

**A PHASE 1 ARCHAEOLOGICAL IMPACT ASSESSMENT FOR THE PROPOSED
EXPANSION OF AGRICULTURAL ACTIVITIES ON PORTION 20 OF FARM 84,
LANDDROST VEEPLAATS, KIRKWOOD, SUNDAYS RIVER VALLEY
MUNICIPALITY, EASTERN CAPE PROVINCE**

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

SUMMARY

Proposal

The original proposal was to conduct a survey of possible archaeological heritage sites on portion 20 of farm 84, Landdrost Veeplaats, Kirkwood, 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 investigation

Occasional Earlier Stone Age (ESA), Middle Stone Age (MSA) and Later Stone Age (LSA) stone tools were found in areas where the dense vegetation has been cleared and in tracks where river gravels were exposed. The development is near the Sunday's River and freshwater shell middens may be exposed during the clearing of the dense vegetation. There are no graves or historical buildings on the property.

Cultural sensitivity

The proposed property for development appeared to be of low archaeological sensitivity. Development may proceed as planned (see recommendations).

Recommendations

1. If any freshwater shell middens are uncovered during development, it should be reported immediately to the Albany Museum and/or the South African Heritage Resources Agency.
2. If any concentrations of other archaeological material are uncovered during development it should be reported immediately to the nearest archaeologist, museum and/or the South African Heritage Resources Agency.

PROJECT INFORMATION

Status

The report is part of an Environmental Impact Assessment.

The type of development

The proposed development includes the expanding of existing agricultural activities with an additional 190 hectares, for the cultivation of a variety of crops.

The Developer

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Terms of reference

Conduct a survey of possible archaeological heritage sites on portion 20 of farm 84, Landdrost Veeplaats, Kirkwood, 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.

BRIEF ARCHAEOLOGICAL BACKGROUND

Literature review

In general little systematic archaeological research and regional surveys/recordings have been conducted in the Kirkwood area. The oldest evidence of the early inhabitants are large stone tools, called hand axes and cleavers, which can be found amongst river gravels 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 Suurberg 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.

Museum/University databases and collections

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

Relevant impact assessments

- Binneman, J. and Booth, C. 2008. A letter of recommendation (with conditions) for the exemption of a full phase 1 archaeological heritage impact assessment for the proposed open pit mining operation at borrowpit 2, Kirkwood, Eastern Cape. Prepared for Terreco cc, Geotechnical, Environmental and Waste Management Services, Tecoma.

DESCRIPTION OF THE PROPERTY

Area Surveyed

Location data

The proposed development to expand the existing agricultural activities with approximately 190 hectares on Portion 20 of Farm 84, Landdrost Veeplaats, is situated between Kirkwood and Enon, in the Sundays River Valley Municipality, Eastern Cape Province (Maps 1-3). The total size of the property is 624 hectares, but only a small area of 190 hectares will be developed for the cultivation of a variety of crops.

Map

1:50 000 3325 DA Addo

ARCHAEOLOGICAL INVESTIGATION

Methodology and finds

The survey was conducted on foot and spots checks from a vehicle. GPS readings were taken with a Garmin Plus II and all important features were digitally recorded. It was impossible to do a complete survey of the very large footprint because of the dense vegetation (Figs 1-2). Most of the many tracks which run at rectangles through the footprint were investigated by spot checks from a vehicle (Map 3). Tracks outside the footprint were also investigated. Small sections within the large property were disturbed by small scale farming activities in the past (Figs 3-6).

In general it was difficult to locate archaeological sites/materials because most of the area is covered by dense/impenetrable thicket vegetation. However, occasional stone tools were found throughout the study region where areas have been cleared/disturbed by small scale farming activities and in tracks which were constructed through the dense thicket vegetation. (Figs 7-12). The density and type of the stone tools varied from place to place and included Earlier Stone Age (1,5 million – 250 000 years old), Middle Stone Age (older that 30 000 years old) and Later Stone Age (younger than 30 000 years old) stone tools.

Occasional Earlier Stone Age hand axes, flaked cobbles and flakes were found in exposed river gravels which capped the hill tops and slopes overlooking the Sunday's River Valley region. These stone tools were found randomly without any recognised distribution patterns and were in secondary context (GPS readings: Map 3 No. 3 - 33.25.568S; 25.31.422E and No. 4 - 33.25.016S; 25.31.981E) (Figs 9-10). Quartzite Middle Stone Age stone tools with typical faceted striking platforms were found, especially where pebble/cobble gravels were exposed (GPS readings: Map 3 No. 1 - 33.25.528S; 25.31.978E and No. 2 - 33.25.407S; 25.31.727E) (Figs 11-12). Most of the tools were thick, small 'informal' flakes and chunks. Few cores, points and blades were observed. Although many flakes, points and blades displayed utilization damage, few were 'formally' retouched. A few points and blades with serrated edges were found. There were no 'concentrations' of tools observed which suggested any spatial patterning or activity areas such as 'manufacturing' sites. Such sites may exist but were not be visible. In general all the stone tools were randomly distributed across the landscape and were in secondary context and not associated with any other archaeological remains.

