

A PHASE 1 ARCHAEOLOGICAL IMPACT ASSESSMENT (AIA) FOR THE PROPOSED  
MIXED-USE HOUSING DEVELOPMENT, KWANOBUHLE, EXTENSION 11, UITENHAGE,  
NELSON MANDELA BAY MUNICIPALITY, EASTERN CAPE PROVINCE

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## A PHASE 1 ARCHAEOLOGICAL IMPACT ASSESSMENT (AIA) FOR THE PROPOSED MIXED-USE HOUSING DEVELOPMENT, KWANOBUHLE, EXTENSION 11, UITENHAGE, NELSON MANDELA BAY MUNICIPALITY, EASTERN CAPE PROVINCE

**Note:** This report follows the minimum standard guidelines required by the South African Heritage Resources Agency 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 mixed-use housing development, Kwanobuhle Extension 11, Uitenhage, Nelson Mandela Bay Municipality, Eastern 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 area for development has in the past been heavily disturbed by the construction of the neighbouring Kwanobuhle Extension 10 and associated infrastructure such as powerlines, fences and gravel roads. Some areas have also been used as informal dumping areas. The northern section of the proposed area has been disturbed by continuous ploughing and is currently being used to graze domestic animals such as cattle and goats.

Occasional surface scatters of mainly quartzite Middle Stone Age (MSA) stone artefacts were observed within the disturbed areas, namely the ploughed field, informal footpaths and the gravel roads and stone artefacts were also observed in the undisturbed vegetation area to the south of the proposed area for development. Later Stone Age (LSA) stone artefacts made predominantly from quartz were mainly observed within the ploughed field. A possible lower grinding stone was located in an open area near the road.

It is highly unlikely that the stone tool scatters are *in situ* and are, therefore, considered to be in a secondary context. No sites containing any depth of deposit or other archaeological material associated with the stone artefacts were observed within the area. The proposed area for development is considered as having a low-

medium cultural significance, although the following recommendations must be taken into consideration prior to the construction activities.

### Recommendations

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

1. It is possible that *in situ* stone artefacts and archaeological sites/remains would be uncovered within the dense thicket vegetation during construction. Therefore, a professional archaeologist should be appointed during the vegetation removal and construction phases of the development.
2. 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.
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.

### BACKGROUND INFORMATION

The phase 1 archaeological impact (AIA) assessment report is part of a heritage impact assessment (HIA) required for the environmental impact assessment (EIA).

The proposed mixed-use housing development will cover an area approximately 143 hectares and will consist of various stands of use. A total of 2,575 stands will be used for different housing categories (approximately 63 ha), 5 stands for businesses (approximately 5 ha), community facilities such as clinics, schools and churches, will cover approximately 12 ha, 12 stands will be mixed-use areas (approximately 1 ha), public space will total approximately 22 ha and streets will cover approximately 36 ha.

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**Terms of Reference**

The purpose of the study was to conduct a phase 1 archaeological impact assessment (AIA) for the proposed mixed-use housing development situated at Kwanobuhle Extension 11, Uitenhage, Nelson Mandela Bay Municipality, Eastern 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 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 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.

## BRIEF ARCHAEOLOGICAL BACKGROUND

### Literature review

Little is known of the early prehistory of the region. The oldest evidence of the early inhabitants are large stone tools, called handaxes and cleavers, which may be found amongst river gravels such as the Swartkops River and in old spring deposits within the region. These large stone tools are from a time period called the Earlier Stone Age (ESA) and may date between 1, 4 million and 250 000 years old. Large numbers of Early Stone Age stone tools were found at a research excavation at Amanzi Springs, some 10 kilometres north-east of Uitenhage (Deacon 1970). In a series of spring deposits a large number of stone tools were found *in situ* to a depth of 3-4 meters. Wood and seed material preserved remarkably very well within the spring deposits, and possibly date to between 800 000 to 250 000 years old.

The large handaxes and cleavers were replaced by smaller stone tools called the Middle Stone Age (MSA) flake and blade industries. Evidence of Middle Stone Age sites occur throughout the region and date between 250 000 and 30 000 years old. Fossil bone may in rare cases be associated with Middle Stone Age occurrences (Gess 1969). These stone artefacts, like the Earlier Stone Age handaxes are usually observed in secondary context with no other associated archaeological material.

