

**TRUSTFEED WATER RETICULATION PHASE 1,
UMSHWATHI MUNICIPALITY, KZN**

**FOR SUKUMA CONSULTING ENGINEERS PTY
(LTD)**

DATE: 20 FEBRUARY 2021

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EXECUTIVE SUMMARY

Trust Feed Water Reticulation Phase 1 is located in the Wartburg magisterial area under uMshwathi Local Municipality, uMgungundlovu District Municipality in KZN Province. The proposed development is accessed through a tarred road from Wartburg to Schroeders and then branching left at about 1,4km into a gravel road and the area is about 3km along the gravel road. The site is in a mostly built up area serving the area with potable water.

Umlando was initially requested to provide guidance regarding the proximity of the pipeline to three cemeteries. It was then realised that an HIA for the project had not been undertaken. Umlando was then requested to undertake an assessment of the proposed development. In the mean time, the three known sensitive areas were demarcated, and the pipeline was realigned.

The heritage survey did not locate any further heritage resources.

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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

Trust Feed Water Reticulation Phase 1 is located in the Wartburg magisterial area under uMshwathi Local Municipality, uMgungundlovu District Municipality in KZN Province. The proposed development is accessed through a tarred road from Wartburg to Schroeders and then branching left at about 1,4km into a gravel road and the area is about 3km along the gravel road. The site is in a mostly built up area serving the area with potable water.

The following uPVC and HDPE pipe sizes will be installed:

- 250mm
- 200mm
- 160mm
- 110mm
- 75mm
- 50mm

Figures 1 – 3 show the location of the development.

Umlando was requested to provide information regarding the proximity of the pipeline to three cemeteries. It was then realised that an HIA for the project had not been undertaken. Umlando was requested to undertake an assessment of the proposed development. In the mean time, the three known sensitive areas were demarcated, and the pipeline was realigned.

