

**HERITAGE SURVEY OF THE UPGRADING OF THE
P419, KZN**

FOR JG AFRIKA(PTY)

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EXECUTIVE SUMMARY

JG Afrika (Pty) Ltd was appointed by Ilifa Africa Engineers (Pty) Ltd, on behalf the KZN DoT, to undertake the environmental services required for the proposed upgrading of Main Road P419, Harry Gwala District Municipality, KwaZulu-Natal. The project was put on hold in 2020, and then revived in 2022.

The proposed development entails the upgrading of two sections of the Main Road P419, from KM 4.4 – KM 9.4 (referred to as northern road) and KM 17.0 – KM 22.0 (referred to as southern road). The upgrade will include the following:

- Existing 7m wide gravel road to be upgraded to an 8m wide blacktop road;*
- Re-alignment of road where required to meet 60 km/h design speed and associated road reserve. The realignment will be limited to less than 0.5km; and*
- the replacement and extension of culverts over watercourse crossings.*

Four areas with graves were noted to occur 5m - 20m of the road reserve. Since more recent houses have been built near the road, it has made the road realignment for the graves very difficult. Discussions with the engineer and Umlando resulted in the 5m buffer decreased to 2m with strict conditions. These are to be verified by the Ward Councillor and living descendents in writing.

No palaeontological mitigation is required since it is a road upgrade and there will not be any deep excavations. The locations of teh culverts occur in areas of no palaeontological sensitivity.

No further HIA is required for this road upgrade. However the buffering and demarcation will need to be confirmed before construction begins.

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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

JG Afrika (Pty) Ltd was appointed by Ilifa Africa Engineers (Pty) Ltd, on behalf the KZN DoT, to undertake the environmental services required for the proposed upgrading of Main Road P419, Harry Gwala District Municipality, KwaZulu-Natal. The proposed development entails the upgrading of two sections of the Main Road P419, from KM 4.4 – KM 9.4 (referred to as northern road) and KM 17.0 – KM 22.0 (referred to as southern road). The upgrade will include the following:

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- Re-alignment of road where required to meet 60 km/h design speed and associated road reserve. The realignment will be limited to less than 0.5km; and
- the replacement and extension of culverts over watercourse crossings.

Umlando was contracted by JG Afrika (Pty) Ltd to undertake the heritage survey of the road upgrade.

Figures 1 – 4 show the location of the development.