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. The preservation of these sites is poor and it is not always possible to date them (Deacon and Deacon 1999). There are many San hunter-gatherers sites in the nearby Groendal Wilderness Area and adjacent mountains. Here, caves and rock shelters were occupied by the San during the Later Stone Age and contain numerous paintings along the walls. The last San/KhoiSan group was killed by Commando's in the Groendal area in the 1880s.

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 (Deacon and Deacon 1999).

## 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. & Deacon, J. 1999. *Human beginnings in South Africa*. Cape Town: David Phillips Publishers.
- Gess, W.H.R. 1969. Excavations of a Pleistocene bone deposit at Aloes near Port Elizabeth. *South African Archaeological Bulletin* 24:31-32.

## Relevant archaeological impact assessments:

- Binneman, J. 2007. A Phase 1 Archaeological Heritage Impact Assessment of the proposed construction of the chicken broilerhouses of the Farm Rooihoogte Erf 328, Portions 25 and 26, Uitenhage District, Nelson Mandela Bay Municipality, Eastern Cape. Albany Museum: Grahamstown.
- Binneman, J; Booth, C and Higgitt, N. 2010. A Phase 1 Archaeological Impact Assessment (AIA) for the Proposed Rosedale Low Cost Housing Project, Uitenhage, Nelson Mandela Bay, Eastern Cape Province. Albany Museum: Grahamstown.

A few relevant archaeological impact assessments have been conducted within the area and the Uitenhage District. Other surveys have been conducted within the Coega and the Coega Industrial Development Zone areas. These archaeological impact assessments are currently stored at the Department of Archaeology, Albany Museum, Grahamstown, Eastern Cape Province.

## DESCRIPTION OF THE PROPERTY

### Area surveyed

#### Location data

The proposed area for development is situated about 5km to the south-west of the town of Uitenhage and 30km from the nearest coastline. The area is neighboured by the existing Kwanobuhle Extension 10 to the east, the R334 to the west with Bantom Road to the north.

Most of the area is covered in dense Sundays Valley Thicket vegetation. A portion of the area has been heavily disturbed by previous farming activities such as the ploughed field that is currently being used as a grazing area for domestic animal



such as cattle and goats; the construction of powerlines, fences, and gravel service roads, and some informal dumping also occurs.

### Map

1:50 000 Maps: 3325CD & 3425AB Uitenhage (Map 1).

## **ARCHAEOLOGICAL INVESTIGATION**

### **Methodology**

The survey was conducted by three people on foot following the existing gravel roads and investigating the disturbed and vegetation-cleared areas. GPS readings were taken using a Garmin Oregon 550 (Table 1). The GPS readings have been plotted on Map 2 and Map 3.

There are two distinct areas of vegetation cover and archaeological visibility, these areas will be referred in the report to as the northern section that encompasses the ploughed field, gravel roads and informal footpaths that were investigated for the possible occurrence of archaeological material remains (white circled area on Map 3). The southern section of the proposed area comprises mostly dense Sundays Valley Thicket vegetation which made archaeological visibility difficult; however, it was possible in some areas to investigate within the thicket vegetation and along the vegetation-cleared areas (blue circled area on Map 3).

The northern section of the proposed area for development has been disturbed by the construction of the neighbouring Kwanobuhle Extension 10 and associated infrastructure such as powerlines, fences, gravel roads and related activities such as informal footpaths, and a ploughed field related to farming activities prior to the development of the township that is currently being used to graze domestic animals such as cattle and goats. An exposed makeshift soccer pitch is situated adjacent to Kwanobuhle Extension 10, in the area of the ploughed field.

The southern section of the proposed area for development comprises mainly dense Sundays Valley Thicket vegetation. Some disturbances such as powerlines, fences, the gravel road, informal footpaths and informal dumping occurs within the area, albeit to a lesser extent than in the southern part of proposed development area. Vegetation has been cleared in between the thicket that may act as firebreaks.



