HERITAGE SURVEY OF PORTION 2 HONIG KRANTZ, CAMPERDOWN, KZN

FOR THE INDEPENDENT ENVIRONMENTAL ADVISOR CC

DATE: 30 AUGUST 2021

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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

It is proposed to redevelop Sunblest Farm from a predominantly sugar cane farm with a few poultry houses to mixed use and light industrial business park. Access to the property is likely to be taken off district road D113 due to restrictions of access onto the provincial main road R103.

The property has been released from the strictures of the Subdivision of Agricultural Land Act (Act 70/70) by Dept of Agriculture.

The greater part of Ptn 45 is contoured reflecting its history as a sugar cane farm

Umlando was requested to undertake an assessment of the proposed development. Figures 1 – 3 show the location of the development.

FIG. 1 GENERAL LOCATION OF THE PROPOSED DEVELOPMENT

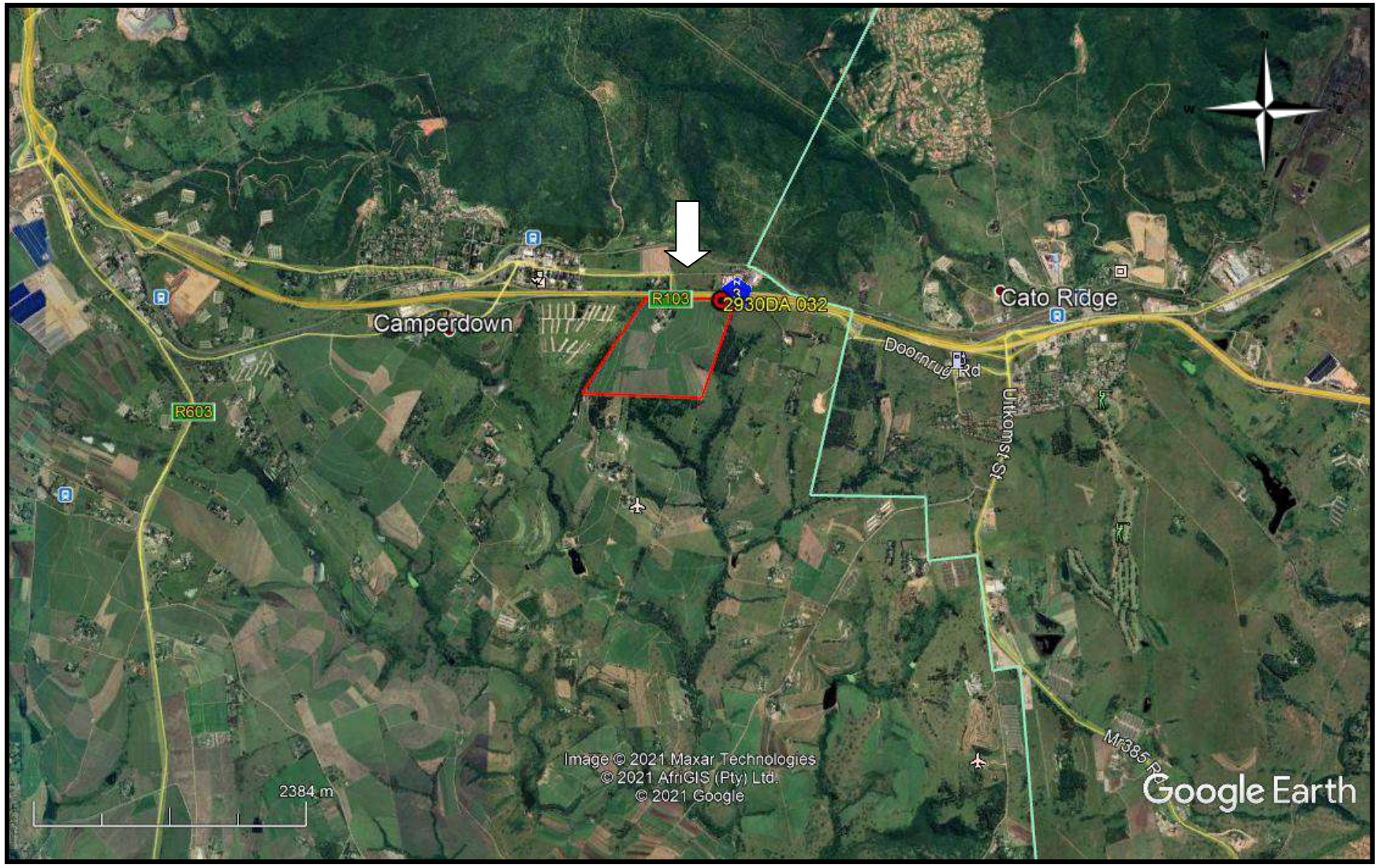


FIG. 2: AERIAL OVERVIEW OF THE PROPOSED DEVELOPMENT

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

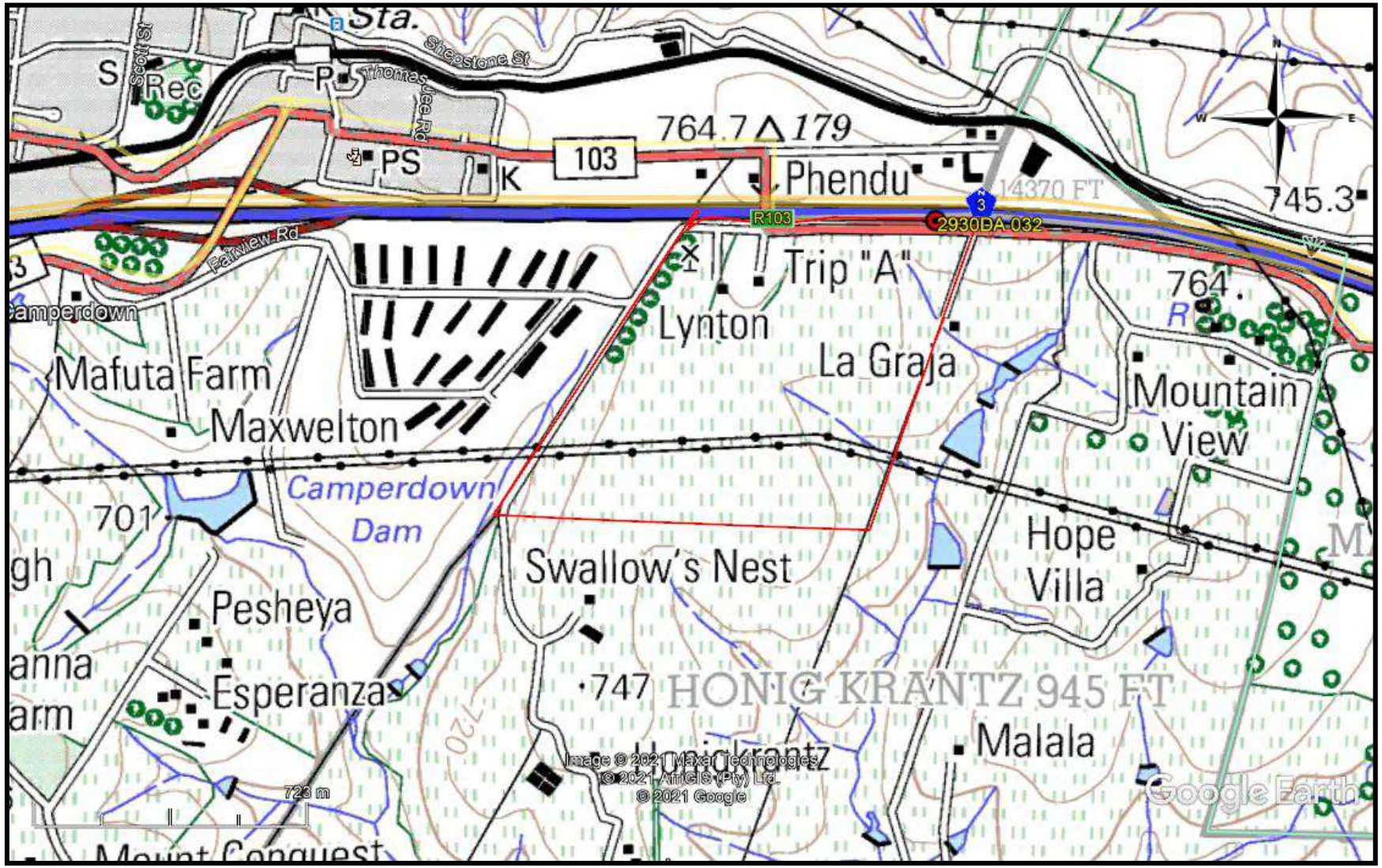


FIG. 4: SCENIC VIEW OF THE STUDY AREA

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. Few archaeological sites occur in the general area, while one occurs within the study area (fig. 5). Davies rerecorded the site 2930DA 032 in 1975 (KZN Museum site records). He states:

> "No description of stratification; but the soil is thin at this cutting, and the pieces must have been on or close above rock.
> Farnden records 5 pieces found, chopper, small cleaver, 2 flakes and a fabricator. Only two flakes reached Natal Museum. Both are quartzite pointed flakes, one with faceted butt, of Middle Stone Age type; one has a small flake removed from the base of the dorsal arris to facilitate hafting.
> Among the stones in the nodules probably several artefacts, but it is often difficult to be sure of them if they come from tillite. Two pieces kept, end-scraper on a thick quartzite side-struck flake, and probably a bifacial core of quartzite."

The site is thus a mix of Early Stone Age, Middle Stone Age, and Late Stone Age. The artefacts are in a lag deposit and probably occur across the whole of the Camperdown area. The tools are not a site per se, rather occurrences of stone tools in a secondary context.

The Farm Honig Krantz 945 was first surveyed in 1848 (fig. 6). It was probably sold thereafter and thus some buildings may relate to the original farmhouse. There are no listed buildings on KZNARI database.

The 1937 aerial photograph indicates that there are at least two buildings in the study area (fig. 7). The 1968 topographical map indicates that the number of buildings have increased (fig. 8).

