

# Archaeological Impact Assessment

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. Requested by Heritage Western Cape on 14 October 2021  
(HWC Case No. 20190809SB0909E)

## Proposed Residential Development on Erf 3927 (Still Bay West), Riversdale District and Hessequa Municipality

prepared for

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10 February 2022



## Executive Summary

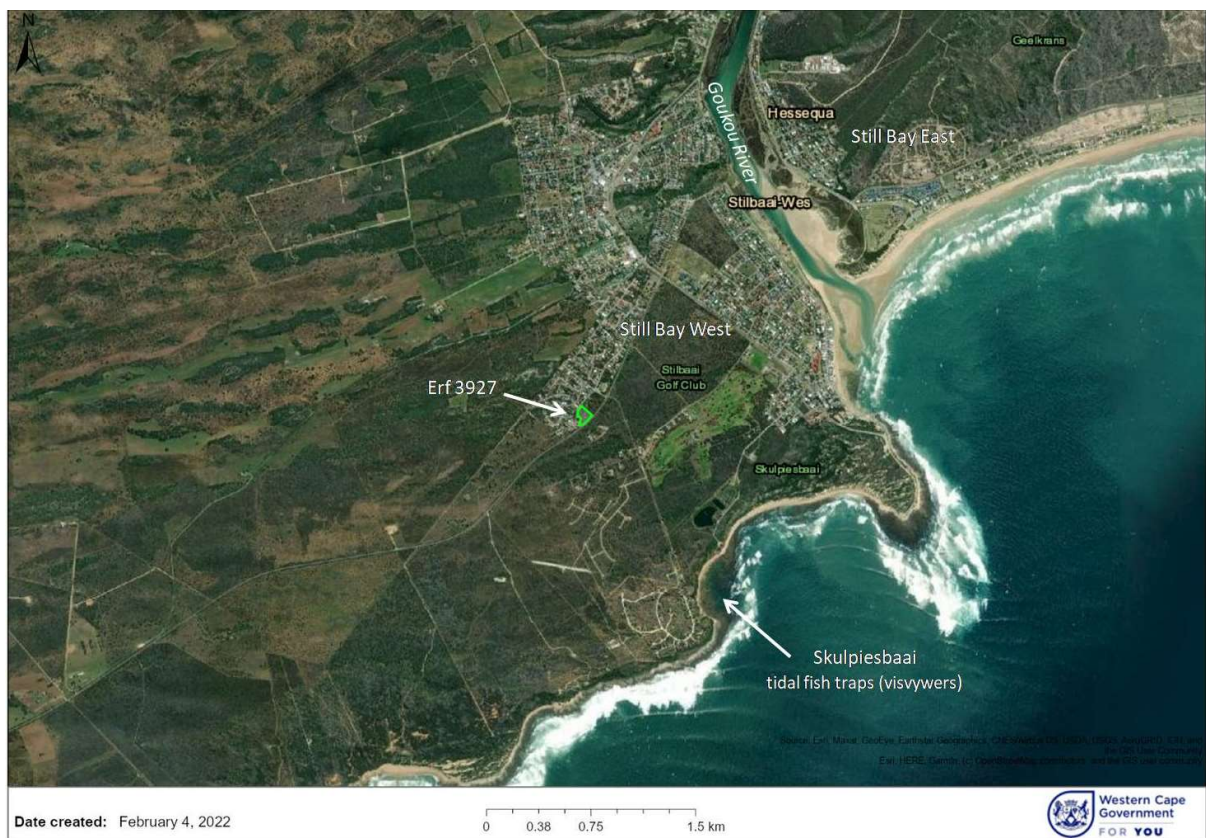
### Site Name

No known heritage sites on or within direct proximity of Erf 3927, Still Bay West.

### Location

Off Bessie Street and immediately north of the Jongensfontein Road (Main Road 331), Erf 3927, Still Bay West, Riversdale District and Hessequa Municipality, Western Cape Province. The approximate centre point of the property is at 34°23'08.85" S 21°24'10.70" E.

### Locality Plan



Green polygon represents the affected property, Erf 3927, Still Bay West, Western Cape Province (<https://gis.elsenburg.com/apps/cfm/>).

### Description of Proposed Development

The project involves twelve medium density residential Erven, a public open space, and a portion of private road.

### Identified Archaeological Resources

Through a desktop study, a literature review, an examination of Surveyor-General diagrams, historic and current aerial photographs as well as a comprehensive field



investigation, the only heritage resources identified on the affected property are two isolated Stone Age implements that are of low to no significance, and are Not Conservation Worthy.

### **Anticipated Impacts on Archaeological Resources**

The proposed development will damage or destroy the context of the two identified Stone Age stone implements, but since they are Not Conservation Worthy, the impact to archaeological resources will be insignificant.