Apart from the occasional stone tools no other archaeological sites/materials were found. However, because the proposed development is near the Sunday's River, it is possible that freshwater shell middens may be exposed during the clearing of the dense vegetation.



Figs 1-2. Views of the dense vegetation which over of the property investigated.



Figs 3-4. Views of the tracks which run through the property. Note the dense vegetation on both sides of the tracks and the exposed river gravel in places.



Figs 5-6. Views of small disturbances to the landscape from previous and current farming activities. Note the low dense grass which cover these disturbed areas.



Figs 7-8. A view of Middle and Later Stone Age stone tools exposed in a track at an area disturbed from previous and current farm activities.



Figs 9-12. Earlier (top left) and Middle (bottom right) Stone Age stone tools associated with the gravels.

Discussion

The footprint investigated is large and most of it is covered with dense thicket vegetation which made it difficult to find archaeological sites. Notwithstanding, occasional Earlier, Middle and Later Stone Age stone artefacts were found in exposed river gravel in most areas where the vegetation was cleared or disturbed by farming activities. No spatial patterning or distribution of the tools was observed. The stone tools are in secondary context and of low sensitivity. Usually one would expect to find freshwater shell middens along the banks of major rivers such as the Sunday's River. These are important archaeological sites and special care must be taken during development not to damage or to destroy them when found.

RECOMMENDATIONS

1. The proposed development will take place near the Sunday's River, 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 any other concentrations of archaeological material are uncovered during development, it should be reported to the Albany Museum and/or the South African Heritage Resources Agency immediately so that systematic and professional investigation/excavations 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.

GENERAL REMARKS AND CONDITION

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) (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, (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 should give 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 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.

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.

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.

