

ARCHAEOLOGICAL IMPACT ASSESSMENT OF A PROPOSED RESIDENTIAL ESTATE ON PORTIONS 66 & 67 OF FARM 443, PLETTENBURG BAY.

HWC CASE: 21021901SB1008E

Decision making authority:

Department of Environmental Affairs and Development Planning
A 3rd Floor, Rentzburghof,
42 Courtenay Street, George

(Assessment conducted under Section 38 (8) of the
National Heritage Resources Act (No. 25 of 1999)
as part of a NEMA Basic Assessment process)

Prepared for

KAPP Environmental Consultants

On behalf of

**(BSP Investment (?))
The Keep Property (Pty) Ltd**

March 2022



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EXECUTIVE SUMMARY

Introduction

ACO Associates cc has been requested by KAPP on behalf of BSP Investment to compile an Archaeological Impact Assessment (AIA) of the impacts on possible archaeological heritage resources of the proposed construction of a proposed residential estate on Portions 66 & 67 of Farm 443, Plettenburg Bay, on the coastal dunes ~3.5 km south of the well-known landmark of the Beacon Island Hotel in the Bitou Municipality in the Western Cape Province.

KAPP submitted a NID application to Heritage Western Cape (HWC) which was discussed at the Heritage Officers Meeting on the 25th October 2021. A response to the NID was issued on 3 November 2021 with Case Number 21021901SB1008E in which HWC resolved that: "since there is reason to believe that the proposed residential estate on Portions 66 & 67 of Farm 443, Plettenburg Bay will impact on heritage resources, HWC requires that a Heritage Impact Assessment (HIA) that satisfies the provisions of section 38(3) of the NHRA be submitted. This HIA must have specific reference to the following: A palaeontological desktop study (PIA) an archaeological impact assessment (AIA) and a visual impact assessment (VIA). The comments of relevant registered conservation bodies; all Interested and Affected parties; and the relevant Municipality must be requested and included in the HIA where provided. Proof of these requests must be supplied."

ACO Associates cc was appointed to compile the AIA.

Project motivation and technical data

The applicant wishes to consolidate Portions 66 and 67 of Farm 443 and construct a residential estate consisting of nine structures (Figure 3) to be known as Athina Estate. A single large modern dwelling (multiple units therein) exists on Ptn 66. This is in a mostly sound, but disused state and information suggests that it will be demolished to make way for the new development.

No alternative layouts have been provided.

Data gathering

The fieldwork component of the Archaeological Impact Assessment was conducted by Mr D Halkett of ACO Associates cc on the 16th March 2022. Visibility of the ground surface in the project site was considered to be good in places, but limited in others due to bush growth and thick surface leaf litter. There were no limitations in terms of access. There were a number of open clearings to provide excellent visibility. The area was assessed on foot, except in one or two small areas where vegetation was thick, but this is not expected to affect the conclusions of the study.

Prior to embarking on the fieldwork, aerial photographs from a range of periods had been examined to determine if any heritage indicators that may need to be inspected could be identified on the images.

The area did not appear to contain much apart from one suspected structure that was assumed to be a reservoir. While on site, a second concrete slab was located which suggested another structure.

Search tracks were recorded by means of a Garmin GPS receiver to document the searched area (Figure 3), and identified heritage resources were assigned Lat-Lon co-ordinates, described and photographed. The few identified heritage resources observed are also plotted on Figure 5 and described in Section 5. Heritage resources have been provisionally graded for significance according to the system used by Heritage Western Cape as defined in the Table 2.

Findings and Recommendations

Pre-colonial heritage

No pre-colonial heritage resources have been identified on the site and the proposed activities are not expected to result in the loss of significant heritage resources. Although we consider it a low possibility that material will be found, we cannot exclude the possibility in its entirety given that

material could be buried. If any archaeological resources (e.g. shell layers, human remains) are identified during construction, these must be immediately reported to the Archaeologist and Heritage Western Cape to indicate a way forward. In the case of human remains, as soon as they are recognised they must be cordoned off and not disturbed further. Work may carry on elsewhere until the finds have been examined.

Built environment

The remains of two ruinous structures were identified. The modest remains consist of concrete slabs, which in the case of ruin 1 is associated with a hearth and chimney. Ruin 1 is believed to be the remains of a wooden (or other) walled building, with a small corrugated iron water tank, next to a large round covered reservoir. It does not appear to be a vernacular design and cement is used as mortar and as plaster. Function is unknown, though possibly a holiday/fisherman's shack. A single sherd of modern ceramic was found close to the ruin. Ruin 2 is a concrete slab with a small corrugated iron water tank, and also believed to be a shack of some sort, also with wooden (or other) walls. No associated material was identified at ruin 2. These are both likely to have been built mid-20th c, and based on the remains, both have been provisionally graded NCW. No mitigation has been proposed.

Impact Assessment

The findings of the impact assessment evaluated in terms of the Impact Methodology (Appendix D), suggests that impacts on archaeological heritage resources will be low without mitigation. The low heritage significance of the resources does not warrant implementation of formal mitigation, but discovery of buried archaeological material must be reported.

Conclusion

Overall we find that the proposed residential development and associated infrastructure will not result in the loss of significant heritage resources and no mitigation is proposed.

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GLOSSARY

Archaeological	Remains resulting from human activity which is in a state of disuse and are in or on land and which are older than 100 years, including artefacts, human and hominid remains and artificial features and structures.
Baseline	Information gathered at the beginning of a study which describes the environment prior to development of a project and against which predicted changes (impacts) are measured.
Construction Phase	The stage of project development comprising site preparation as well as all construction activities associated with the development.
Cumulative Impacts	Direct and indirect impacts that act together with current or future potential impacts of other activities or proposed activities in the area/region that affect the same resources and/or receptors.
Environment	The external circumstances, conditions and objects that affect the existence of an individual, organism or group. These circumstances include biophysical, social, economic, historical and cultural aspects.
Environmental Authorisation	Permission granted by the competent authority for the applicant to undertake listed activities in terms of the NEMA EIA Regulations, 2014.
Environmental Impact Assessment	A process of evaluating the environmental and socio-economic consequences of a proposed course of action or project.
Environmental Impact Assessment Report	The report produced to relay the information gathered and assessments undertaken during the Environmental Impact Assessment.
Environmental Management Programme	A description of the means (the environmental specification) to achieve environmental objectives and targets during all stages of a specific proposed activity.
Fossil	Mineralised bones of animals, shellfish, plants and marine animals. A trace fossil is the track or footprint of a fossil animal that is preserved in stone or consolidated sediment
Heritage	That which is inherited and forms part of the National Estate (Historical places, objects, fossils as defined by the National Heritage Resources Act 25 of 1999
Impact	A change to the existing environment, either adverse or beneficial, that is directly or indirectly due to the development of the project and its associated activities.
Mitigation measures	Design or management measures that are intended to minimise or enhance an impact, depending on the desired effect. These measures are ideally incorporated into a design at an early stage.
Operational Phase	The stage of the works following the Construction Phase, during which the development will function or be used as anticipated in the Environmental Authorisation.
Palaeontological	Any fossilised remains or fossil trace of animals or plants which lived in the geological past, other than fossil fuels or fossiliferous rock intended for industrial use, and any site which contains such fossilised remains or trace.
Scoping	A procedure to consult with stakeholders to determine issues and concerns and for determining the extent of and approach to an EIA and EMP (one of the phases in an EIA and EMP). This process results in the development of a scope of work for the EIA, EMP and specialist studies.
Specialist study	A study into a particular aspect of the environment, undertaken by an expert in that discipline.
Stakeholders	All parties affected by and/or able to influence a project, often those in a position of authority and/or representing others.
Structure (historic)	Any building, works, device or other facility made by people and which is fixed to land, and includes any fixtures, fittings and equipment associated therewith. Generally protected structures are those which are over 60 years old.