FIG. 1 GENERAL LOCATION OF THE PROPOSED DEVELOPMENT

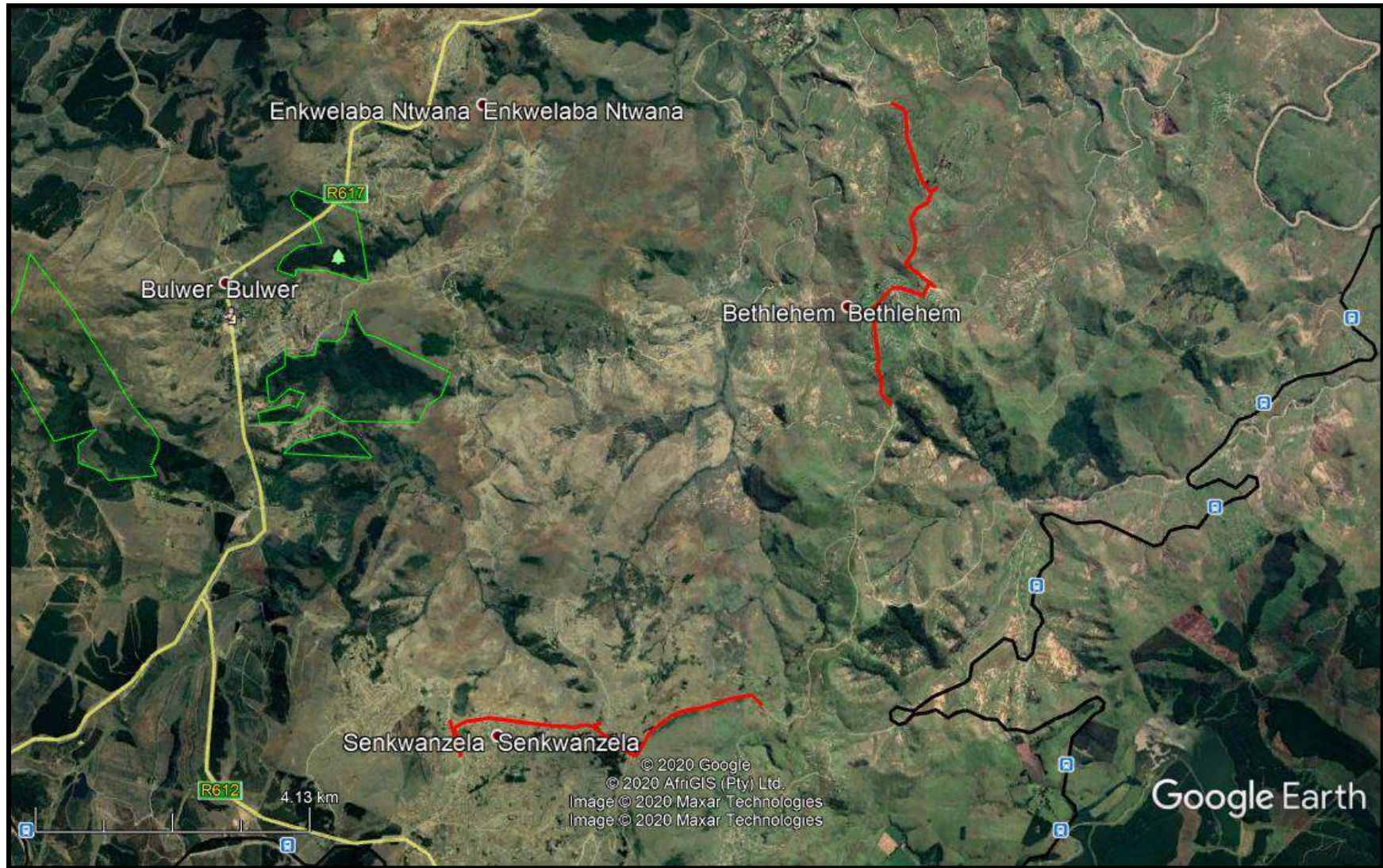


FIG. 2A: AERIAL OVERVIEW OF THE PROPOSED DEVELOPMENT OF P419 (NORTH)



FIG. 2B: AERIAL OVERVIEW OF THE PROPOSED DEVELOPMENT OF P419 (NORTH)

