

**HERITAGE SURVEY OF PROPOSED VAN ZYL
PONGOLA HOUSING DEVELOPMENT, ZULULAND
DISTRICT MUNICIPALITY, KWAZULU-NATAL.**

FOR CAN VAN ZYL AND JEFFARES & GREEN

DATE:

07 September 2015

By Gavin Anderson

**Umlando: Archaeological Surveys and Heritage
Management**

PO Box 102532, Meerensee, 3901

Phone/fax: 035-7531785 Fax: 0865445631

Cell: 0836585362



TABLE OF CONTENT

INTRODUCTION	3
KWAZULU-NATAL HERITAGE ACT NO. 4 OF 2008	7
METHOD	9
Defining significance.....	10
RESULTS	12
DESKTOP STUDY	12
FIELD SURVEY.....	17
CAN1	20
CAN2	21
CAIRN 1	22
GENERAL	23
PALAEONTOLOGICAL IMPACT ASSESSMENT	24
GENERAL MANAGEMENT PLAN	24
CONCLUSION.....	26

TABLE OF FIGURES

FIG. 1 GENERAL LOCATION OF THE STUDY AREA.....	4
FIG. 2: AERIAL OVERVIEW OF THE STUDY AREA	5
FIG. 3: TOPOGRAPHICAL OVERVIEW OF THE STUDY AREA.....	6
FIG. 4: LOCATION OF KNOWN HERITAGE SITES NEAR THE STUDY AREA.....	13
FIG. 5: SURVEYOR GENERAL DIAGRAM OF THE FARM.....	14
FIG. 6: STUDY AREA IN 1937	15
FIG. 7: STUDY AREA IN 1947	16
FIG. 8: SCENIC VIEWS OF THE STUDY AREA	18
FIG. 9: LOCATION OF RECORDED SITES	19
FIG. 10: STONE CAIRN AT CAN1	20
FIG. 11: LOW STONE WALLING AT CAN2	21
TABLE 1: DESCRIPTION OF RECORDED SITES	22
FIG. 12: STONE CAIRN AT CAIRN 1	23
FIG. 13: PALAEONTOLOGICAL SENSITIVITY MAP OF THE STUDY AREA	25

INTRODUCTION

Mr Van Zyl intends to develop a residential housing development on the Farm Marula; the proposed development is situated on Farm Marula (Farm Koppie Alleen No 63, Portion 11) on the periphery of Pongola town, Zululand District Municipality (fig.'s 1 – 3). The development will entail the construction of 64 units, which will be dispersed throughout the extent of the property. Each unit is proposed to have an approximate footprint of 310 m². The entire project footprint is expected to cover an area of approximately 30000m²

Construction of infrastructure within the development footprint will entail the following:

- Approximately 3.7km of internal roads will be constructed. The road footprint will be limited as much as possible, and will be less than 4m in width.
- Approximately 3.1km of sewerage pipeline;
- Approximately 2km clean water line;
- Approximately 3km grey water line;
- Pipe diameters (vary from 40mm to 150mm);
- 3x50kVa Transformers;
- 2.6km of bonnox game fencing, 2.4m high;
- The establishment of approximately 7 small water bodies intended for aesthetic purposes; and
- 64 Housing units.