FIG. 1 GENERAL LOCATION OF THE PROPOSED DEVELOPMENT

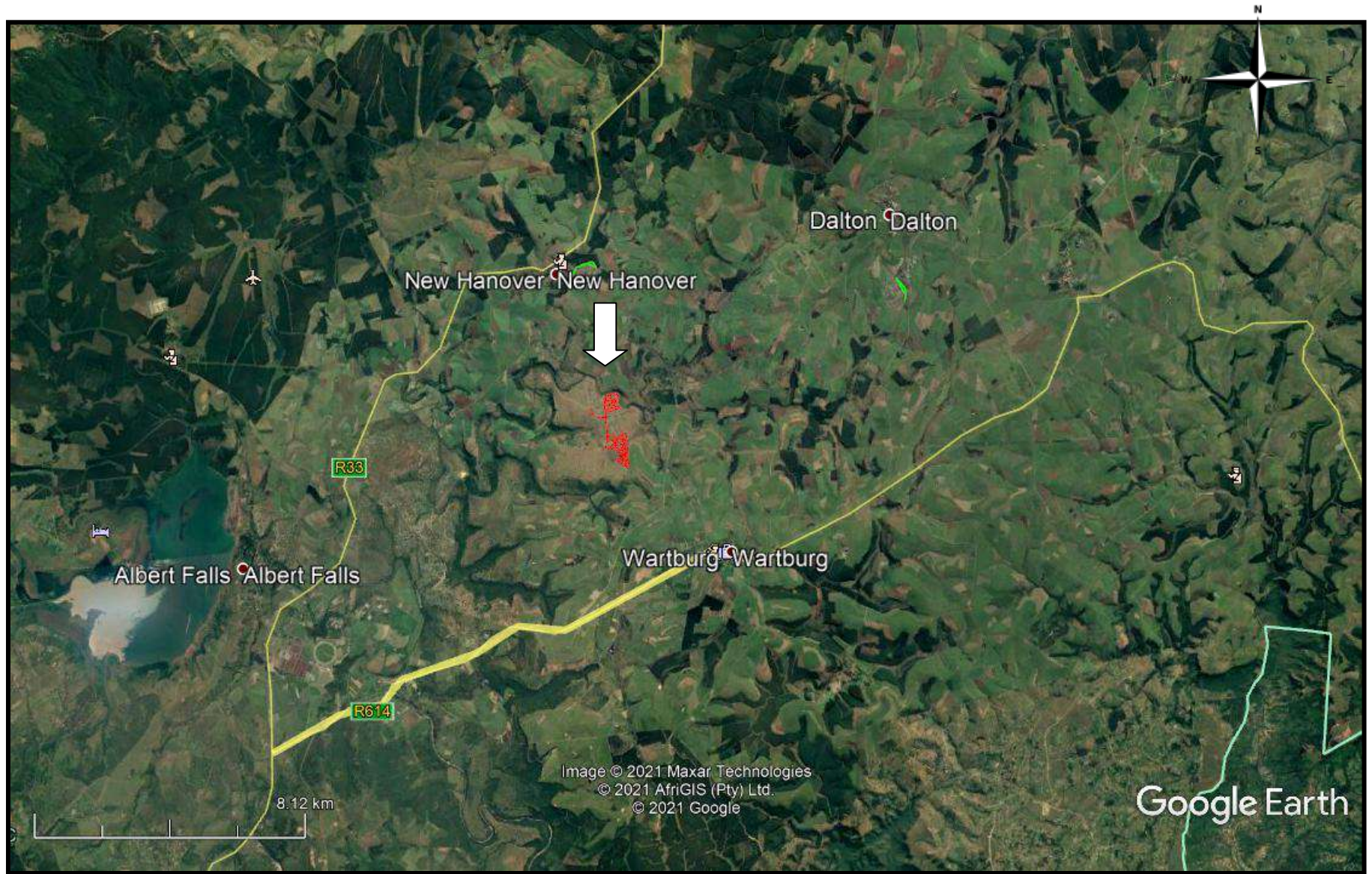


FIG. 2: AERIAL OVERVIEW OF THE PROPOSED DEVELOPMENT



FIG. 3: TOPOGRAPHICAL MAP OF THE PROPOSED DEVELOPMENT (2002)