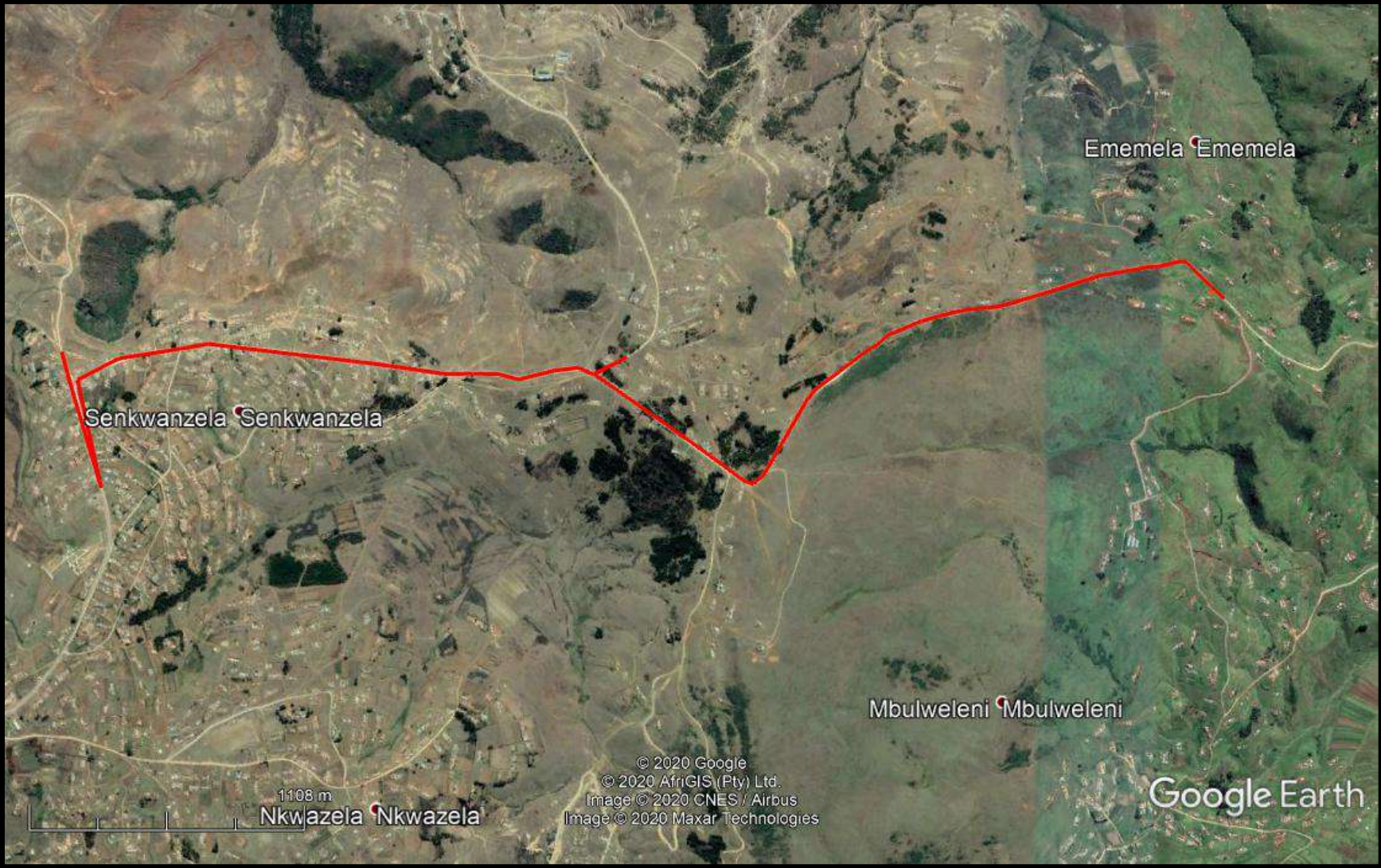
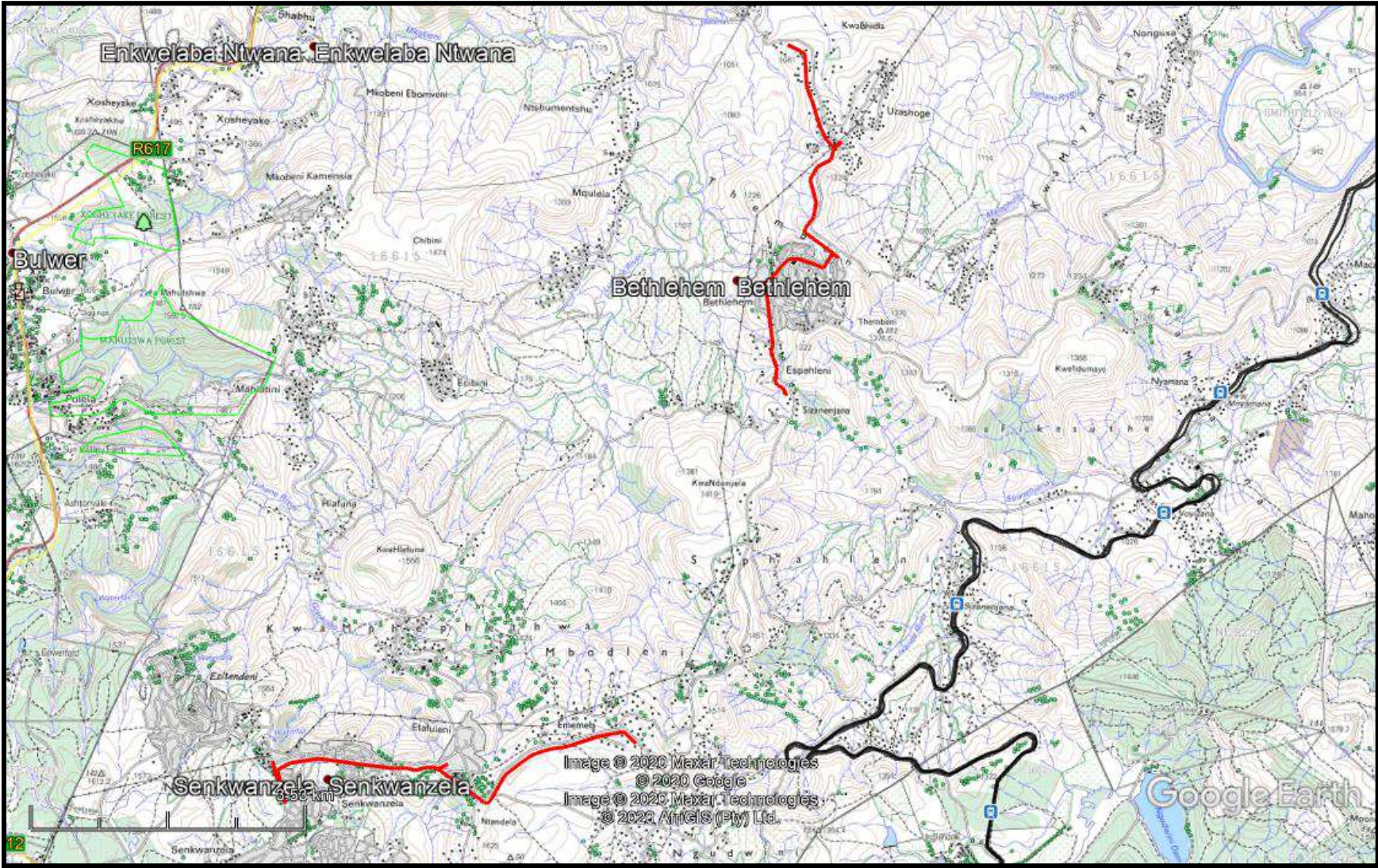