ACRONYMS AND ABBREVIATIONS

BA	Basic Assessment Process
CRM	Cultural Resource Management
EA	Environmental Authorisation
EAP	Environmental Assessment Practitioner
EIA	Environmental Impact Assessment
ESA	Early Stone Age >~3000 0000 years -- 1.1 Million years
GPS	Global Positioning System
HIA	Heritage Impact Assessment
HWC	Heritage Western Cape – Provincial Heritage Authority
LSA	Later Stone Age <~20 000 years
MSA	Middle Stone Age – between ~300 000 and ~20 000 years
MVA	Megavolt amperes
NEMA	National Environmental Management Act 107 of 1998, as amended
NHRA	National Heritage Resources Act of 1999
NID	Notice of intent to Develop – application to HWC at inception of the project
PHRA	Provincial Heritage Resources Authority
SAHRA	South African Heritage Resources Agency – the National Heritage Authority
SAHRIS	South African Heritage Resources Information System
S&EIR	Scoping and Environmental Impact Reporting
SRK	SRK Consulting (South Africa) (Pty) Ltd
ToR	Terms of Reference
VIA	Visual Impact Assessment

1. INTRODUCTION

1.1 Background

ACO Associates cc has been requested by KAPP on behalf of BSP Investment to compile an Archaeological Impact Assessment (AIA) of the impacts on possible archaeological heritage resources resulting from the proposed construction of a proposed residential estate on Portions 66 & 67 of Farm 443, Plettenburg Bay. This is located on the coastal dunes ~3.5 km south of the well-known landmark of the Beacon Island Hotel, and ~1km north west of the Robberg Peninsula in the Bitou Municipality in the Western Cape Province (Figure 1).

1.2 HWC requirements for the project

KAPP Environmental consultants submitted a NID application to Heritage Western Cape (HWC) which was discussed at the Heritage Officers Meeting on the 25th October 2021. A response to the NID was issued on 3 November 2021 with Case Number 21021901SB1008E, in which HWC resolved that: “since there is reason to believe that the proposed residential estate on Portions 66 & 67 of Farm 443, Plettenburg Bay will impact on heritage resources, HWC requires that a Heritage Impact Assessment (HIA) that satisfies the provisions of section 38(3) of the NHRA be submitted. This HIA must have specific reference to the following: A palaeontological desktop study (PIA) an archaeological impact assessment (AIA) and a visual impact assessment (VIA). The comments of relevant registered conservation bodies; all Interested and Affected parties; and the relevant Municipality must be requested and included in the HIA where provided. Proof of these requests must be supplied.”

ACO Associates cc was appointed to compile the AIA.

1.3 Terms of Reference

The generic ToR and principal objectives for study is to:

- Describe the existing baseline characteristics of the study area and place this in a regional context;
- Identify and assess potential impacts of the project and the alternatives, including impacts associated with the construction and operation phases, using the impact rating methodology in Appendix D;
- Recommend mitigation measures to avoid and/or minimise impacts and/or optimise benefits associated with the proposed project if applicable; and
- Recommend and draft a monitoring campaign, if applicable.

The main deliverable will be an archaeological impact assessment (AIA) report with appropriate maps, drawings and figures. The report will include the following components:

- Baseline description: a description of the environment of the study area in its current state, relevant to the specialist’s field of study; and
- Impact assessment: an assessment of how the proposed project will alter the *status quo* as described in the baseline description, and recommended measures to mitigate and monitor impacts.

The report must take cognizance of, and comply with, the substantive content requirements outlined within Appendix 6 of GN R982, which outlines the legal minimum requirements for specialist studies in terms of the 2014 NEMA EIA Regulations.

1.4 Content of the Report

The EIA Regulations, 2014 (R982 of 2014, as amended by R326 of 2017), prescribe the required content of a specialist report prepared in terms of the EIA Regulations, 2014. These requirements, and the sections of this AIA in which they are addressed, are summarised in Table 1.

Table 1: Required content of a specialist report

App 6	Item	Section
(a) (i)	Details of the specialist who prepared the report;	App A
(a) (ii)	Expertise of that specialist to compile a specialist report, including a curriculum vitae	App A
(b)	A declaration that the specialist is independent in a form as may be specified by the competent authority;	App B
(c)	An indication of the scope of, and the purpose for which the report was prepared;	1.3
(cA)	An indication of the quality and age of base data used for the specialist report;	4
(cB)	A description of existing impacts on the site, cumulative impacts of the proposed development and levels of acceptable change;	6.4
(d)	The duration, date and season of the site investigation and the relevance of the season to the outcome of the assessment;	4.3
(e)	A description of the methodology adopted in preparing the report or carrying out the specialised process inclusive of equipment and modelling used;	4
(f)	Details of an assessment of the specific identified sensitivity of the site related to the proposed activity or activities and its associated structures and infrastructure, inclusive of a site plan identifying site alternatives;	6
(g)	An identification of any areas to be avoided, including buffers;	6
(h)	A map superimposing the activity including the associated structures and infrastructure on the environmental sensitivities of the site including areas to be avoided, including buffers;	Fig 3, 5
(i)	A description of any assumptions made and any uncertainties or gaps in knowledge;	1.5
(j)	A description of the findings and potential implications of such findings on the impact of the proposed activity or activities;	4,5,6
(k)	Any mitigation measures for inclusion in the EMPr;	7.1
(l)	Any conditions for inclusion in the environmental authorisation;	7.1
(m)	Any monitoring requirements for inclusion in the EMPr or environmental authorisation;	n/a
(n) (i)	A reasoned opinion whether the proposed activity or portions thereof should be authorised;	8
(n) (iA)	A reasoned opinion regarding the acceptability of the proposed activity or activities;	8
(n) (ii)	If the opinion is that the proposed activity, activities or portions thereof should be authorised, any avoidance, management and mitigation measures that should be included in the EMPr, and where applicable, the closure plan;	7.1
(o)	A description of any consultation process that was undertaken during the course of preparing the specialist report;	n/a
(p)	A summary and copies of any comments received during any consultation process and where applicable all responses thereto; and	n/a
(q)	Any other information requested by the competent authority.	n/a

1.5 Assumptions and limitations

- We assume that the information provided by KAPP is accurate;
- We assume that the information provided in consulted reports and publications is accurate;
- There are limitations with accessing up to date impact assessments submitted to HWC as no online database of projects post-2009 is available. Knowledge of reports not on the SAHRIS database is by way of referenced resources in other reports, or personal knowledge.

Notwithstanding the lack of certain documents, there were no perceived significant limitations in conducting this archaeological assessment.



Figure 1: The project area in broad Plettenberg Bay regional context. Affected farm portions (red).



Figure 2: The proposed cadastral divisions in the area of the site (red). Grey divisions – erven, Yellow divisions – farm portions.

2. PROJECT DESCRIPTION

2.1 Project motivation and technical data

Based on the information provided in the site sensitivity report by West (2021) with minor changes to reflect the changed layout.

Portion 66 and 67 of the Farm Brakkloof 443 measures ~2.68ha in size and are some of the last remaining “undeveloped” agricultural land parcels along the coastal strip between the Beacon Isle Hotel and the Robberg Nature Reserve.

For the last 40 years, the properties have been earmarked for urban development in various Structure Plans, Guide Plans, and Spatial Development Frameworks. Presently, the 2017 Spatial Development Framework for Bitou, like all the preceding spatial plans, also earmarks the site as urban land within the urban edge, where residential development is encouraged.

In 1989, Portion 66 was rezoned from “Agriculture” to “Subdivisional Area” and subdivided into 11 “Single Residential” erven with average erf sizes of approximately ~1020m² and 2 open space erven. These development rights were never implemented and have lapsed. Presently, the site contains a dwelling house that appears to have been erected without approved building plans. The house has never been occupied and will be demolished to make way for the new development. Portion 67 is vacant.

The proposal is to consolidate the two portions and to create a small exclusive beachfront security estate (Figure 3). The proximity to the beach and the views over the bay will secure high property values as there are very few beachfront properties left in the area. The development concept includes nine residential stands that vary between ~1300 and ~1900m² in size. The communal open space will be rehabilitated with natural indigenous vegetation. The property will be fenced and gated, however access to the frontal/coastal beach walking trail, will not be denied. The development will be controlled by a Homeowners Association and the design of houses will be subject to architectural design guidelines that will ensure an aesthetically pleasing development that blends in with the surroundings.