### **Recommendations**

- There are no fatal flaws or objections to the full authorisation of the proposed development provided that the below recommendations are implemented.
- No further archaeological studies or mitigation / management measures are necessary for identified archaeological resources.
- If any human remains or significant archaeological materials are exposed during development activities, then the find should be protected from further disturbance and work in the immediate area should be halted and Heritage Western Cape must be notified immediately. These heritage resources are protected by Section 36(3)(a) and Section 35(4) of the NHRA (Act 25 of 1999) respectively and may not be damaged or disturbed in any way without a permit from the heritage authorities. Any work in mitigation, if deemed appropriate, should be commissioned and completed before construction continues in the affected area and will be at the expense of the developer.
- The above recommendations should be included in the Environmental Management Program (EMPr) for the proposed residential development.
- If an EMPr is not developed for the project, then the above recommendations must be implemented by the applicant or developer.

### **Author(s) / Contributor(s) and Date**

**Archaeological** specialist study: Peter Nilssen, February 2022



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# 1. Introduction

## 1.1. Site, description and location

Erf 3927 is 8010m<sup>2</sup> in extent, and is situated between Bessie Street and the Jongensfontein Road (Main Road 331), Still Bay West, Riversdale District and Hessequa Municipality, Western Cape Province (Figures 1 and 2). Erf 3927 is currently an unregistered portion of Erf 3917, Still Bay West, and is registered to Daily Double Trading 447 CC and held under title deed T 80007/1997 (De Kock 2021).

The approximate centre point of the property is at 34°23'08.85" S 21°24'10.70" E. (see red star in Figure 1 and green polygon in Figure 2).

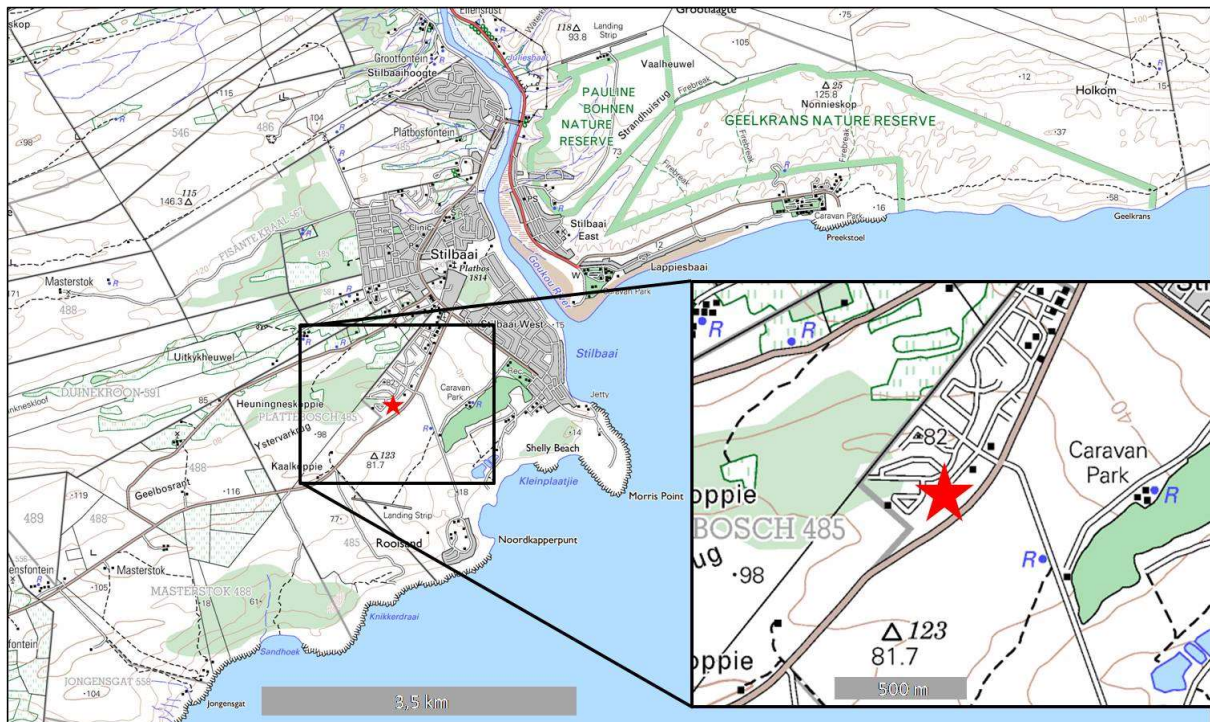


Figure 1. General location of Erf 3927, Still Bay West, Western Cape Province (red star). Enlarged portion of 1:50 000 topographic map 3421AD STILBAAI (1999). Courtesy of the Chief Directorate: Surveys and Mapping, Mowbray. (A4 version on page 37)