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

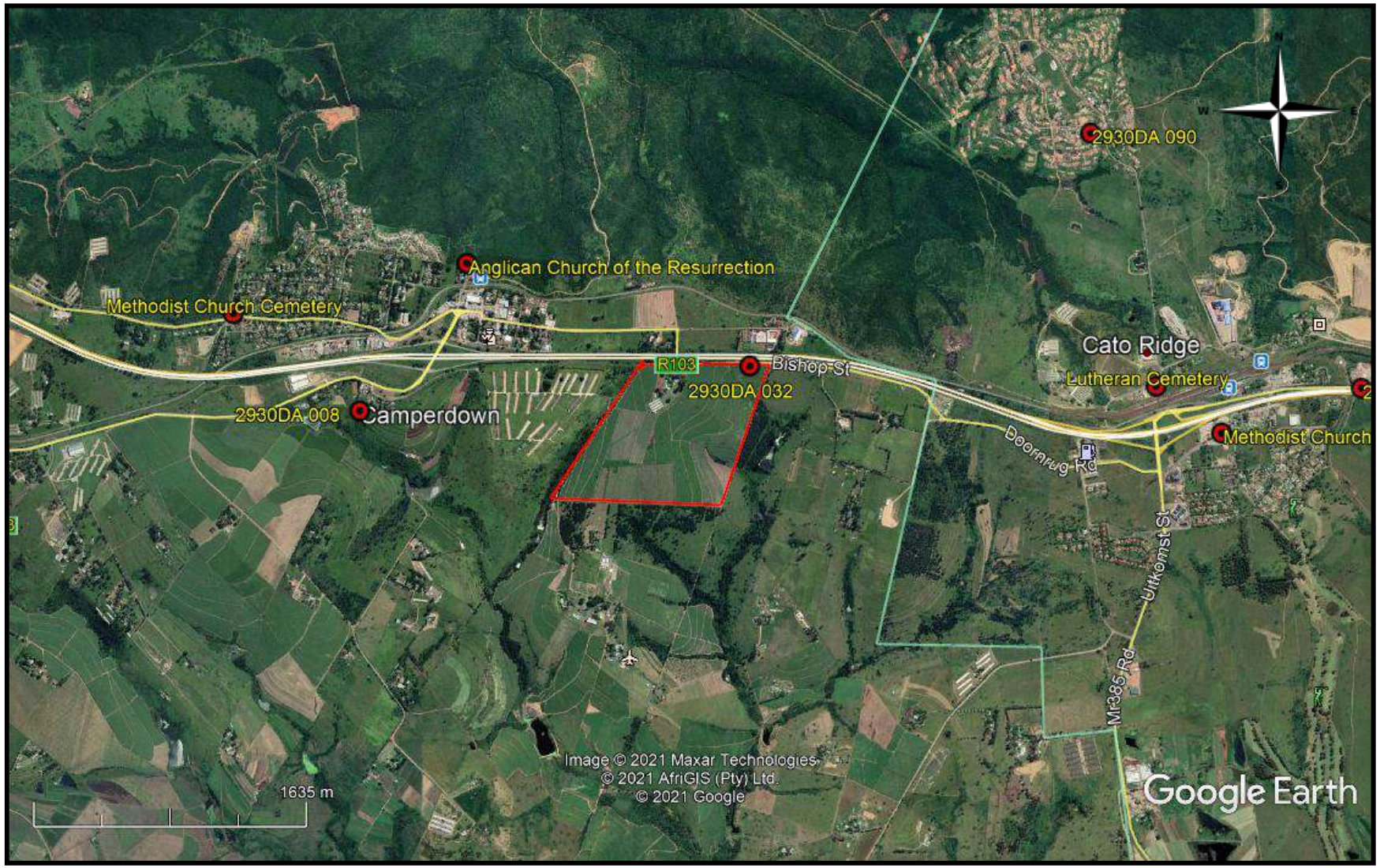


FIG. 6: LOCATION OF THE STUDY AREA IN 1848

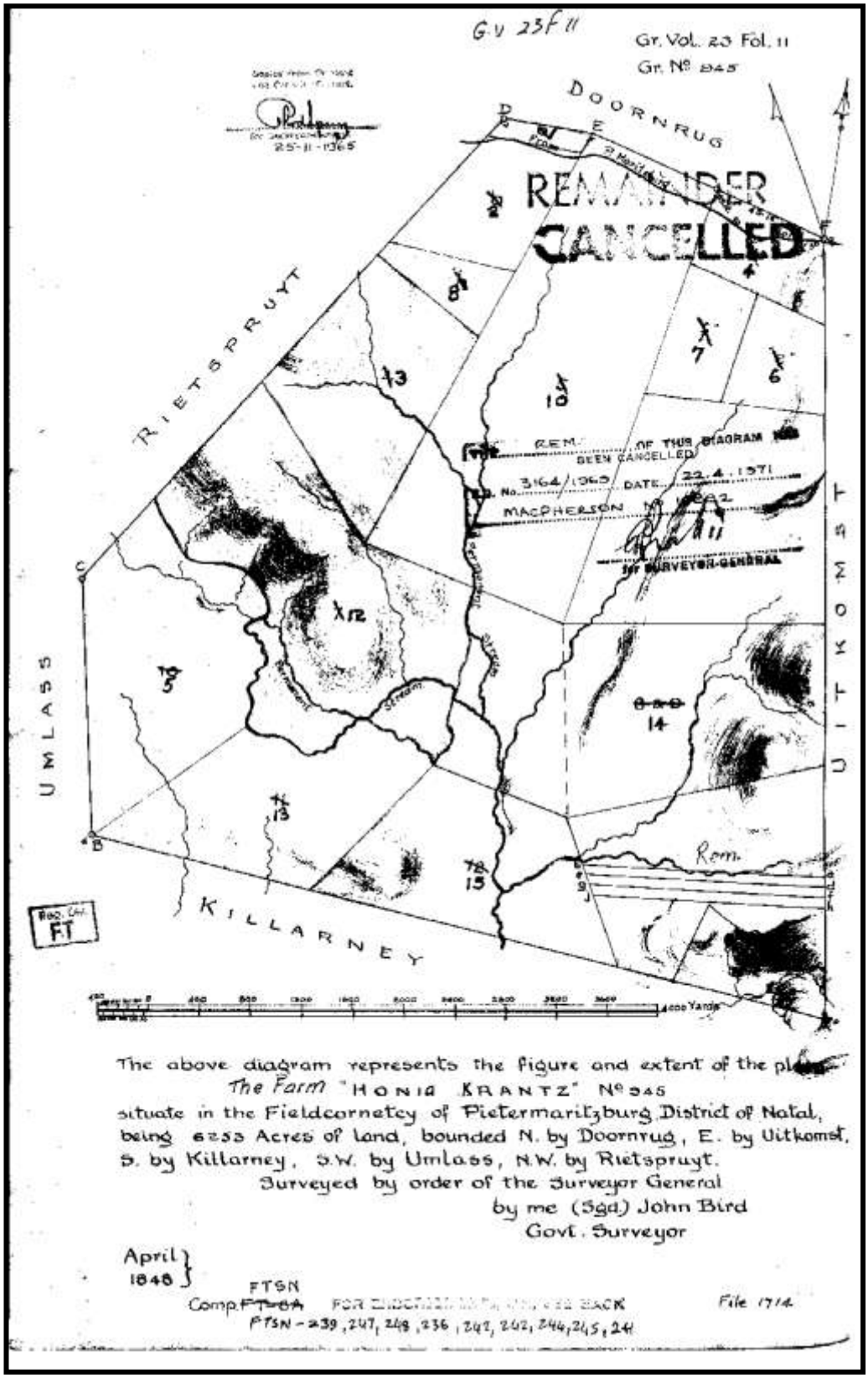
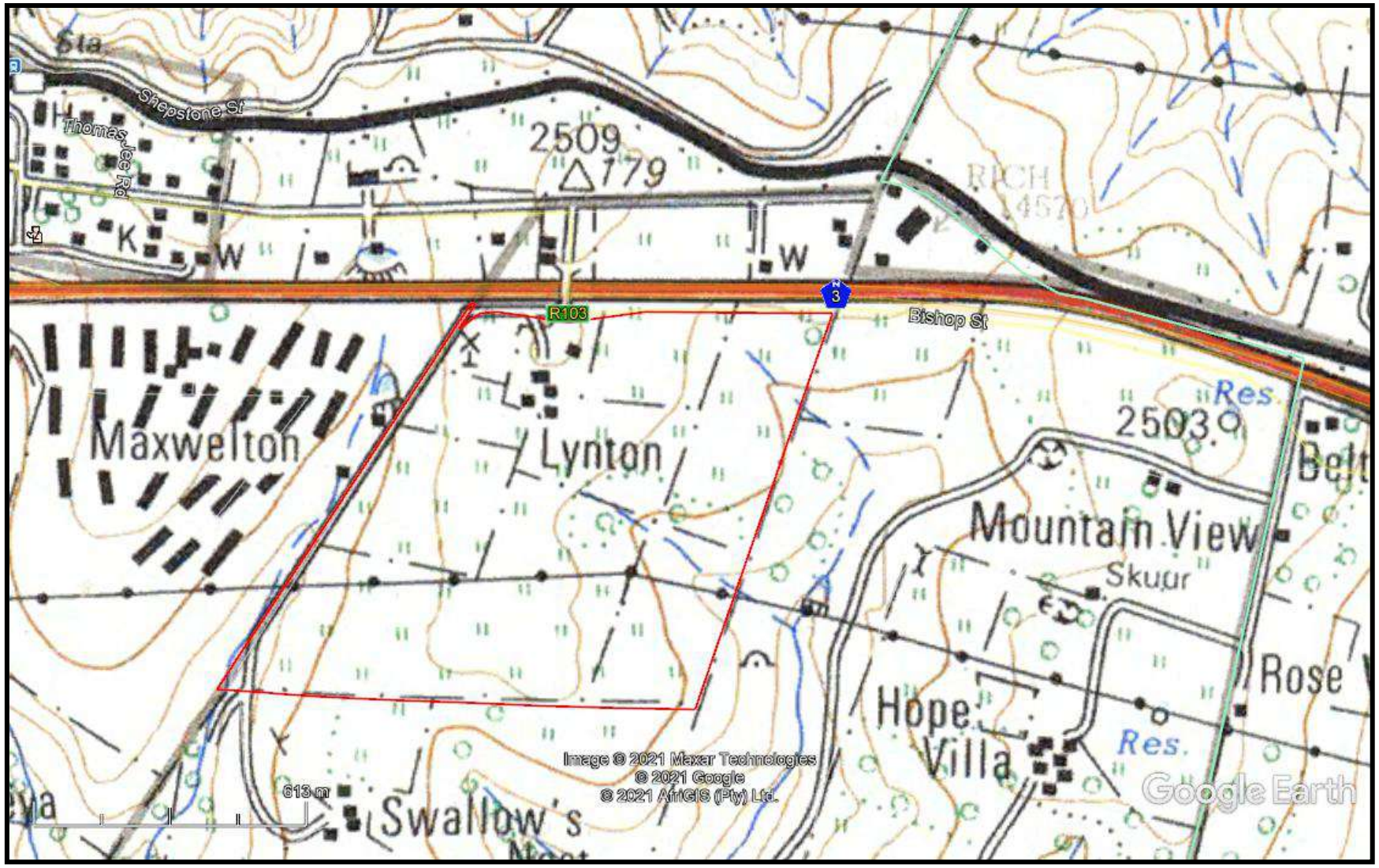


FIG. 7: LOCATION OF THE STUDY AREA IN 1937

FIG. 8: LOCATION OF THE STUDY AREA IN 1968



PALAEONTOLOGICAL SENSITIVITY

The area is in an area of medium to no palaeontological sensitivity (fig. 9). Dr Alan Smith undertook a desktop PIA for the study area (Appendix A). He states:

"The Dwyka Tillite Group is classified green in the SAHRIS Paleosensitivity Map (Figure 4). This rock was not deposited in a fossil-friendly setting. Life is common in modern ice-covered oceans, but for some reason body fossils are not common in this region of the planet during the world-wide Dwyka Glaciation. This may have been due to the continuous "rain" of silt depositing from the melting ice sheet restricting the growth of organisms. Trace fossils are found but these are not of great palaeontological interest. Although the chances are very low, they are not zero, and a "Chance find Protocol" has been inserted"

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 the 4 August 2021. Ground visibility varied from very good to very poor. The site 2930DA 032 was under dense sugar cane and could not be assessed (fig. 4, top left). However, since this is a lag deposit site, mixed with different ages, it is of low significance. These stone tools would occur across the entire property, if not the Camperdown area.

Significance: The site is of low significance

Mitigation: No further mitigation is required. A permit to damage/destroy an archaeological site will be required.

