HERITAGE SURVEY OF THE PROPOSED BALLITO BEACH CLUB, KZN.

FOR WALLACE AND GREEN PTY (LTD)

DATE: 1 SETPEMBER 2022

By Gavin Anderson

Umlando: Archaeological Surveys and Heritage Management

PO Box 10153, Meerensee, 3901

Phone:035-7531785 Cell: 0836585362

umlando@gmail.com

EXECUTIVE SUMMARY

Balwin Properties, wish to develop a vacant plot of land located along the coastline at Erf 14, Ballito, iLembe District. The development will see the construction of “Ballito Beach Club”, a four-storey development with a restaurant, offices and residential uses.

The development occurs within 100m of the high water mark and near a large rock outcrop. This means that it is in an area of very high archaeological sensitivity.

A heritage survey was undertaken at Erf 14, Ballito, for the proposed development of the Ballito Beach Club. The development will consist of a four-story complex with related infrastructures.

An archaeological site, 2931CA 044, was originally recorded in 1958, and revisited in the 1960s on Erf 14. The site is a shell midden presumed to date to the Historical Period. The shell midden has not been disturbed since its recording and is the last intact shell midden for at least 2km to the north and south. Continual development between Zimbali Coastal Estate and Sheffield Beach has resulted in the loss of most of the coastal shell middens.

2931CA 044 is considered to have medium significance. This midden requires test-pit excavations prior to construction and possibly on site monitoring during construction.

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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

Balwin Properties, wish to develop a vacant plot of land located along the coastline at Erf 14, Ballito, iLembe District (29°32'41.46"S ; 31°12'53.04"E). The development will see the construction of “Ballito Beach Club”, a four-storey development with a restaurant, offices and residential uses.

The construction will include:

Basement level with parking;

Ground floor with entertainment facilities, including a restaurant, pool, dining area, kitchen and buffet bar;

First floor with entrance facilities, including a reception, meeting rooms, and terrace bar;

Second floor with four residential units.

Umlando was requested to undertake an HIA of the proposed development property. Figures 1 – 4 show the location of the development.