Figure 2. Aerial image showing the location of Erf 3927 (green polygon), Still Bay West, Western Cape Province (<https://gis.elsenburg.com/apps/cfm/>). (A4 version on page 38)

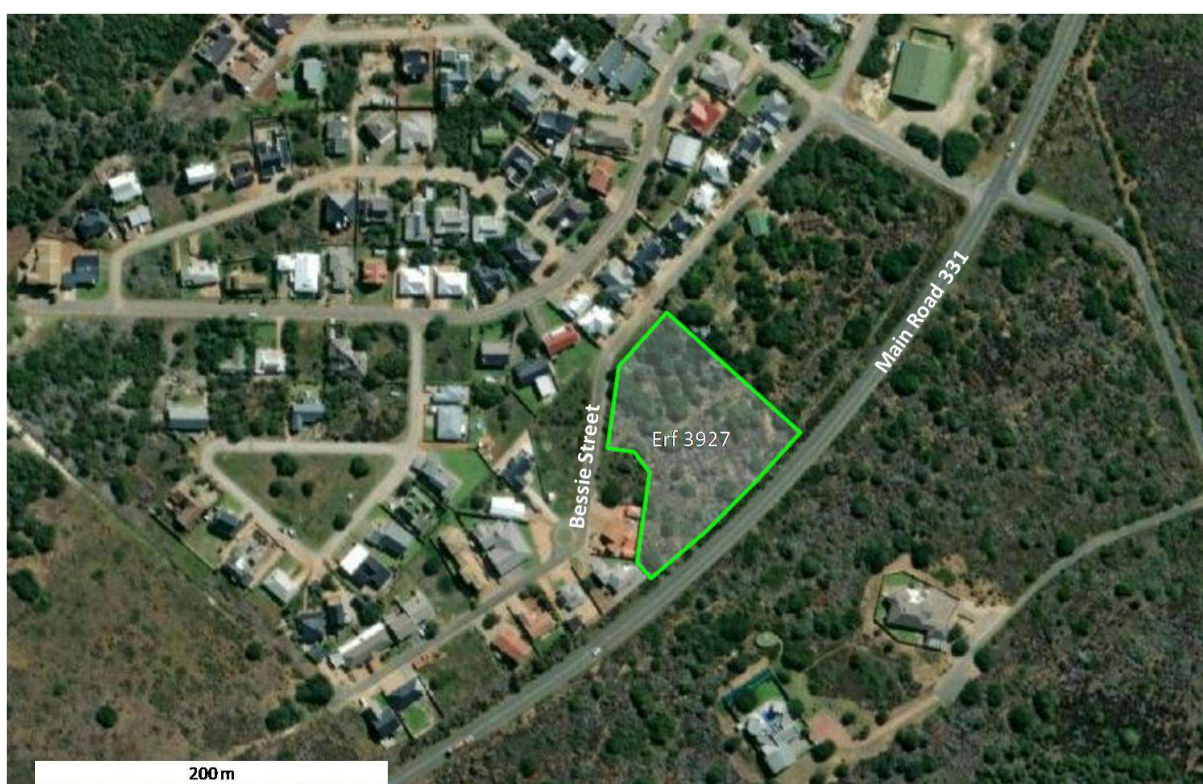


Figure 3. Enlarged from Figure 2 showing the immediate surroundings and context of Erf 3927, Still Bay West (<https://gis.elsenburg.com/apps/cfm/>). (A4 version page 39)



## **1.2. Terms of reference**

This author was appointed to compile an Archaeological Impact Assessment (AIA) that meets the requirements of Heritage Western Cape (HWC) and that is founded on both a desktop study and a site investigation. The overall purpose of an AIA is to identify archaeological resources in the affected area, to assess their significance and sensitivity, to determine the potential impacts on such resources, and to make recommendations to avoid and/or minimize such impacts by means of management and/or mitigation measures. This study was undertaken according to best practice principles and meets standards required by the heritage authorities in terms of the National Heritage Resources Act, No. 25 of 1999 (Heritage Western Cape 2021b).

Summary objectives of an AIA:

- To identify and assess the nature, sensitivity and significance of archaeological resources in the receiving environment;
- To identify the impact of the proposed development on such resources as well as options for mitigation and/or management in order to minimize potential negative impacts, and to recommend measures for mitigation / management where necessary; and
- To identify archaeological resources and issues that may require further investigation.

A Notification of Intent to Develop (NID) was discussed at a HWC Heritage Officers Meeting on 11 October 2021, to which they responded on 14 October 2021, requesting a HIA with specific reference to an AIA and a Desktop Palaeontological Impact Assessment (PIA). The report submitted here fulfils the requirement for the archaeological component of the HIA.