The property is presently zoned “Agriculture” in terms of the Plettenberg Bay zoning Scheme and the intention is to apply for the rezoning of the land to “Sub-divisional Area” which would allow for the further subdivision of the land into “Single Residential” erven and communal “Private Open Space”.

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 STRUCTURE TO BE CONSTRUCTED IN ACCORDANCE WITH SPECIFICATION AND PERMITS THROUGH STRUCTURAL ENGINEERS TO BE VERIFIED WITH RELEVANT CONSULTANTS.
 ALL WORK TO BE CARRIED OUT STRICTLY IN ACCORDANCE WITH NATIONAL BUILDING REGULATIONS AND LOCAL AUTHORITY REGULATIONS.
 THE ARCHITECT ACCEPTS NO RESPONSIBILITY FOR ERRORS RESULTING FROM MISINTERPRETATION OF THE DRAWINGS.
 ANY CORRECTIONS TO BE REPORTED TO THE ARCHITECT IMMEDIATELY.

REVISIONS	
REV	DATE

Property Schedule	
Name	Area

Property Schedule 1	
Name	Area

Application Description:
 Consolidation of 2 erven 66/443 and 67/443, subdivided into 9 erven with common area remainder.

OBJEH:
 ARCHITECTS | INTERIORS | DESIGN

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WITH:

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project name	project description
ERF 66 & 67 KNYSNA	
New development	
Plettenberg Bay	
The Keep	
Site Development Plan - SDP	

For Council Submission

project number	drawn number	current rev.
2020-01	10_03	
drawing scale	drawn by	checked by
A6 indicated	Author	Checker

Issue Date: 15/04/2022 22:12:27
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Figure 3: The proposed scheme layout. (The pink hatched area on the northern boundary is a right of way servitude in favour of Portion 60 as described in Condition D of the Title deed of portion 67

2.2 The Receiving Environment

Both Portions of land are similar in terms of vegetation and topography. A large dwelling is present on Ptn 66 accessed by a dirt track off the informal access road known as Robberg Road which runs n-s parallel to the vlei, and passes through the western section of the property (Plates1-3).

Most of the western half is covered by vegetation much of it alien (mostly *Acacia cyclops*), and quite dense in places, while in others, attempts to remove aliens has left open patches or less dense vegetation. As can be seen from the contours (Figure 3) the high point of the site is on the west, and is a remnant of the coastal dune cordon. From there the land dips to the east in the direction of the beach.

The large dwelling lies on a flatter area on the eastern side. It appears that the area was levelled during construction and in the process soil appears to have been pushed towards the east creating an additional flat area in front of the house. This area is therefore disturbed. From there the site dips steeply down towards the beach. An old electric fence demarcates the edge of the property, which is ~60 meters from the main beach, an area of vegetated and semi-vegetated dune. No fence is present on the southern side. A new, metal palisade fence runs the length of the northern boundary.

Other structures include a round reservoir associated with the ruins of some form of ruined dwelling (possibly an old holiday shack?) on the southern edge of Ptn 66, and another possible small shack alongside the access road on Ptn 67.

Surrounding land uses include residential to the north and south. Robberg Road runs along the western edge and separates the site from a large vlei.

2.3 Site photographs



Plate 1: Looking north showing the existing structure. The chimney of a ruined structure can also be seen at left.



Plate 2: Panorama capturing north and north west views north from a point more to the west than in Plate 1, showing the vlei at left.



Plate 3: Panorama capturing south west and east views from the high dune on the north western part of the site. A construction site is visible on the adjacent property to the north.



Plate 4: Looking west along the northern fenceline across the vlei.



Plate 5: Looking north west to existing developments in similar coastal context. **Plate 6:** Levelled platform on the beach side of the house.

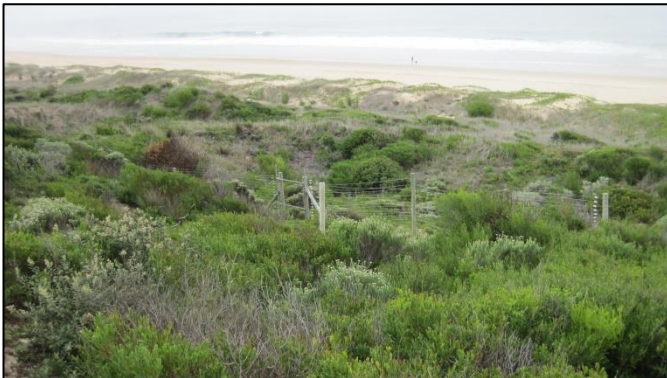


Plate 7: The eastern boundary, marked by an old electric fence in relation to the beach. **Plate 8:** Access to the site off Robberg Road.

2.4 List of affected properties

The affected farm is listed in Table 2 while cadastral boundaries are shown in Figures 1.

Table 2: List of affected properties and associated information

Farm	Ptn	Size
Brakkloof 443	66	~1.7Ha
Brakkloof 443	67	~0.9Ha

2.5 Alternatives

- No alternative layouts have been provided

2.6 Date and season of the site investigation

The Archaeological Impact assessment was conducted on the 16th March 2021 and was unaffected by seasonal vegetation or other factors. Visibility of the ground surface in the project site was considered to be good in places, but limited in others due to bush growth and thick surface leaf litter. There were no limitations in terms of access. There were a number of open clearings where visibility was excellent.

The area was assessed on foot, except in one or two small areas where vegetation was thick, but this is not expected to affect the overall conclusions of the study.

3. APPLICABLE LEGISLATION

The National Department of Environmental Affairs is the decision making authority acting in terms of the National Environmental Management Act (Act 107 of 1998) (NEMA) and the NEMA Regulations (2014). In terms of Section 38 (8) National Heritage Resources Act (Act 25 of 1999) (NHRA), DEA must ensure that the evaluation of the statutorily defined broad range of heritage resources fulfils the requirements of the relevant heritage resources authority in terms of Section 38 (3) of the NHRA, and that any comments and recommendations of the relevant heritage resources authority with regard to proposed development have been taken into account prior to the granting of the consent.

Section 38 of the NHRA applies to development where HWC is not the decision making authority. Triggers for the NHRA are as follows:

- 38.** (1) Subject to the provisions of subsections (7), (8) and (9), any person who intends to undertake a development categorised as—
- (a) the construction of a road, wall, powerline, pipeline, canal or other similar form of linear development or barrier exceeding 300m in length;
 - (b) the construction of a bridge or similar structure exceeding 50 m in length;
 - (c) any development or other activity which will change the character of a site—
 - (i) exceeding 5 000 m² in extent; or
 - (ii) involving three or more existing erven or subdivisions thereof; or
 - (iii) involving three or more erven or divisions thereof which have been consolidated within the past five years; or
 - (iv) the costs of which will exceed a sum set in terms of regulations by SAHRA or a provincial heritage resources authority;
 - (d) the re-zoning of a site exceeding 10 000 m² in extent; or
 - (e) any other category of development provided for in regulations by SAHRA or a provincial heritage resources authority.....

The person who intends to undertake the development must notify SAHRA/HWC at the very earliest stages of initiating such a project of the location, nature and extent of the development. Section 38 (2a) states that if there is reason to believe that heritage resources will be affected then an impact assessment report must be submitted that fulfils the requirements of S38 (3).

- 38** (3) The responsible heritage resources authority must specify the information to be provided in a report required in terms of subsection (2)(a): Provided that the following must be included:
- (a) The identification and mapping of all heritage resources in the area affected;
 - (b) an assessment of the significance of such resources in terms of the heritage assessment criteria set out in section 6(2) or prescribed under section 7;
 - (c) an assessment of the impact of the development on such heritage resources;
 - (d) 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;
 - (e) the results of consultation with communities affected by the proposed development and other interested parties regarding the impact of the development on heritage resources;
 - (f) if heritage resources will be adversely affected by the proposed development, the consideration of alternatives; and
 - (g) plans for mitigation of any adverse effects during and after the completion of the proposed development.