FIG. 1 GENERAL LOCATION OF THE STUDY AREA

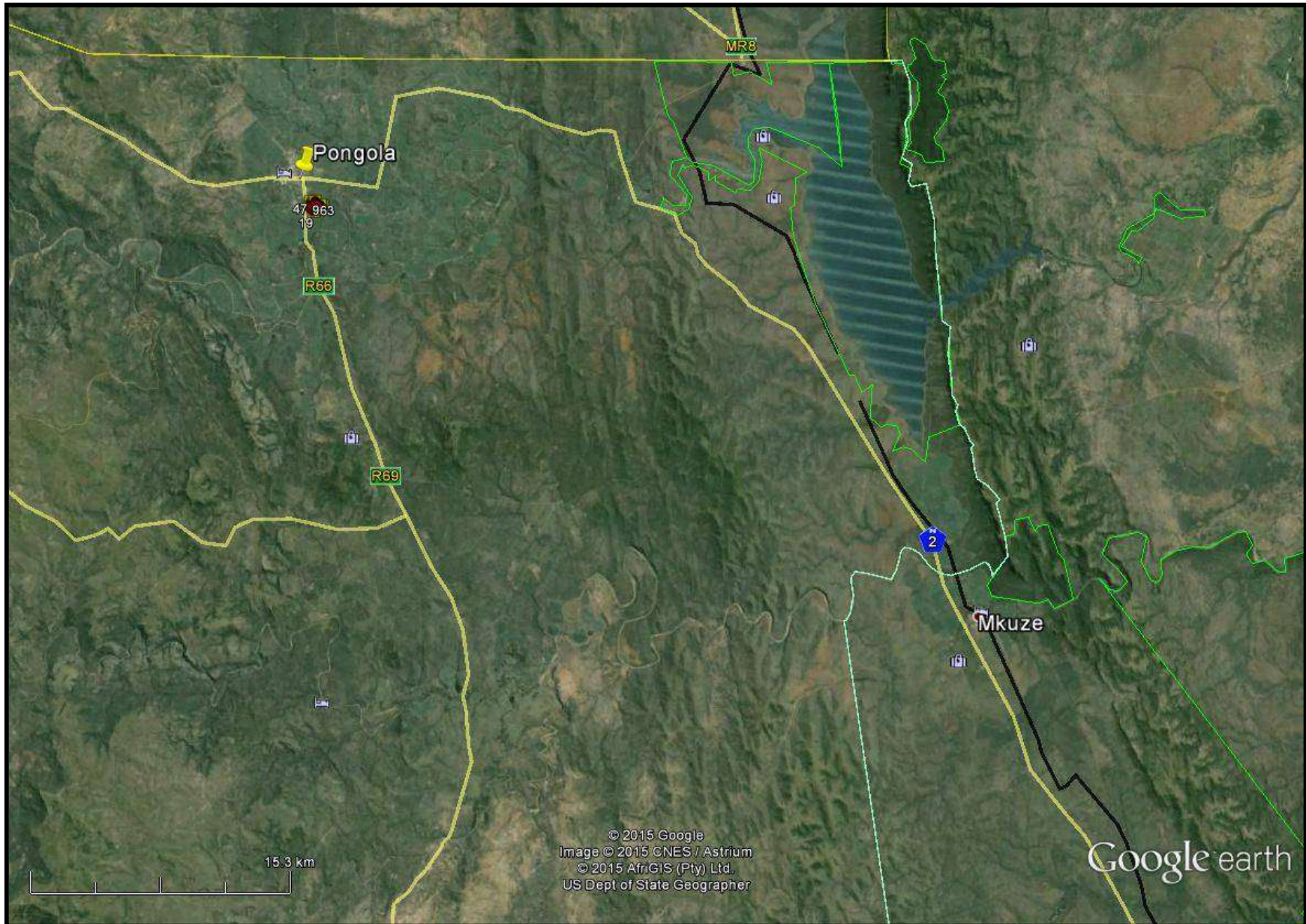


FIG. 2: AERIAL OVERVIEW OF THE STUDY AREA

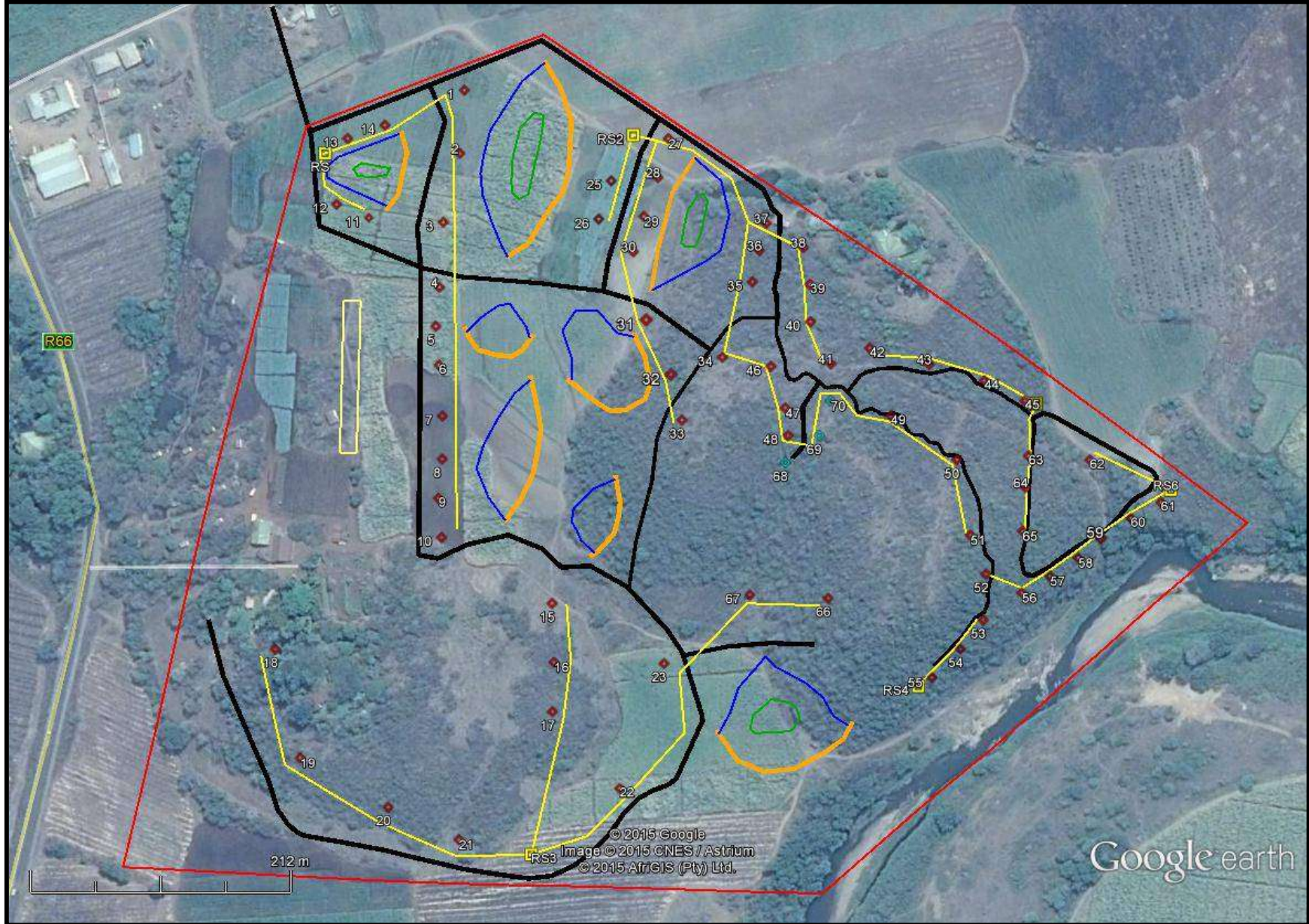
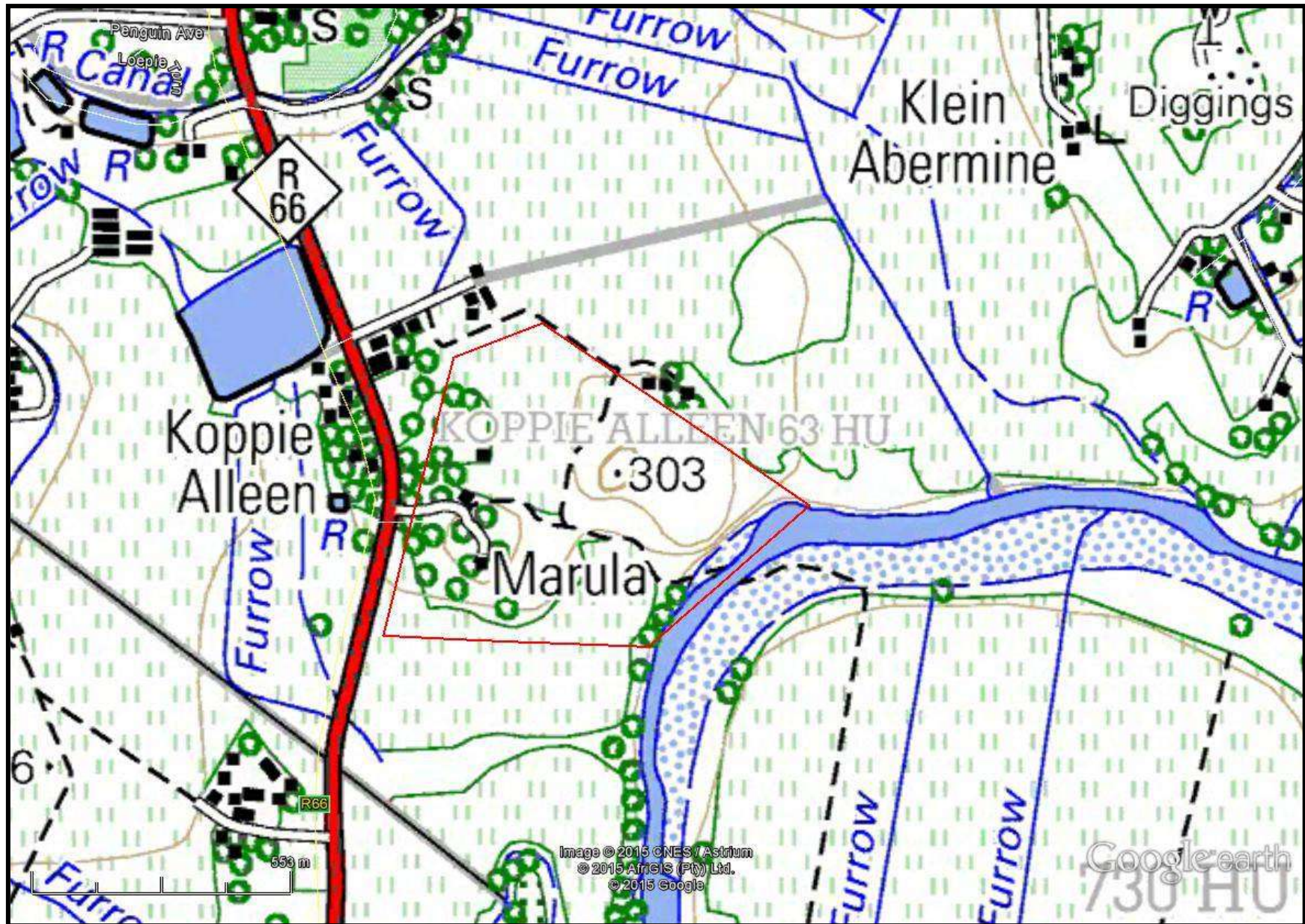


FIG. 3: TOPOGRAPHICAL OVERVIEW OF THE STUDY AREA



KWAZULU-NATAL HERITAGE ACT NO. 4 OF 2008

“General protection: Structures.—

- No structure which is, or which may reasonably be expected to be older than 60 years, may be demolished, altered or added to without the prior written approval of the Council having been obtained on written application to the Council.
- Where the Council does not grant approval, the Council must consider special protection in terms of sections 38, 39, 40, 41 and 43 of Chapter 9.
- The Council may, by notice in the *Gazette*, exempt—
- A defined geographical area; or
- defined categories of sites within a defined geographical area, from the provisions of subsection where the Council is satisfied that heritage resources falling in the defined geographical area or category have been identified and are adequately protected in terms of sections 38, 39, 40, 41 and 43 of Chapter 9.
- A notice referred to in subsection (2) may, by notice in the *Gazette*, be amended or withdrawn by the Council.