SAHRA Rating: 3C

The farmhouse buildings from the 1937 aerial photograph and 1968 may, or may not still exist. These buildings were assessed by Lindsay Napier (Appendix B). The Built Environment report indicates that while the house and cottage are older than 90 years in age, they are of low significance. They are 'Not Conservation Worthy' and may be demolished. A permit for their demolition will be required.

No other artefacts or heritage features were noted within the study area.

RECOMMENDATIONS

The proposed development will not affect archaeological resources. There is a possibility that palaeontological horizons may be affected. If they are, then a Chance Find Protocol has been suggested to deal with isolated finds.

The assessment of the buildings was undertaken and they are of low significance. A permit for their destruction will be required.

CONCLUSION

A heritage survey was undertaken for the proposed mixed-use development and light industrial business park. One archaeological site occurs on the property. The site is a scatter of Stone Age tools in a lag deposit and of low significance.

There is a small chance that palaeontological material may occur in the Dwykka layers, thus a Chance Find protocol was initiated.

The project should be exempt from further heritage mitigation.

REFERENCES

2930DA Cato Ridge 1968, 2000
17B_027_5450

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.

Gavin Anderson
Archaeologist/Heritage Impact Assessor

APPENDIX A

PIA DESKTOP

Camperdown Business Park Development
Desk-Top Palaeontological Impact Assessment

FOR

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by

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29 August 2021

Declaration of Independence

This report has been compiled by Dr Alan Smith (Pr. Sc. Nat.) of Alan Smith Consulting, Durban. The views expressed in this report are entirely those of the author, if not then the source has been duly acknowledged. No other interest was displayed during the decision making process for the Project.

Specialist: Dr Alan Smith

Signature: 

EXECUTIVE SUMMARY

According to the Palaeontological Sensitivity Map this area is coded grey and green. Grey (Karoo Dolerite) is not fossiliferous. Green (Dwyka Tillite Group) is not known to be fossiliferous.

The possibility of finding fossils on this proposed development site is very low, but not zero, consequently a “Chance Find Protocol” has been inserted into this report. This Protocol will only commence if palaeontological material is found.

1. BACKGROUND

It is proposed to build a Business Park Development at Camperdown, KwaZulu-Natal. South Africa's unique and non-renewable palaeontological heritage is protected by the National Heritage Resources Act (Act No 25 of 1999, section. As such palaeontological investigations are required prior to any construction.

2. PROPOSED PROJECT

The location of the proposed project is shown in Figure one.

Figure 1: Location map of proposed Business Park Development (red border). Image source Naidu Consulting (2014)Google Earth.

3. GEOLOGY

Perusal of 2930 Durban 1: 250 000 geological map indicated that there should be Dwyka Group and Karoo Dolerite rocks at this site (Figure 2).

Dwyka Group

The Dwyka Tillite Group is the lithified product of sediments laid down during the Late Palaeozoic (or Dwyka) Ice Glaciation (or Ice Age) (Visser, 1990). This glacial deposit accumulated during the Permian, a time when southern Africa (at the time part of the Gondwana Supercontinent) was located near the South Pole.

This glaciation was a global event which began at 327 Ma (million years ago) and ended about 260 Ma (Fielding et al., 2008).

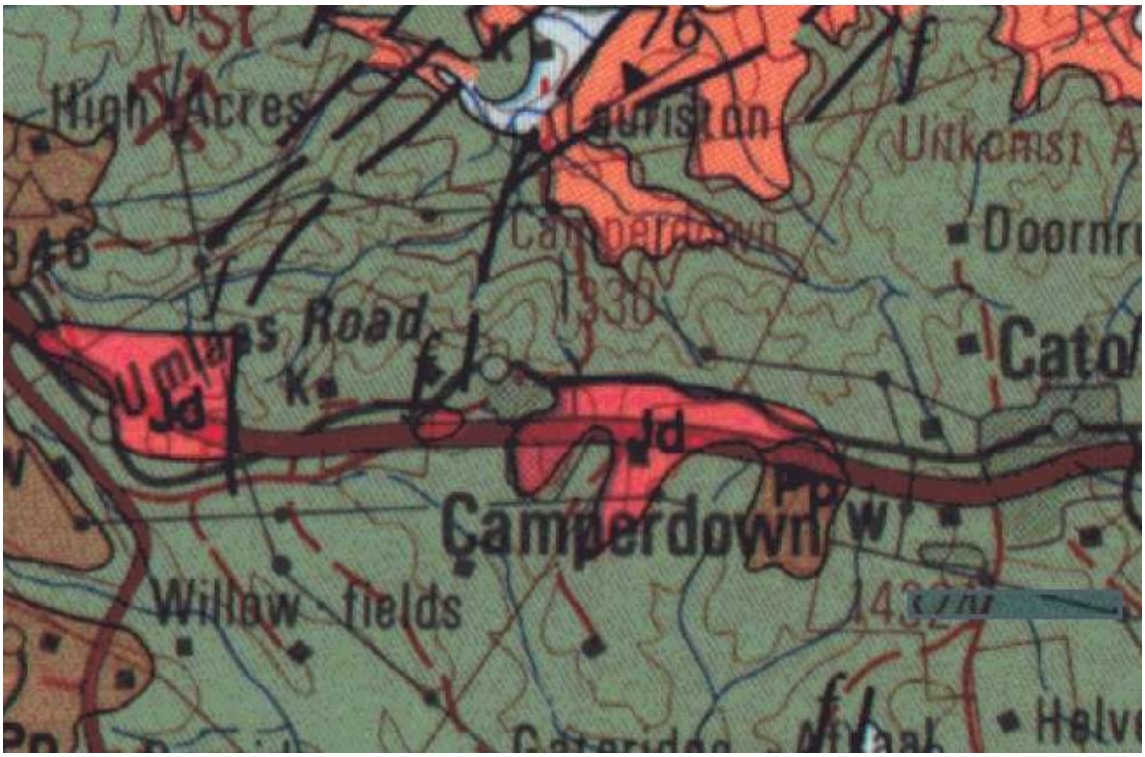

Figure 2: Extract from the Durban 2930 1: 250 000 scale Geological Map. Grey is Dwyka Group and red (Jd) is Karoo intrusive volcanic rocks.

The Dwyka Group comprises two Formations. The Elandsvlei Formation is the most common and is likely to be found at this site. This Formation is characterized by massive debrites, which ranges in composition from boulders to silt. This unsorted material was deposited in a deep marine setting due to sediment melting from an ice sheet which was retreating across the Karoo Sea. The process involved is summarized in Figure 3.