FIG. 3: TOPOGRAPHICAL MAP OF THE PROPOSED DEVELOPMENT¹



¹ 2929DC Donnybrook

FIG. 4A: SCENIC VIEWS OF THE NORTHERN STUDY AREA



FIG. 4B: SCENIC VIEWS OF THE SOUTHERN STUDY AREA



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 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. Table 1 lists the grading system

TABLE 1: SAHRA GRADINGS FOR HERITAGE SITES

| SITE SIGNIFICANCE | FIELD RATING | GRADE | RECOMMENDED MITIGATION |
|----------------------------|-------------------------|---------------|---|
| High Significance | National Significance | Grade 1 | Site conservation / Site development |
| High Significance | Provincial Significance | Grade 2 | Site conservation / Site development |
| High Significance | Local Significance | Grade 3A / 3B | |
| High / Medium Significance | Generally Protected A | | Site conservation or mitigation prior to development / destruction |
| Medium Significance | Generally Protected B | | Site conservation or mitigation / test excavation / systematic sampling / monitoring prior to or during development / destruction |
| Low Significance | Generally Protected C | | On-site sampling monitoring or no archaeological mitigation required prior to or during development / destruction |

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. There have been no prior surveys in the study area. The archaeological sites tend to be open Stone Age scatters or LIA or HP settlements of varying significance (fig. 5). No sites have been noted in the study area.

The 1971 topographical map indicates that the area was already densely occupied (fig. 6). The area also has many agricultural fields. The number of settlements in the rural area suggests that there will be several graves around the various settlements.

PALAEONTOLOGICAL SENSITIVITY

The area is in an area of mainly of no palaeontological sensitivity with a few area of very high sensitivity (fig. 7). It will require a minimum of a PIA desktop, and possible site visits during construction. Culverts occur in the area of no sensitivity. Since this is a road upgrade there will be no deep excavations into unweathered formations, and thus no impact on palaeontological deposits.

