

**HERITAGE DESKTOP SURVEY OF TWO PROPOSED  
PROSPECTING APPLICATIONS, RAY NKONYENI  
LOCAL MUNICIPALITY, KZN**

**FOR THE INDEPENDENT ENVIRONMENTAL  
ADVISOR**

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## TABLE OF CONTENT

INTRODUCTION .....	4
KWAZULU NATAL AMAFA AND RESEARCH INSTITUTE, ACT 05, 2018 .....	8
METHOD .....	10
Defining significance.....	11
RESULTS .....	13
DESKTOP STUDY .....	13
PALAEONTOLOGICAL SENSITIVITY .....	18
MANAGEMENT PLAN AND RECOMMENDATIONS .....	18
CONCLUSION.....	19
REFERENCES .....	19

## TABLE OF FIGURES

FIG. 1 GENERAL LOCATION OF THE PROPOSED PROSPECTING SITES .....	5
FIG. 2: AERIAL OVERVIEW OF THE PROPOSED.....	6
FIG. 3: TOPOGRAPHICAL MAP OF THE NORTHERN SECTION OF THE PROPOSED .....	7
FIG. 4: LOCATION OF KNOWN HERITAGE SITES IN THE GENERAL AREA .....	15
FIG. 5: LOCATION OF SETTLEMENTS IN 1937 .....	16
FIG. 6: LOCATION OF SETTLEMENTS IN THE PROPOSED PROSPECTING AREA IN 1972. ....	17

## Abbreviations

HP	Historical Period
IIA	Indeterminate Iron Age
LIA	Late Iron Age
EIA	Early Iron Age
ISA	Indeterminate Stone Age
ESA	Early Stone Age
MSA	Middle Stone Age
LSA	Late Stone Age
HIA	Heritage Impact Assessment
PIA	Palaeontological Impact Assessment

## INTRODUCTION

Salene Technologies propose prospecting for lithium, feldspar, silica, gold, platinum group elements (PGE), niobium, copper, and rare earth elements (all), over two areas defined in the Regulation 2.2 diagrams over Portion 1 and Rem of Farm The Corner No 11328 ET, inland of Umzumbe on the KwaZulu-Natal South Coast in the Ray Nkonyeni Local Municipality, Ugu District Municipality.

Prospecting will take place over a period of five (5) years and the application is for both invasive and non-invasive methods. Invasive methods require disturbance of the land surface (both areas are already significantly disturbed by previous mining activities) and are likely to include clearing, drilling and/or trenching, sampling and sample storage. Non-invasive methods include data assimilation through desktop research and use of detailed geophysical surveys.

It is planned that prospecting will take place in 3 phases:

1. Desktop assessment
2. Geophysical surveys
3. Sampling by drilling and/or trenching

Each subsequent phase is dependent on the outcome or findings of the preceding phase. The precise location of the ground activities is not yet known, however the application will be premised on the presumption that ground activities could take place over the whole prospecting areas.

Umlando was contracted by The Independent Environmental Advisor to undertake the desktop heritage survey of two new prospecting applications. These border the study area of the previous survey (Anderson 2018). The location is shown in figures 1 -3.