FIG. 1 GENERAL LOCATION OF THE PROPOSED DEVELOPMENT

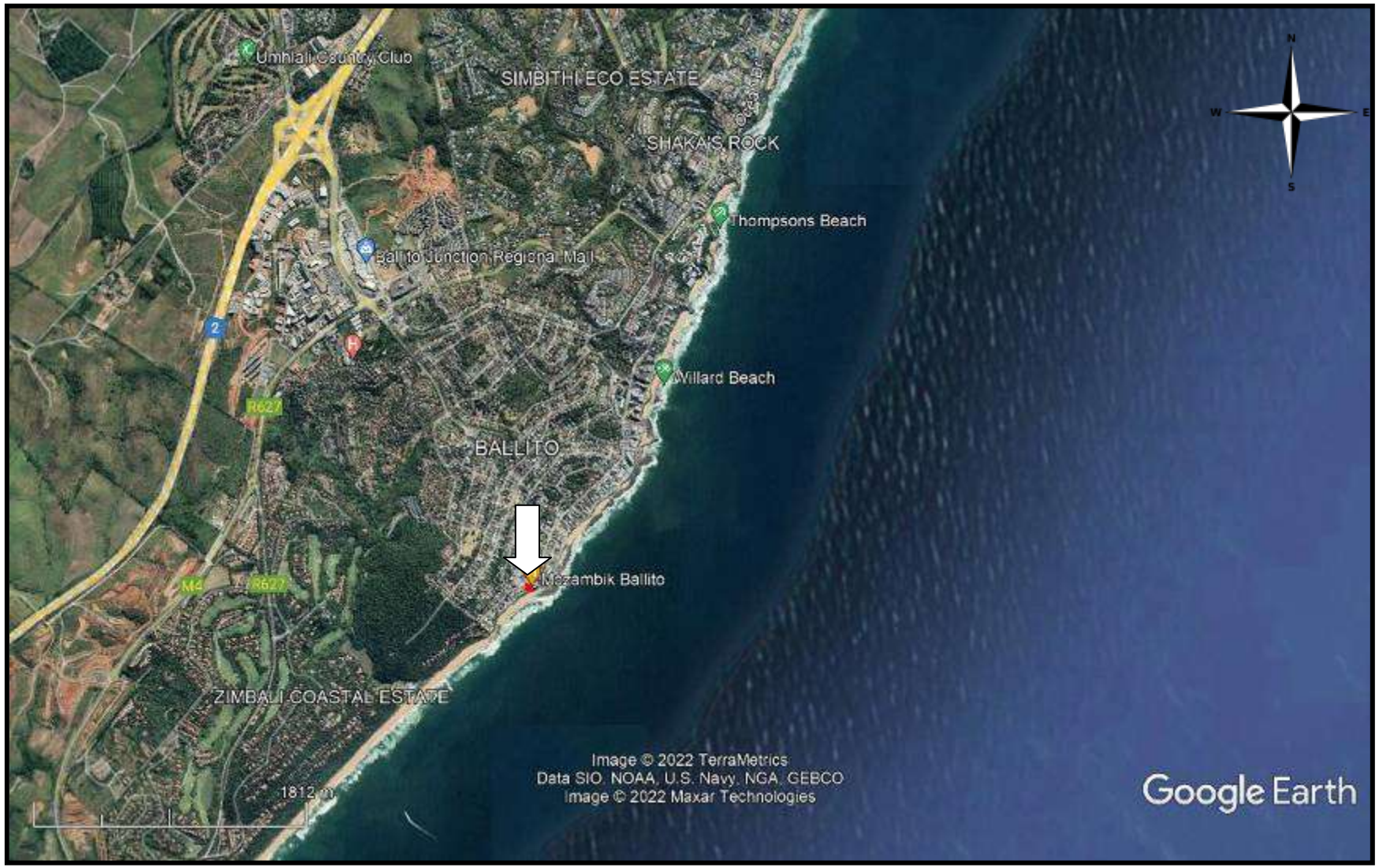

FIG. 2: AERIAL OVERVIEW OF THE PROPOSED DEVELOPMENT

FIG. 3: TOPOGRAPHICAL MAP OF THE PROPOSED DEVELOPMENT (2000)