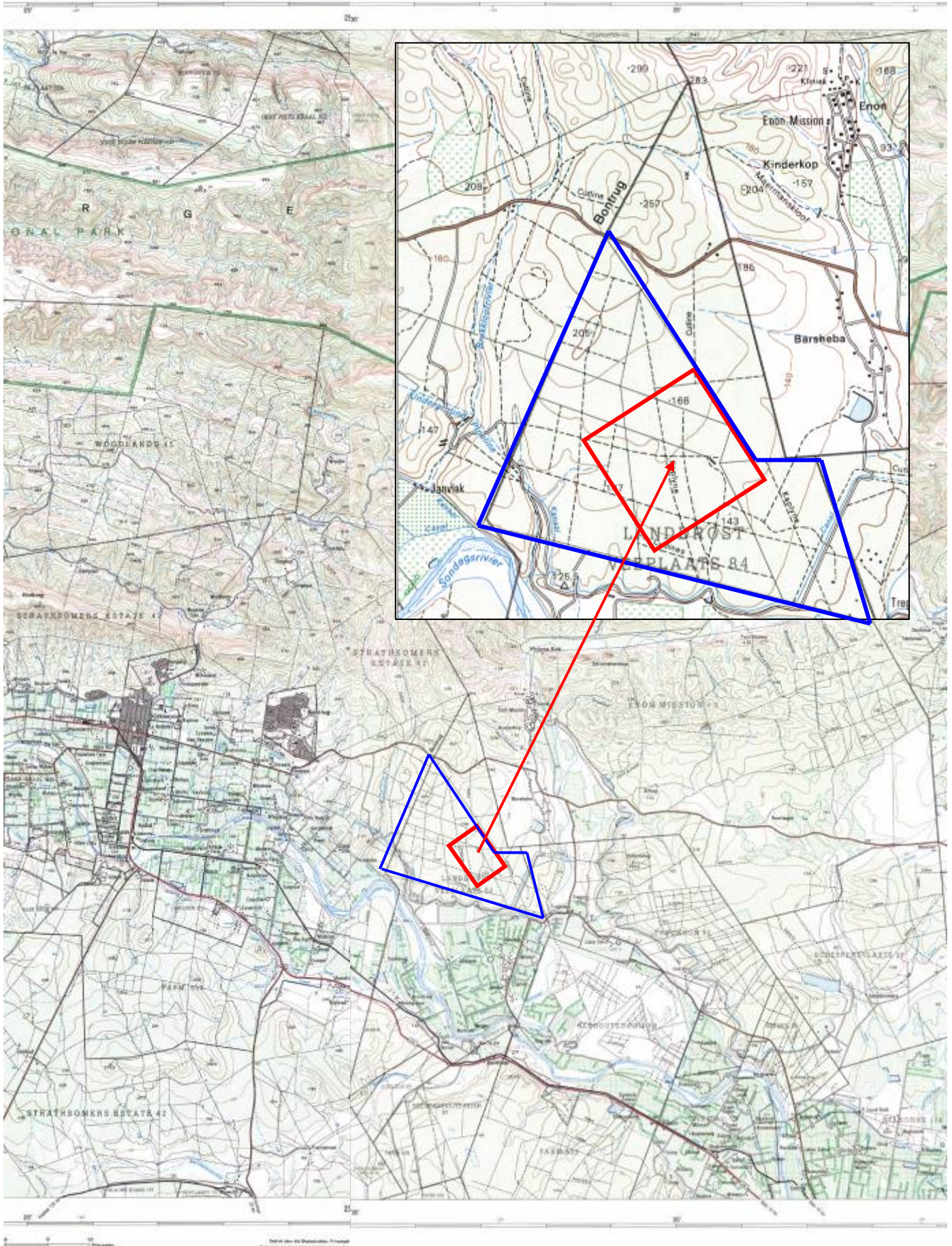
Large stone features

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*. 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.

