

**HERITAGE SURVEY OF THE PROPOSED NGODINI
BORDER CAVE DEVELOPMENT**

**FOR NZINGWE CONSULTANCY
(ENVIRONMENTAL & SAFETY PLANNERS)**

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TABLE OF CONTENT

INTRODUCTION	4
KWAZULU-NATAL HERITAGE ACT NO. 4 OF 2008	9
METHOD	11
Defining significance.....	12
RESULTS	15
DESKTOP STUDY	15
FIELD SURVEY.....	19
Proposed Lodge/Accommodation	20
Paths to Border Cave	21
INTERPRETIVE CENTRE	22
PALAEONTOLOGICAL IMPACT ASSESSMENT	23
MANAGEMENT PLAN	24
CONCLUSION.....	25
REFERENCES	25
EXPERIENCE OF THE HERITAGE CONSULTANT	26
DECLARATION OF INDEPENDENCE	26

TABLE OF FIGURES

FIG. 1 GENERAL LOCATION OF THE STUDY AREA.....	5
FIG. 2: AERIAL OVERVIEW OF THE STUDY AREA	6
FIG. 3: TOPOGRAPHICAL OVERVIEW OF THE STUDY AREA.....	7
FIG. 4: SCENIC VIEWS OF THE AREA	8
TABLE 1: SAHRA GRADINGS FOR HERITAGE SITES	14
FIG. 5: LOCATION OF KNOWN HERITAGE SITES NEAR THE STUDY AREA	16
FIG. 6: STUDY AREA IN 1937	17
FIG. 7: STUDY AREA IN 1968	18
FIG. 8: MSA FLAKE LOCATED NEAR THE PROPOSED LODGE	19
FIG. 9: PROPOSED LODGE/HOUSES	20
FIG. 10: EXISTING PATH TO BORDER CAVE	21
FIG. 11: BEGINNING OF PROPOSED 2 ND PATH.....	22
FIG. 12: PALAEAONTOLOGICAL SENSITIVITY	23

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

Ezemvelo KZN Wildlife has recognized the need to develop Ngodini Border Cave as a tourist destination. The development is proposed on non-disturbed land and requires environmental authorization under the National Environmental Management Act 107 of 1998. The development consists of:

- The upgrade of the interpretation centre
- The construction of a pathway leading to the Border Cave
- The construction of 8 huts with running water
- Two (2) ablutions and sanitation facilities
- Drilling of a borehole for the provision of water

Border Cave has recently been added to the tentative list of World Heritage Sites. It is internationally recognised as highly significant archaeological site in South Africa. The cave has a stratigraphic record that spans more than 190 000 years. Border Cave had the earliest evidence of possible religious behaviour by *Homo sapiens sapiens* in the form of an infant burial. Several anatomically modern human bone fragments associated with the MSA were excavated at the site. Two other sites, Blombos Cave and Sibudu Shelter, have recently pushed these dates further back in time

A small piece of baboon fibula incised with 29 notches dating to c. 35 000 BP was excavated here. This has been proposed to be the oldest 'counter' in the world.

Umlando was appointed by Nzingwe Consultancy Environmental & Safety Planners to undertake the heritage survey of the proposed Ngodini Border Cave Development.