## **1.3. Scope and purpose of the report**

“Reports resulting from the assessment of impacts to heritage resources, or their mitigation, may determine the future management of the resources or become the final record regarding these heritage resources. It is necessary to ensure that the quality and content of such reports accurately identify, describe and record the resources prior to alteration or destruction, as well as reflect their significance and provide proposals for their management or a narrative of their alteration” (Heritage Western Cape 2021, pg 1).

The purpose of an AIA is to identify significant archaeological resources prior to development so that such resources can be protected and/or managed without detrimental and unnecessary negative impacts resulting from development activities. This AIA aims to fulfil the requirements of the heritage authorities so that they can issue a comment for consideration by the relevant environmental authority who will review the environmental application for the approval or denial of authorisation. Where necessary, an AIA provides management and/or mitigation requirements that must be complied with and included in the conditions of authorisation in the event that a project is approved.

## **1.3. The author**

Peter Nilssen has a PhD in archaeology (University of Cape Town, 2000), and is a Professional member - in good standing - of the Association of Southern African Professional Archaeologists (ASAPA), including the Cultural Resource Management section of the same



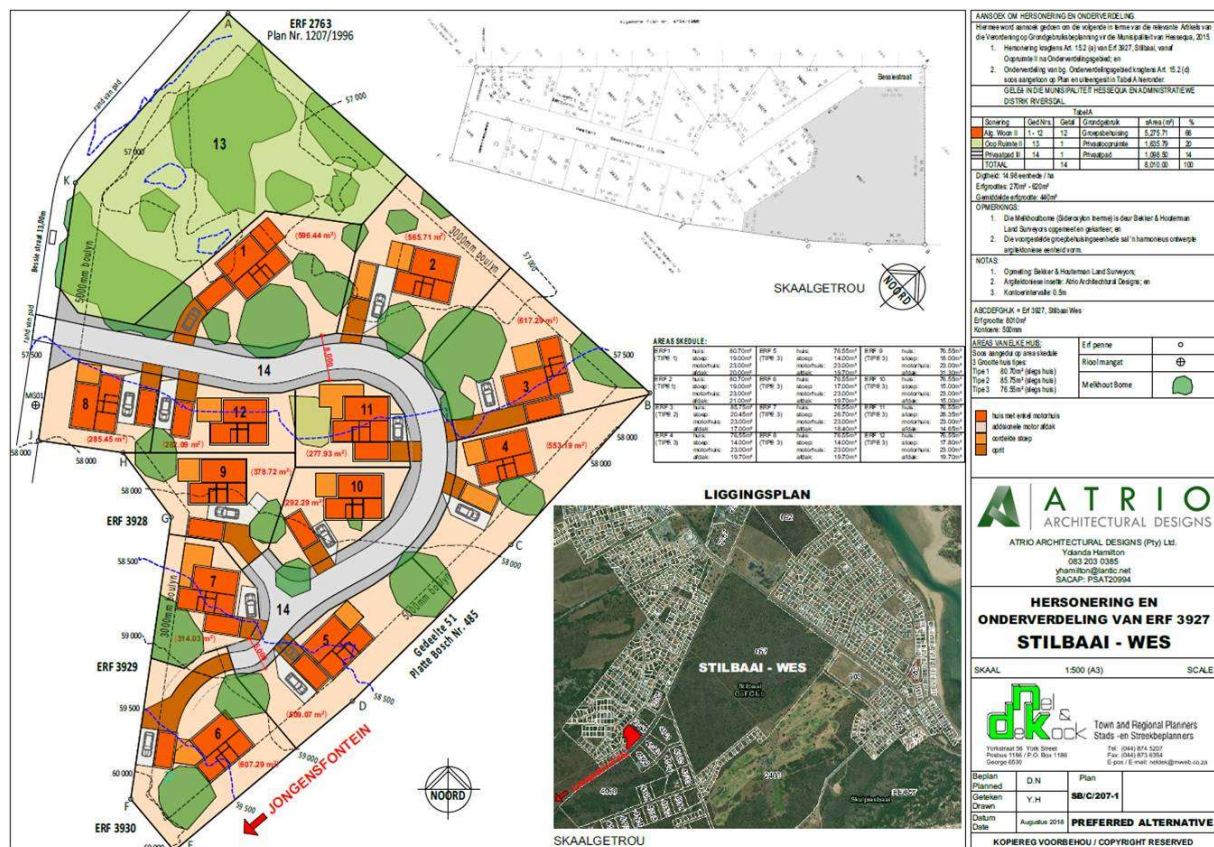
association since 1989 (ASAPA professional member # 097). He is an accredited Principal Investigator for archaeozoology (specialist analysis), Coastal, Shell Midden and Stone Age archaeology; Field Director for Colonial Period archaeology; and Field Supervisor for Iron Age archaeology and Rock Art. He has worked as a professional archaeologist in Cultural Resource Management since 1989 and has completed more than 240 heritage-related impact assessments and mitigation projects as Principal Investigator.