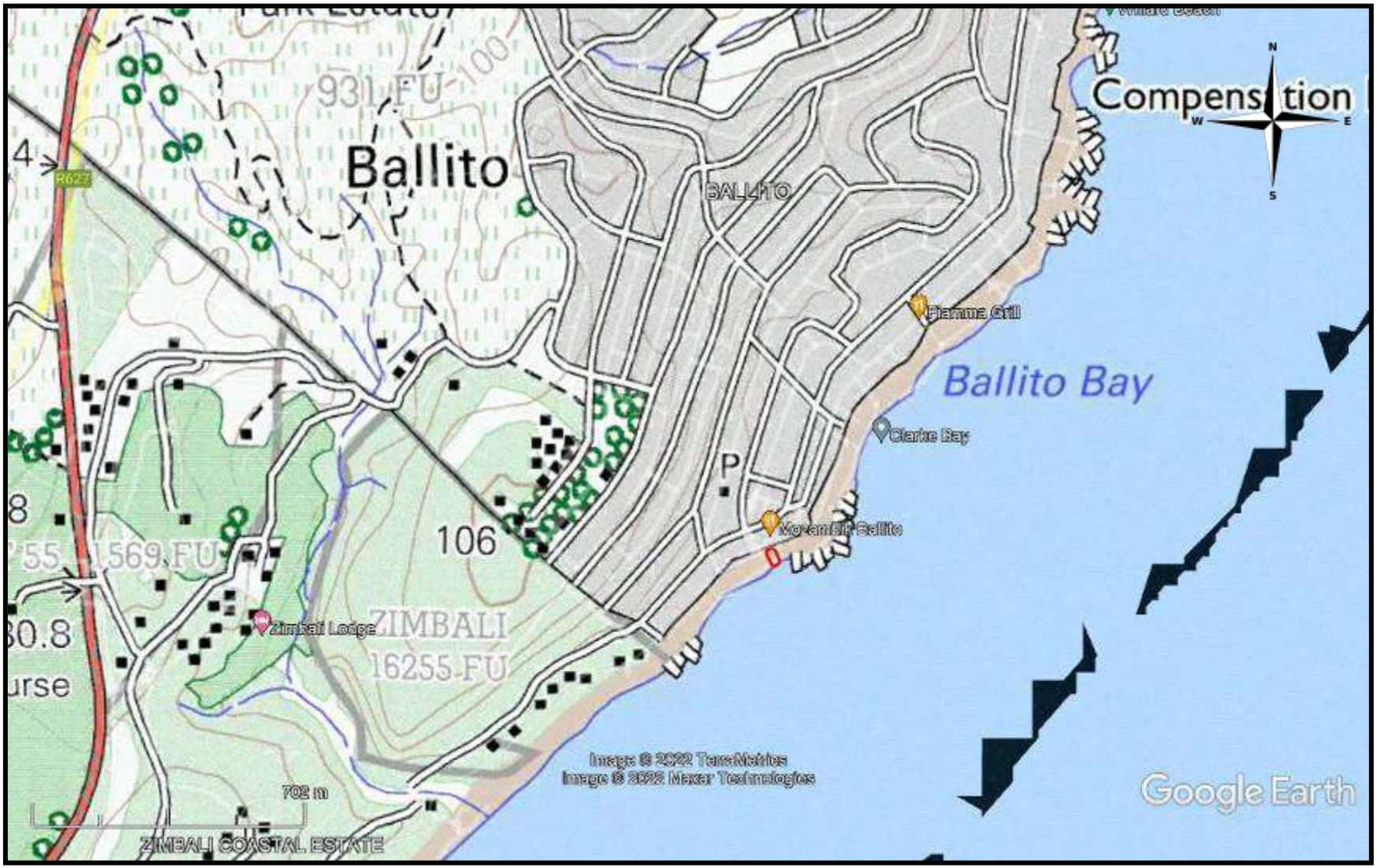

FIG. 4: SCENIC VIEWS OF THE STUDY AREA

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. The general area is known for its high density of archaeological sites, especially along the coastline (fig. 5). One site, 2931CA 044, was originally recorded in 1958 by Schoute-Vanneck and Walsh, and then revisited the 1960s by Oliver Davies (KwaZulu-Natal Museum Database). The site is described as a shell midden approximately 5cm below the surface and probably dating to the Historical Period. Another similar midden was recorded 20m northwards.

The 1937 aerial photograph indicates that the area is still under coastal bush and there is no development on the property (fig. 6). This is repeated on the 1942 topographical map (fig. 7).

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The 1984 aerial photograph indicates there were no buildings on the property (fig. 8).

This suggests that the shell midden, 2931CA 044 could still be intact.

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

FIG. 6: LOCATION OF THE STUDY AREA IN 1937[1]