The NHRA provides protection for the following categories of heritage resources:

- Cultural landscapes (Section 3(3))
- Buildings and structures greater than 60 years of age (Section 34)
- Archaeological sites greater than 100 years of age (Section 35)
- Palaeontological sites and specimens (Section 35)
- Shipwrecks and aircraft wrecks (Section 35)

- Graves and grave yards (Section 36).

3.1 Heritage authorities

SAHRA is the National Heritage Resources Authority and is responsible for Grade 1 heritage sites and the management of heritage in provinces where no Provincial authority has been established. As there are no Grade 1 heritage sites identified for the current project, SAHRA has no part to play in this application.

HWC is the relevant Provincial Heritage Resources Authority (PHRA) for the Western Cape and therefore for this application. They have a defined process in order to achieve a final comment with respect to heritage resources as follows:

In terms of Section 38 of the NHRA, the appointed Heritage Practitioner must submit a “Notice of Intent to Develop” (NID) form to the Provincial Heritage Resources Authority (PHRA) for initial adjudication of the project and for them to determine the need for, and scope of further specialist heritage studies. If it is clear from the NID that no significant heritage resources will be impacted, no further action in terms of heritage will be requested. The comment is submitted to the Environmental Assessment practitioner (EAP) for inclusion in the Environmental process. If the decision is that further studies are required, the PHRA will request that the additional specialist studies are done as part of an Integrated Heritage Impact Assessment (HIA). The integration is to ensure that there is a recommendation that takes into account the findings of the various requested specialist Heritage studies. The specialist studies may include studies undertaken routinely as part of the Environmental Impact Assessment (EIA) process e.g. a Visual Impact Assessment (VIA), but most often include Archaeological and/or Palaeontological Impact Assessments. If there is significant Built Environment heritage at the affected site, a study of the buildings and their significance could be requested.

3.1.1 Consultation

HWC requires consultation with the responsible Municipality and conservation bodies registered with HWC where there is jurisdiction for the area in which the project falls. The HIA will be submitted for comment.

3.2 Grading of heritage resources

The significance of heritage resources is assessed according to the grading criteria established by the NHRA. The grading system in Table 3 is currently applied by HWC.

Table 3: Grading of heritage resources (only categories I, II and III are defined in the NHRA), but HWC have introduced additional categories under III).

Grade	Level of significance	Description
I	National	Of high intrinsic, associational and contextual heritage value within a national context, i.e. formally declared or potential Grade 1 heritage resources.
II	Provincial	Of high intrinsic, associational and contextual heritage value within a provincial context, i.e. formally declared or potential Grade 2 heritage resources.
IIIA	Local	Of high intrinsic, associational and contextual heritage value within a local context, i.e. formally declared or potential Grade 3a heritage resources.
IIIB	Local	Of moderate to high intrinsic, associational and contextual value within a local context, i.e. potential Grade 3b heritage resources.
IIIC	Local	Of medium to low intrinsic, associational or contextual heritage value within a national, provincial and local context, i.e. potential Grade 3c heritage resources.
NCW		Not conservation-worthy - The Heritage Authority has applied its mind and the resource does not have enough heritage significance to be included in the National Estate. i.e. Insufficient Heritage Significance or “Ungradeable”. This category is important as not all old places or structures are significant in terms of the NHRA.
Not yet graded		The Heritage Authority has not yet applied its mind in order to determine a grading for the resource or there is not, yet, sufficient information to determine the grading.

4. METHODOLOGY

4.1 Literature review

A survey of available literature was carried out to assess the general heritage context of the area and a background search of other Cultural Resource Management (CRM) projects in the area pre-2009 was made via the South African Heritage Resources Information Systems (SAHRIS) database. Only an incomplete record of post-2009 reports submitted to HWC is available as they currently maintain no online database of their information. Further information was derived from the in-house database and library maintained at ACO Associates cc. Reference to specific consulted reports and publications is made in the text where relevant.

4.2 Baseline information from previous work in the area

Most of the coastal zones of South Africa are archaeologically sensitive as prehistoric people were attracted there by the reliable source of marine foods, such as seals, fish, shellfish and other crustacea. This has resulted in an accumulation of archaeological sites along the coastal strip, some as old as 120 000 years, but the vast majority dating to the Later Stone Age (LSA) period of the last ~10 000 years. The Robberg Peninsula in particular attracted a large amount of prehistoric activity. This is evident at the famous site of Nelson Bay Cave as well as other open sites on the peninsula (Inskeep 1965). LSA sites tend to cluster at or near rocky shoreline where shellfish grow and can be collected at low tides.

In more recent times the coastal dunes just north of, and in the lee of the Robberg Peninsula was the site of the first accidental European “settlement” in South Africa, and which in turn resulted in early interactions between Europeans and the pre-colonial people of the area.

In 1979, Mr J. Jerling, the owner at that time of Portion 44/443, discovered a large collection of oriental ceramics, metal clothing fittings and ships navigational instruments in a sand dune at the site where he was building a house (Figure 4). Little is known about the exact context of the finds however as no archaeologist was present during the discovery. The ceramics have subsequently been analysed and dated to the late Ming period (1623-1635) (Rudner n.d., Smith 1986, Hart & Halkett 1993).

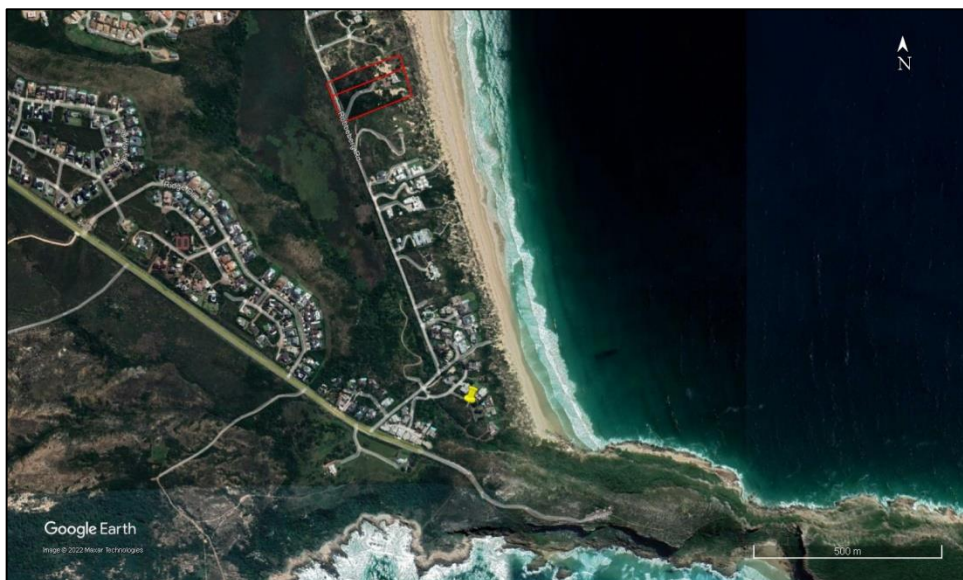


Figure 4: The location of the Sao Goncalo survivor settlement (yellow pin) in relation to Ptns 66 and 67 (red)

The conclusion is that the artefacts were related to the heavily laden Portuguese vessel, *Sao Goncalo* which sank with the loss of 130 hands in Plettenberg Bay in 1630. The 100 survivors remained at Plettenberg Bay for some 8 months during which time they appear to have established a small settlement and built two more ships (pinnaces) from the remains of the wrecked vessel. The survivors eventually set sail in hope of reaching home. The presence of a fresh water spring here (Rudner n.d: 1) and the availability of wood locally, is also likely to have influenced the siting of the camp.