Peter co-initiated and co-directed archaeological research into Middle Stone Age cave sites at the Provincial Heritage Site of Pinnacle Point Site Complex near Mossel Bay, which he identified with Jonathan Kaplan in 1997. A brief CV is presented in Appendix B.

## 2. Development Proposal

### 2.1. Project description

The proposal involves subdivision and development of the existing private open space for twelve medium density single residential Erven, a public open space and a portion of private road as shown in the Site Development Plan (Figure 4). A detailed description of the proposed subdivision, development and required applications are given in the HIA.





## **2.2. Identification of Alternatives**

At the time of this writing, no alternatives are presented, but see the HIA for a more complete consideration and discussion. Apart from the No-Go option, alternative development options will not affect this investigation, assessment or recommendations made here.

## **2.3. Aspects of the Project Relevant to the Archaeological Study**

Because the proposed development involves vegetation clearing, earthmoving activities, and construction, it has the potential to damage or disturb archaeological resources in both buried and above-ground contexts. Excavations into the coversands will reach an approximate maximum depth of 1.5 m. Archaeological remains may occur in the coversands and at the interface (or on the palaeosol) between the coversands and the underlying calcrete capping of the Wankoe Formation (Pether 2021).

## **3. Legislative Context**

### **3.1. National Heritage Resources Act (NHRA), Act No. 25 of 1999**

The NHRA protects a variety of heritage resources as follows:

- Section 34: structures older than 60 years;
- Section 35: prehistoric and historical material (including ruins) more than 100 years old as well as military remains more than 75 years old, palaeontological material and meteorites;
- Section 36: graves and human remains older than 60 years and located outside of a formal cemetery administered by a local authority; and
- Section 37: public monuments and memorials.

Following Section 2, the definitions applicable to the above protections are as follows:

- Structures: “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”;
- Place (falling under structures): b) “a building or other structure which may include equipment, furniture, fittings and articles associated with or connected with such building or other structure”; c) “a group of buildings or other structures which may include equipment, furniture, fittings and articles associated with or connected with such group of buildings or other structures”; d) “an open space, including a public square, street or park”; and e) “in relation to the management of a place, includes the immediate surroundings of a place”;
- Palaeontological material: “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”;
- Archaeological material: a) “material remains resulting from human activity which are 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”; b) “rock art, being any form of painting, engraving or other graphic representation on a fixed rock surface or loose rock or stone, which was executed by



human agency and which is older than 100 years, including any area within 10m of such representation”; c) “wrecks, being any vessel or aircraft, or any part thereof, which was wrecked in South Africa, whether on land, in the internal waters, the territorial waters or in the maritime culture zone of the Republic, as defined respectively in sections 3, 4 and 6 of the Maritime Zones Act, 1994 (Act No. 15 of 1994), and any cargo, debris or artefacts found or associated therewith, which is older than 60 years or which SAHRA considers to be worthy of conservation”; and d) “features, structures and artefacts associated with military history which are older than 75 years and the sites on which they are found”;

- Meteorite: “any naturally-occurring object of extraterrestrial origin”;
- Grave: “means a place of interment and includes the contents, headstone or other marker of such a place and any other structure on or associated with such place”; and
- Public monuments and memorials: “all monuments and memorials a) “erected on land belonging to any branch of central, provincial or local government, or on land belonging to any organisation funded by or established in terms of the legislation of such a branch of government”; or b) “which were paid for by public subscription, government funds, or a public-spirited or military organisation, and are on land belonging to any private individual.”

Section 3(2) describes the types of heritage resources that should be considered to form part of the National Estate. These are as follows:

- (a) “places, buildings, structures and equipment of cultural significance”;
- (b) “places to which oral traditions are attached or which are associated with living heritage”;
- (c) “historical settlements and townscapes”;
- (d) “landscapes and natural features of cultural significance”;
- (e) “geological sites of scientific or cultural importance”;
- (f) “archaeological and palaeontological sites”;
- (g) “graves and burial grounds, including” (i) “ancestral graves”; (ii) “royal graves and graves of traditional leaders”; (iii) “graves of victims of conflict”; (iv) “graves of individuals designated by the Minister by notice in the Gazette”; (v) “historical graves and cemeteries”; and (vi) “other human remains which are not covered in terms of the Human Tissue Act, 1983 (Act No. 65 of 1983)”;
- (h) “sites of significance relating to the history of slavery in South Africa”;
- (i) “movable objects, including” (i) “objects recovered from the soil or waters of South Africa, including archaeological and palaeontological objects and material, meteorites and rare geological specimens”; (ii) “objects to which oral traditions are attached or which are associated with living heritage”; (iii) “ethnographic art and objects”; (iv) “military objects”; (v) “objects of decorative or fine art”; (vi) “objects of scientific or technological interest”; and (vii) “books, records, documents, photographic positives and negatives, graphic, film or video material or sound recordings, excluding those that are public records as defined in section 1(xiv) of the National Archives of South Africa Act, 1996 (Act No. 43 of 1996)”.