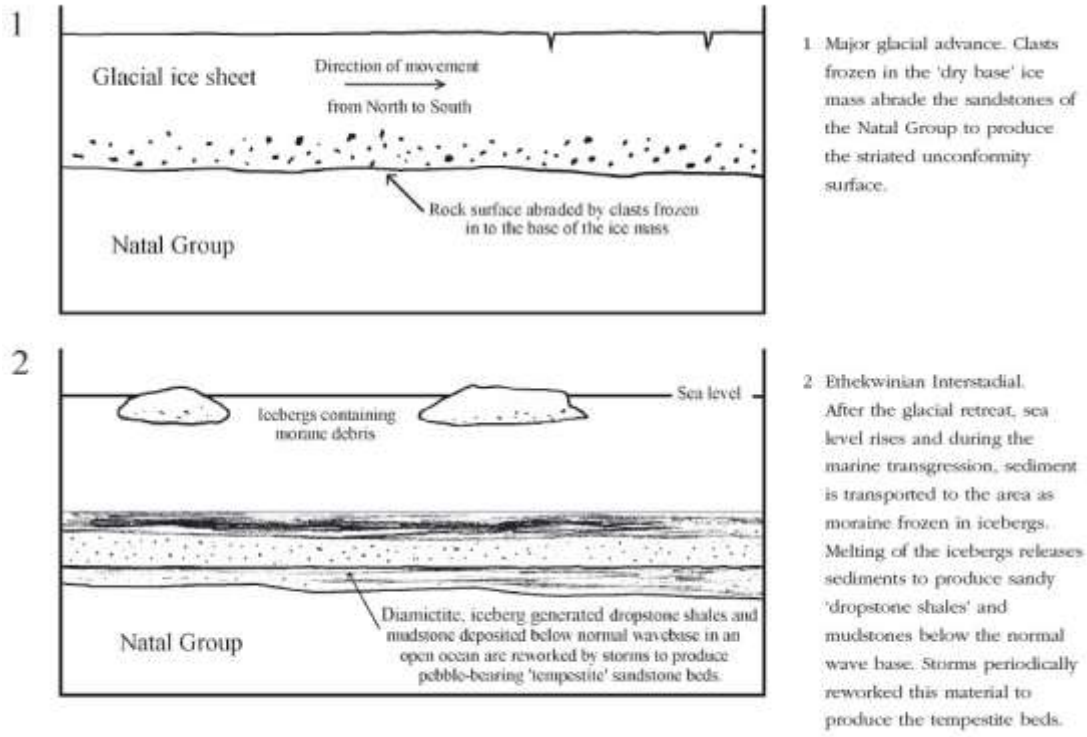

Figure 3: The process by which glacial deposits are formed (from Dunlevey & Smith, 2011).

The other is the Mbizane Formation which may also be located here. This formation overlies the Elandsvlei Formation. This unit comprises sediment that was deposited along the shoreline by retreating glaciers This rock may contain varves, wave ripples and glacio-tectonic folds produced by action of the ice sheet (Dunlevey and Smith, 2012).

Karoo Dolerite

The Karoo Dolerite is an intrusive igneous rock emplaced in 184 Ma (Hastie et al. 2014). This was part of the Karoo volcanism event which was the prelude to the break up of the supercontinent Gondwana into the southern hemisphere continents we know today. The Karoo Dolerite rocks present in this area were was emplaced as dykes and sills.

4. PALAEONTOLOGY

The Dwyka Tillite Group is classified green in the Sahris Paleosensitivity Map (Figure 4). This rock was not deposited in a fossil-friendly setting. Life is common in modern ice-covered oceans, but for some reason body fossils are not common in this region of the planet during the world-wide Dwyka Glaciation. This may have been due to the continuous “rain” of silt depositing from the melting ice sheet restricting the growth of organisms. Trace fossils are found but these are not of great palaeontological interest. Although the chances are very low, they are not zero, and a “Chance find Protocol” has been inserted (see Section 5).

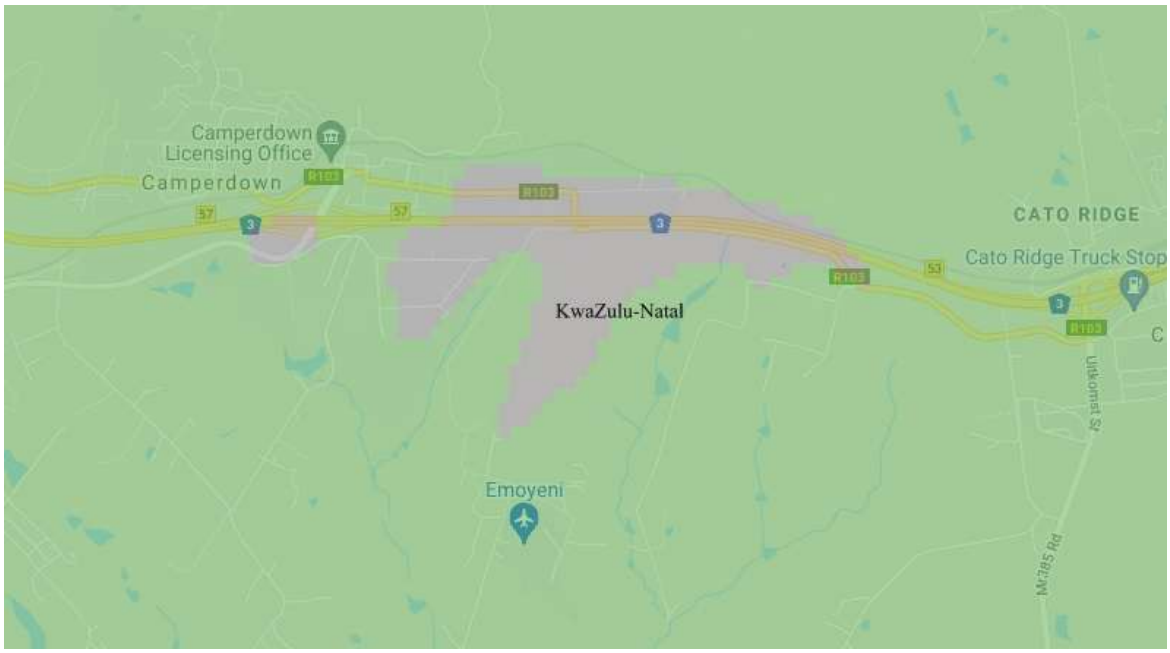

Figure 4: Extract form the Sahris paleosensitivity map. The Dwyka Group is green and Karoo Dolerite is grey.

Karoo Dolerite may be present on this site but as this is an igneous rock and is not fossiliferous.

5. CHANCE FIND PROTOCOL

I recommend a “Chance Find Protocol. This protocol is based on that of Groenevald (2017). This Protocol will ONLY kick-in if palaeontological material is found.

In the case of any unusual structures, the Palaeontologist must be notified immediately by the ECO and/or EAP, and a site visit must be arranged at the earliest possible time with the Palaeontologist.

In the case of the ECO or the Site Manager becoming aware of suspicious looking palaeo-material

- The construction must be halted in that specific area and the Palaeontologist must be given enough time to reach the site and remove the material before excavation continues.

- Mitigation will involve the attempt to capture all rare fossils and systematic collection of all fossils discovered. This will take place in conjunction with descriptive, diagrammatic and photographic recording of exposures, also involving sediment samples and samples of both representative and unusual sedimentary or biogenic features. The fossils and contextual samples will be processed (sorted, sub-sampled, labeled, boxed) and documentation consolidated, to create an archive collection from the excavated sites for future researchers.

Functional responsibilities of the Developer

1. At full cost to the project, and guided by the appointed Palaeontological Specialist, ensure that a representative archive of palaeontological samples and other records is assembled to characterize the palaeontological occurrences affected by the excavation operation.

2. Provide field aid, if necessary, in the supply of materials, labour and machinery to excavate, load and transport sampled material from the excavation areas to the sorting areas, removal of overburden if necessary, and the return of discarded material to the disposal areas.

3. Facilitate systematic recording of the stratigraphic and palaeo-environmental features in exposures in the fossil-bearing excavations, by described and measured geological sections, and by providing aid in the surveying of positions where significant fossils are found.

4. Provide safe storage for fossil material found routinely during excavation operations by construction personnel. In this context, isolated fossil finds in disturbed material qualify as “normal” fossil finds.

5. Provide covered, dry storage for samples and facilities for a work area for sorting, labeling and boxing/bagging samples.

6. Costs of basic curation and storage in the sample archive at the Museum in Durban (labels, boxes, shelving and, if necessary, specifically-tasked temporary employees) as specified by or agreed with AMAFA. Documentary record of palaeontological occurrences

7. The contractor will in collaboration with the Palaeontologist, make the excavation plan available to the appointed specialist, in which appropriate information regarding plans for excavations and work schedules must be indicated on the plan of the excavation sites. This must be done in conjunction with the appointed specialist:

8. Initially, all known specific palaeontological information will be indicated on the plan. This will be updated throughout the excavation period

9. Locations of samples and measured sections are to be pegged, and routinely accurately surveyed. Sample locations, measured sections, etc., must be recorded three-dimensionally if any “significant fossils” are recorded during the time of excavation. Functional responsibilities of the appointed palaeontologist

10. Establishment of a representative collection of fossils and a contextual archive of appropriately documented and sampled palaeoenvironmental and sedimentological geodata at the Museum in Durban.