In 1981, a team from the University of Cape Town Archaeology Department followed up on the Jerling finds with archaeological excavations (Smith 1986). Smith and his team located the remains of what appeared to be a workshop area where iron (probably from the wreck) was being smelted and forged – probably for the manufacture of components for the two pinnaces. Several associated concentrations of mussel shell and small quantities of porcelain recovered ~50cm below surface, were interpreted as being the remains of meals of the survivors who were working on the forge site. Smith hypothesised that Jerling's original porcelain find site on the dune top, where his house was subsequently built, was probably the site of the survivors camp, while the slag finds represented the remains of a workshop area. "They built wooden structures, including a church, and grew food in gardens. They also fished and bartered for cattle from the local Khoi in exchange for pieces of iron" (Smith 1986:1). Rudner (n.d) has described the artefacts and likely camp layout and recounts entries from the diary of one of the survivors, a Jesuit priest, in the article by Storrar (1977), describing some of the temporary buildings. No burials have ever come to light in the area, except for a skeleton found at a caravan park which used to be adjacent to the Jerling property (Rudner n.d.). Said to have been of a "tall" man, no further information is available to know if this has anything to do with the San Goncalo?

In 1993, additional development occurred on the site and was preceded by an impact assessment (Hart & Halkett 1993). A thorough inspection of the lots to be developed on the dune cordon failed to reveal any pre-colonial shell middens of significance. A thin, disturbed scatter of mixed shell was noted adjacent to the garden of the Jerling's old house, but shovel tests failed to reveal any in situ lenses. An inspection of the slope below Robberg Road where property lots 9-25 were to be developed, did not reveal any archaeological material that would be adversely impacted by the development. Middle Stone Age (MSA) artefacts were observed along the rocky slope close to the Robberg road but were not affected by the proposed development. No ceramics of the type found by Jerling were recognised during the survey, or to our knowledge during subsequent construction activities. As Rudner has noted, the more valuable finds were probably removed when the crew left in the new vessels, and perhaps what was found by Jerling was all that was left behind?

Other surveys in this area of Plettenberg Bay have usually preceded the construction of housing estates. Kaplan (2000a) prepared a baseline study of Ptn 60/443, which lies to the west of the vlei. He writes that no significant archaeological sites were located during the baseline study, although he also says that "relatively large numbers of Early Stone Age (ESA) and Middle Stone Age (MSA) tools, including handaxes, cleavers, choppers, large flakes, flaked cobbles, and cores were located on a series of sheet washed gravel slopes behind Whale Rock. Diffuse scatters of ESA and MSA tools, including cleavers, flaked cobbles, flakes, and chunks were also located on the north-east facing slopes on the rocky ridge above Whale Rock, overlooking the vlei. In addition, a few MSA flakes and some ESA material were found on loose gravel on steep vegetated slopes in the extreme north-western portion of the site". He considered the material to be in disturbed context and gave it a low significance rating

In that same year, Kaplan (2000b) looked at another proposed development on Ptns 59 and 68/443, to the south of Ptn 60/443 looked at earlier. Most of the land for development was located on the high ridge to the west of the vlei, though a portion of the site is shown to extend almost to the coast, adjacent to the Jerling property, where, according to his Figure 2 (Kaplan 2000a), the old caravan/camp site was located.

He writes that "no coherent archaeological sites were located during the baseline study of Robberg Estate. No archaeological remains were located in either Phase 1A or Phase 1B of the proposed development. A handful of Early and Middle Stone Age artefacts were, however, located alongside the gravel road leading to the entrance of the Robberg Camp Site. Some artefacts were also located alongside the few gravel roads which are present in the study area These included large and medium-sized flakes, chunks and split cobbles, all in quartzite. Significance of finds is low."

In 2001, Webley assessed Ptn 57/443, immediately to the south of Ptns 66 and 67. She surveyed the site on foot and recorded three places where material was found. One of these turned out to be the site of a number of rhizoliths (calcified roots) and was thus of no relevance to the archaeology. Both of the remaining two sites contained scatters of shellfish. One, located in the highly mobile sand on the edge of the beach is likely to be recent and possibly associated with fishermen, while the other, site 2, is located in the middle of the property and consisted of a diffuse scatter of marine shell over a large area (at least

30m x 30m). Webley writes: "Some of the (shell) fragments (white and brown mussel) are quite large and complete, suggesting that they may be of more recent origin. One small piece of modern white china was found in this same area. It is possible that this marine shell scatter may also be of recent origin. However, the size of the distribution as well as the location of the scatter over a large flat area on the top of the ridge overlooking the sea, makes it an ideal settlement area for prehistoric inhabitants.....It is possible that a prehistoric shell midden may be situated beneath the soil surface."

The absence of any rocky shoreline between Robberg and Beacon Isle, would have meant that any of the more common limpets favoured by LSA people would have had to be collected some distances away, and carried back if people were indeed camping in this area. The lack of even the most rudimentary stone flakes with the shell scatter would suggest that possibly it may also be more recent, or indeed be entirely the result of gull dropping.

There are no obviously apparent reasons why the survivors of the *Sao Goncalo* would be doing anything more than foraging to the north of their presumed encampment. If they had buried the deceased crew, it was likely to have been closer to their encampment, and similarly, cargo is more likely to have been buried closer to the camp. No significant numbers of burials have, to our knowledge, ever been reported during any construction in the area.

4.3 Data gathering

The fieldwork component of the Archaeological Impact Assessment was conducted by Mr D Halkett of ACO Associates cc on the 16th March 2022. Visibility of the ground surface in the project site was considered to be good in places but limited in others due to bush growth and thick surface leaf litter. There were no limitations in terms of access. There were a number of open clearings to provide excellent visibility. The area was assessed on foot, except in one or two small areas where vegetation was thick, but this is not expected to affect the conclusions of the study.

Prior to embarking on the fieldwork, aerial photographs and topographic maps from a range of periods had been examined to determine if any heritage indicators that may need to be inspected could be identified.

The area did not appear to contain much apart from one suspected structure that was, based on its shape, assumed to be a reservoir. While on site, a second concrete slab was located which suggested another structure.

Search tracks were recorded by means of a Garmin GPS receiver to document the searched area (Figure 5) and identified heritage resources were assigned Lat-Lon co-ordinates, described and photographed. The few identified heritage resources observed are also plotted on Figure 5 and described in Section 5. Heritage resources have been provisionally graded for significance according to the system used by Heritage Western Cape as defined in the Table 2.