Section 3(3) describes the types of cultural significance that a place or object might have in order to be considered part of the National Estate. These are as follows:

- a) “its importance in the community, or pattern of South Africa’s history”;



- b) its possession of uncommon, rare or endangered aspects of South Africa's natural or cultural heritage;
- c) "its potential to yield information that will contribute to an understanding of South Africa's natural or cultural heritage";
- d) "its importance in demonstrating the principal characteristics of a particular class of South Africa's natural or cultural places or objects";
- e) "its importance in exhibiting particular aesthetic characteristics valued by a community or cultural group";
- f) "its importance in demonstrating a high degree of creative or technical achievement at a particular period";
- g) "its strong or special association with a particular community or cultural group for social, cultural or spiritual reasons";
- h) "its strong or special association with the life or work of a person, group or organisation of importance in the history of South Africa"; and
- i) "sites of significance relating to the history of slavery in South Africa".

Although cultural landscapes do not have a dedicated Section in the NHRA, they are protected under the definition of the National Estate (Section 3). Section 3(2)(c), (d) and (e) list "historical settlements and townscapes", "landscapes and natural features of cultural significance", and "geological sites of scientific or cultural importance" as part of the National Estate. All the points in Section 3(3) with the exception of (f) and (i) make direct reference to cultural landscapes.

Human occupation and use of the landscape and its features results in a visually more or less evident modification of that landscape. Human use of the environment, however, may have no visually detectable altering effect at all, but nevertheless, this imprinting of human behaviour on the environment, and the relationship between people and the landscape is what is implied by the term "cultural landscape" (see UNESCO 2008 for definitions, significance and preservation of cultural landscapes).

Cultural landscapes are defined and informed by several elements including, but not limited to; natural landscape features, geology, biomes, palaeontology, archaeology / anthropology, oral histories, public memory, the built environment and social and written histories. The value of cultural landscapes are determined through professional interpretation and opinion, community and public values, as well as environmental and heritage legislation.

Section 38(8) of the NHRA states that if an impact assessment is required by any other legislation, then it must include a heritage component that satisfies the requirements of Section 38(3). The comments of the relevant heritage authority must be sought and considered by the consenting authority prior to the issuing of a decision. Under the National Environmental Management Act (No. 107 of 1998; NEMA), as amended, the project is subject to an environmental application. The report presented here provides archaeological input to the heritage component. HWC are required to provide comment on the proposed project in order to facilitate final decision making by the relevant authority.

### **3.2. National Environmental Management Act (NEMA), Act No. 107 of 1998, as amended**

The following table presents NEMA requirements for specialist reports and where those requirements are covered in this report.



NEMA requirements for Specialist Reports		
Appendix 6	Specialist Report content as required by the NEMA 2014 EIA Regulations, as amended	Section
1 (1)(a)	(i) the specialist who prepared the report; and (ii) the expertise of that specialist to compile a specialist report including a curriculum vitae;	Title page & Section 1.4 and Appendix B
(b)	a declaration that the specialist is independent in a form as may be specified by the competent authority;	Appendix C
(c)	an indication of the scope of, and the purpose for which, the report was prepared;	Section 1.2 & 1.3
(cA)	an indication of the quality and age of the base data used for the specialist report;	desktop study up to 2022 and fieldwork data obtained in February 2022; see Sections 4 & 5
(cB)	a description of existing impacts on the site, cumulative impacts of the proposed development and levels of acceptable change;	Section 8
(d)	the duration, date and season of the site investigation and the relevance of the season to the outcome of the assessment;	Section 4
(e)	a description of the methodology adopted in preparing the report or carrying out the specialised process, inclusive of equipment and modelling used;	Section 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;	Sections 6, 7 & 8
(g)	an identification of any areas to be avoided, including buffers;	Sections 9 & 11
(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;	Section 6 and associated Figures
(i)	a description of any assumptions made and any uncertainties or gaps in knowledge;	Section 5
(j)	a description of the findings and potential implications of such findings on the impact of the proposed activity, or activities;	Sections 6, 7 & 8
(k)	any mitigation measures for inclusion in the EMPr;	Sections 9 & 11
(l)	any conditions for inclusion in the environmental authorisation;	Section 9
(m)	any monitoring requirements for inclusion in the EMPr or environmental authorisation;	Section 9
(n)	a reasoned opinion- (i) whether the proposed activity or portions thereof should be authorised; and (iA) regarding the acceptability of the proposed activity or activities; and (ii) if the opinion is that the proposed activity 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;	Sections 9, 10 & 11
(o)	a description of any consultation process that was undertaken during the course of preparing the specialist report;	NA – see HIA
(p)	a summary and copies of any comments received during any consultation process and where applicable all responses thereto; and	NA – see HIA
(q)	any other information requested by the competent authority.	Not at this time
2	Where a government notice gazetted by the Minister provides for any protocol or minimum information requirement to be applied to a specialist report, the requirements as indicated in such notice will apply.	Sections 1 & 3