11. Undertake an initial evaluation of potentially affected areas and of available exposures in excavations.

12. On the basis of the above, and evaluation during the early stages of excavation development, in collaboration with the contractor management team, more detailed practical strategies to deal with the fossils encountered routinely during excavation, as well as the strategies for major finds.

13. Informal on-site training in responses applicable to “normal” fossil finds must be provided for the ECO and environmental staff by the appointed specialist.

14. Transport of material from the site to the Museum in Durban.

15. Reporting on the significance of discoveries, as far as can be preliminarily ascertained. This report is in the public domain and copies of the report must be deposited at ESI, AMAFA, and the South African Heritage Resources Authority (SAHRA). It must fulfill the reporting standards and data requirements of these bodies.

16. Reasonable participation in publicity and public involvement associated with palaeontological discoveries. In the event of construction exposing new palaeontological material, not regarded as normative/routine as outlined in the initial investigation, such as a major fossil plant find, the following procedure must be adhered to:

17. The appointed specialist or alternates (AMAFA, SAHRA; University) must be notified by the responsible officer (e.g. the ECO or contractor manager), of major or unusual discoveries during excavation, found by the Contractor Staff.

18. Should a major in situ occurrence be exposed, excavation will immediately cease in that area so that the discovery is not disturbed or altered in any way until the appointed specialist or scientists from the ESI at WITS University, or its designated representatives at AMAFA, have had reasonable opportunity to investigate the find. Such work will be at the expense of the Developer.

6. CONCLUSIONS & RECOMMENDTIONS

The possibility of finding fossils is very low, however it is not zero, and consequently a "Chance Find" Protocol has been inserted into this report.

7. REFERENCES

Dunlevey, JN & Smith, AM (2011). Sedimentological evidence for an interglacial in the Permo-Carboniferous Dwyka Group, Coedmore Quarry, Durban, South Africa. South African Journal of Geology, 114, 159-166

Durban (2930)1: 250 000 Geological Map, Council for Geosciences, Pretoria.

Fielding, C.R., Frank, T.D., Birgenheier, L.P., Rygel, M.C., Jones, A.T. and Roberts, J., 2008. Stratigraphic record and facies associations of the late Paleozoic ice age in eastern Australia (New South Wales and Queensland). Geological Society of America, Special Paper, 441, 41–58.

Hastie, WW; Watkeys, MK; Aubourg, C (2014). Magma flow in dyke swarms of the Karoo LIP: Implications for the mantle plume hypothesis. Gondwana Research 25 (2014) 736–755.

SAHRA APM Guidelines: Minimum Standards for the Archaeological & Palaeontological Components of Impact Assessment Reports

Sahris Palaeosensitivity map

Visser 1990. The age of the late Palaeozoic glacigene deposits in southern Africa. South African Journal of Geology, 93, 366–375.

8. DETAILS OF SPECIALIST

Dr Alan Smith Pr. Sc. Nat., I.A.H.S.

Private Consultant: ***Alan Smith Consulting, 29 Brown's Grove, Sherwood, Durban, 4091***

&

Honorary Research Fellow: ***Discipline of Geology, School of Agriculture, Earth and Environmental Sciences, University of KwaZulu-Natal, Durban***.

Role: Specialist Palaeontological Report production

Expertise of the specialist:

- MSc in stromatolites (University of KwaZulu-Natal)
- PhD in Geology (University of KwaZulu-Natal).
- Expert in Vryheid Formation (Ecca Group) in northern KZN, this having been the subject of PhD.
- Scientific Research experience includes: Fluvial geomorphology, palaeoflood hydrology, Cretaceous deposits.
- Experience includes understanding Earth Surface Processes in both fluvial and coastal environments (modern & ancient).
- Alan has published in both national and international, peer-reviewed journals. He has published more than 50 journal articles with 420 citations (detailed CV available on request).
- Attended and presented scientific papers and posters at numerous international and local conferences (UK, Canada, South Africa) and is actively involved in research.

Selected recent palaeo-related work includes:

- Desktop PIA: Proposed middle income housing units on Portion 23 of Farm Lot H Weston 13026, Bruntville, Mpofana Local Municipality. Client: UMLANDO.
- Desktop PIA: Proposed ByPass Pipeline for Ulundi bulk water pipeline upgrade. Client: UMLANDO.
- Fieldwork PIA: Bhekuzulu Epangweni KZN water reticulation project, Cathkin Park. Client: Mike Webster, HSG Attorneys.
- Desktop PIA: Zuka valley, Ballito. Client: Mike Webster, HSG Attorneys.
- Mevamhlope proposed quarry palaeontology report. Client: Enviropro.
- Desktop PIA: Proposed Lovu Desalination site. Client: eThembeni Cultural Heritage.
- Desktop PIA: Tinley Manor phase 2 North & South banks: eThembeni Cultural Heritage

- Desktop PIA: Tongaat. Client: eThembeni Cultural Heritage.
- Palaeontological Assessment Reports (3) to Scatec Solar SA (Pty) Ltd on an Appraisal of Inferred Palaeontological Sensitivity for a Potential Photo Voltaic Park at (1) Farm Rooilyf near Groblershoop, N Cape; (2) Farm Riet Fountain No. Portions 1 and 6, 18km SE of De Aar, N Cape; and (3) Dreunberg, near Burgersdorp, Eastern Cape. Client: Sustainable Development Projects.

APPENDIX B

BUILT ENVIRONMENT REPORT

HERITAGE IMPACT ASSESSMENT

Assessment of Structures and proposed development

at

Portion 2 Honig Krantz "Sunblest Farm"

Camperdown, KwaZulu Natal

Date 13 September 2021

PREPARED FOR: Independent Environmental Advisor CC

PREPARED BY:

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Architectural Heritage Consultant
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CONTENTS page

1. BACKGROUND INFORMATION

Lindsay Napier Architect was appointed by the Independent Environmental Advisor CC, on behalf of the property owners and developers, to prepare a Heritage Impact Assessment of Portion 2 of Honig Krantz Farm as a guide for the planning of a new commercial development.

Report details

Client Name :	The Independent Environmental Advisor CC
Document Title:	Heritage Impact Assessment of proposed development on Portion 2 of Honig Krantz Farm
Reference :	Heritage Survey of Portion 2 of Honig Krantz Farm Camperdown KZN by Umlando 30 Aug 2021
File Name :	HonigKrantzHIA-2BE-2021-09-13
Address:	Sunblest Farm Camperdown
Cadastral descriptions:	Portion 2 of Honig Krantz Farm
Consolidation :	Nil
Zoning :	Current : Agricultural, Proposed : light industrial
Municipality:	Umgungundlovu District Municipality

Deeds Office ownership report :

Previous	New Title	
T17342/1967	T18341/1990	C.J.S.Farming Investments CC
T18341/1990	T13685/2003	Larkan, Garth Aden (Sunblest Trust)
K250/1995S	K1983/20005	
B7576/2003	BC33691/2014	

2. TERMS OF REFERENCE

The report refers to KZN Amafa and Research Institute Act no.5 of 2018, which aims to protect heritage resources in Kwa Zulu Natal.
Clause 37 : 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 prior written approval of the Council having been obtained on written application to the Council."*

An **Heritage Impact Assessment Report** of the development site generally covers the following:

1. *The identification and mapping of all heritage resources in the development site and in the surrounding area*
2. *An assessment of the significance of the resources,*
3. *An assessment of the impact of the development on the resources,*
4. *An evaluation of the impact of the development on heritage resources relative to the sustainable social and economic benefits to be derived from the development,*
5. *Public consultation*
6. *Possible alternatives if the development adversely affects the heritage resources.*

The report is an independent view and makes recommendations to the Heritage authority based on its findings. The authority will consider the recommendations and make a decision based on conservation principles.