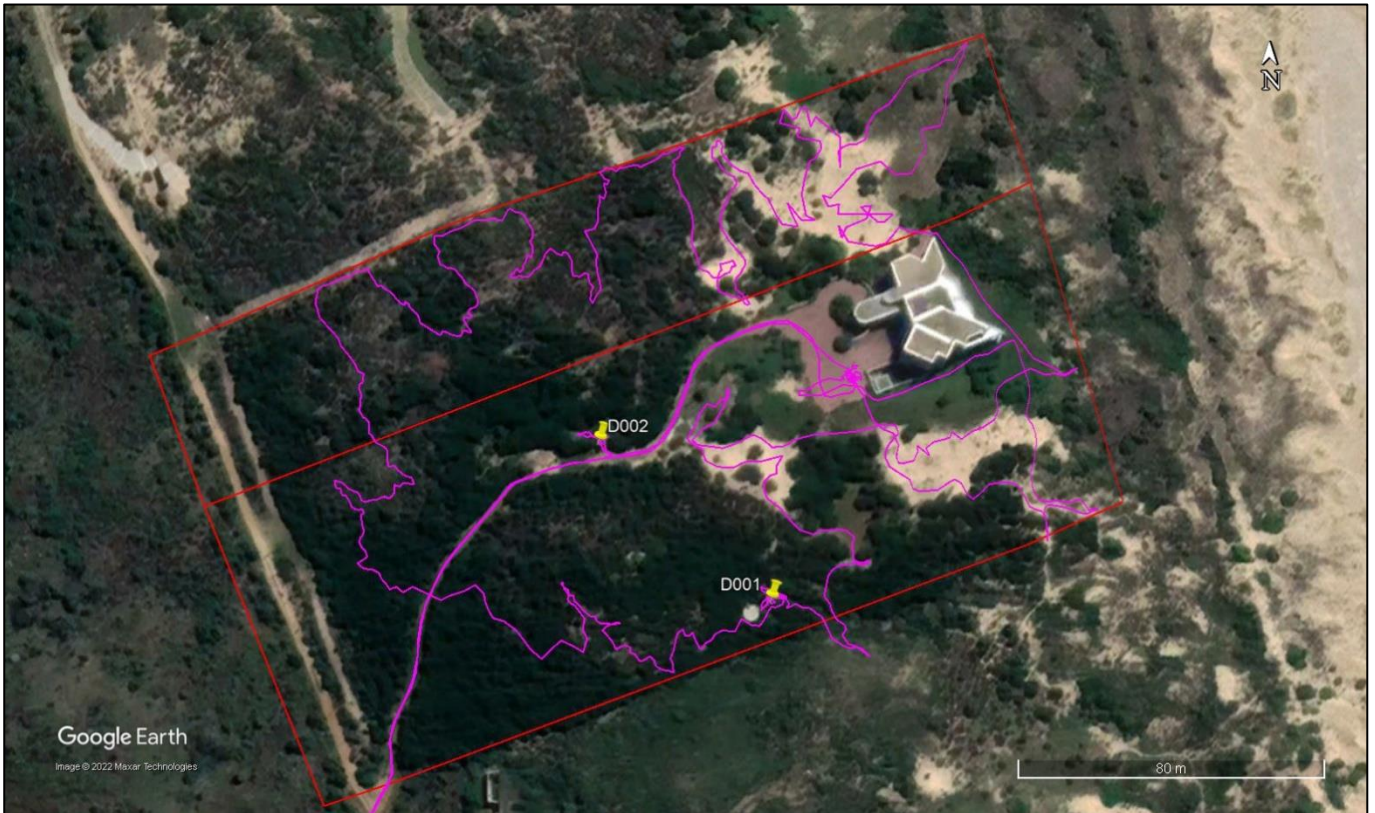


Figure 5: Sites and track paths map. Farm portions (red), ruined structures (yellow pins), tracks (magenta lines). The new construction to the north of the boundary of Ptn 67, is too recent to be visible on this aerial photograph.

5. FIELDWORK OBSERVATIONS

5.1 Pre-colonial sites

No pre-colonial sites, or traces were observed. A number of cuttings into the dunes on the site were examined and did not reveal any buried lenses of archaeological material. We also examined the fresh cuttings into the dunes on a construction site immediately to the north of Ptn 67. This is very recent and does not yet show on the Google Earth image used for Figure 5. It is not possible to say if anything may be deeply buried in thickly wooded dense vegetation, but given the context of the site alongside a sandy beach, we believe there is a low possibility of significant material manifesting.

While it is not impossible that burials could occur on Ptns 66 and 67/443, experience indicates that pre-colonial burials are usually associated with, or near occupation sites. As we have not identified any obvious signs of pre-colonial occupation, the likelihood of finding burials during construction is considered to be very low.



Plates 9&10: Dune cuttings and deflations on the site could be inspected for Pre-colonial and historical traces



Plate 11: Dune cuttings and deflations on the site could be inspected for Pre-colonial and historical traces. **Plate 12:** A large spoil heap at a construction site on the adjacent property was examined over the fence. No shellfish were observed.



Plate 13: Dune cuttings and spoil heaps at a construction site on the adjacent property (north) failed to reveal any signs of pre-colonial or historical traces.

5.2 Built environment

Two clusters of structures were observed. We estimate that both date to the 20th century based on the use of concrete slabs, mortar and plater work. Positions are consistent with structures shown on the 1966 topographic maps. Requests for the high resolution 1936 and 1958 aerial photos covering the area from Chief Directorate: National Geo-spatial Information) Geospatial Portal was not fulfilled by the time of submission. The low resolution image from 1936 is inconclusive, while they may be faintly determined on the low resolution 1958 image. It appears that the access track can be seen.

5.2.1 Structures D001

This cluster of structures is located at S34.090396° E23.370596°. Its location is easily spotted due to the surviving chimney that protrudes above the prevailing bushes (Figure 5, Plates 1,3, 11).

The structures consist of a large round water reservoir (covered) (Plate 14) and an associated “dwelling” consisting of two parallel concrete slabs (Plates 15, 16), with a hearth and chimney at one end between the slabs (Plates 16, 18,19). The area in front of the hearth between the slabs does not appear to have a slab, but a may have been a brick surface. A smaller water tank is found to the east of the chimney (Plates 16, 17) and is made with corrugated iron re-enforced with cement on the outside. Grooves in the edges of the slabs suggests the walls were of timber rather than corrugated iron. Very little refuse was observed around the cluster though the bush and leaf litter was quite thick. The layout is not what would be expected of a vernacular building, though the style of the chimney is quite traditional. It is possible that this represents the remains of a fishing/holiday shack.

Proposed grade: NCW.



Plate 14: The large, covered reservoir. **Plate 15:** One of the concrete slabs



Plate 16: Chimney and a small water tank next to it. **Plate 17:** Detail of the small water tank



Plate 18: A concrete platform in front of the hearth. Grooves for wood panels can be seen in the edges of the slabs behind. **Plate 19:** The brick hearth and chimney is of a vernacular style although layout of the slabs does not suggest a vernacular shape.

5.2.2 Structure D002

A second “structure” at S34.090056° E23.370150° is located immediately alongside the access track (Figure 5, Plates 20, 21). This consists of just a concrete slab and the remains of a small water tank, of the same corrugated iron and cement as at D001. There was no sign of a hearth or other associated features.

Proposed grade: NCW.



Plate 20: Concrete slab at D002. **Plate 21:** The remains of a small water tank at the one end of the slab.

6. IMPACT ASSESSMENT

6.1 Methodology for assessing impact

Potential impacts of the proposed project were identified based on the baseline data, project description, review of other studies for similar projects and professional experience.

The significance of the impacts was assessed using the impact rating methodology in Appendix D. The significance of an impact is defined as a combination of the consequence of the impact occurring and the probability that the impact will occur.

Practical mitigation and optimisation measures that can be implemented effectively to reduce or enhance the significance of impacts were identified. The impact significance was re-rated assuming the effective implementation of mitigation measures.

Only one layout has been assessed but we have considered the properties as a whole so layout is not crucial to the impact on archaeological heritage resources

No pre-colonial archaeological resources have been identified and thus no impacts from construction or operation phases are anticipated

6.2 Potential impacts: construction phase

- Impacts on built environment archaeological resources during the construction phase – construction of 9 houses, roads and associated infrastructure;

6.2.1 Impacts on built environment during construction

The two structures at D001 and D002 will be impacted by the proposed development. These are however not considered to be significant heritage resources. Proposed grade: NCW. The impact without mitigation is assessed to be **low negative** but no mitigation is proposed for either of the structures.

Table 6.2: Impacts on the built environment during construction

	Extent	Intensity	Duration	Consequence	Probability	Significance	Status	Confidence
Without mitigation	Local 1	Low 1	Long-term 3	Low 5	Definite	LOW	– ve	High
Essential mitigation measures:								
<ul style="list-style-type: none"> • The two structures are not considered significant heritage resources and no mitigation is proposed. 								
With mitigation	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

6.3 Potential impacts: operational phase

- Impacts on archaeological/heritage resources resulting from use/maintenance of the development;

Any possible impacts would occur at the construction phase, and impacts at the operational phase are considered non-existent in the light of the findings of the assessment.

6.4 Cumulative impacts

Cumulative impacts on archaeological and historical built heritage resources appear to be limited to non-existent overall. The baseline study has not identified significant archaeological resources at, or alongside the site. The encampment of the survivors of the wreck of the *Sao Goncalo* is far enough away not to be an issue with this development.