FIG. 1 GENERAL LOCATION OF THE PROPOSED PROSPECTING SITES

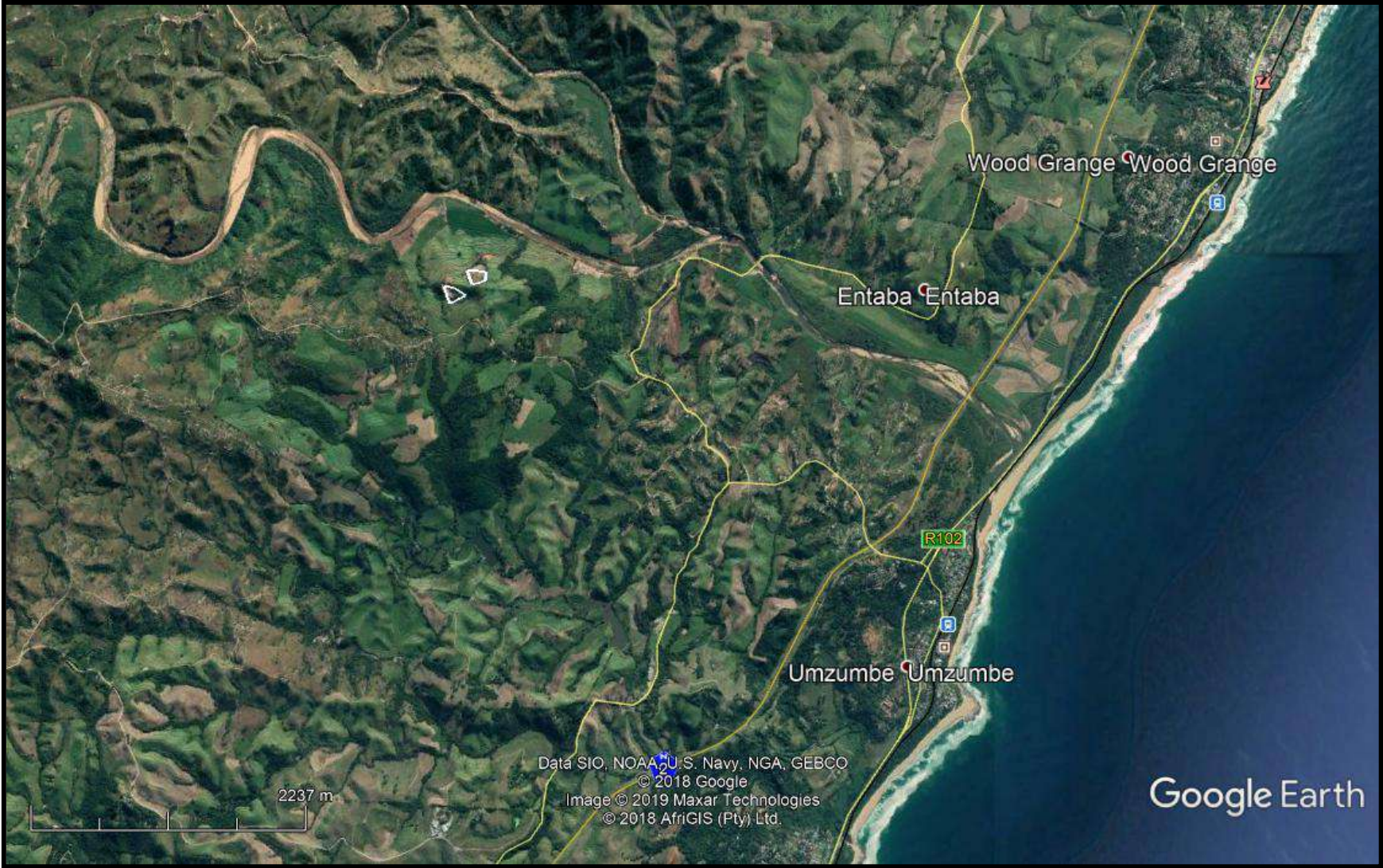
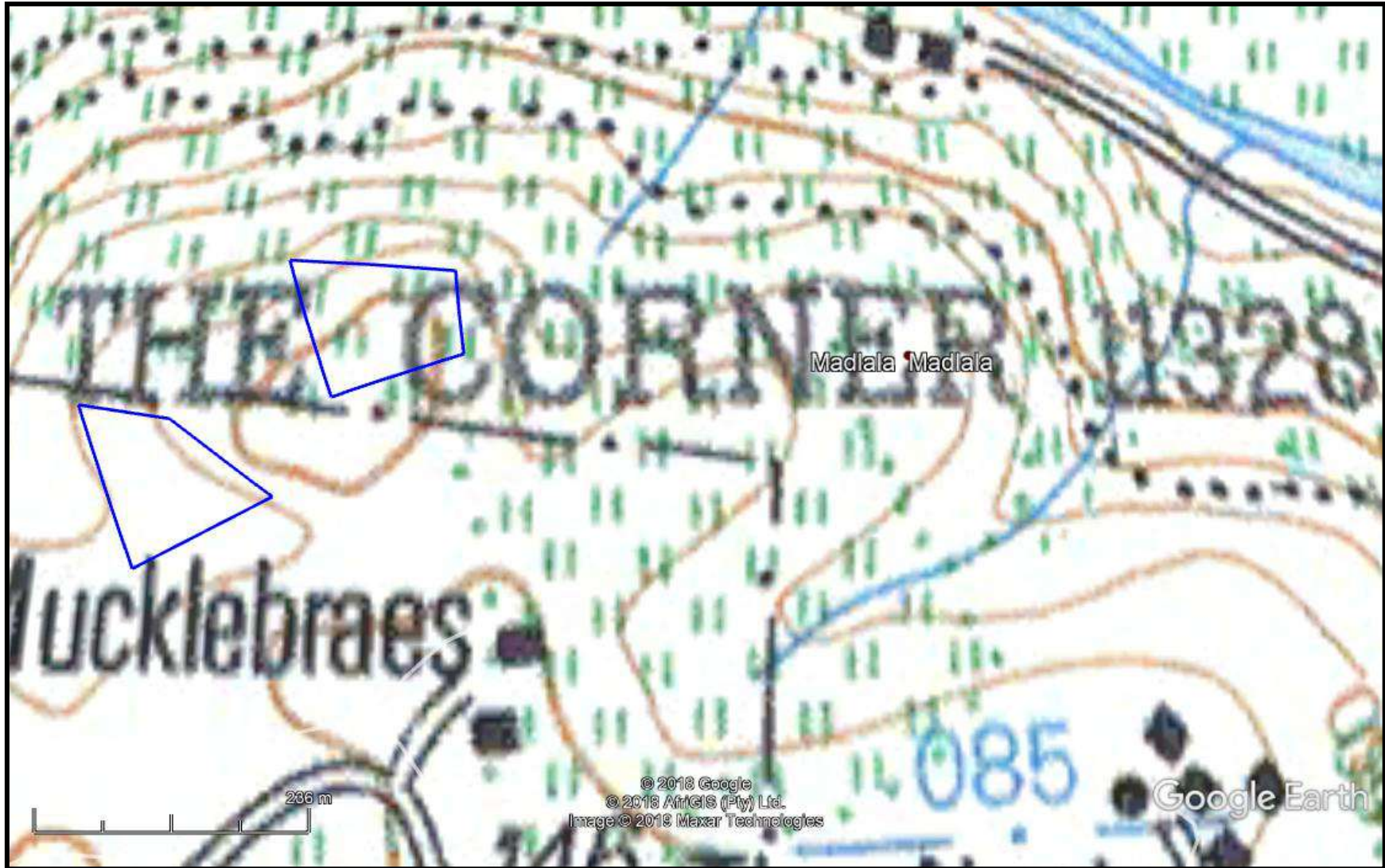