FIG. 5: LOCATION OF KNOWN HERITAGE SITES IN THE GENERAL AREA

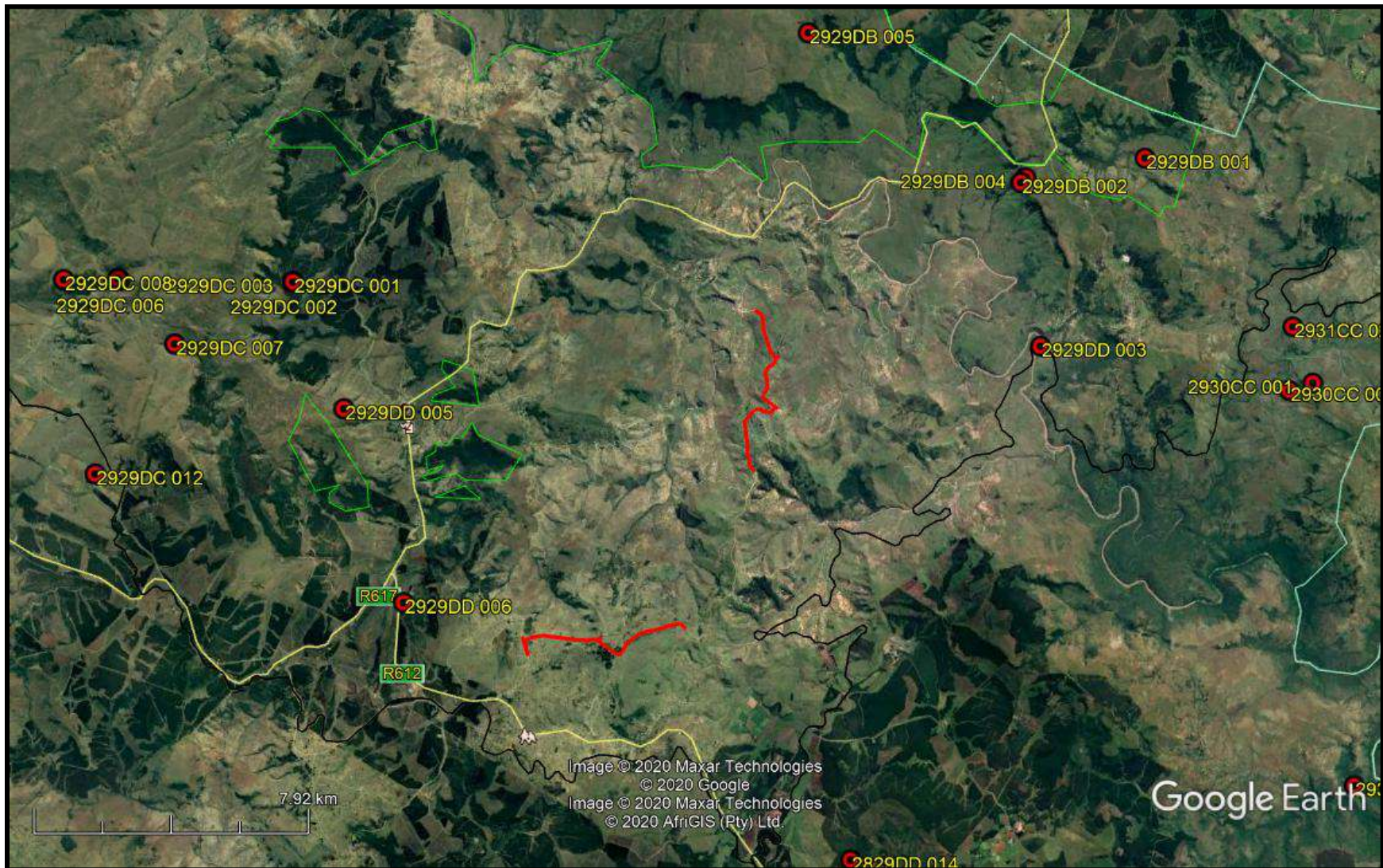


FIG. 6: LOCATION OF PROPOSED DEVELOPMENT IN 1971

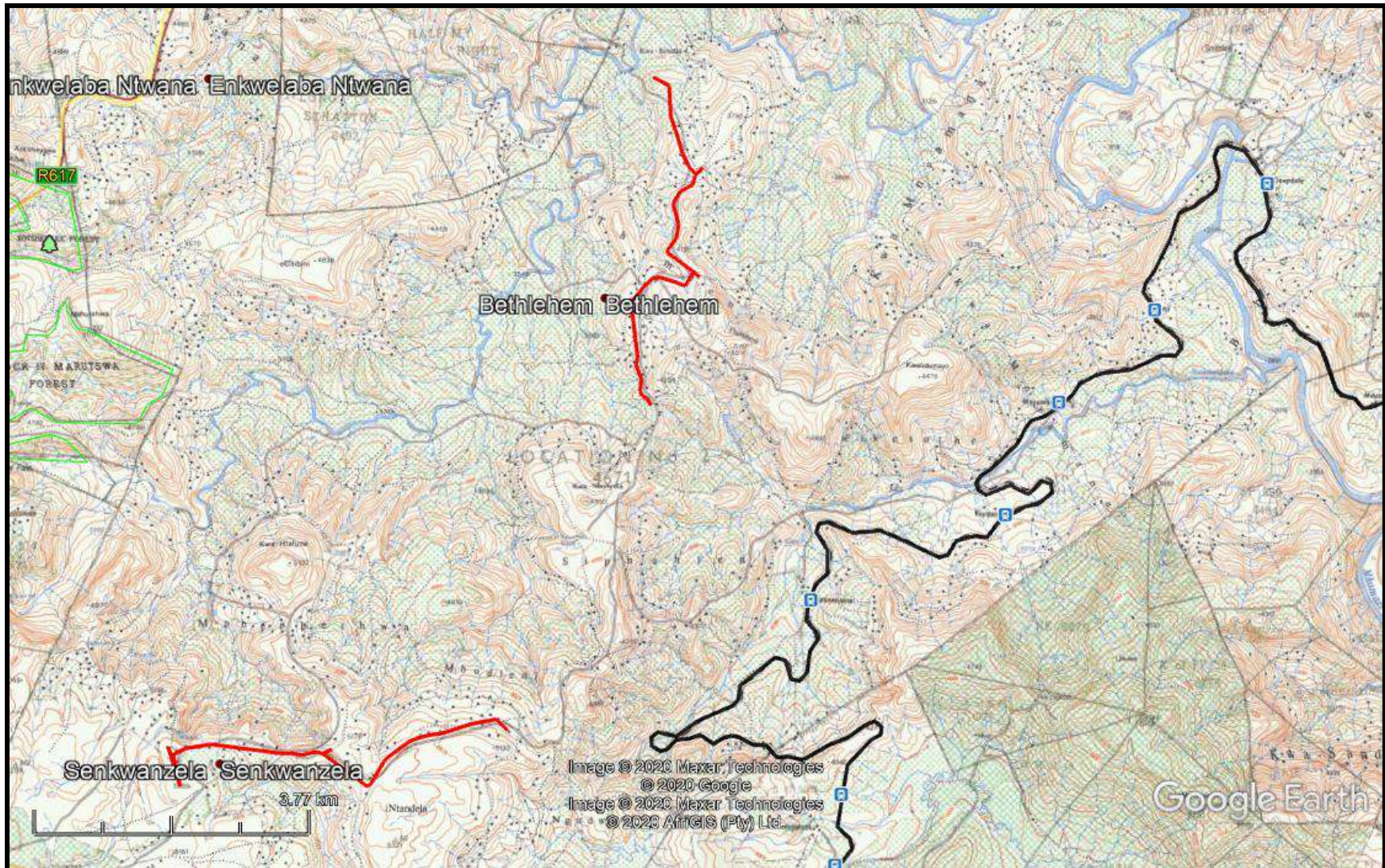
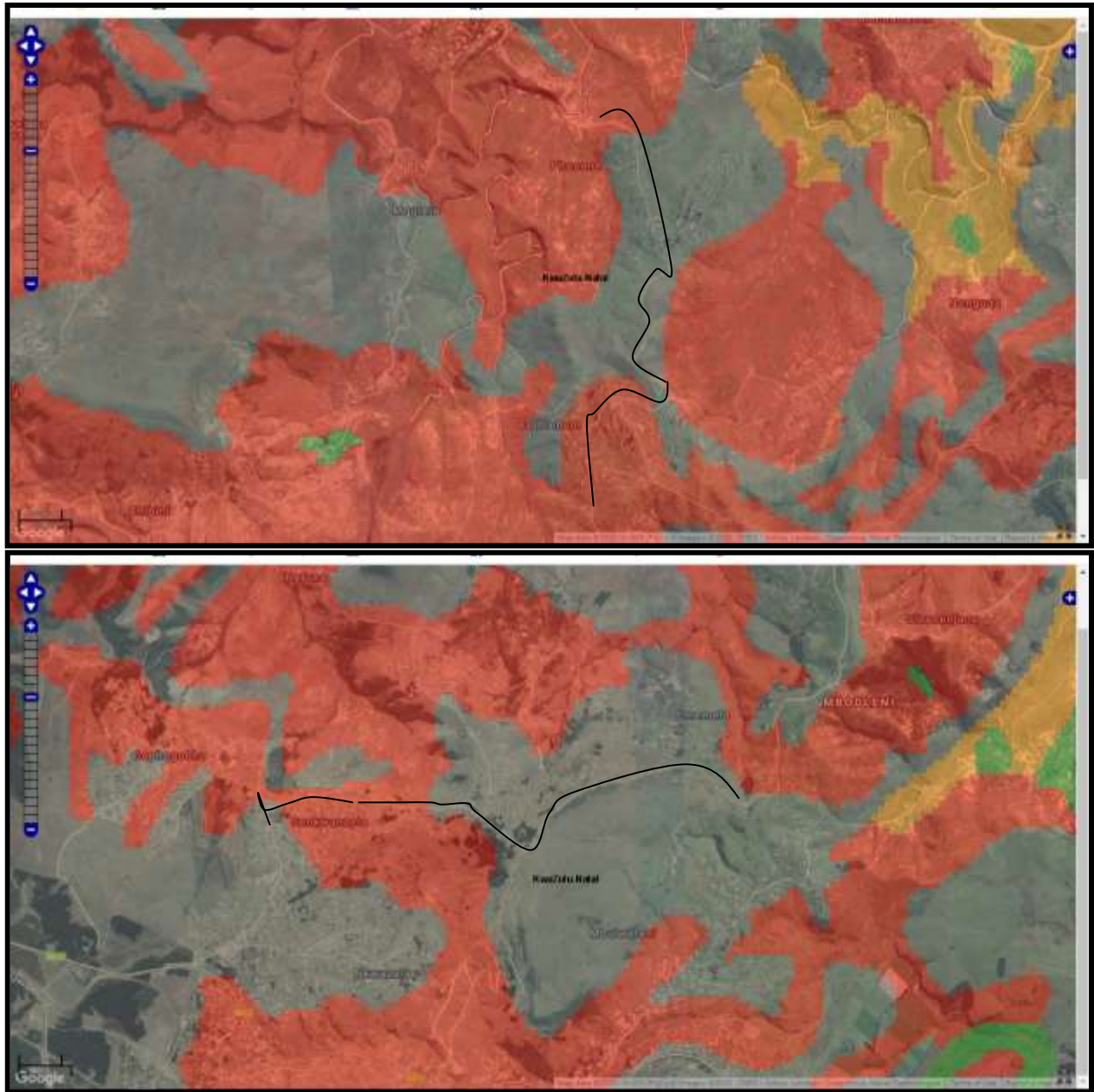


FIG. 7: PALAEOONTOLOGICAL SENSITIVITY MAP



FIELD SURVEY

The field survey was undertaken on 12 March 2020. No archaeological sites were noted during the survey. However five graves are known to occur (fig.'s 8 – m13, Table 3). Graves 1 – 3 occur within demarcated settlements and they should not be disturbed not be disturbed. Graves 4 - 5 are not in demarcated areas nor are they near the road. Grave 6 was pointed out by the engineer, as I had missed it during the survey. It occurs under trees and in a dense grass.

All graves are of high significance and need to be demarcated in some manner before construction begins. Graves 1 -3 are already demarcated by fencing. Graves 4 - 5 will need to be demarcated with high visibility markers. There should be at least a 5m buffer between the grave and the “fencing”, and a 20m buffer from the grave to the road. This is however impossible to undertake as the road in some places is already 5m from the grave(s) and/or new houses have been erected near the road, making the realignment very difficult. The engineer, myself and the previous environmentalist discussed these issues and we decided some leeway must be given on both sides as well as a management plan.