General protection: Graves of victims of conflict.—No person may damage, alter, exhume, or remove from its original position—

- the grave of a victim of conflict;
- a cemetery made up of such graves; or
- any part of a cemetery containing such graves, without the prior written approval of the Council having been obtained on written application to the Council.
- General protection: Traditional burial places.—
- No grave—
- not otherwise protected by this Act; and
- not located in a formal cemetery managed or administered by a local authority, may be damaged, altered, exhumed, removed from its original position, or otherwise disturbed without the prior written approval of the Council having been obtained on written application to the Council.

The Council may only issue written approval once the Council is satisfied that—

- the applicant has made a concerted effort to consult with communities and individuals who by tradition may have an interest in the grave; and
- the applicant and the relevant communities or individuals have reached agreement regarding the grave.

General protection: Battlefield sites, archaeological sites, rock art sites, palaeontological sites, historic fortifications, meteorite or meteorite impact sites.—

- No person may destroy, damage, excavate, alter, write or draw upon, or otherwise disturb any battlefield site, archaeological site, rock art site, palaeontological site, historic fortification, meteorite or meteorite impact site without the prior written approval of the Council having been obtained on written application to the Council.
- Upon discovery of archaeological or palaeontological material or a meteorite by any person, all activity or operations in the general vicinity of such material or meteorite must cease forthwith and a person who made the discovery must submit a written report to the Council without delay.
- The Council may, after consultation with an owner or controlling authority, by way of written notice served on the owner or controlling authority, prohibit any activity considered by the Council to be inappropriate within 50 metres of a rock art site.
- No person may exhume, remove from its original position or otherwise disturb, damage, destroy, own or collect any object or material associated with any battlefield site, archaeological site, rock art site, palaeontological site, historic fortification, meteorite or meteorite impact site without the prior written approval of the Council having been obtained on written application to the Council.
- No person may bring any equipment which assists in the detection of metals and archaeological and palaeontological objects and material, or excavation equipment onto any battlefield site, archaeological site, rock art site, palaeontological site, historic fortification, or meteorite impact site, or

- use similar detection or excavation equipment for the recovery of meteorites, without the prior written approval of the Council having been obtained on written application to the Council.
- The ownership of any object or material associated with any battlefield site, archaeological site, rock art site, palaeontological site, historic fortification, meteorite or meteorite impact site, on discovery, vest in the Provincial Government and the Council is regarded as the custodian on behalf of the Provincial Government.” (KZN Heritage Act of 2008)

METHOD

The method for Heritage assessment consists of several steps.

The first step forms part of the desktop assessment. Here we would consult the database that has been collated by Umlando. These databases contains archaeological site locations and basic information from several provinces (information from Umlando surveys and some colleagues), most of the national and provincial monuments and battlefields in Southern Africa (<http://www.vuvuzela.com/googleearth/monuments.html>) and cemeteries in southern Africa (information supplied by the Genealogical Society of Southern Africa). We use 1st and 2nd edition 1:50 000 topographical and 1937 aerial photographs where available, to assist in general location and dating of buildings and/or graves. The database is in Google Earth format and thus used as a quick reference when undertaking desktop studies. Where required we would consult with a local data recording centre, however these tend to be fragmented between different institutions and areas and thus difficult to access at times. We also consult with an historical architect, palaeontologist, and an historian where necessary.

The survey results will define the significance of each recorded site, as well as a management plan.

All sites are grouped according to low, medium, and high significance for the purpose of this report. Sites of low significance have no diagnostic artefacts or features. Sites of medium significance have diagnostic artefacts or features and these sites tend to be sampled. Sampling includes the collection of artefacts for future analysis. All diagnostic pottery, such as rims, lips, and decorated sherds are sampled, while bone, stone, and shell are mostly noted. Sampling usually occurs on most sites. Sites of high significance are excavated and/or extensively sampled. Those sites that are extensively sampled have high research potential, yet poor preservation of features.

Defining significance

Heritage sites vary according to significance and several different criteria relate to each type of site. However, there are several criteria that allow for a general significance rating of archaeological sites.

These criteria are:

1. State of preservation of:

- 1.1. Organic remains:
 - 1.1.1. Faunal
 - 1.1.2. Botanical
- 1.2. Rock art
- 1.3. Walling
- 1.4. Presence of a cultural deposit
- 1.5. Features:
 - 1.5.1. Ash Features
 - 1.5.2. Graves
 - 1.5.3. Middens
 - 1.5.4. Cattle byres
 - 1.5.5. Bedding and ash complexes

2. Spatial arrangements:

- 2.1. Internal housing arrangements
- 2.2. Intra-site settlement patterns
- 2.3. Inter-site settlement patterns

3. Features of the site:

- 3.1. Are there any unusual, unique or rare artefacts or images at the site?
- 3.2. Is it a type site?
- 3.3. Does the site have a very good example of a specific time period, feature, or artefact?

4. Research:

- 4.1. Providing information on current research projects
- 4.2. Salvaging information for potential future research projects

5. Inter- and intra-site variability

- 5.1. Can this particular site yield information regarding intra-site variability, i.e. spatial relationships between various features and artefacts?
- 5.2. Can this particular site yield information about a community's social relationships within itself, or between other communities?