FIG. 2: AERIAL OVERVIEW OF THE PROPOSED



FIG. 3: TOPOGRAPHICAL MAP OF THE NORTHERN SECTION OF THE PROPOSED



**KWAZULU NATAL AMAFA AND RESEARCH INSTITUTE, ACT 05, 2018**

“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.”

## 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. This 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 1<sup>st</sup> and 2<sup>nd</sup> 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 two prospecting areas were not previously surveyed as it was partly an active mining area and we did not have permission to enter the property.

The previous general desktop study noted that there were many houses in the area from 1937 onwards (fig. 5). Some of these were continuously reused up to the present. Some of the earlier houses had human graves that were recorded

during the survey. The site A33 occurs between the two proposed prospecting areas. It is of concern that the existing mine appears to be nearing this settlement and there is no HIA to confirm the presence of human remains.

The 1972 topographical map indicates that the entire area is under sugarcane cultivation. This means that any houses that did exist had been removed; however, human graves could still exist below the surface.

Subsequent to the initial survey, I was informed that Ms Nobuhle Nyirongo had family graves to the north of the eastern application. Apparently, the graves of twins have been demolished/removed by existing mining activity. This was not done by the current applicant. While this does not form part of the desktop report, it does indicate that human remains do occur in cultivated lands. These graves may or may not have been demarcated. Thus if the mining at the two proposed prospecting areas is given, then the area of A33 needs to be assessed after the sugar cane has been burnt. The current footprint is within 50m of the A33.

Kwazulu Natal Amafa And Research Institute should investigate the removal of the graves.

No drilling should occur on the area of A33.