## **4. Description of Property / Affected Environment**

### **4.1. Site Context**

Erf 3927 falls within the south-western urban edge of Still Bay West and is situated approximately 1,5 km from the nearest shoreline to the south-east with the Goukou River mouth approximately 2 km to the east-north-east (Figures 1 and 2). The surrounding land is used for residential and agricultural purposes and the property is enclosed by Bessie Street in the north-west to west, Main Road 331 in the south-east, an undeveloped property in the north-east and a single residential property in the south-west (Figure 3).

The study area is readily accessed by vehicle via the Jongensfontein Road (Main Road 331), Bosbokduin Avenue and Bessie Street. The property immediately north-east of Erf 3927 is mostly cleared of vegetation and under preparation for development. Apart from the latter, as yet undeveloped land, the immediate surroundings are developed with roads and residential units.

### **4.2. Site Description**

The property is situated in a transformed near-coastal landscape consisting of unconsolidated and mostly level and undulating aeolian dune sands or coversands that are vegetated by predominantly indigenous coastal species, including several large Milkwood trees. Underlying the coversands is the calcrete capping of the Wankoe Formation (Pether 2021). According to a botanical investigation, the floral integrity of the site is significantly degraded as a result of repeatedly clearing shrubby vegetation and alien species (Vlok 2020, cited in De Kock 2021). If clearing of vegetation involved uprooting shrubs and alien plants, then this activity would have disturbed surface sediments and their contents (archaeological context).

Although the property is undeveloped, there is a faintly visible disused vehicle track entering from Bessie Street with traces of previously dumped gravel at its eastern end. Dumped rubble that is partially overgrown is fairly common along the Bessie Street boundary and two areas (depressions) appear to have served as informal borrow pits for dune sand, but are now overgrown with grasses and ground cover. It is also possible that the depressions result from calcrete outcrops underlying the coversands being dissolved by ground waters and then “forming solution pits of various sizes from potholes to small wetlands” (Pether 2021, Pg. 2). Mole activity is extensive and intense, providing good archaeological visibility over much of the site, but with resulting bioturbation of sediments to a depth of approximately one meter. Examples of the site, context and features are shown in Figure 3 and Figures 5 through 8.





Figure 5. Examples of the affected property viewed from Bessie Street (top) and along the SE and NE boundaries (bottom left and right respectively). Note Jongensfontein Road (Main Road 331) in bottom left image. Directions of views are indicated with abbreviated compass bearing names. (A4 version on page 41)



Figure 6. Shown are examples of the affected property with existing disturbances, exposed sandy surfaces, vegetation and topography. Note the disused vehicle track and remains of imported gravel (bottom left and right respectively). Directions of views are indicated with abbreviated compass bearing names. (A4 version on page 42)