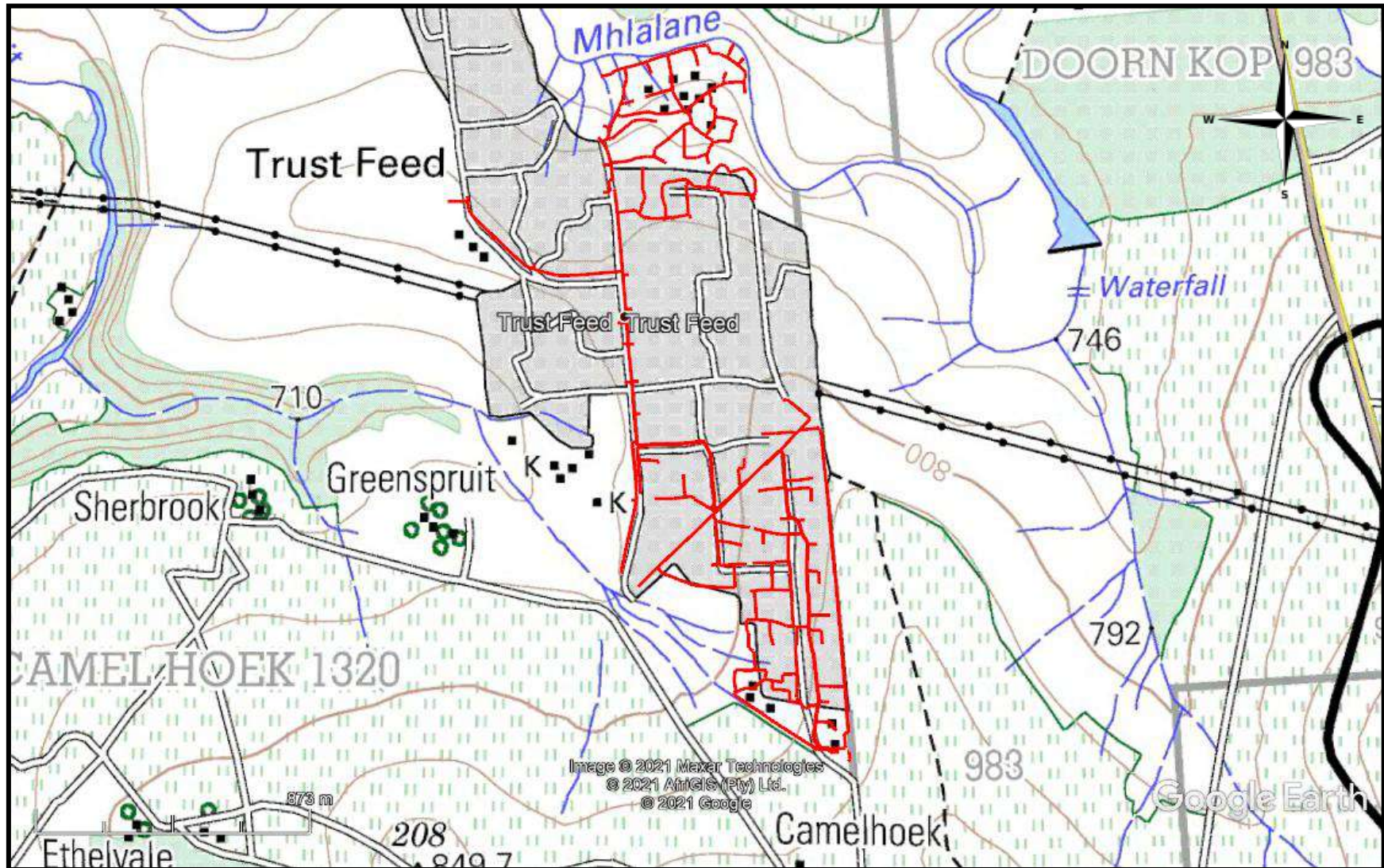


FIG. 4: SCENIC VIEW OF THE STUDY AREA



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. Many archaeological sites occur in the general area. The archaeological sites tend to be open Stone Age scatters of low significance, Overhangs with Rock Paintings, Late Iron Age walling, and Historical Period structures (fig. 5). Anderson (2017) undertook a heritage survey to the west of Trust Feeds for the initial water reticulation system. Several heritage sites and features were noted in the area. Active heritage (2016) undertook a survey to the east of Anderson, and did not locate any heritage features.

The Deeds register indicates that the land was first surveyed and then given a Title Deed in 1852 and 1853 respectively (fig. 6). The colonial occupation of the farm thus postdates 1853; however, the farmhouse is not shown on the deeds map.

The 1937 aerial photograph indicates several farm buildings outside of the study area and a possible farmhouse in the middle of the southern part of Trust Feeds (see white arrow in fig. 7)

By 1968 The Trust Feed Township was established as a bequeathed area with several buildings, churches and cemeteries (fig. 8). The buildings noted in fig. 7 no longer exist.