FIG. 4: LOCATION OF KNOWN HERITAGE SITES IN THE GENERAL AREA



FIG. 5: LOCATION OF SETTLEMENTS IN 1937

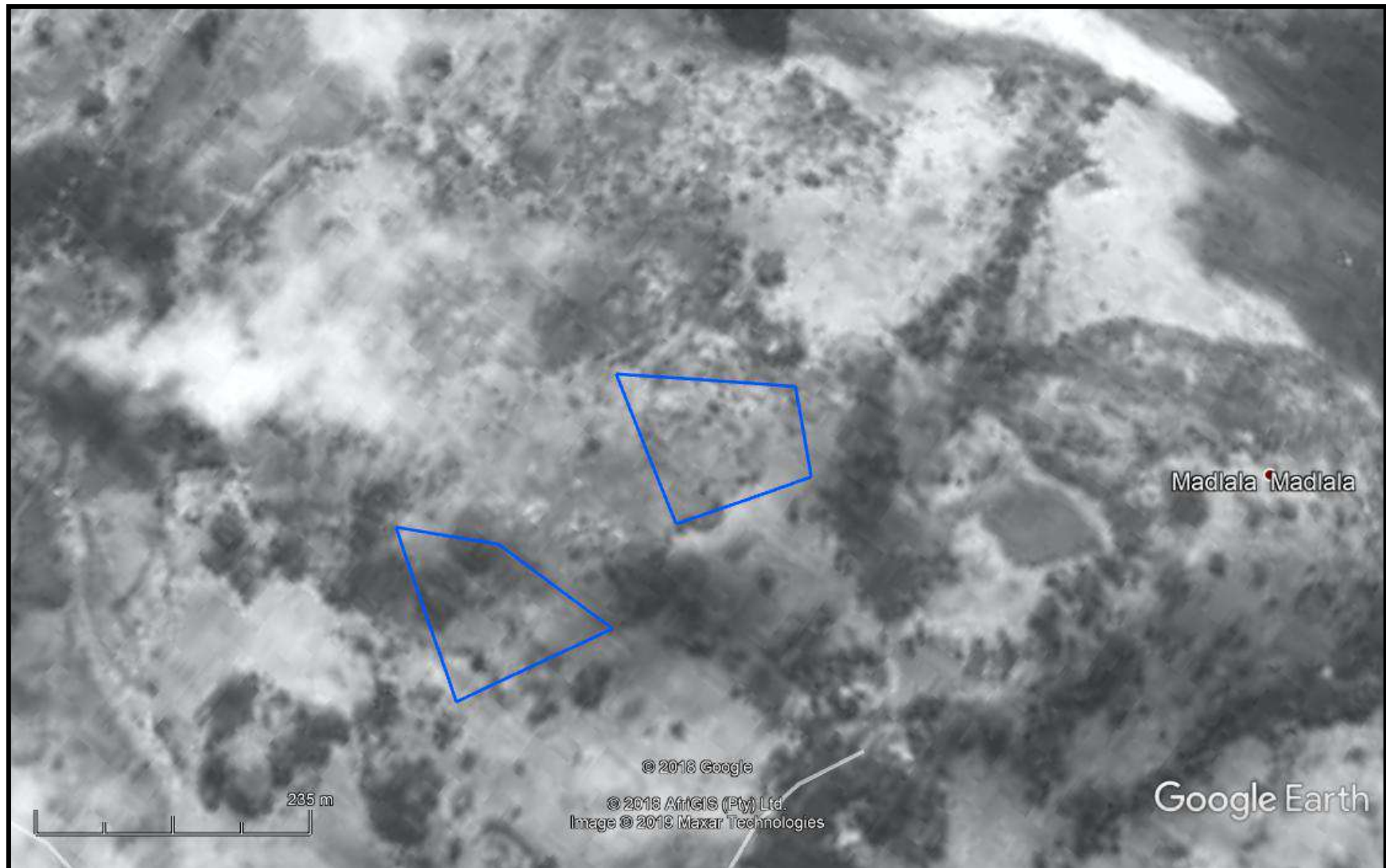
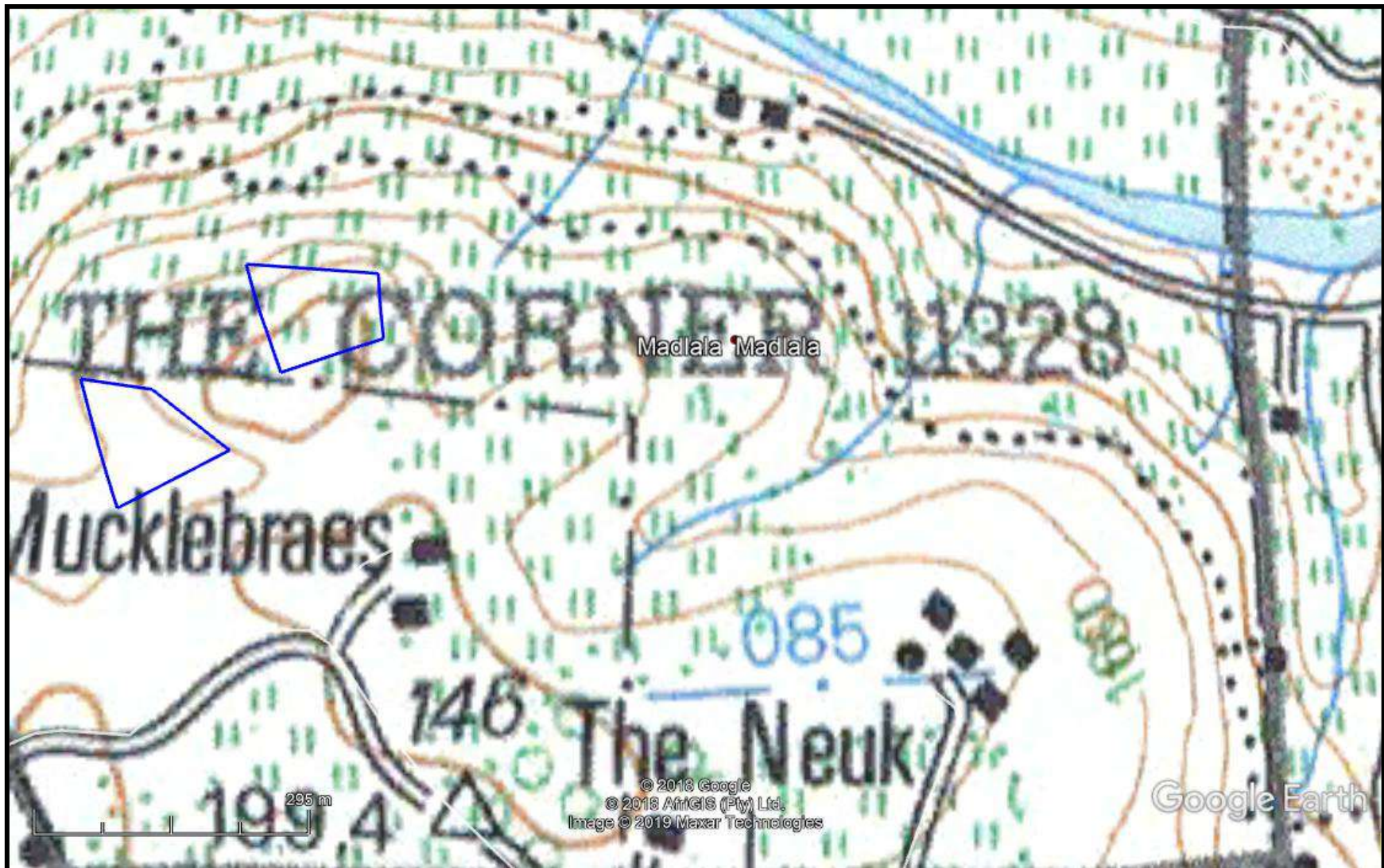