Figs 1-4. (Top) Views of vegetation cover in the northern section highlighting the ploughed field (left) and in the southern section highlighting dense thicket vegetation and vegetation clearing. (Bottom) Informal footpaths occur throughout the proposed development area (left) and the makeshift soccer pitch on the ploughed field adjacent to Kwanobuhle Extension 10.

Surface scatters of Middle Stone Age (MSA) stone artefacts were observed across the entire extent of the area proposed for development. In the northern section (white circle on Map 3), Middle Stone Age stone artefacts occurred more densely, however, this can be attributed to the higher occurrence of disturbances, namely the ploughed field, the makeshift soccer pitch and informal pathways and gravel roads. Therefore, it is probable that the Middle Stone Age stone artefacts occur between the surface and 50cm-80cm below ground owing to years of soil deposition. No other archaeological materials were observed in association with the stone artefact scatter. In the southern section (blue circle on Map 3), observance of occurrences of Middle Stone Age stone artefacts were less frequent, however, this may attribute to the higher occurrence of dense and relatively undisturbed thicket vegetation. Middle Stone Age stone artefacts were observed within the gravel road and between the open and exposed areas within the thicket vegetation. It is, therefore, highly probable that in the southern section, in comparison to what was observed within the ploughed field, that undisturbed stone artefacts may occur between the surface and 50cm-80cm below ground, underneath the thicket vegetation. The Middle Stone Age stone artefacts were predominantly made on a medium-grained quartzite raw material and included the characteristic Middle Stone Age faceted platform flakes, general flakes varying in size and containing markings of retouch and utilisation, as well as cores, including some prepared cores.

The occurrence of Later Stone Age (LSA) stone artefacts was limited to the areas marked SAScat and KWA1 within the ploughed field and phased out towards the

south at the area marked KWA2. The Later Stone Age Stone artefacts occurred intermixed with the Middle Stone Age stone artefacts within the ploughed field, this may be attributed to the continuing ploughing and disturbance of the field, although does indicate that the area was utilised by hunter-gatherers from the Middle Stone Age to within the last 10 000 years. The Later Stone Age stone artefacts were predominantly made on quartz raw materials, chunks of this particular raw material occurs across the area proposed for development, and comprised of flakes, chips, cores and one formal tool (thumbnail scraper) was documented.



Figs. 5-8. Examples of the exposed areas where Middle Stone Age and Later Stone Age artefacts were observed.

The distribution of surface scatters of Middle and Later Stone Age stone artefacts across the area occurs in a disturbed and secondary context in the northern section of the proposed area for development, however, undisturbed and probably *in situ* material may occur underneath, between the surface and 50cm-80cm below ground, the Sundays Valley Thicket vegetation in the southern section of the proposed area for development. No organic or other archaeological materials remains were observed to be associated with the stone artefact surface scatters, and no substantial depth of deposit. The Middle Stone Age stone artefacts include the characteristic faceted platform flakes and prepared cores made predominantly on medium-grained quartzite. The Later Stone Age stone artefacts comprised mainly of quartz, that is local to the area, and one formal tool, a thumbnail scraper, was documented. The Middle Stone Age stone artefacts

resemble those that have been documented in the surrounding area and wider region.

### Survey/Description of Sites

Exposed surface scatters of Middle Stone Age and Later Stone Age stone artefacts were observed in mainly disturbed conditions, such as the ploughed field, informal pathways and gravel roads, within proposed area for development. No associated archaeological material and organic remains nor any substantial depth of deposit was associated with the stone artefact surface scatters. It is, therefore, unlikely that the artefacts are *in situ* and occur in secondary context owing to the previous and present disturbances occurring with the area. However, it is possible that undisturbed stone artefacts may be encountered within the areas covered in thicket vegetation.

### CULTURAL LANDSCAPE

The Middle Stone Age and Later Stone Age stone artefacts documented during the survey shows evidence that the dynamics of the cultural landscape spans about 250 000 years. It is clear that Middle Stone Age hunter-gatherers utilised the natural resources, i.e. quartzite raw materials, to manufacture stone tools. It is, however, unclear of whether they occupied the immediate area proposed for development for extended periods as no further organic or material remains were observed during the survey conducted. The presence of Later Stone Age stone artefacts indicates that the landscape was once again used by the later hunter-gatherers within the last 10 000 years. Similarly, it is unclear of whether they occupied the area owing to the lack of additional organic and material remains and substantial deposit. The proposed area for development is surrounded by various streams and rivers and the Cape Fold Belt mountain range to the west.

