Africanist Archaeologists		

Project Consultant:	CEN Integrated Environmental Management Unit		
Contact person:	Dr M Cohen		
Postal address:	36 River Road, Walmer		
Postal code:	6070	Cell:	082 320 3111
Telephone:	041 581 2983 / 581 7811	Fax:	086 504 2549
E-mail:	steenbok@aerosat.co.za		

4.2 The specialist appointed in terms of the Regulations_

I, **J.N.F. Binneman**, declare that --


General declaration:

- I act as the independent specialist in this application
- I will perform the work relating to the application in an objective manner, even if this results in views and findings that are not favourable to the applicant
- I declare that there are no circumstances that may compromise my objectivity in performing such work;
- I have expertise in conducting the specialist report relevant to this application, including knowledge of the Act, regulations and any guidelines that have relevance to the proposed activity;
- I will comply with the Act, regulations and all other applicable legislation;
- I have no, and will not engage in, conflicting interests in the undertaking of the activity;
- I undertake to disclose to the applicant and the competent authority all material information in my possession that reasonably has or may have the potential of influencing - any decision to be taken with respect to the application by the competent authority; and - the objectivity of any report, plan or document to be prepared by myself for submission to the competent authority;
- all the particulars furnished by me in this form are true and correct; and
- I realise that a false declaration is an offence in terms of Regulation 71 and is punishable in terms of section 24F of the Act.


Signature of the specialist:

Eastern Cape Heritage Consultants.
Name of company (if applicable):

03-03-2014
Date:


Signature of the Commissioner of Oaths:

2014-03-03
Date:

POLICE - OFFICIAL
Designation:

Official stamp (below)