FIG. 1 GENERAL LOCATION OF THE STUDY AREA

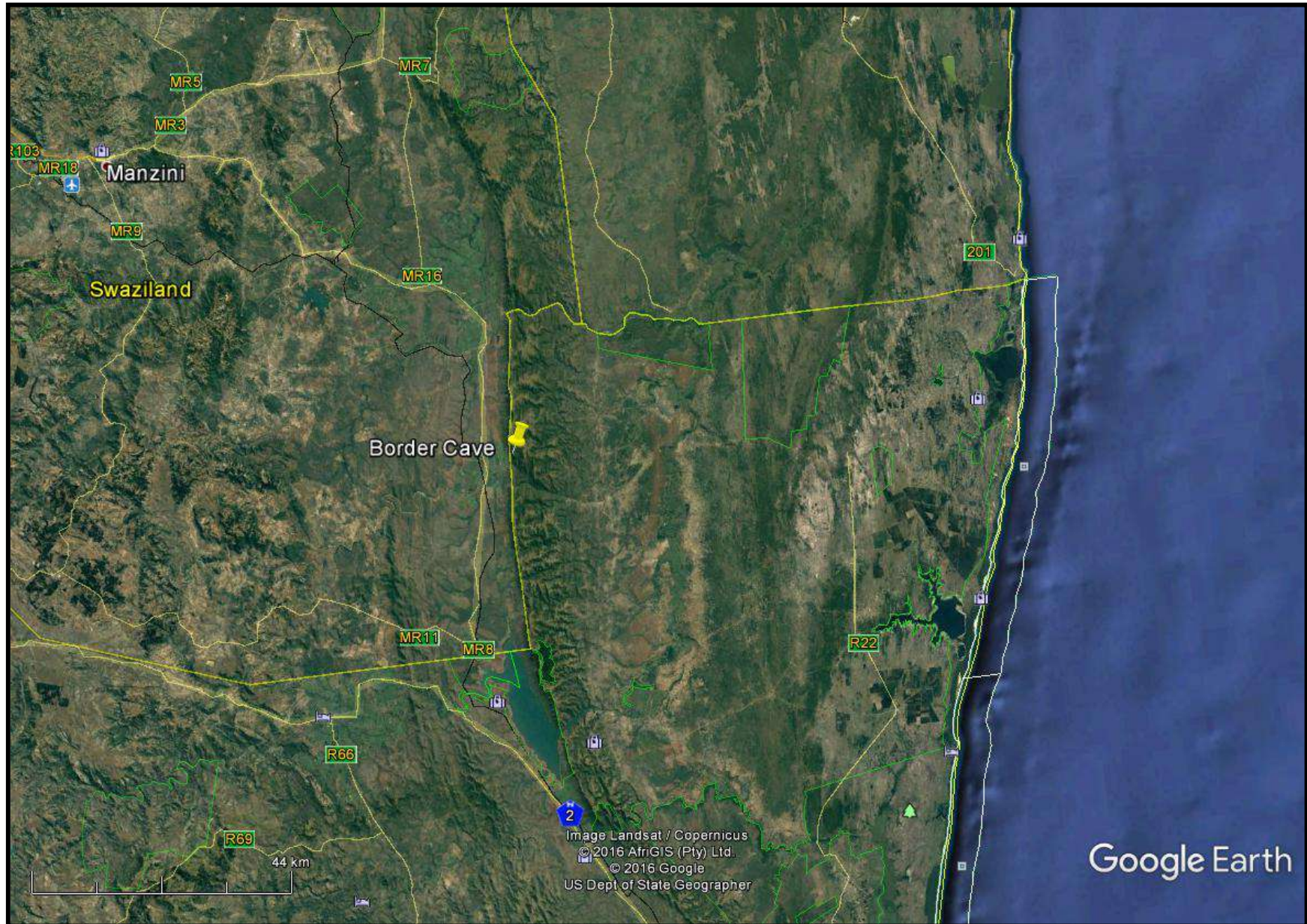


FIG. 2: AERIAL OVERVIEW OF THE STUDY AREA

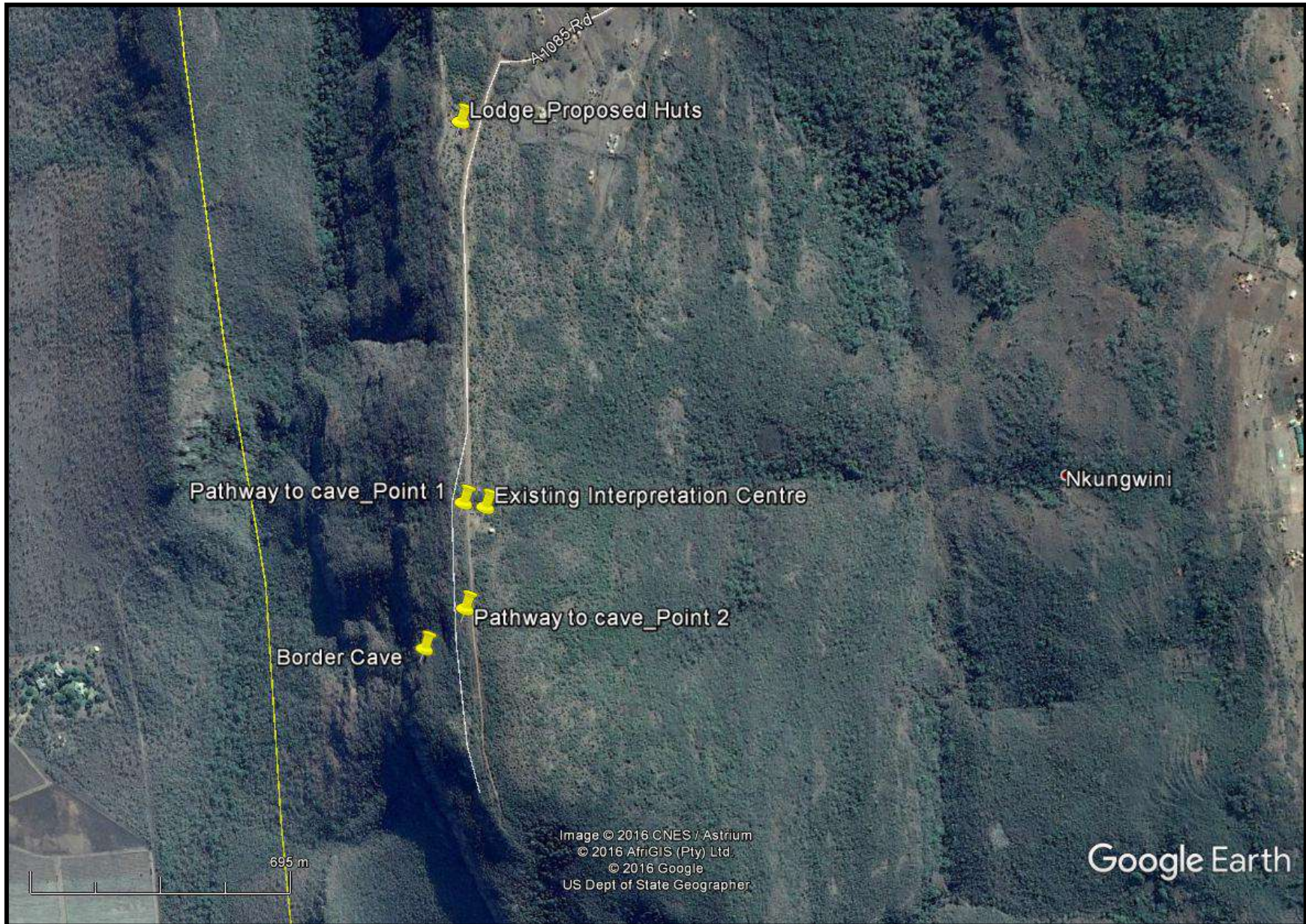


FIG. 3: TOPOGRAPHICAL OVERVIEW OF THE STUDY AREA

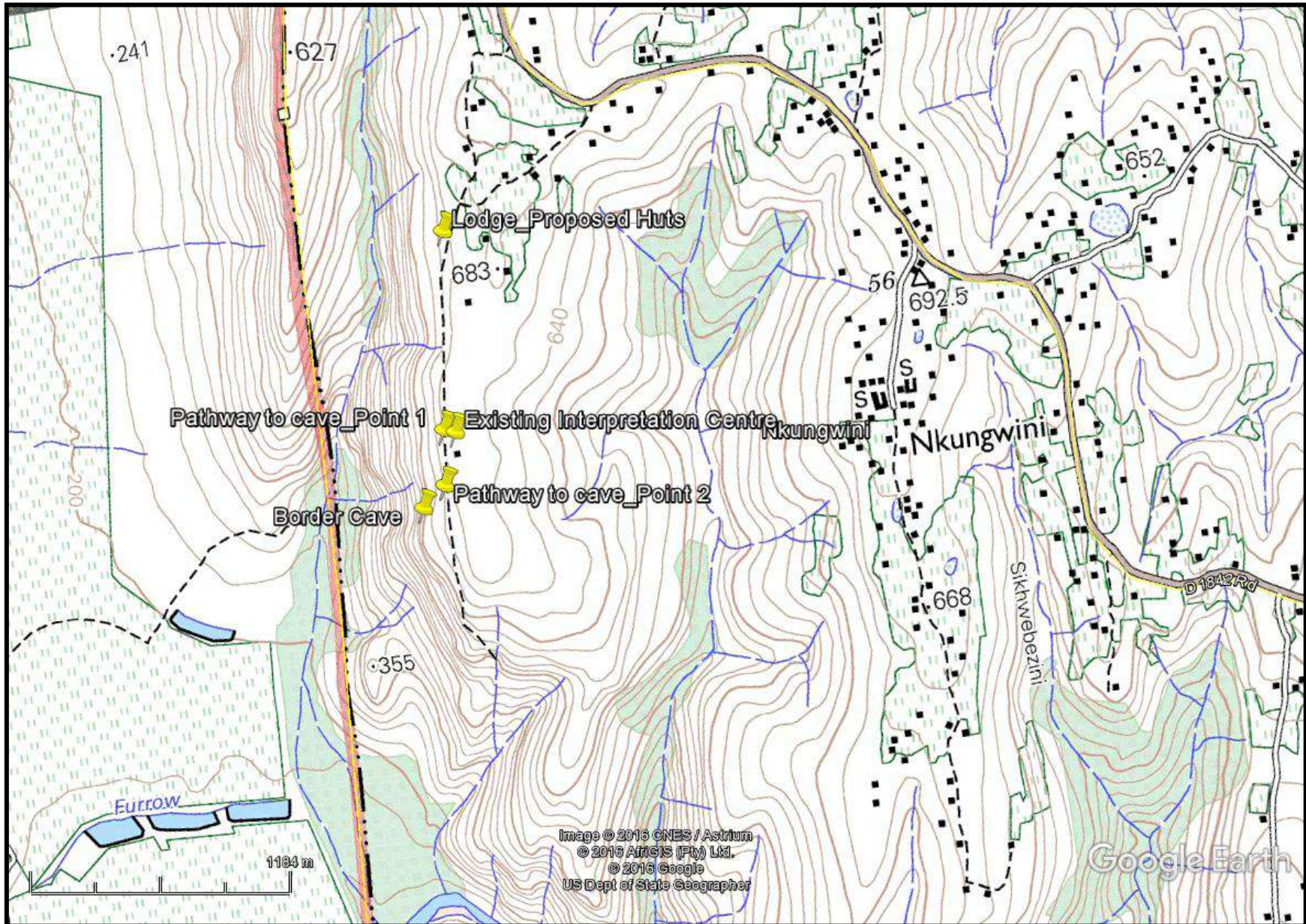


FIG. 4: SCENIC VIEWS OF THE AREA



KWAZULU-NATAL HERITAGE ACT NO. 4 OF 2008

“General protection: Structures.—

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

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

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

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

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

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

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

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

METHOD

The method for Heritage assessment consists of several steps.