Presently the dynamics of the cultural landscape seems to continue in that the area bordering the proposed development area (yellow circle on Map 3). The area is currently being used as a cultural landscape used for *Kwaluka* (AmaXhosa boys' initiation or 'going to the bush' to perform). Two *amabhoma*, structures built by the boys and used for shelter during this stage of initiation, were observed. We requested permission from the local community to take a close-up photograph, however, our request was denied owing to the significance and privacy of this stage of initiation. A general landscape photograph shows the location of the two *amabhoma* (Fig 9).

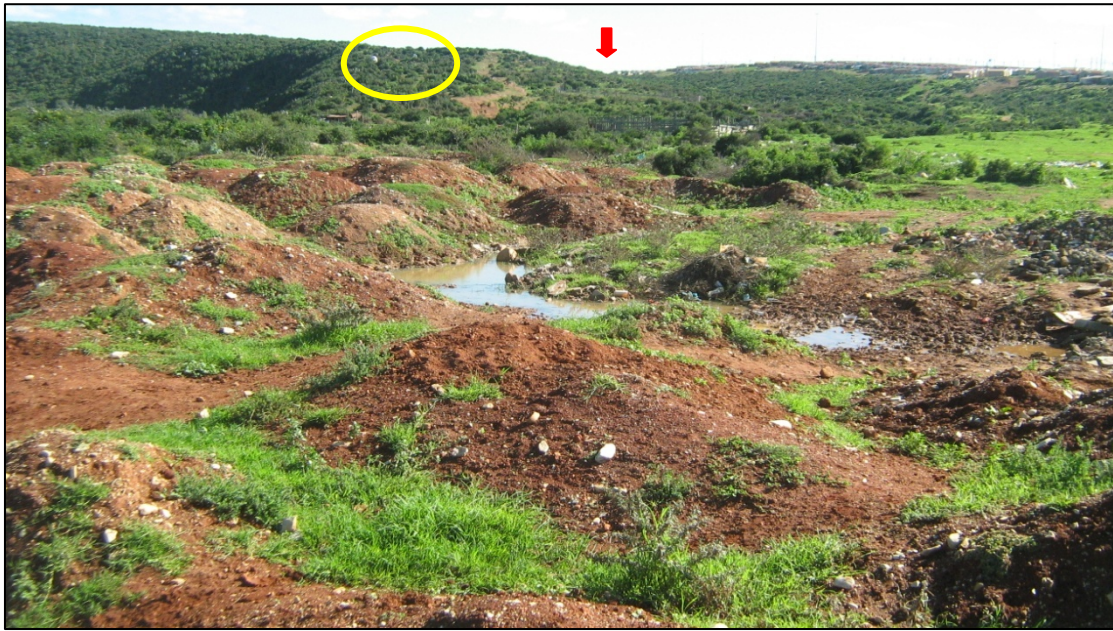


Fig. 9. Photograph showing the location of the two *amabhoma* (yellow circle) taken from the area marked KWA4 (Map 3) facing south towards the proposed area for development (red arrow).

### Recommendations

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

1. It is possible that *in situ* stone artefacts and archaeological sites/remains would be uncovered within the dense thicket vegetation during construction. Therefore, a professional archaeologist should be appointed during the vegetation removal and construction phases of the development.
2. 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.
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.