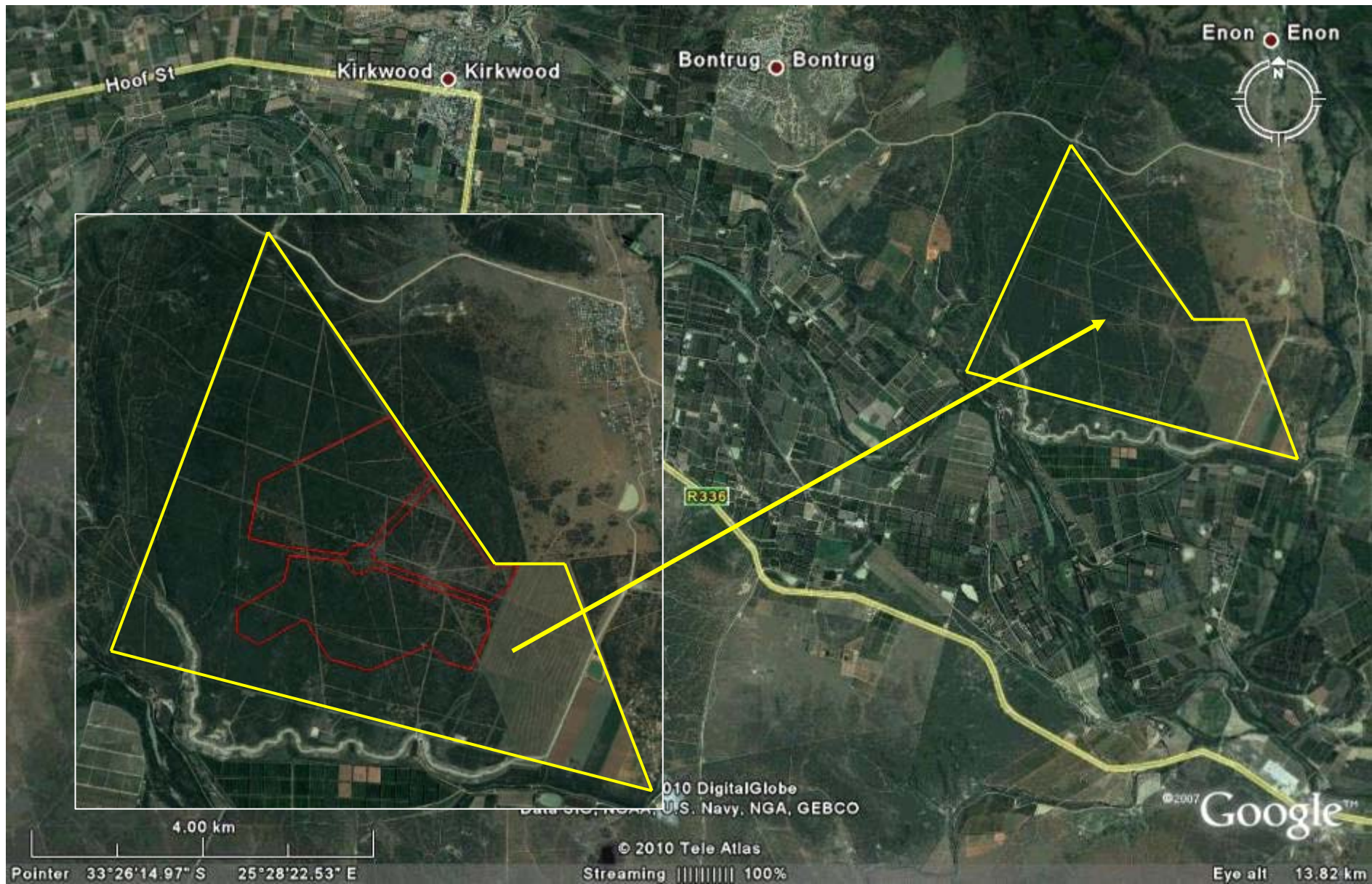
Historical artefacts or features

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

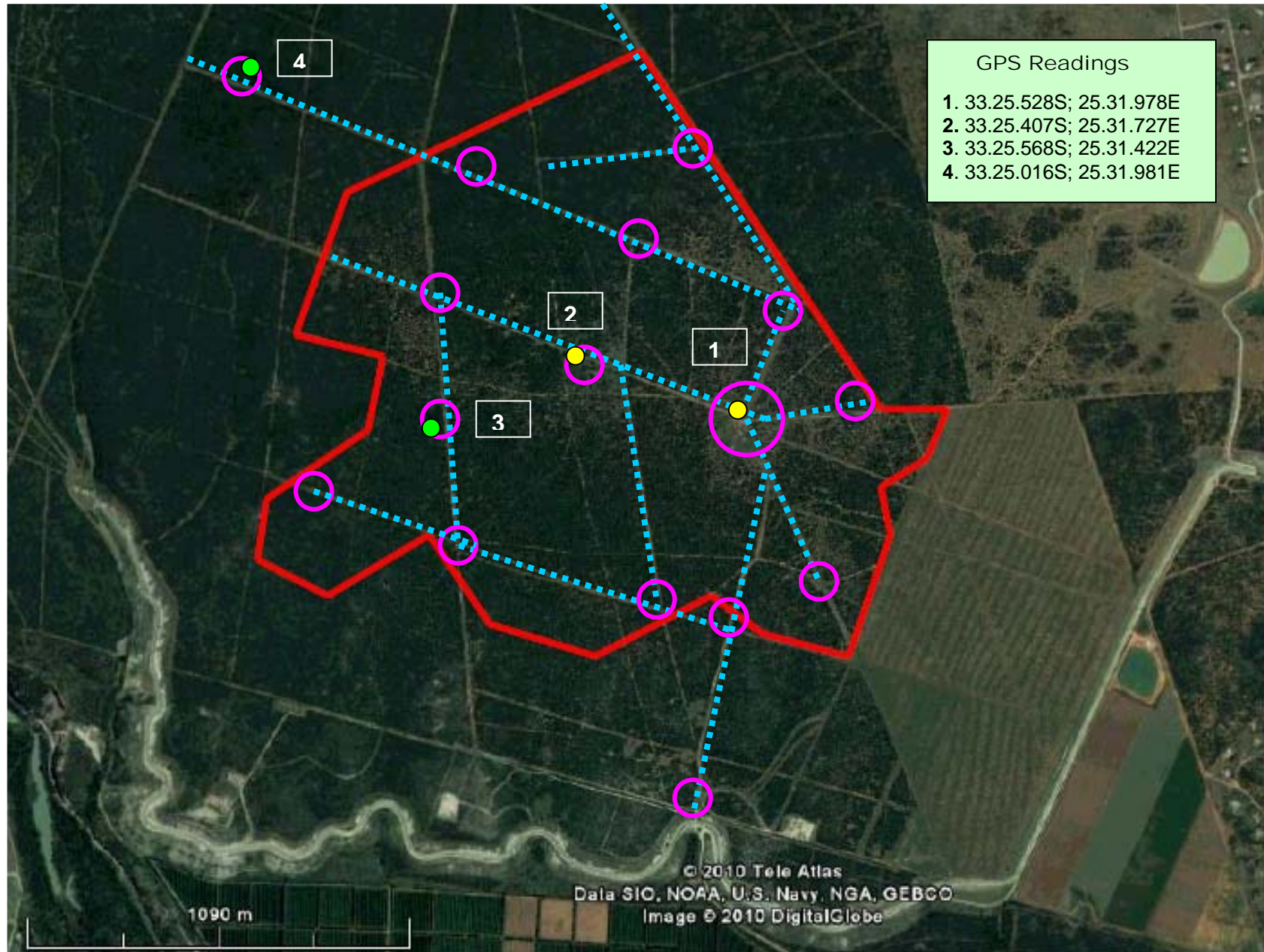
1:50 000 SUID-AFRIKA 3325BC COERNEY



Map 1. 1:50 000 maps indicating the location of the development. The blue lines outline the size of the property and the red squares the approximate area of the development.



Map 2. Aerial images indicating the location of the property (yellow lines) and the proposed footprint outlined in red (insert map, courtesy of Public Process Consultants).



Map 3. An aerial image indicating the location of the footprint (outlined in red), the survey routes (blue stippled lines), spot checks (pink circles) and the samples of Earlier Stone Age (green dots) and Middle Stone Age (yellow dots) mentioned in the text.