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

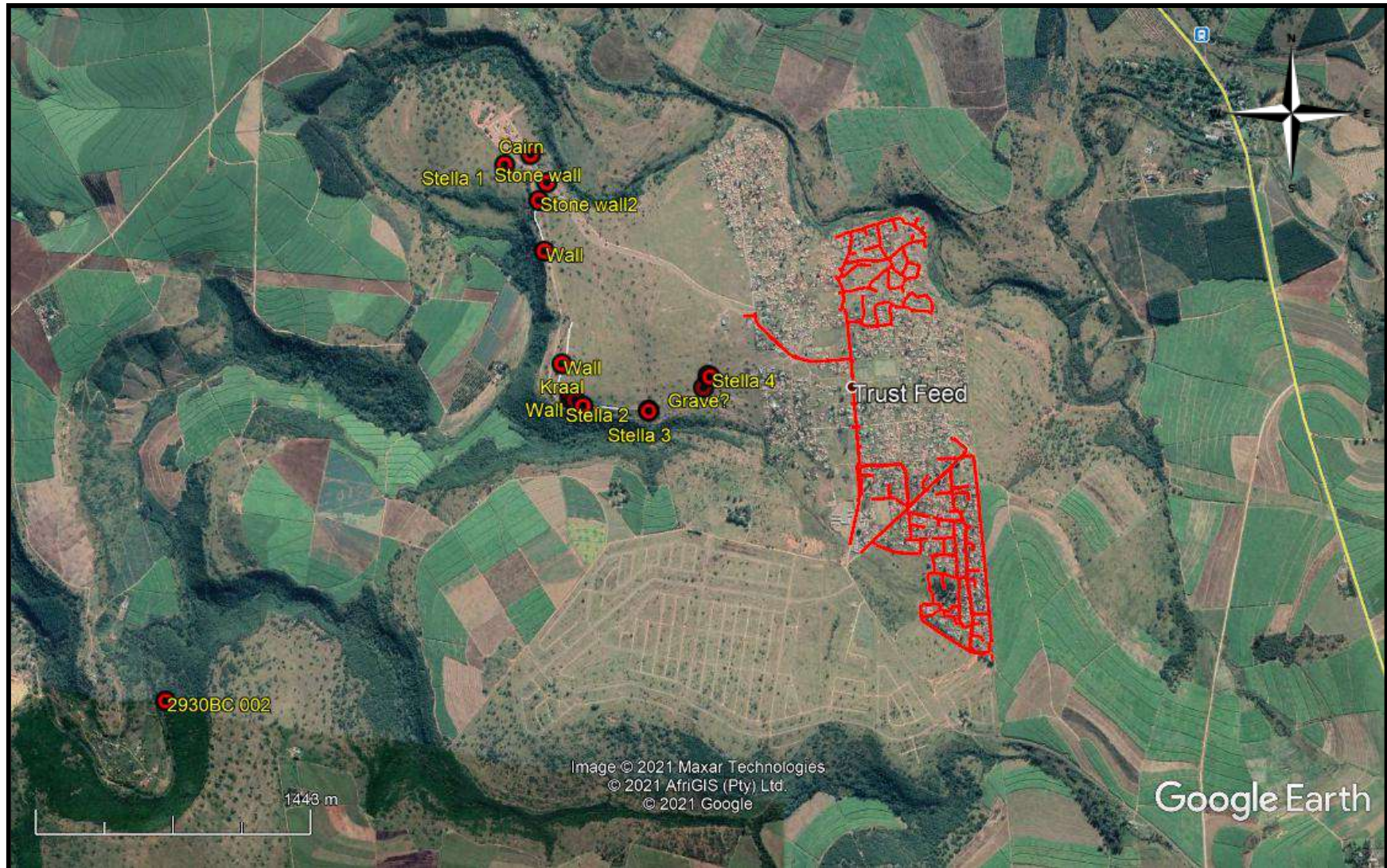


FIG. 6: SURVEYOR GENERAL DIAGRAM OF CAMEL HOEK 1320 (1853)