6. Archaeological Experience:

6.1. The personal experience and expertise of the CRM practitioner should not be ignored. Experience can indicate sites that have potentially significant aspects, but need to be tested prior to any conclusions.

7. Educational:

- 7.1. Does the site have the potential to be used as an educational instrument?
- 7.2. Does the site have the potential to become a tourist attraction?
- 7.3. The educational value of a site can only be fully determined after initial test-pit excavations and/or full excavations.

8. Other Heritage Significance:

- 8.1. Palaeontological sites
- 8.2. Historical buildings

- 8.3. Battlefields and general Anglo-Zulu and Anglo-Boer sites
- 8.4. Graves and/or community cemeteries
- 8.5. Living Heritage Sites
- 8.6. Cultural Landscapes, that includes old trees, hills, mountains, rivers, etc related to cultural or historical experiences.

The more a site can fulfill the above criteria, the more significant it becomes. Test-pit excavations are used to test the full potential of an archaeological deposit. This occurs in Phase 2. These test-pit excavations may require further excavations if the site is of significance (Phase 3). Sites may also be mapped and/or have artefacts sampled as a form of mitigation. Sampling normally occurs when the artefacts may be good examples of their type, but are not in a primary archaeological context. Mapping records the spatial relationship between features and artefacts.

RESULTS

DESKTOP STUDY

The desktop study consisted of analysing various maps for evidence of prior habitation in the study area, as well as for previous archaeological surveys. The archaeological database indicates that there are archaeological sites in the general area (fig. 4). These sites include all types of Stone Age and Iron Age sites. No sites occur in the study area. No national monuments, battlefields, or historical cemeteries are known to occur in the study area. The original Pongola cemetery appears to occur on the opposite side of the Pongola River (see fig. 7). This was apparently destroyed by Cyclone Demoina

The first Surveyor General diagram for the property dates to 1893 when this area was part of the then (Eastern) Transvaal (fig. 5). No features are noted on this diagram.