## 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. 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.

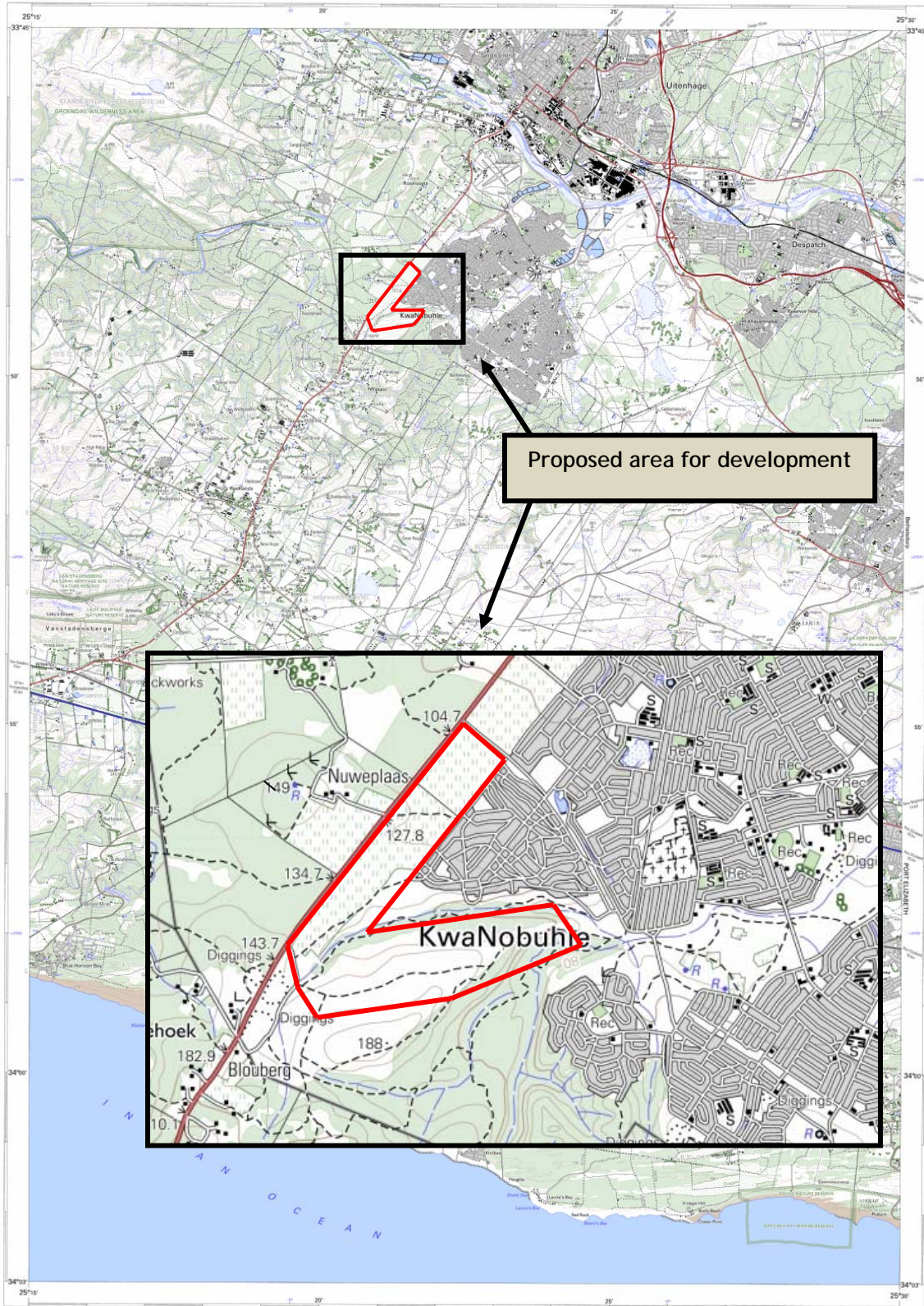
### 5. Large stone features

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*. 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.