6.4.1 The “No Go” option

If the no-go option is invoked, the status quo would be maintained and natural and man-made processes would continue to act on the heritage resources. Based on the findings, we do not believe that the “no-go” option, as far as it applies to archaeological resources, should be applied in this case.

7. FINDINGS AND RECOMMENDATIONS

7.1 Pre-colonial heritage

No pre-colonial heritage resources have been identified on the site and the proposed activities are not expected to result in the loss of significant heritage resources. Although we consider it a low possibility that material will be found, we cannot exclude the possibility in its entirety given that material could be buried. If any archaeological resources (e.g. shell layers, human remains) are identified during construction, these must be immediately reported to the Archaeologist and Heritage Western Cape to indicate a way forward. In the case of human remains, as soon as they are recognised they must be cordoned off and not disturbed further. Work may carry on elsewhere until the finds have been examined.

7.2 Built environment

The built environment is largely limited to two semi-ruinous structures (D001 and D002), provisionally graded NCW. No mitigation has been proposed.

7.3 Impact Assessment

The findings of the impact assessment evaluated in terms of the Impact Methodology (Appendix D), suggests that impacts on archaeological heritage resources will be low without mitigation. The low heritage significance of the resources does not warrant implementation of formal mitigation, but discovery of buried archaeological material must be reported.

8. CONCLUSION

Overall we find that the proposed residential development and associated infrastructure will not result in the loss of significant heritage resources and no mitigation is proposed. The proposed development is supported.

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Appendix A: Specialist CV

Details

Name: Mr David John Halkett

ID number: 5807235148080

Date of Birth: 23.07.1958

Company: ACO Associates cc (Registration 2008/234490/23)

Principal business: Archaeological/Heritage Impact Assessment

Position: Director (Principal investigator)

Profession: Archaeologist, Heritage Impact Assessor

Years with Firm: 8

Years' experience: 27

Previous employment: Archaeology Contracts Office, UCT, 24 years

Nationality: South African

HDI Status: White Male

Physical work address: 8 Jacobs Ladder, St James, 7945

Postal address: 8 Jacobs Ladder, St James, 7945

E-mail: david.halkett@aco-associates.com

Education

1991: M.A. (Archaeology) University of Cape Town

1982: B.A. (Hons) (Archaeology) University of Cape Town

1980: B.A. University of Cape Town

1976: Pinelands High School (matric exemption)

Professional Qualifications

MA (Archaeology) UCT

Registered member of the Association of Southern African Professional Archaeologists (ASAPA)

Languages

First language – English

Second language – Afrikaans (speaking, reading and writing).

Expertise

Having co-directed the Archaeology Contracts Office at the University of Cape Town for 24 years (one of the first heritage resource management companies in South Africa), David is now a director of ACO Associates cc, which has taken over from the UCT operation and retains most of its staff. ACO Associates provides Heritage and Archaeological Impact Assessment services to a range of clients in order for them to comply with Environmental and Heritage Legislation. He is a long standing member of the Association of Southern African Professional Archaeologists (ASAPA) and an accredited Principal Investigator of the Cultural Resource Management (CRM) section. With 28 years of working experience in heritage impact assessments, conservation and archaeological research, he has worked in a wide variety of contexts and participated in over a thousand heritage projects ranging from Heritage and archaeological impact assessments, to mitigation of archaeological sites in suburban, rural and industrial (mining) situations. He is an accredited with ASAPA to act as a Principal Investigator on Earlier Middle and Later Stone Age sites, especially coastal shell middens and rock painting sites, and Colonial period sites. David's broad experience in heritage management has led to his participation as an advisor to the National Monuments Council up until 2000, and more recently he served as a member of two Heritage Western Cape regulatory committees, the Impact Assessment Review Committee (IACOM) and the Archaeology, Palaeontology and Meteorites Committee (APM), and he has served on occasion as a forensic consultant to the Missing Persons Unit of the National Prosecuting Authority (NPA). He has led field projects on behalf of both local and overseas research organisations, and continues to participate in archaeological research on an ad hoc basis. Research interests include aspects of the Middle Stone

Age, Later Stone Age and Colonial era of southern Africa. He has co-authored a number of peer reviewed journal articles on these topics. ACO Associates cc has assisted on numerous renewable energy projects in the Northern, Eastern and Western Cape and David has been personally involved in a number of these projects.

Summary of other experience

2008-present: Director and Principal Investigator: ACO Associates cc. Projects undertaken in the Eastern, Northern and Western Cape Provinces.

1988-2012: Principal Investigator and director: Archaeology Contracts Office, University of Cape Town. Projects undertaken in the Eastern, Northern and Western Cape Provinces.

1997: Junior Research Officer: Palaeoanthropology Research Unit, University of the Witwatersrand, (part time apt for one year) Cape Town based.

1984: Part time research assistant: Spatial Archaeology Research Unit, University of Cape Town

Relevant experience

Employment since 1988 has required management of all aspects of heritage projects, and management of the day to day functions of the business (including Financial, HR).

Selected recent commercial Heritage management projects:

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Appendix B: Declaration of Independence

Declaration of Independence

I, David John Halkett, declare that I am an independent consultant and have no business, financial, personal or other interest in the proposed development project, application or appeal in respect of which I was appointed other than fair remuneration for work performed in connection with the activity, application, or appeal. There are no circumstances that compromise the objectivity of my performing such work.

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

David John Halkett
Heritage Impact Assessor and Archaeologist
ACO Associates cc
25 March 2022

Appendix C: HWC comment on the NID submission

PAGE 1 OF 2

Our Ref: HM/ EDEN/GARDEN ROUTE/ BITOU / PLETTENBERG BAY / PORTION 66 AND 67 OF FARM 443
Case No.: 21021901SB1008E
Enquiries: Stephanie Barnardt
E-mail: stephanie.barnardt@westerncape.gov.za
Tel: 021 483 5959



Andrew West
andrewwest@isat.co.za, kyle@thekeep.co.za

RESPONSE TO NOTIFICATION OF INTENT TO DEVELOP: HIA REQUIRED
In terms of Section 38(8) of the National Heritage Resources Act (Act 25 of 1999) and the Western Cape
Provincial Gazette 6061, Notice 298 of 2003

NOTIFICATION OF INTENT TO DEVELOP: PROPOSED RESIDENTIAL ESTATE ON PORTIONS 66 & 67 OF FARM 443, PLETTENBURG, SUBMITTED IN TERMS OF SECTION 38(1) OF THE NATIONAL HERITAGE RESOURCES ACT (ACT 25 OF 1999)

CASE NUMBER: 21021901SB1008E

The matter above has reference.

Heritage Western Cape is in receipt of your application for the above matter received. This matter was discussed at the Heritage Officers Meeting held on 25 October 2021.

You are hereby notified that, since there is reason to believe that the proposed residential estate on Portions 66 & 67 of Farm 443, Plettenburg, will impact on heritage resources, HWC requires that a Heritage Impact Assessment (HIA) that satisfies the provisions of Section 38(3) of the NHRA be submitted. Section 38(3) of the NHRA provides

- (3) *The responsible heritage resources authority must specify the information to be provided in a report required in terms of subsection (2)(a): **Provided that the following must be included:***
- (a) *The identification and mapping of all heritage resources in the area affected;*
 - (b) *an assessment of the significance of such resources in terms of the heritage assessment criteria set out in section 6(2) or prescribed under section 7;*
 - (c) *an assessment of the impact of the development on such heritage resources;*
 - (d) *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;*
 - (e) *the results of consultation with communities affected by the proposed development and other interested parties regarding the impact of the development on heritage resources;*
 - (f) *if heritage resources will be adversely affected by the proposed development, The consideration of alternatives; and*
 - (g) *plans for mitigation of any adverse effects during and after the completion of the proposed development.*

(Our emphasis)

This HIA must in addition have specific reference to the following:

- Archaeology impact assessment study
- Palaeontology impact assessment study
- Visual impact assessment study

www.westerncape.gov.za/cas

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PAGE 2 OF 2

Our Ref: HM/ EDEN/GARDEN ROUTE/ BITOU / PLETTENBERG BAY / PORTION 66 AND 67 OF FARM 443
Case No.: 21021901SB1008E
Enquiries: Stephanie Barnardt
E-mail: stephanie.barnardt@westerncape.gov.za
Tel: 021 483 5959



The HIA must have an overall assessment of the impacts to heritage resources which are not limited to the specific studies referenced above.