[1] 117B_053_54273

FIG. 7: LOCATION OF THE STUDY AREA IN 1942

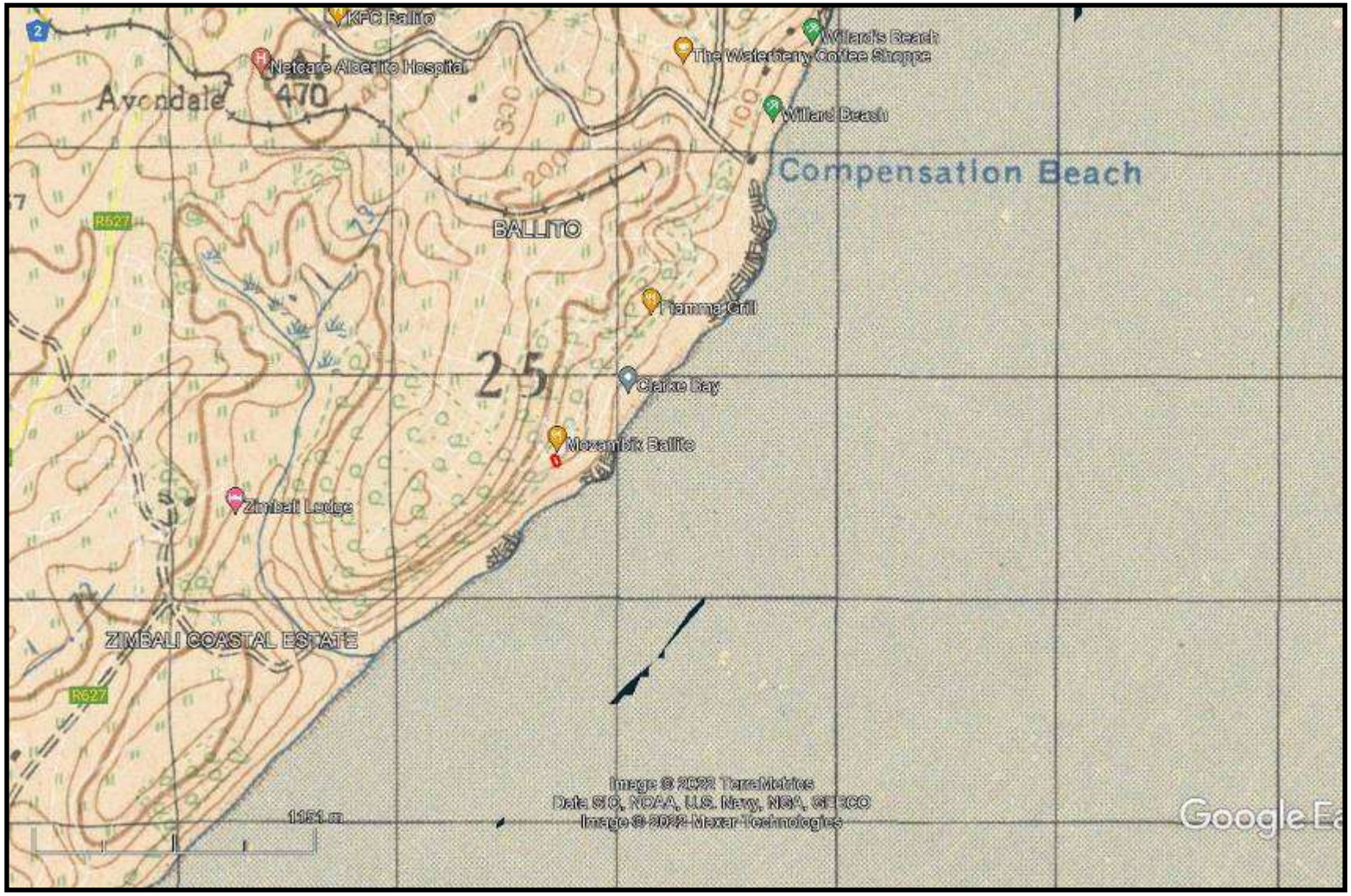

FIG. 8: LOCATION OF THE STUDY AREA IN 1984

PALAEONTOLOGICAL SENSITIVITY

The area is in an area of medium palaeontological sensitivity (fig. 9). A desktop PIA was undertaken by Dr Alan Smith. This sediment is part of the Umkwelane Formation (previously known as the Berea Red Sandstone). No palaeontological material of any significance has been found in this sediment. Theoretically palaeontological material could be found so a “Chance Find Protocol” is attached.

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

A field survey was undertaken on the 31 August 2022. Ground visibility was average due to the dense coastal bush. However, areas had been cleared and the eastern fence poles and (assumed) geological test pits had exposed the shell midden(s). There is a servitude running along the southwestern part of the property as well as a retaining wall that connects to the northern side. Most of the property appears to be undeveloped and thus 2931CA 044 is probably still intact.

A shell midden was visible in the various small test-pits that were excavated. The shell is approximately 15cm 20 30cm below the surface, not the 5cm reported by Davies. This is probably due to aeolian sands. The midden varies from 5cm to 10cm in thickness and consists mostly of *Perna perna*. The visible parts of the shell midden cover an area of 8m x 17m in size (fig.10 - blue polygon). Fig. 11 shows some of the midden on the surface.

The midden may extend northwards and uphill. The site is either a food-processing site or a living area. Food processing sites are where the meat from the shellfish is extracted and/or cooked and then taken back to the domestic area that can be nearby or further away. These types of sites have low artefact content, and few hearths.

If the site is a domestic area, then it means the midden is the one side of the site where everything would be discarded, and the living area will occur within 10m of the midden. These types of sites have a much richer artefact component and may have human burials.

The midden itself has scientific value in terms of oxygen isotopes used for (historical) sea temperatures. The smaller shell species can also be used as environmental indicators since they tend to be more influenced by environmental changes.