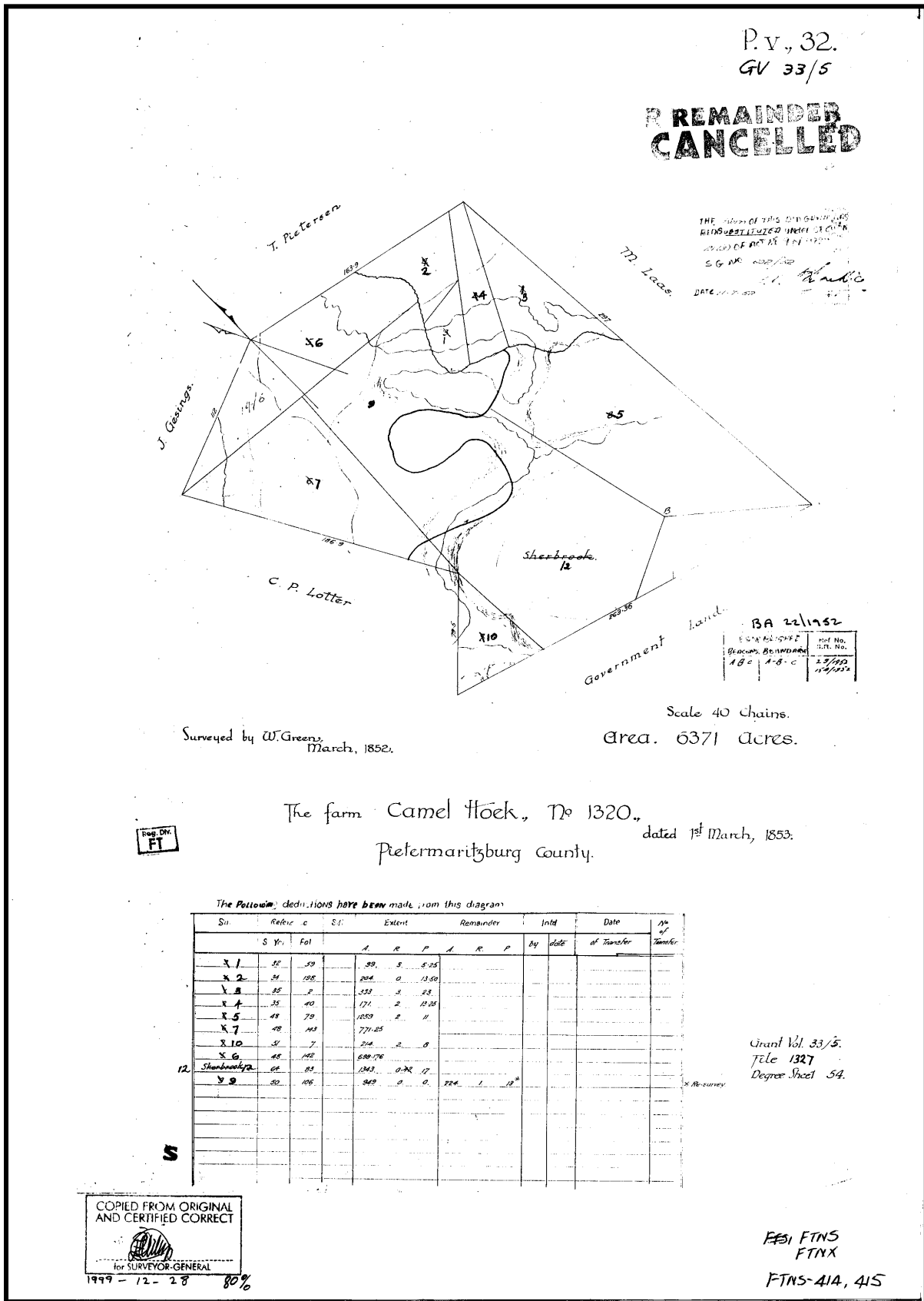


FIG. 7: STUDY AREA IN 1937

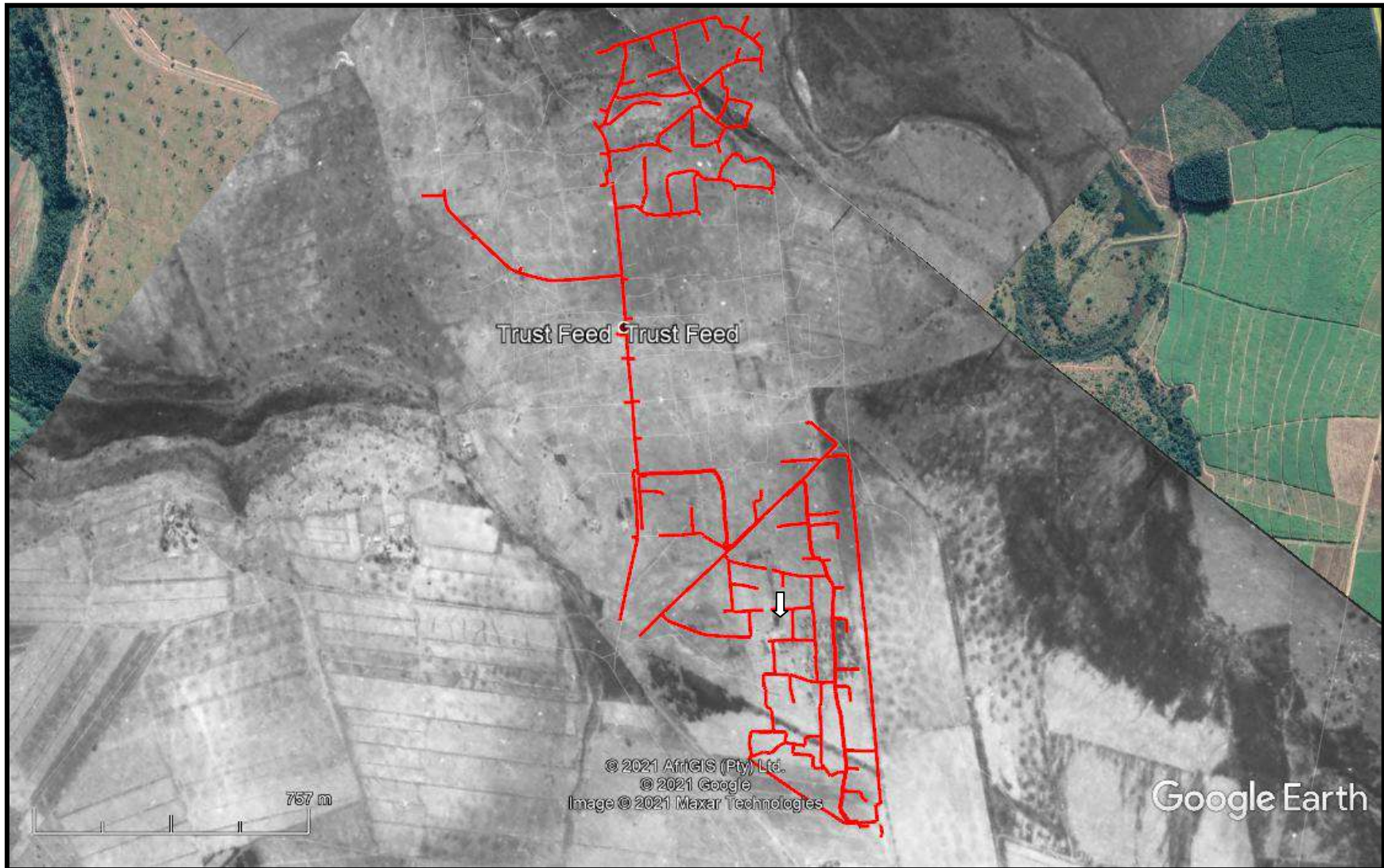