FIG. 4: LOCATION OF KNOWN HERITAGE SITES NEAR THE STUDY AREA

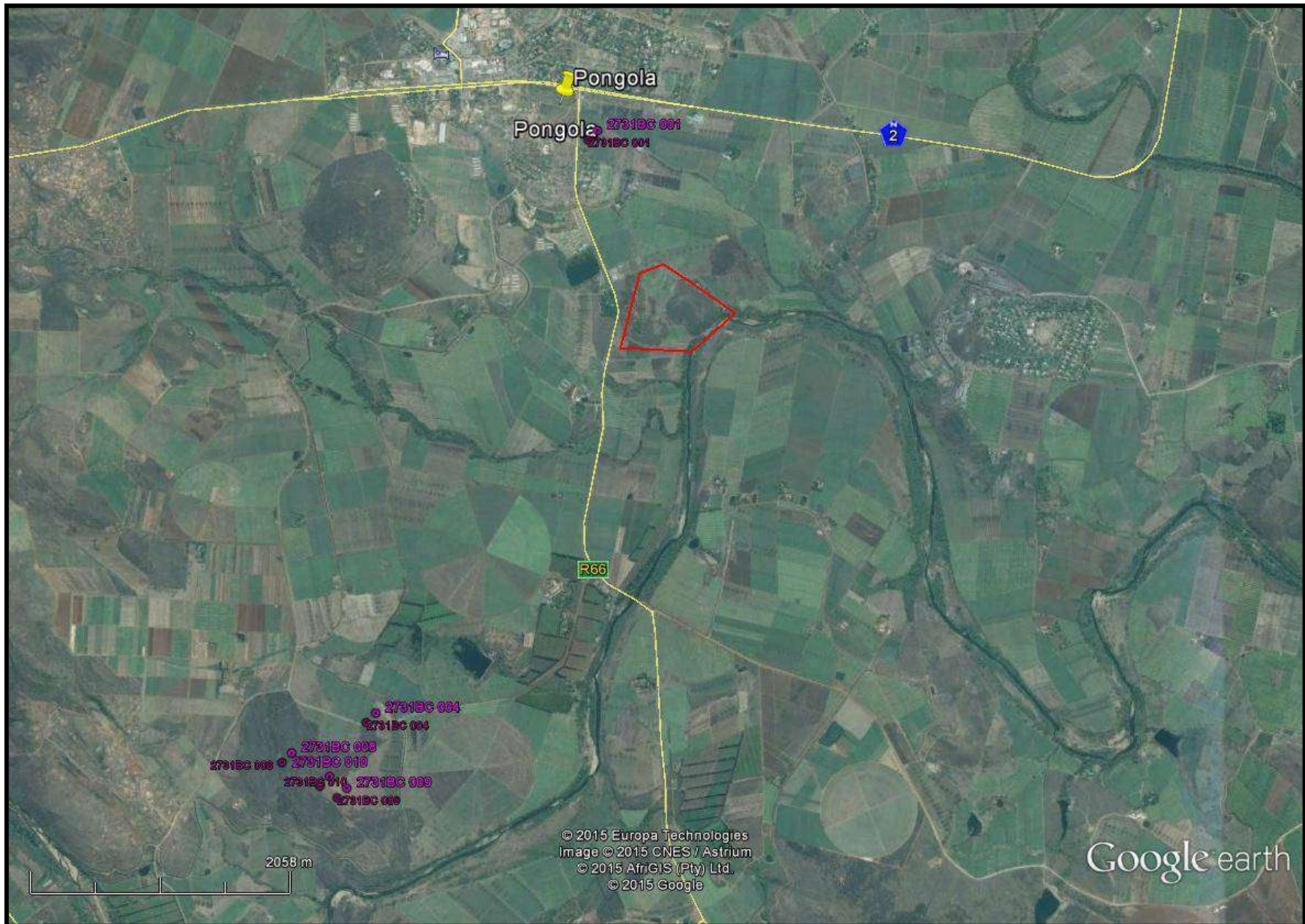


FIG. 5: SURVEYOR GENERAL DIAGRAM OF THE FARM

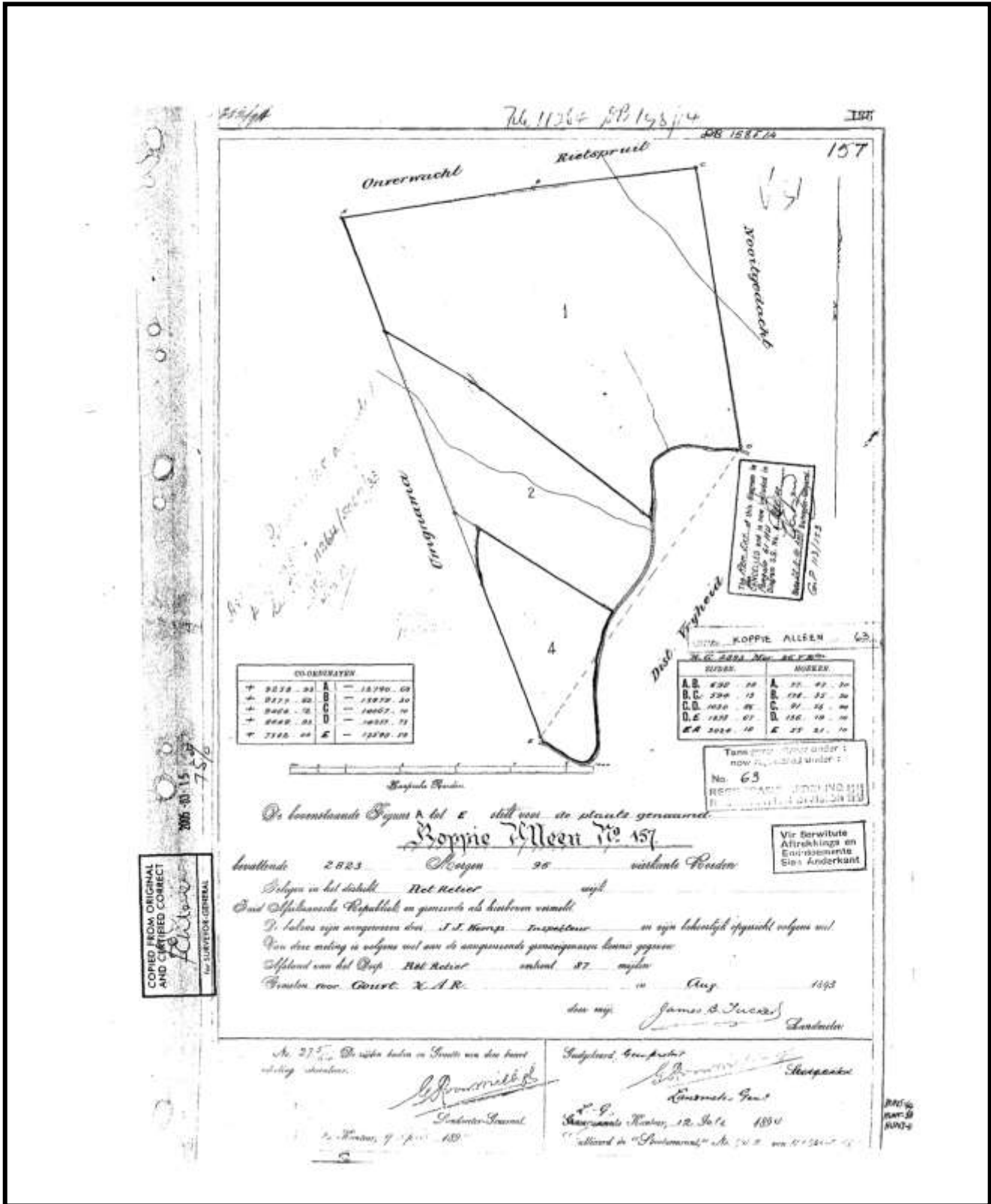
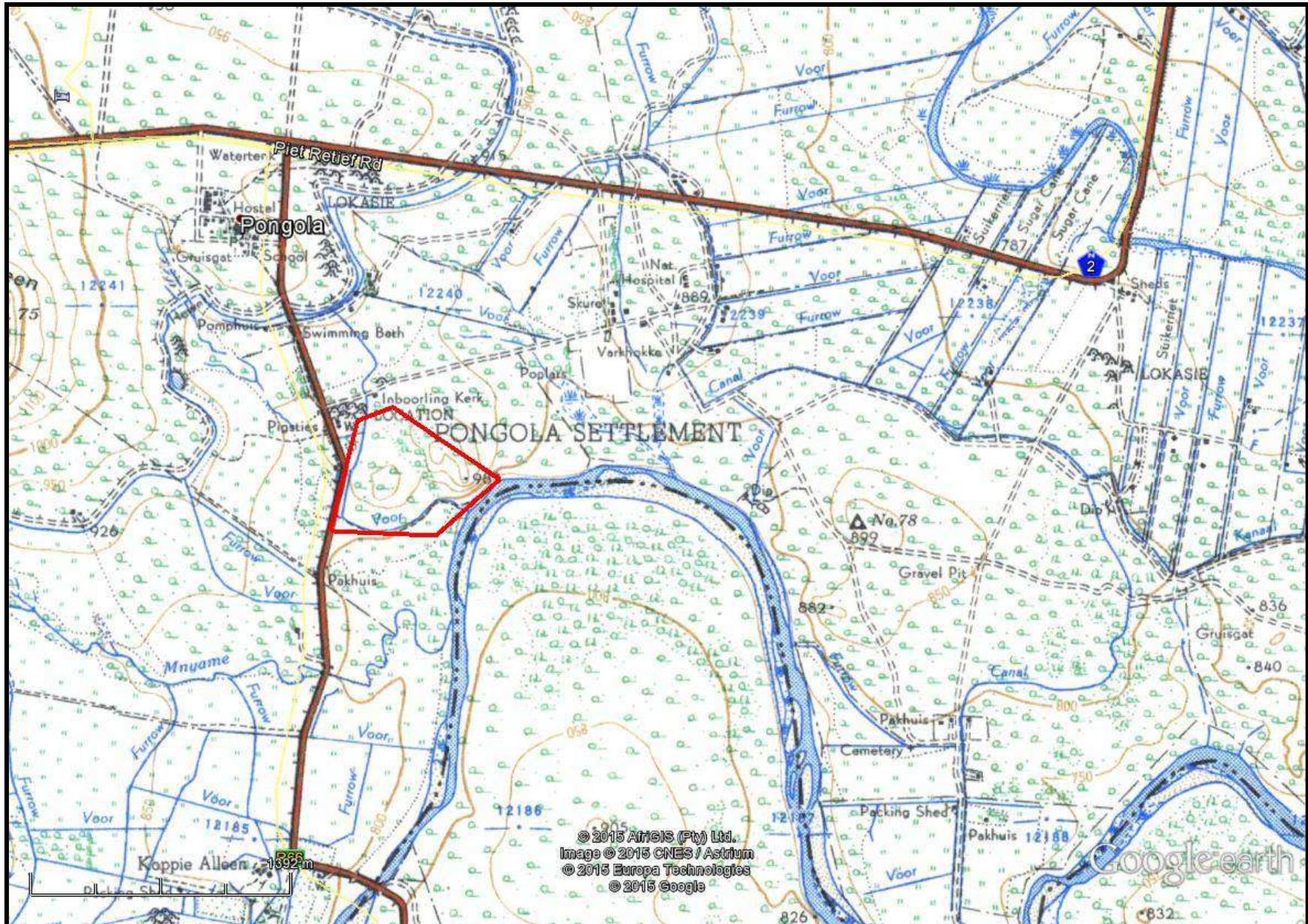