FIG. 10: LOCATION AND EXTENT OF 2931CA 044

FIG. 11: SURFACE OF 2931C 044

Significance: The site is at least of medium significance. It has an archaeological deposit, preservation of faunal remains will be good, and there may be a spatial component in terms of processing and domestic areas. If there are human remains, then the site will be of higher significance. This midden is also one of the last middens along the Ballito coastline that has not been destroyed by development.

Mitigation: Several test-pit excavations need to occur to sample the site and assess its full potential. The slightly raised area to the north of the midden also needs a few test-pits to determine if the site extends that far. Some form of bush clearance will need to occur before excavations begin.

If material is found to the north of the midden, then more excavations will be required, and/or the area needs to be monitored during earthmoving activity.

A permit to destroy the site via development, and to excavate it, will be required. This can be obtained from KZNARI.

SAHRA Rating: 3B

RECOMMENDATIONS

Test-pit excavations need to be undertaken at the site. This will assess the full significance of the site and might require extended excavations if deemed necessary.

Monitoring of parts of the property during construction might be required.

CONCLUSION

A heritage survey was undertaken at Erf 14, Ballito, for the proposed development of the Ballito Beach Club. The development will consist of a four-story complex with related infrastructures.

An archaeological site, 2931CA 044, was originally recorded in 1958, and revisited in the 1960s on Erf 14. The site is a shell midden presumed to date to the Historical Period. The shell midden has not been disturbed since its recording and is the last intact shell midden for at least 2km to the north and south. Continual development between Zimbali Coastal Estate and Sheffield Beach has resulted in the loss of most of the coastal shell middens.

2931CA 044 is considered to have medium significance. This midden requires test-pit excavations prior to construction and possibly on site monitoring during construction.

REFERENCES

1:50 000 Topographical Maps

Aerial Photographs

Database

KZN Museum

SHARIS

Umlando

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 LETTER OF EXEMPTION

Dr Alan Smith
Alan Smith Consulting
29 Browns Grove
Sherwood
Durban
4091

UMLANDO: Archaeological Surveys & Heritage Management
PO Box 102532, Meerensee, KwaZulu-Natal 3901
phone (035)7531785 fax: 0865445631
cell: 0836585362 / 0723481327
Email:umlando@gmail.com

Letter of Exemption from Palaeontological Impact Assessment for:

BALLITO BEACH CLUB, IILEMBE DISTRICT MUNICIPATITY, DOLPHIN COAST LOCAL MUNICIPALITY, KWAZULU-NATAL.

Dear Sir

Dr Alan Smith was asked by UMLANDO: Archaeological Surveys & Heritage Management to conduct a PIA for the above named project.

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The proposed Ballito Beach Club development will take place in sediment coloured yellow on the Sahris Paleosensitivity Map. This sediment is part of the Umkwelane Formation (previously known as the Berea Red Sandstone). No palaeontological material of any significance has been found in this sediment. Theoretically palaeontological material could be found so a "Chance Find Protocol" is attached.

Further this site is within an urban setting and has been historically disturbed.

Consequently there is no reason to conduct a PIA for this project. Consequently exemption from Palaeontological Impact Assessment (PIA) is requested for this project. However a “Chance Find Protocol” is attached to cover any chance find.

Should any of the proposed plans change then the project will need to be reassessed in terms of a PIA

Dr Alan Smith.
Alan Smith Consulting
22 August, 2022

CHANCE FIND PROTOCOL

This Chance Find Protocol must be included in the site EMPr.

If any fossils are found, a 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, and 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 until collected. Documentary record of palaeontological occurrences must be done.

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 and accurately surveyed. Sample locations, measured sections, etc., must be recorded three-dimensionally if any “significant fossils” are recorded during the time of excavation.

DETAILS OF SPECIALIST

Dr Alan Smith
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:

- PhD in Geology (University of KwaZulu-Natal), Pr. Sc. Nat., I.A.H.S.
- 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 + 50 journal articles with 497 citations (detailed CV available on request).
- Attended and presented scientific papers and posters at numerous international and local conferences (UK, Canada, and 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.
- Fieldwork PIA: Mpungoze water supply scheme, Empangeni. Client: Enviropro.
- Fieldwork PIA: Helpmekaar Dam. Client: Afzelia environmental consultants.
- 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.