FIG. 6: LOCATION OF SETTLEMENTS IN THE PROPOSED PROSPECTING AREA IN 1972



## PALAEONTOLOGICAL SENSITIVITY

The area is classified as having no palaeontological sensitivity (fig. 7)



## MANAGEMENT PLAN AND RECOMMENDATIONS

Much of the proposed prospecting area is in an already mined and disturbed area. Those areas that will be extended will not disturb sensitive areas. However, if mining is to go ahead, then the area between the two properties will need to be surveyed for potential human settlement. This can only be undertaken once the sugar cane has been removed or burnt. This will determine if human graves occur in the area, and how close to the mining footprint.

No drilling should occur within a 50m area of A33 (S30.595938265, E30.503224449)

## CONCLUSION

A desktop heritage survey was undertaken for two proposed prospecting areas. These areas were briefly covered by a previous desktop, but it was redone with new information. The two areas were not covered by the field survey as I did not have permission to enter that specific property. Much of the proposed prospecting area is in an already mined and disturbed area. Those areas that will be extended will not be in sensitive areas.

If prospecting occurs then the land between the two properties will need to be surveyed after the sugar cane has been cleared. This is because of potential human remains within 50m of mining activity.

## REFERENCES

Anderson, G. 2018. Heritage Survey Of The Proposed Salene Lithium Mine And Prospecting Rights, Kwazulu-Natal. For The Independent Environmental Advisor