FIG. 6: STUDY AREA IN 1937



FIG. 7: STUDY AREA IN 1947



The 1937 aerial photographs indicate that the area has not been cultivated (fig. 6). There is a possible small house on the eastern hill. There are labourers' houses and a smaller structure to the north of the study area. The drift over the Pongola River is in use as noted by the small track leading to/from it to the small structure.

The 1947 topographical map indicates that the study area has been changed to poplar afforestation (fig. 7). This implies that the indigenous vegetation has been removed. There is an addition of a church, or a mission, on the northern border of the study area. No built structures occur within the study area.

FIELD SURVEY

The field survey was undertaken in August 2015. The ground vegetation was dense in some places resulting in poor archaeological vision. However, this was countered by using existing roads and other tracks. The main hill consists of large dolerite boulders and steep slopes. There was only one area cleared of boulders on the top of the hill, but this was a recent landowner activity for water tanks.

The agricultural fields have been cultivated for several decades and have destroyed any potential archaeological deposit. Fig. 8 shows the general views of the study area. Fig. 9 and Table 1 show the locations of the recorded sites.

There are several large *Euphorbia ingens* trees on the hill. While these may be naturally occurring, they were also historically used to demarcate graves in Nguni-speaking society. Any large *E. ingens* that is not on a slope should be treated as a possible grave. I counted ~nine of these that are still standing.

FIG. 8: SCENIC VIEWS OF THE STUDY AREA



FIG. 9: LOCATION OF RECORDED SITES



CAN1

CAN1 is a sunken cairn next to an old *E. ingens*. The cairn consists of rocks in an oval shape (fig. 10). The cairn is ~1.5m x 1m in size and could be a grave. These rocks are smaller than the rest of the rocks in the area. The area is heavily vegetated making it difficult to note the exact area of the feature. If this were a grave then it would probably predate when the farm was given a title deed.

Significance: The cairn is of high significance if it is a grave.

Mitigation: There are two options for this cairn. Firstly, a 20m buffer is placed around the cairn and the site is not disturbed. Secondly, a test-pit excavation can be undertaken to determine if it is a grave or a natural feature. The test-pit will not necessarily remove the grave.