3. METHODS

Lindsay Napier is an architect experienced in assessment of protected buildings in KZN. She has previous experience in recording historic buildings, surveying townscapes and designing for protected buildings.
The properties were inspected by Lindsay Napier on 7 September 2021.

Satellite images from Google Maps and Ethekwini GIS were used to establish the development of the area. SG diagrams and building plan records were used to analyse the history of the property boundaries and age of structures.
Research was conducted at the KZN Deeds office and at the Natal Archives.

Publications, interviews and websites referenced:

1. "Pioneers'Progress Early Natal" Bob O'Keefe 1988
2. Natal Repository archives
3. KZN Deeds office
4. Braby's Natal Directory 1942
5. Braby's Natal Directory 1908
6. https://en.wikipedia.org/wiki/Camperdown,_KwaZulu-Natal
7. https://kznpr.co.za/natal-old-farms/

4. HISTORICAL, CULTURAL AND SOCIAL SIGNIFICANCE

The farm is situated on the South side of the R103 route between Cato Ridge and Camperdown and is accessed from the bridge over the N3 via a gravel road.
The farmhouse faces North-West so the N3 freeway can be seen from the front garden of the farm house.
The farm slopes gently away behind the farmstead to the South.

The farm is portion 2 of the Farm Honig Krantz, surveyed in April 1848 by Sgt.John Bird, the Government Surveyor. Honig Krantz farm was bounded by the farms Killarney, Umlass, Rietspruit, Doornrug and Uitkomst. The old "Maritzburg Road" traversed the farm on the Northern boundary (the current R103). Portion 1, to the North of the old road and Portion 2 to the South of the road were sub-divided off in 1880 by surveyor William W.Cato.

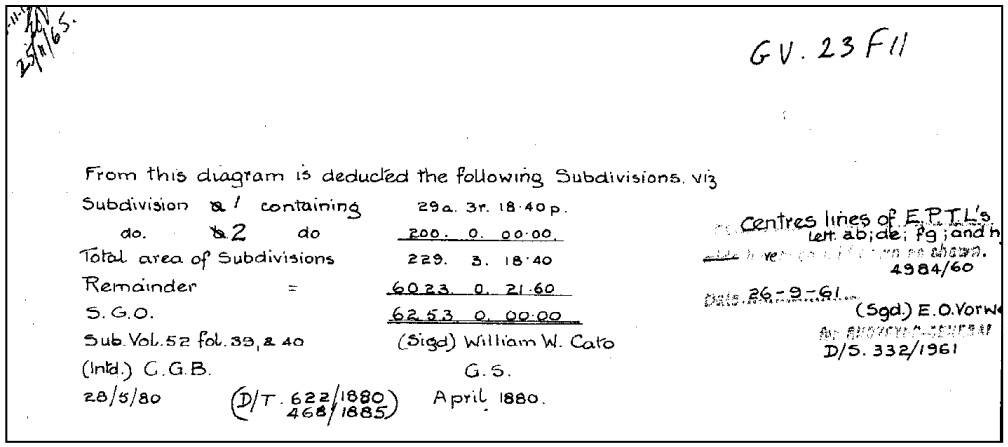
The land in Cato Ridge and Camperdown was originally owned by the Dutch Voortrekkers, "Uitkomst" was owned by Potgieter, who bequeathed the land (approx.. 1840) to George Cato "in consideration for his sufferings and indignities to which he had been subjected by the Boers". The farm became "Cato's Ridge" later known as "Cato Ridge". Further North-West was the farm "Camperdown" which was bequeathed by the Republic of Natalia to a British settler, John Vanderplank in 1838 after he helped the Boers fight the Zulus under Chief Parate at Camperdown. He went into farming Wattle for use in the tanning industry and later for pulp and paper.

The establishment of the farm Honig Krantz is assumed to have been a German settler, since the name is German for "Honey ridge". A group of German settlers sailed from Germany in 1843 under Jonas Bergtheil.

Other Heritage resources in the area :
The area has not been recently surveyed for Heritage structures.
Notable protected structures in the area that display settler heritage are :

1. Residential buildings on Bishops Street, Camperdown
2. The German Church, Alice St, Cato Ridge
3. Paddington Primary School, Cato Ridge
4. Church of the Ressurection Chapel
5. Remains of railway shunting yards

The Surveyor General's diagram and subdivision note :


GV. 23 F11

From this diagram is deducted the following Subdivisions. viz
Subdivision "1" containing 29a. 3r. 18·40p.
do. "2" do 200. 0. 00·00.
Total area of Subdivisions 229. 3. 18·40
Remainder = 6023. 0. 21·60
S.G.O. 6253. 0. 00·00
Sub. Vol. 52 fol. 39, & 40
(Intd.) C.G.B.
28/5/80

(D/T. 622/1880 468/1885)

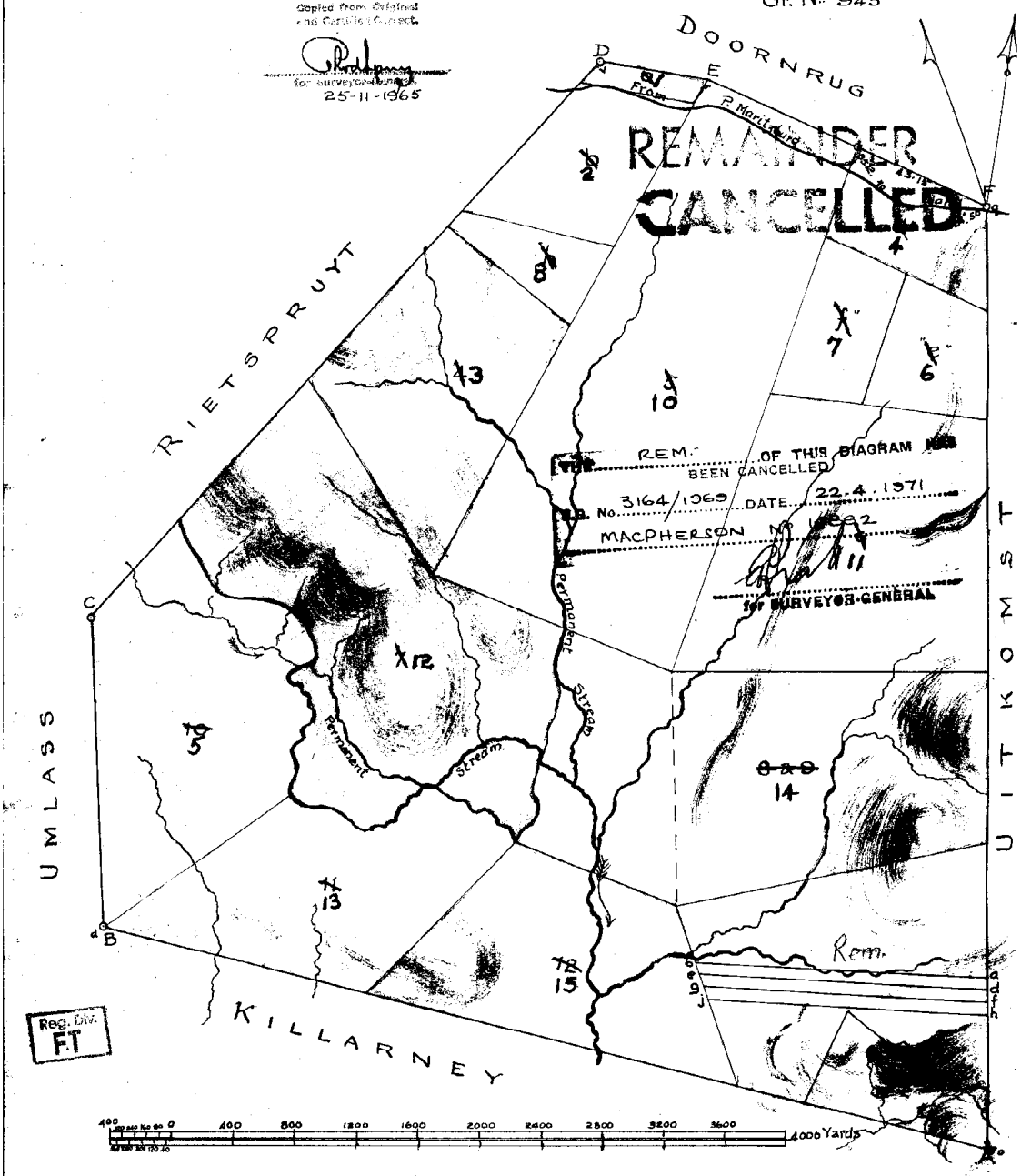
(Sigd) William W. Cato
G.S.
April 1880.