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

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

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

Defining significance

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

These criteria are:

1. State of preservation of:

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

2. Spatial arrangements:

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

3. Features of the site:

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

4. Research:

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

5. Inter- and intra-site variability

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

6. Archaeological Experience:

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

7. Educational:

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

8. Other Heritage Significance:

- 8.1. Palaeontological sites
- 8.2. Historical buildings

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

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

The above significance ratings allow one to grade the site according to SAHRA's grading scale. This is summarised in Table 1.

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. The archaeological database indicates that, apart from Border Cave, there are archaeological sites in the general area (fig. 4). These sites include all types of Stone Age and Iron Age sites. Only Border Cave occurs in the study area.

No national monuments (apart from Border Cave), battlefields, or historical cemeteries are known to occur in the study area.

The 1937 aerial photographs indicate that there were a few settlements to the east of the existing road near the proposed lodges (fig. 6).

The 1967 topographical map indicates that there are no settlements in the affected areas (fig. 7).

FIG. 5: LOCATION OF KNOWN HERITAGE SITES NEAR THE STUDY AREA

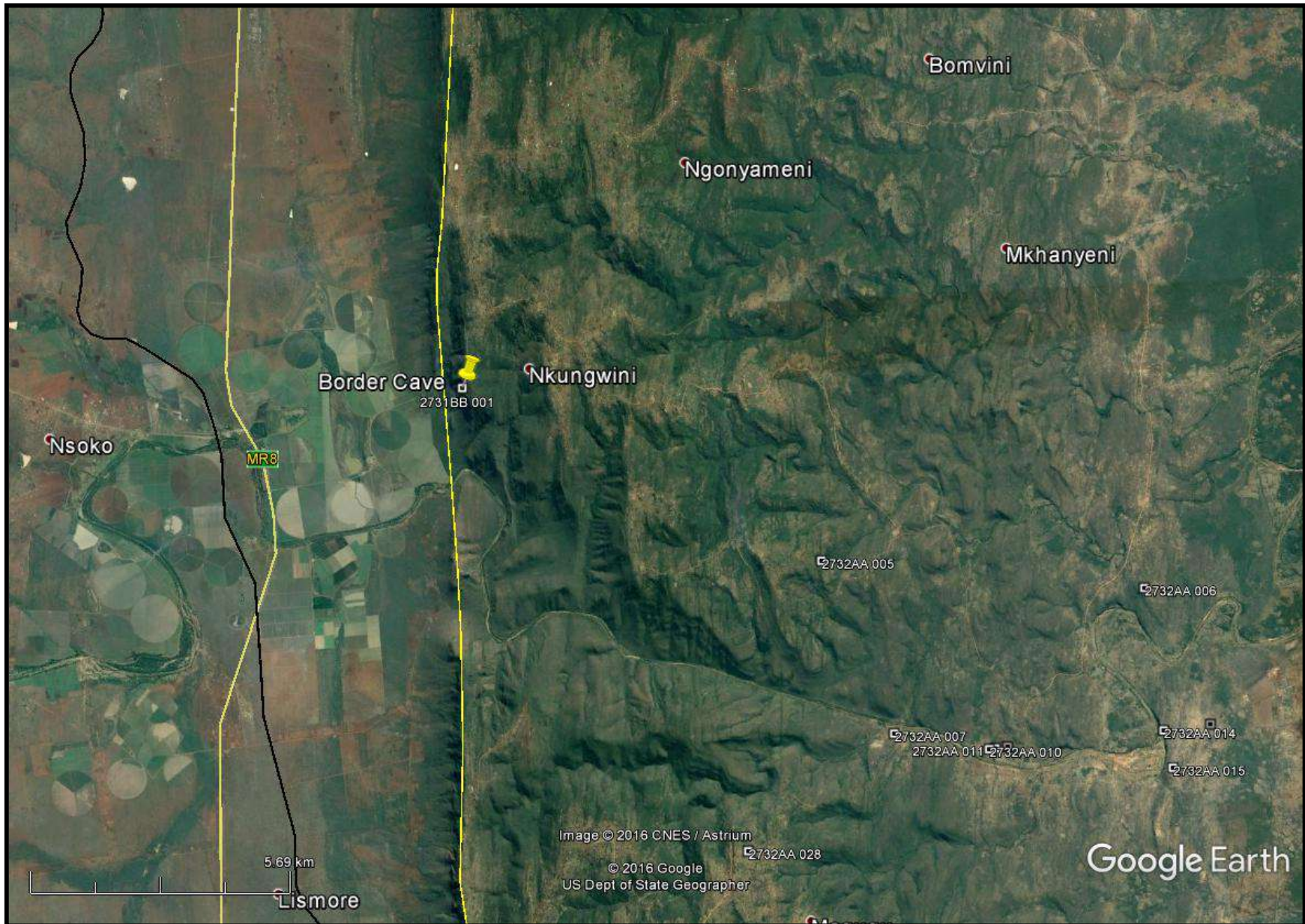


FIG. 6: STUDY AREA IN 1937

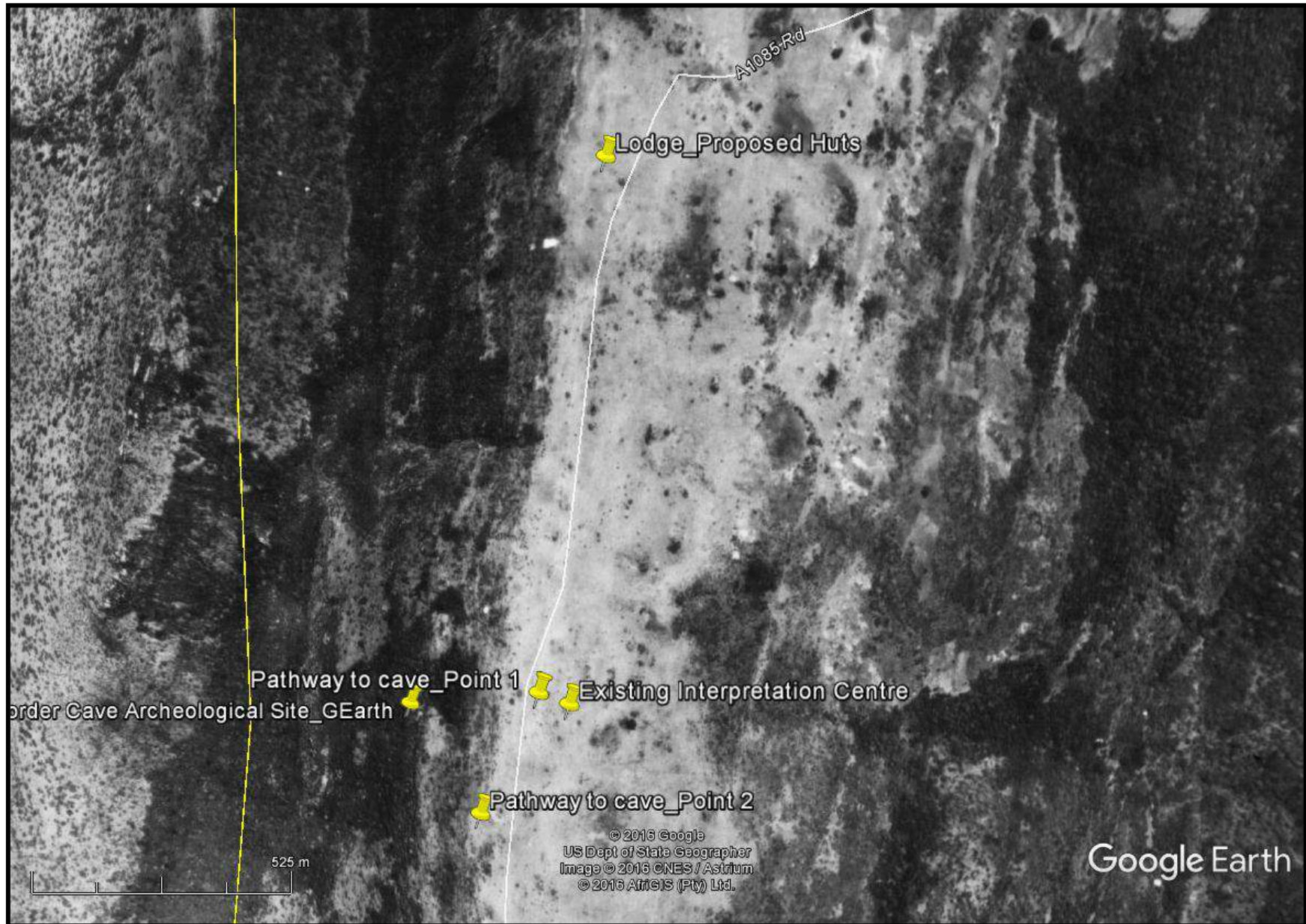
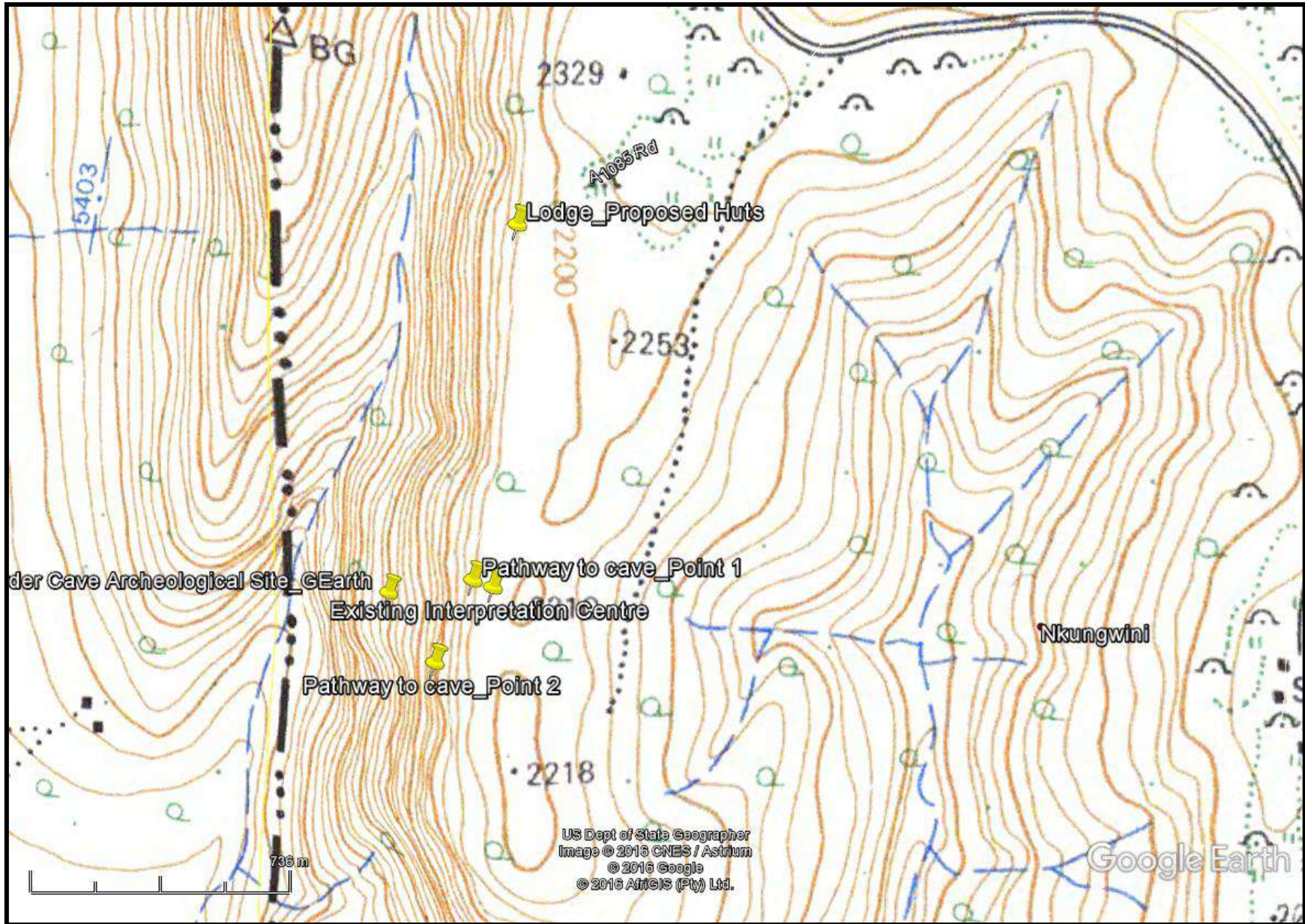