The required HIA must have an integrated set of recommendations.

The comments of relevant registered conservation bodies; all Interested and Affected parties; and the relevant Municipality must be requested and included in the HIA where provided. Proof of these requests must be supplied.

Please note, should you require the HIA to be submitted as a Phased HIA, a written request must be submitted to HWC prior to submission. HWC reserves the right to determine whether a phased HIA is acceptable on a case-by-case basis.

If applicable, applicants are strongly advised to review and adhere to the time limits contained the Standard Operational Procedure (SOP) between DEADP and HWC. The SOP can be found using the following link <http://www.hwc.org.za/node/293>

Kindly take note of the HWC meeting dates and associated agenda closure date in order to ensure that comments are provided within as Reasonable time and that these times are factored into the project timeframes.

HWC reserves the right to request additional information as required.

Should you have any further queries, please contact the official above and quote the case number.

.....
Colette M Scheermeyer
Deputy Director



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Appendix D: Impact Assessment Methodology

Impact Assessment Methodology for EIAs - Instructions to Specialists

The significance of all potential impacts that would result from the proposed Project is determined in order to assist decision-makers. The significance rating of impacts is considered by decision-makers, as shown below.

- **INSIGNIFICANT:** the potential impact is negligible and **will not** have an influence on the decision regarding the proposed activity.
- **VERY LOW:** the potential impact is very small and **should not** have any meaningful influence on the decision regarding the proposed activity.
- **LOW:** the potential impact **may not** have any meaningful influence on the decision regarding the proposed activity.
- **MEDIUM:** the potential impact **should** influence the decision regarding the proposed activity.
- **HIGH:** the potential impact **will** affect a decision regarding the proposed activity.
- **VERY HIGH:** The proposed activity should only be approved under special circumstances.

The **significance** of an impact is defined as a combination of the **consequence** of the impact occurring and the **probability** that the impact will occur. The significance of each identified impact⁴ must be rated according to the methodology set out below:

Step 1 – Determine the **consequence** rating for the impact by determining the score for each of the three criteria (A-C) listed below and then **adding** them⁵. The rationale for assigning a specific rating, and comments on the degree to which the impact may cause irreplaceable loss of resources and be irreversible, must be included in the narrative accompanying the impact rating:

Rating	Definition of Rating	Score
A. Extent – <i>the area over which the impact will be experienced</i>		
Local	Confined to project or study area or part thereof (e.g. site)	1
Regional	The region, which may be defined in various ways, e.g. cadastral, catchment, topographic	2
(Inter) national	Nationally or beyond	3
B. Intensity – <i>the magnitude of the impact in relation to the sensitivity of the receiving environment, taking into account the degree to which the impact may cause irreplaceable loss of resources</i>		
Low	Site-specific and wider natural and/or social functions and processes are negligibly altered	1
Medium	Site-specific and wider natural and/or social functions and processes continue albeit in a modified way	2
High	Site-specific and wider natural and/or social functions or processes are severely altered	3
C. Duration – <i>the timeframe over which the impact will be experienced and its reversibility</i>		
Short-term	Up to 2 years (i.e. reversible impact)	1
Medium-term	2 to 15 years (i.e. reversible impact)	2
Long-term	More than 15 years (state whether impact is irreversible)	3

⁴ This does not apply to minor impacts which can be logically grouped into a single assessment.

⁵ Please note that specialists are welcome to discuss the rating definitions as they apply to their study with the EIA team.

The combined score of these three criteria corresponds to a **Consequence Rating**, as follows:

Combined Score (A+B+C)	3 – 4	5	6	7	8 – 9
Consequence Rating	Very low	Low	Medium	High	Very high

Example 1:

Extent	Intensity	Duration	Consequence
Regional 2	Medium 2	Long-term 3	High 7

Step 2 – Assess the probability of the impact occurring according to the following definitions:

Probability– the likelihood of the impact occurring	
Improbable	< 40% chance of occurring
Possible	40% - 70% chance of occurring
Probable	> 70% - 90% chance of occurring
Definite	> 90% chance of occurring

Example 2:

Extent	Intensity	Duration	Consequence	Probability
Regional 2	Medium 2	Long-term 3	High 7	Probable

Step 3 – Determine the overall significance of the impact as a combination of the consequence and probability ratings, as set out below:

		Probability			
		Improbable	Possible	Probable	Definite
Consequence	Very Low	INSIGNIFICANT	INSIGNIFICANT	VERY LOW	VERY LOW
	Low	VERY LOW	VERY LOW	LOW	LOW
	Medium	LOW	LOW	MEDIUM	MEDIUM
	High	MEDIUM	MEDIUM	HIGH	HIGH
	Very High	HIGH	HIGH	VERY HIGH	VERY HIGH

Example 3:

Extent	Intensity	Duration	Consequence	Probability	Significance
Regional 2	Medium 2	Long-term 3	High 7	Probable	HIGH

Step 4 – Note the status of the impact (i.e. will the effect of the impact be negative or positive?)

Example 4:

Extent	Intensity	Duration	Consequence	Probability	Significance	Status
Regional 2	Medium 2	Long-term 3	High 7	Probable	HIGH	- ve

Step 5 – State your level of confidence in the assessment of the impact (high, medium or low).

Depending on the data available, you may feel more confident in the assessment of some impact than others. For example, if you are basing your assessment on extrapolated data, you may reduce the confidence level to low, noting that further groundtruthing is required to improve this.

Example 5:

<i>Extent</i>	<i>Intensity</i>	<i>Duration</i>	<i>Consequence</i>	<i>Probability</i>	<i>Significance</i>	<i>Status</i>	<i>Confidence</i>
Regional 2	Medium 2	Long-term 3	High 7	Probable	HIGH	- ve	High

Step 6 – Identify and describe practical mitigation and optimisation measures that can be implemented effectively to reduce or enhance the significance of the impact. Mitigation and optimisation measures must be described as either:

- **Essential:** best practice measures which must be implemented and are non-negotiable; and.
- **Best Practice:** recommended to comply with best practice, with adoption dependent on the proponent's risk profile and commitment to adhere to best practice, and which must be shown to have been considered and sound reasons provided by the proponent if not implemented.

Essential mitigation and optimisation measures must be inserted into the completed impact assessment table. The impact should be re-assessed with mitigation, by following Steps 1-5 again to demonstrate how the extent, intensity, duration and/or probability change after implementation of the proposed mitigation measures. *Best practice* measures must also be inserted into the impact assessment table, but not considered in the "with mitigation" impact significance rating.

Example 6: A completed impact assessment table

	<i>Extent</i>	<i>Intensity</i>	<i>Duration</i>	<i>Consequence</i>	<i>Probability</i>	<i>Significance</i>	<i>Status</i>	<i>Confidence</i>
Without mitigation	Regional 2	Medium 2	Long-term 3	High 7	Probable	HIGH	- ve	High
Essential mitigation measures: <ul style="list-style-type: none"> • Xxx1 • Xxx2 • Xxx3 Best practice mitigation measures: <ul style="list-style-type: none"> • Yyy1 • Yyy2 								
With mitigation	Local 1	Low 1	Long-term 3	Low 5	Improbable	VERY LOW	- ve	High

Step 7 – Summarise all impact significance ratings as follows in your executive summary:

Impact	<i>Consequence</i>	<i>Probability</i>	<i>Significance</i>	<i>Status</i>	<i>Confidence</i>
Impact 1: XXXX	Medium	Improbable	LOW	-ve	High
With Mitigation	Low	Improbable	VERY LOW		High
Impact 2: XXXX	Very Low	Definite	VERY LOW	-ve	Medium
With Mitigation:	<i>Not applicable</i>				