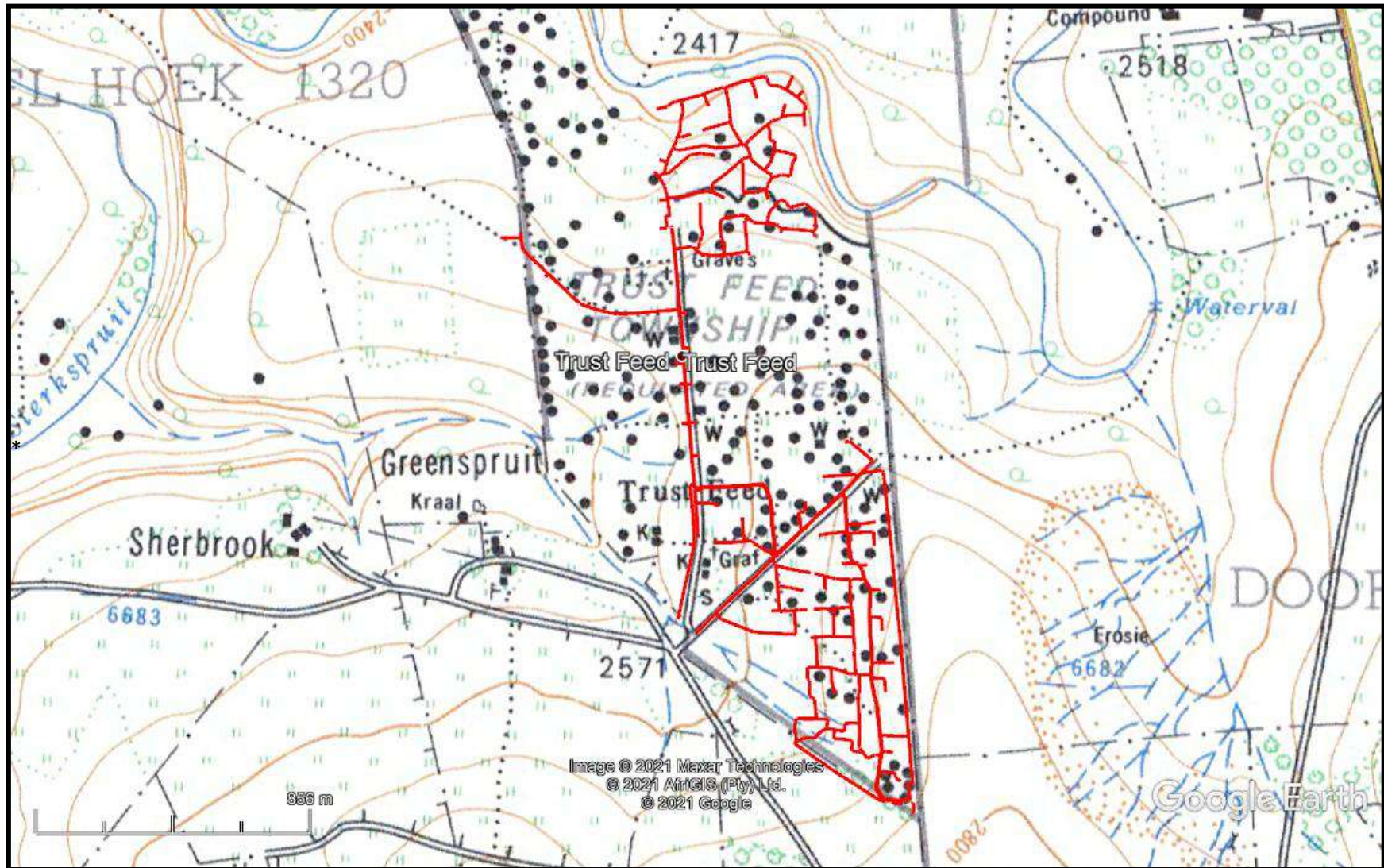