FIG. 7: STUDY AREA IN 1968



FIELD SURVEY

The four areas of the planned development were surveyed. The entire area is an ephemeral scatter of MSA and LSA tools on the surface. These are all in a secondary context. The tools are made from local dolerite, CCs and/or quartz and form part of the general stone tool assemblage of the area. Fig. 8 shows one of the MSA flakes.

FIG. 8: MSA FLAKE LOCATED NEAR THE PROPOSED LODGE¹



¹ GPS = 11cm X 6cm

Proposed Lodge/Accommodation

This area consists of several existing buildings that are now derelict (fig. 9). No heritage features were noted in this area, and only a few stone tools were observed on the surface.

FIG. 9: PROPOSED LODGE/HOUSES



Paths to Border Cave

The existing path to the cave has no affect on heritage sites (fig. 10). A few stone tools were noted on, or near, the path.

FIG. 10: EXISTING PATH TO BORDER CAVE



The proposed second path route was not available by the time of the survey, and only the starting point was given (fig. 11). As with the existing path, there should be a few artefacts on the ground but no features due to the incline. The proposed route must not pass any of the several caves and overhangs in the area. If the route does pass a cave/overhang, regardless of its size, then this will need an assessment.

FIG. 11: BEGINNING OF PROPOSED 2ND PATH



Interpretive Centre

No features occur at the Interpretive Centre. Two stone tools were observed in the parking area.

PALAEONTOLOGICAL IMPACT ASSESSMENT

The area is covered by dolerite and thus it has no palaeontological sensitivity (fig. 12).

FIG. 12: PALAEONTOLOGICAL SENSITIVITY



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.

MANAGEMENT PLAN

The proposed development and its footprints do not affect any heritage sites. While stone tools occur on the surface, these do not constitute an archaeological site and no further mitigation is required.

The proposed accommodation and ablution blocks occur in an area that has already been disturbed by the previous buildings.

The existing path does not affect any archaeological sites. The alternative path will need at least a desktop assessment once it has been finalised. This path should not pass any overhangs or caves, as these could have archaeological deposit. AN increase in human traffic past such shelters could damage any potential deposit.

The architecture should blend in with the natural environment so as not to create a visual impact. The final plans should be submitted to Amafa KZN for approval.

If any artefacts and/or features are uncovered during the construction phase, then these need to be reported to the ECO and Amafa KZN. Initial comments can be made via photographs.

CONCLUSION

A heritage survey was undertaken for the proposed Ngodini Border Cave development. The development includes revamping the existing lodges and ablution facilities, possibly opening a new path, and the upgrading of the existing interpretive centre.

The field survey did not record any heritage sites or features, but did note the ephemeral scatter of MSA and LSA tools that occur on the surface throughout the area. These artefacts are of low significance and require no further mitigation; however, they are not allowed to be collected by members of the public.

No further mitigation is required for the proposed development. However, a protocol for chance finds of artefacts and features should be included in the EMPr.

REFERENCES

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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