TABLE 3: LOCATION OF RECORDED GRAVES

| NAME | LATITUDE | LONGITUDE |
|-------------|-----------------|------------------|
| G1 | -29.784431285 | 29.875406129 |
| G2 | -29.803934205 | 29.868406979 |
| G3 | -29.804384200 | 29.868120694 |
| G4 | -29.856938122 | 29.849902910 |
| G5 | -29.858659 | 29.810634 |
| G6 | -29.780012 | 29.873956 |

FIG. 8: LOCATION OF GRAVES NEAR THE ROAD UPGRADE

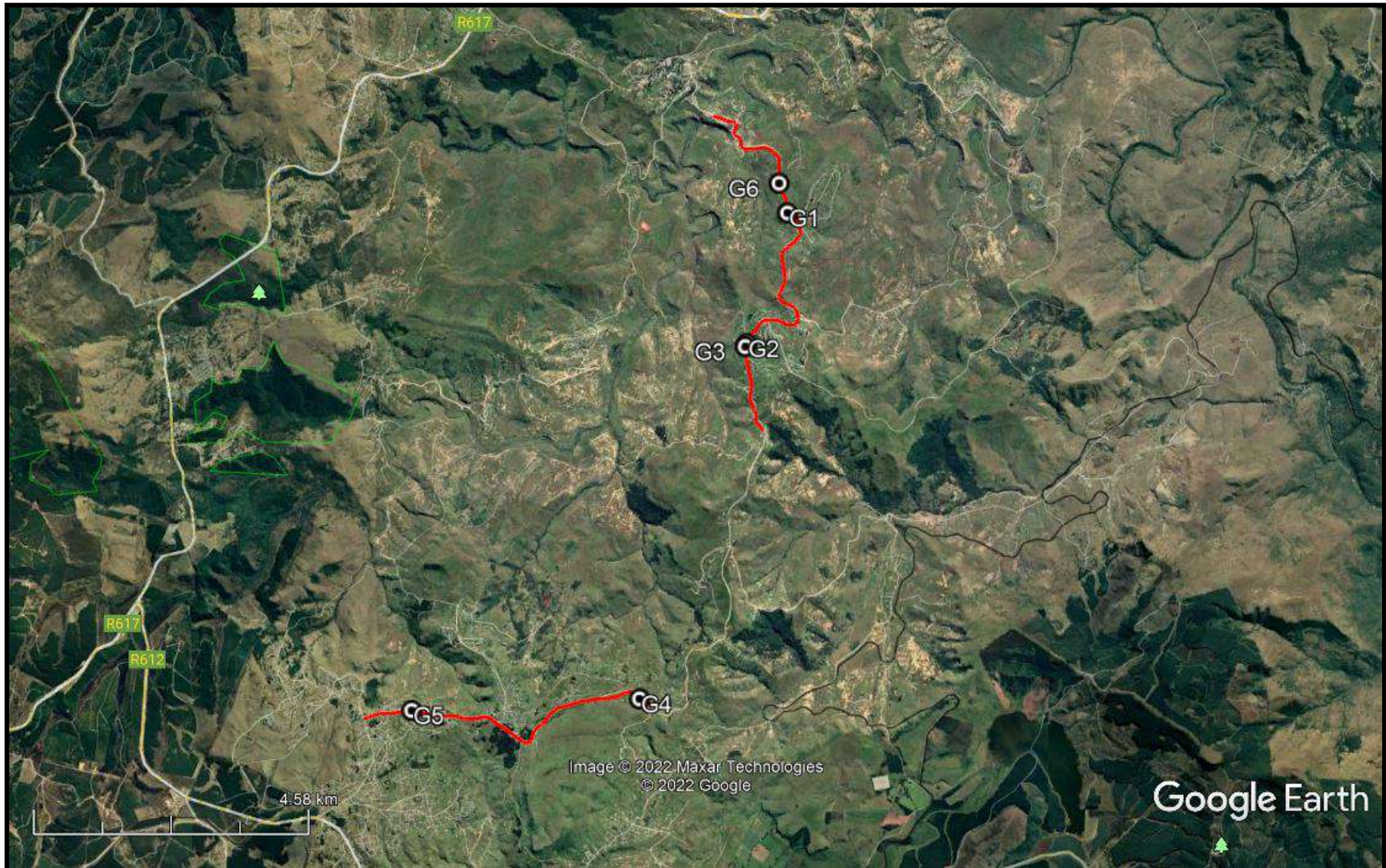


FIG. 9: GRAVE 1



FIG. 10: GRAVE 2



FIG. 11: GRAVE 3



FIG. 12: GRAVE 4



FIG. 13: GRAVE 5



FIG. 14: LOCATION OF GRAVE 6



In order for this 2m or less buffer to be utilised, the following is to occur PRIOR to construction commencing:

- The local Ward Councillor is to be approached and the situation explained;
- The Councillor must then approach the local descendants of the grave and explain the situation to them;
- If the descendants agree to construction occurring within 2m of the grave, they have to acknowledge this in writing, preferably signed by Commissioner of oath or as an Affidavit. The Councillor's letterhead needs to be attached stating (s)he has no objections and that the descendants were contacted
- These letters are to be forwarded to the Heritage Specialist, who will submit to Amafa accordingly noting that the grave has been constructed in the road reserve and as other homesteads have been erected on the opposite side of the road, there is no space to move/realign the road.
- Should the descendants NOT agree, then permission to relocate the grave will have to be sought.

Grave 1

Engineer: The existing fence is 2.005m away from the edge of the demarcated grave. The existing road is 4.321m away from the edge of the grave. Our new road is 16.766m in width including toe lines, as you will see our new road toe line will be 3.989m away from the grave, however, I will have to realign the road since new houses have been built based on the updated aerial imagery from NGI. We have requested a new survey from the department but are still waiting for confirmation.

Umlando: The 5m buffer can be relaxed up to a MAXIMUM of 2 metres and this 2 metres is only to be utilised if absolutely necessary. No digging is to

occur on this 2 metre line in case any human remains are unearthed. Should any remains be uncovered, works in that area needs to stop immediately. The 2m buffer is to have a physical barrier constructed around it, which includes for visibility screening. A wall, or burn, should occur at the edge of the road where the grave occurs

Grave 2 & 3

Engineer: The existing road is 5.343m away from the edge of the demarcated grave (I assume that based on the HIA report that the graves are already fenced and this is the boundary of the fence around the grave). Our toe-line of the new road will only be 0.5m away from the fence around the grave. Again due to the houses on the opposite side of the road we cannot realign any more.

Umlando: The 5m buffer can be relaxed up to a MAXIMUM of 0.5 metres and this is only to be utilised if absolutely necessary. No digging is to occur on this line in case any human remains are unearthed. Should any remains be uncovered, works in that area needs to stop immediately. The 2m buffer is to have a physical barrier constructed around it, which includes for visibility screening. A wall, or burn, should occur at the edge of the road where the grave occurs

Grave 4 & 5

These are outside of the road reserve and will not be affected.

Grave 6

Engineer: The grave was confirmed by the Ward Councillor. The descendents have moved away from the area. The grave occurs 5m from the existing road and the buffer needs to be decreased to 2m

Umlando: The 5m buffer can be relaxed up to a MAXIMUM of 2 metres and this 2 metres is only to be utilised if absolutely necessary. No digging is to occur on this 2 metre line in case any human remains are unearthed. Should any remains be uncovered, works in that area needs to stop immediately. The 2m buffer is to have a physical barrier constructed around it, which includes for visibility screening. A wall, or burn, should occur at the edge of the road where the grave occurs

CONCLUSION

A heritage survey was undertaken for the proposed upgrade of the P419 near Bulwer, KZN in 2020. The project was then placed on hold and revived in February 2022. The road upgrade will not entail excavations, except for a few culverts and toe-lines.

Four areas with graves were noted to occur 5m - 20m of the road reserve. Since more recent houses have been built near the road, it has made the road realignment for the graves very difficult. Discussions with the engineer and Umlando resulted in the 5m buffer decreased to 2m with strict conditions. These are to be verified by the Ward Councillor and living descendents in writing.

No palaeontological mitigation is required since it is a road upgrade and there will not be any deep excavations.

No further HIA is required for this road upgrade.

REFERENCES

2929DD Donnybrooke 1971, 2000

EXPERIENCE OF THE HERITAGE CONSULTANT

Gavin Anderson has a M. Phil (in archaeology and social psychology) degree from the University of Cape Town. Gavin has been working as a professional archaeologist and heritage impact assessor since 1995. He joined the Association of Professional Archaeologists of Southern Africa in 1998 when it was formed. Gavin is rated as a Principle Investigator with expertise status in Rock Art, Stone Age and Iron Age studies. In addition to this, he was worked on both West and East Coast shell middens, Anglo-Boer War sites, and Historical Period sites.

DECLARATION OF INDEPENDENCE

I, Gavin Anderson, declare that I am an independent specialist consultant and have no financial, personal or other interest in the proposed development, nor the developers or any of their subsidiaries, apart from fair remuneration for work performed in the delivery of heritage assessment services. There are no circumstances that compromise the objectivity of my performing such work.

A handwritten signature in black ink, appearing to read 'G. Anderson', with a horizontal line underneath.

Gavin Anderson
Archaeologist/Heritage Impact Assessor