Centres lines of E.P.T.L's left ab; de; fg; and h shown.
4984/60
Date 26-9-61
(Sgd) E.O.Vorw
D/S. 332/1961

G.V 23 F 11

Gr. Vol. 23 Fol. 11
Gr. Nº 945

Copied from Original and Certified Correct.
for surveyor-general
25-11-1965



The above diagram represents the figure and extent of the pl
The Farm "HONIG KRANTZ" Nº 945
situate in the Fieldcornetcy of Pietermaritzburg District of Natal,
being 6253 Acres of land, bounded N. by Doornrug, E. by Uitkomst,
S. by Killarney, S.W. by Umlass, N.W. by Rietspruyt.
Surveyed by order of the Surveyor General
by me (Sgd.) John Bird
Govt. Surveyor

April
1848

FTSN
Comp. ~~FT-8A~~ FOR ENDORSEMENTS SEE BACK
FTSN - 239, 247, 248, 236, 242, 242, 244, 245, 241

File 1714

5. CONTEXT :

Ref: Google Earth 2021

View East from the North boundary (R103 and N3 freeway)

View of the farmstead from the North boundary

6. STRUCTURES AND ARCHITECTURAL SIGNIFICANCE

2021 Aerial (Google maps) the protected structures shown in red.

Main house NE elevation

The house and cottage that show on the 1937 aerial photograph are currently used as residences. They are of clay brick construction, plastered and painted with a facebrick plinth. Windows are painted timber frame and roof is tiled. The architectural style of the main house is "English Tudor" which was popular in Natal in the 1930's with "Tudor" gable details, facebrick chimneys and heavy dark wood doors as main features. The cottage has no architectural detail and may have been converted from a farm building. There are no record plans of the house so the design cannot be ascribed to a specific architect.

It is estimated they were built between 1925 and 1930.

The house and cottage are therefore protected by their age of 90+ years, but with a low significance they are recommended to be Graded as "Not Conservation Worthy".

There are a number of other buildings on the property that are not over 60 years old, therefore not protected : sheds, workers' housing, residences and farm buildings.

East elevation of the house

Cottage East and South elevations

7. ASSESSMENT AND RECOMMENDATIONS

The following table is a summary of the significance statements in the report, measured on Local, regional, national and international importance (refer to Appendix A for explanations) :

Farmhouse and cottage at Sunblest Farm				
Significance	**Importance**			
	Local	Regional	National	International
Architectural	Low	Low	low	low
Historical	Low	low	low	low
Technical	Low	low	low	low
Scientific	Low	low	Low	low
Contextual	Low	low	low	low
Social	low	low	low	low

SUMMARY :

The context of the farmstead is no longer friendly to a place of residence, due to its proximity to the freeway.
The house and cottage are protected by their age of 90+ years, the architectural style of the house is common in Durban and the midlands and is not significant to a specific period or event of importance.
With a low significance in all categories, a Heritage Grading of "Not Conservation Worthy" is recommended and demolition is recommended in favour of the development.

Reference :
Heritage Grading of Structures NHRA :

Grade I (National Heritage Resources)

Grade II (KZN Provincial Landmarks) listed in Schedule 2 of the KZN Amafa and Research Institute Act 2018

Grade IIIA KZN Heritage Landmarks
IIIB Generally protected by age (over 60 years of age)
IIIC Generally protected by age (over 60 years of age) (Chapter 8. clause 37) with contextual significance

NCW : Not Conservation Worthy

APPENDIX A: CONVENTIONS USED TO ASSESS THE IMPACT OF PROJECTS ON HERITAGE RESOURCES

Significance

According to the NHRA, Section 2(vi) the significance of heritage sites and artefacts is determined by it aesthetic, architectural, historical, scientific, social, spiritual, linguistic or technical value in relation to the uniqueness, condition of preservation and research potential. It must be kept in mind that the various aspects are not mutually exclusive, and that the evaluation of any site is done with reference to any number of these.

Matrix used for assessing the significance of each identified site/feature

1. **Historic value**
   - Is it important in the community, or pattern of history
   - Does it have strong or special association with the life or work of a person, group or organisation of importance in history
   - Does it have significance relating to the history of slavery
2. **Aesthetic value**
   - It is important in exhibiting particular aesthetic characteristics valued by a community or cultural group
3. **Scientific value**
   - Does it have potential to yield information that will contribute to an understanding of natural or cultural heritage
   - Is it important in demonstrating a high degree of creative or technical achievement at a particular period
4. **Social value**
   - Does it have strong or special association with a particular community or cultural group for social, cultural or spiritual reasons
5. **Rarity**
   - Does it possess uncommon, rare or endangered aspects of natural or cultural heritage
6. **Representivity**
   - Is it important in demonstrating the principal characteristics of a particular class of natural or cultural places or objects.
   - Importance in demonstrating the principal characteristics of a range of landscapes or environments, the attributes of which identify it as being characteristic of its class.
   - Importance in demonstrating the principal characteristics of human activities (including way of life, philosophy, custom, process, land-use, function, design or technique) in the environment of the nation, province, region or locality.
7. **Sphere of Significance**

	International	National	Provincial	Regional	Local	Specific community
High						
Medium						
Low						

8. **Significance rating of feature**
   1. Low
   2. Medium
   3. High

Significance of impact:

- **low:** where the impact will not have an influence on or require to be significantly accommodated in the project design
- **medium:** where the impact could have an influence which will require modification of the project design or alternative mitigation
- **high:** where it would have a "no-go" implication on the project regardless of any mitigation

Certainty of prediction:

- Definite: More than 90% sure of a particular fact. Substantial supportive data to verify assessment
- Probable: More than 70% sure of a particular fact, or of the likelihood of that impact occurring
- Possible: Only more than 40% sure of a particular fact, or of the likelihood of an impact occurring
- Unsure: Less than 40% sure of a particular fact, or the likelihood of an impact occurring

Recommended management action:

For each impact, the recommended practically attainable mitigation actions which would result in a measurable reduction of the impact, must be identified. This is expressed according to the following:

1 = no further investigation/action necessary
2 = controlled sampling and/or mapping of the site necessary
3 = preserve site if possible, otherwise extensive salvage excavation and/or mapping necessary
4 = preserve site at all costs
5 = retain graves

Legal requirements:

Identify and list the specific legislation and permit requirements which potentially could be infringed upon by the proposed project, if mitigation is necessary.