SAHRA Rating: 3A if a grave

FIG. 10: STONE CAIRN AT CAN1



CAN2

CAN2 is located on part of the highest hill in the study area, on the southern slope. The site consists of the remains a low stone wall that abuts a natural stone outcrop (fig. 11). The walling is ~15m in diameter, forms a semi-circle and it has a small cairn in the centre. Cairns in the middle of a stone walled kraal are normally associated with human graves. The vegetation was too dense to make a definite assessment regarding the cairn.

FIG. 11: LOW STONE WALLING AT CAN2



Significance: The cairn is of high significance if it is a grave.

Mitigation: There are two options for this cairn. Firstly, a 20m buffer is placed around the cairn and the site is not disturbed. Secondly, a test-pit excavation can be undertaken to determine if it is a grave or a natural feature. The test-pit will not necessarily remove the grave. The stone wall should be photographed and mapped if it is to be damaged.

SAHRA Rating: 3A if a grave

CAIRN 1

Cairn 1 is located near the trigonometric beacon (that no longer exists). The site consists of several medium sized dolerite rocks on top of a dolerite boulder (fig. 12). The rocks are not a natural occurrence, but they are not an *isivivane*. There is no known historical association with the cairn, and it does not occur next to a path.

Significance: The cairn is of low significance.

Mitigation: While the cairn is of low significance, it should not be affected by the development if possible. There is, however, no reason to move, or remove, a house because of this cairn.

SAHRA Rating: 3A if a grave

TABLE 1: DESCRIPTION OF RECORDED SITES

NAME	LATITUDE	LONGITUDE	DESCRIPTION
Cairn	-27.396091000	31.631593000	Stone cairn on a rock
CAN1	-27.395826000	31.631715000	Grave?
DRIFT	-27.396247136	31.632598335	Drift
CAN2	-27.394427000	31.630427000	Stone walling and possible grave

GENERAL

Several isolated Middle and Late Stone Age stone tools were noted on the main hill. These flakes were made on quartzite or dolerite. There were not enough stone tool artefacts to record the hill as a site.

The two hills within the study appear to have too many boulders to make it a suitable area for human settlements in the past. The only area cleared of boulders was due to recent activity. I would assume that the human settlements would have occurred at the base of the hill, using the hill as a natural buffer. These areas have been systematically ploughed and/or cleared since the 1940s. The bases of the hills have long rows of “stone walls” however; these are the result of field clearance. These agricultural areas should be noted as being sensitive for possible archaeological human remains.

FIG. 12: STONE CAIRN AT CAIRN 1



PALAEONTOLOGICAL IMPACT ASSESSMENT

Parts of the study area have been designated as having moderate palaeontological sensitivity (fig. 13). Normally a desktop study for this will be required; however, the development will only occur in areas where there are dolerite outcrops and areas that have been ploughed. The koppie where the main houses occur will be above the fossiliferous shale layers, Moreover the houses will be on posts and thus the impact will be minimal and not deep enough to impact on the sensitive layers. The agricultural fields might be sensitive to fossil remains, however these areas will only be affected by small dams and/or shallow trenches for sewerage and water. The development will thus not affect bedrock where the fossils will occur.

GENERAL MANAGEMENT PLAN

The study area is generally of low heritage significance. All recorded sites will need a permit from Amafa KZN if they are to be damaged. The large *Euphorbia ingens* that are not on steep slopes should be treated as potential graves. The development has to options for these trees:

1. Treat the trees as gravesites and place a 20m buffer between them and any development.
2. The ground vegetation is cleared around the tree to note sunken graves. A small test-pit excavation is undertaken to determine if the cairn is a grave. If it is a grave, then it can be covered up and the 20m buffer comes into place, or it is removed.

The stone walling is of low significance and if the possible grave is in the way of the house, I suggest that a test-pit excavation is undertaken to determine the nature of the cairn. This will allow for a final decision on the location of the nearby house. Otherwise, a 20m buffer is required around this cairn and wall. This has implications as the road occurs within 10m of the walling.

FIG. 13: PALAEOLOGICAL SENSITIVITY MAP OF THE STUDY AREA



COLOUR	SENSITIVITY	REQUIRED ACTION
RED	VERY HIGH	field assessment and protocol for finds is required
ORANGE/YELLOW	HIGH	desktop study is required and based on the outcome of the desktop study, a field assessment is likely
GREEN	MODERATE	desktop study is required
BLUE	LOW	no palaeontological studies are required however a protocol for finds is required
GREY	INSIGNIFICANT/ZERO	no palaeontological studies are required
WHITE/CLEAR	UNKNOWN	These areas will require a minimum of a desktop study. As more information comes to light, SAHRA will continue to populate the map.

CONCLUSION

A heritage survey was undertaken for the proposed housing development on Mr C. Van Zyl's property. Most of the development will occur on a single dolerite koppie. This koppie has isolated stone tools, one low stone walled feature and two possible graves. In addition to this, there are several old *Euphorbia ingens* on the hill. These trees are traditionally associated with graves, e.g. CAN1. Some of these trees are not associated with graves e.g. those on the steeper slopes, while others will require further investigation.

There are no further objections to the development, provided the management plans are undertaken.