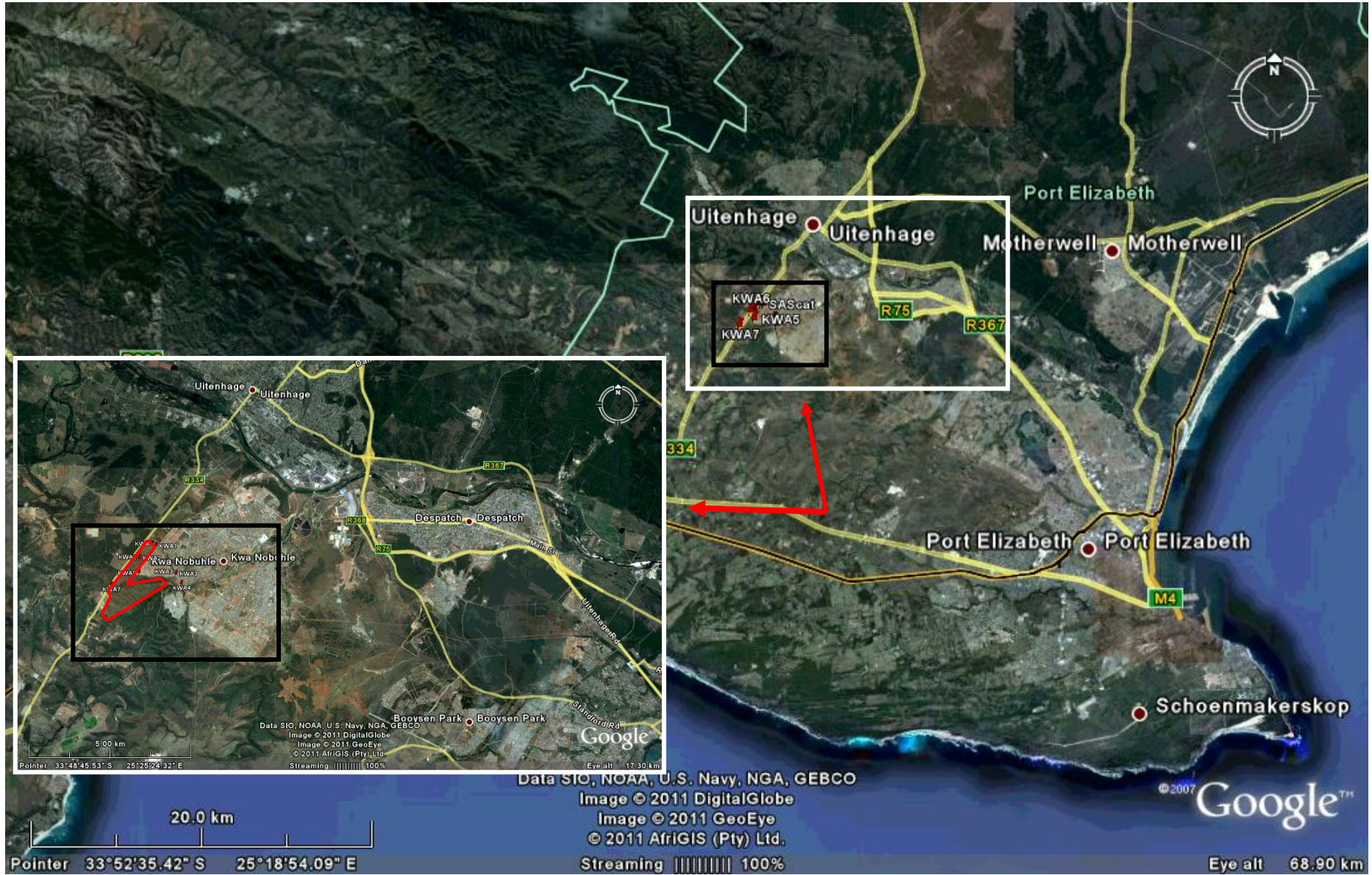
## 6. Historical artefacts or features

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

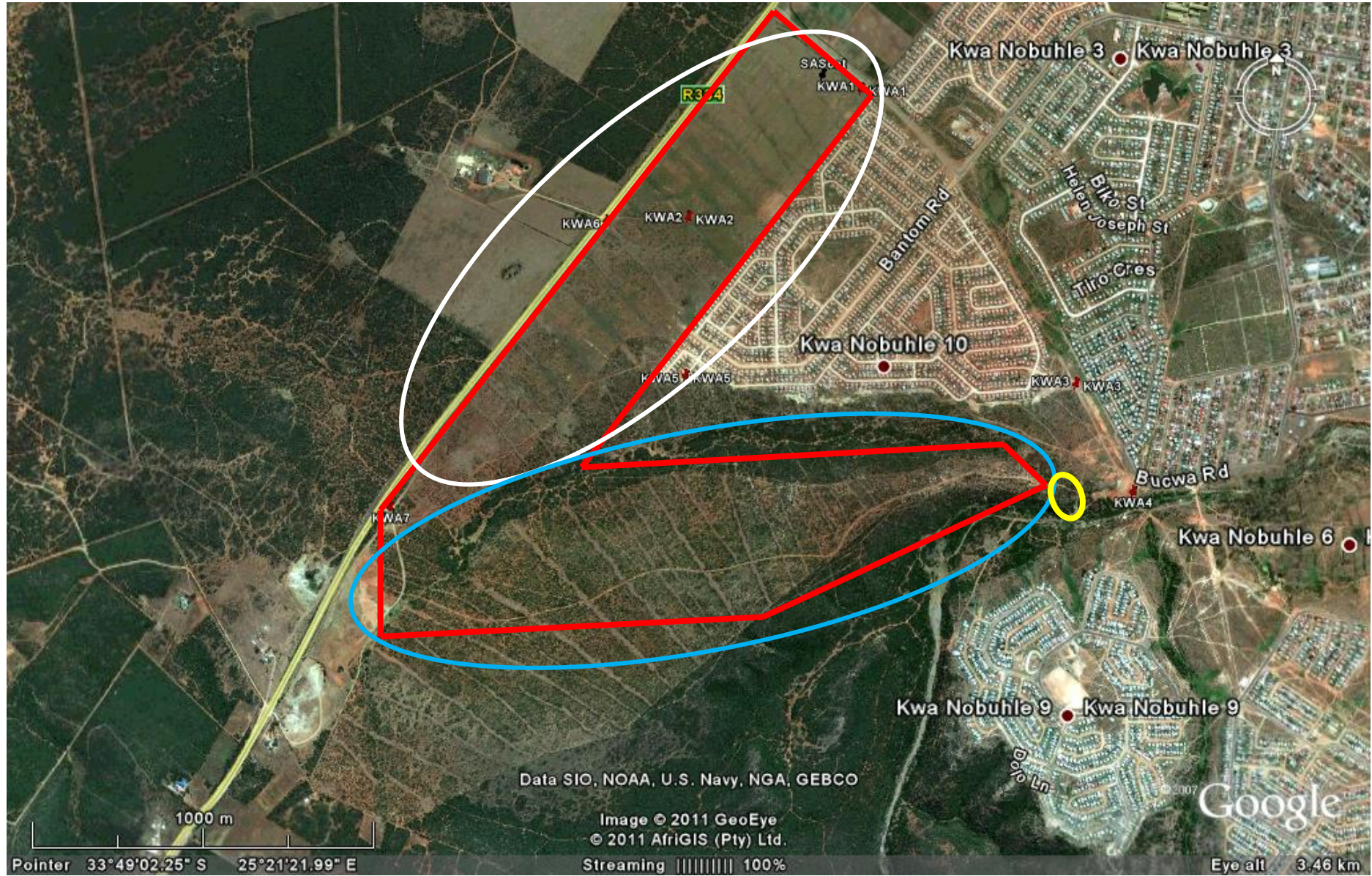




Map 1. 1: 50 000 map indicating the proposed area for the development of the Kwanobuhle Extension 11 mixed-use housing project.



Map 2. Wide aerial view of the area proposed for development.



Map 3. Close-up aerial view of the proposed area for development with general GPS point plotted (white circle: shows the vegetation distinct northern section; blue circle: shows the area referred to as the southern section; yellow circle: shows the location of the two *amabhoma* observed).

Table1. GPS co-ordinates and descriptions taken during the survey.

Reference	Description	Co-ordinates
SA Scat	MSA and LSA stone artefact surface scatter in ploughed field	33°48'28.20"S; 25°21'36.68"E
KWA1	General reading	33°48'29.53"S; 25°21'41.11"E
KWA2	General reading	33°48'41.84"S; 25°21'21.54"E
KWA3	General reading	33°48'57.29"S; 25°22'5.92"E
KWA4	General reading	33°48'7.47"S; 25°22'12.52"E
KWA5	General reading	33°48'56.87"S; 25°21'21.35"E
KWA6	General reading	33°48'42.30"S; 25°21'12.19"E
KWA7	General reading	33°49'9.59"S; 25°20'47.84"E