FIG. 8: STUDY AREA IN 1968



PALAEONTOLOGICAL SENSITIVITY

The area is in an area of low palaeontological sensitivity (fig. 9). The northern part of Trust Feeds is shale on the surface; however, it is very weathered. No further palaeontological mitigation is required,

FIG. 9: PALAEONTOLOGICAL SENSITIVITY MAP



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.

FIELD SURVEY

The field survey was undertaken on 5 February 2021. Ground visibility was very good. A small part of the pipeline was already under construction.

The pipeline followed the main road and then the smaller streets connecting the various properties. The pipeline occurs between the street verge and the properties.

The initial concern regarding the location of the pipeline next to three cemeteries has been rectified.

Grave in Old churchyard (29°24'11.47"S 30°32'33.54"E): The 250mm pipe that was in the road reserve adjacent the grave site has been realigned to the opposite side of the road. The 50mm pipeline was stopped east of the grave site.

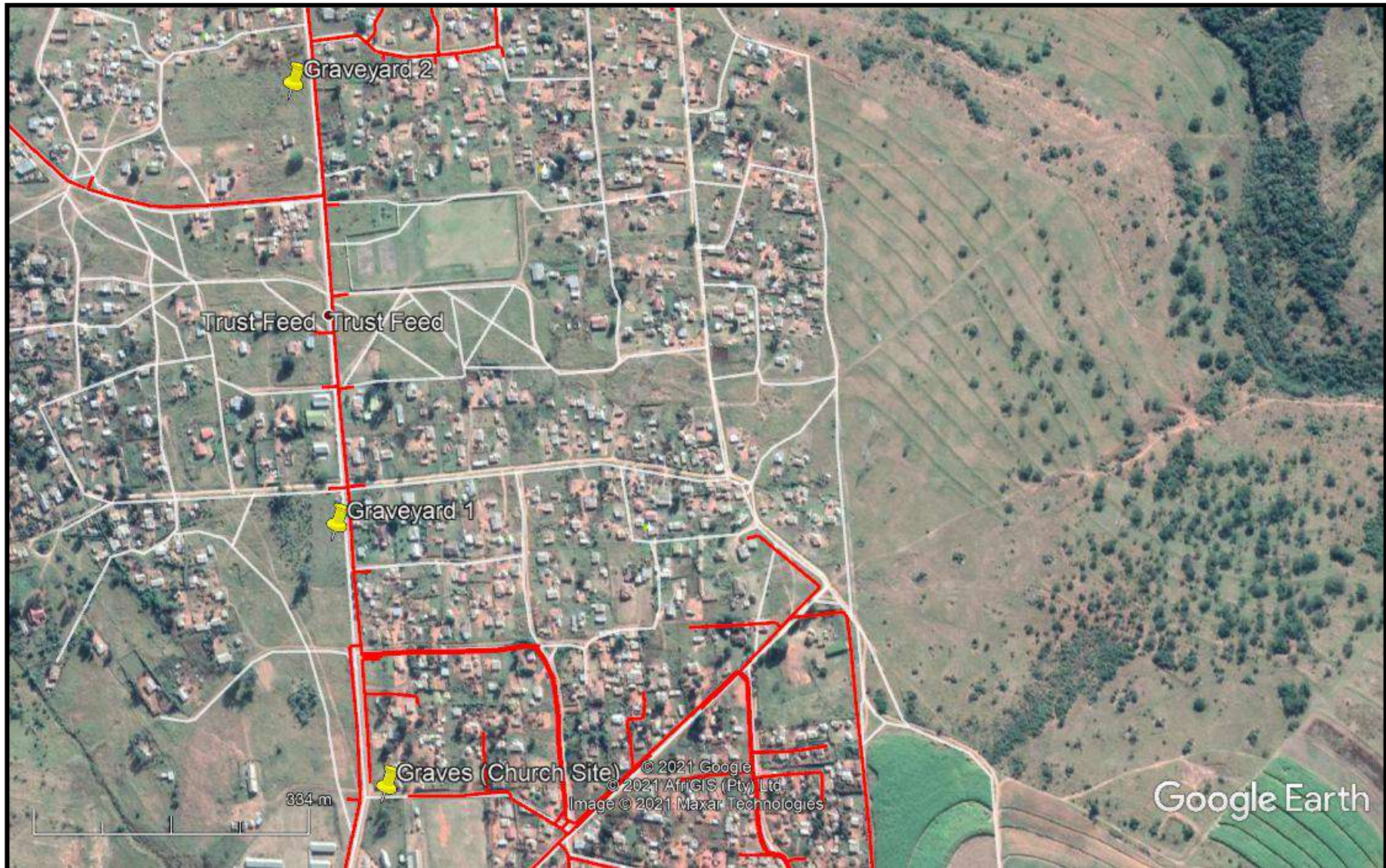
Cemetery No.1 (29°24'1.44"S 30°32'31.30"E): pipeline has been realigned to the opposite side of the road.

Cemetery No.2 (29°23'44.46"S 30°32'29.35"E): pipeline has been realigned to the opposite side of the road.

The location of these cemeteries is shown in fig. 10.

Most of the pipeline occurs in the existing road reserves and are thus unlikely to affect any archaeological sites. The area along the (south) eastern part of Trust Feeds is adjacent to sugarcane fields. No heritage sites were noted in this area.

FIG. 10 LOCATION OF RECORDED FINDS



RECOMMENDATIONS

The proposed water reticulation project will not affect heritage sites. No further mitigation is required.

CONCLUSION

A heritage survey was undertaken for the proposed Trust Feeds water reticulation system. The initial concerns regarding the proximity of the pipelines to existing graves were noted, and the routes were re-aligned.

The field survey did not locate any other heritage features.

REFERENCES

Active Heritage. 2016. Heritage Impact Assessment Of The Proposed Waste Water Treatment Plant To Umshwathi Ridge Housing Project, Near Wartburg, Umshwathi Local Municipality, Kwazulu Natal.

Anderson, G. 2017. Heritage Survey Of The Trustfeed Bulk Water Supply. For Afzelia Environmental

2930BC New Hanover 1968, 2000

Natal Museum Site Record Database

SAHRIS Database

Umlando Database

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