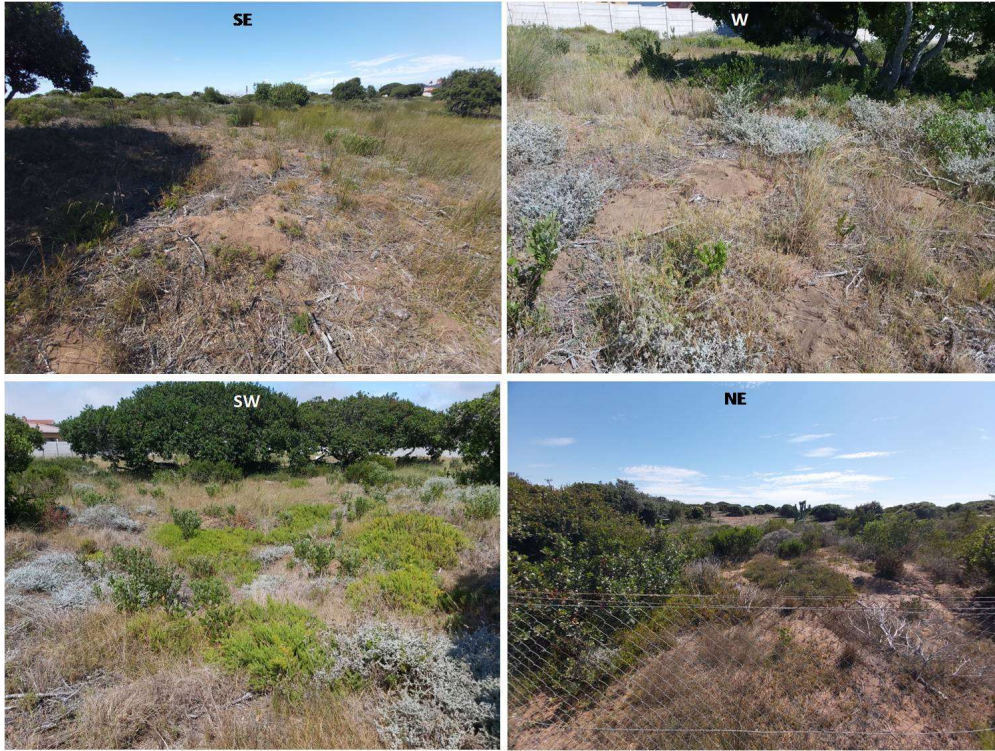


Figure 7. Shown are examples of the affected property with extensive and intense mole activity, vegetation, including some large Milkwood trees, and topography. An approximately 10 m X 5 m depression in the middle of the bottom left image suggests earlier borrow pit for sand. The adjacent property, largely cleared for development, is shown in the bottom right image. Directions of views are indicated with abbreviated compass bearing names. (A4 version on page 43)



Figure 8. Shown are examples of the affected property with extensive and intense mole activity (top), vegetation cover and dumped rubble (bottom). The pieces of concrete in the



bottom right image are well buried. The GPS unit is 10 cm long. Directions of views are indicated with abbreviated compass bearing names. (A4 version on page 44)

## 5. Description of Methodology

This investigation involved a desktop study and literature review as well as an archaeological foot survey of Erf 3927. All work was carried out by this author with inputs and information provided by Stefan De Kock of PERCEPTION Planning, who is compiling the integrated HIA for the project.

### 5.1. Desktop Study and Literature Review

A desktop study and literature review was conducted to gain an understanding of the overall landscape and heritage context of the site proposed for development. The focus of the desktop study and literature review was on previous work done in the immediate surroundings with the aim of identifying the types of archaeological resources and concerns already documented in earlier studies, and how these inform the assessment being conducted here. In addition to this author's own work experience in the area and assistance from colleagues, information sources are listed in Table 1.

Table 1: Information sources.

Data / Information	Source	Date	Type	Description
Maps & Aerial Photographs	Chief Directorate: National Geo-Spatial Information <a href="http://www.cdngiportal.co.za/cdngiportal/">http://www.cdngiportal.co.za/cdngiportal/</a>	Historic & Current	Spatial	Maps of various type and scale, and aerial images
Maps & Aerial Photographs	CapeFarmMapper <a href="https://gis.elsenburg.com/apps/cfm/#">https://gis.elsenburg.com/apps/cfm/#</a>	Historic & Current	Spatial	Maps of various type and scale, and aerial images
Aerial Photographs and for Superimposing Spatial Data	Google Earth Software Application or <a href="https://earth.google.com/web/">https://earth.google.com/web/</a>	Historic & Current	Spatial	Aerial images and overlays of SDPs, GPS data, Surveyor General Diagrams and aerial images
Cadastral Data	CapeFarmMapper <a href="https://gis.elsenburg.com/apps/cfm/#">https://gis.elsenburg.com/apps/cfm/#</a>	Current	Spatial	Cadastral boundaries and extents
Cadastral Data	Chief Directorate: National Geo-Spatial Information <a href="http://www.cdngiportal.co.za/cdngiportal/">http://www.cdngiportal.co.za/cdngiportal/</a>	Various	Survey Diagrams	Historical & current diagrams, survey data and registration dates
Cadastral Data	Chief Surveyor-General <a href="http://csg.dla.gov.za/d ata.htm">http://csg.dla.gov.za/d ata.htm</a>	Current & Historic	Survey Diagrams	Historical & current diagrams, survey data and registration dates
Background Information	South African Heritage Resources Information System (SAHRIS) <a href="https://sahris.sahra.org.za/map/reports">https://sahris.sahra.org.za/map/reports</a>	Current	Reports and Spatial	Previous impact assessments for developments in the immediate surroundings area
Palaeontological Sensitivity	South African Heritage Resources Information System (SAHRIS)	Current	Spatial	Map showing palaeontological sensitivity and



	<a href="https://sahris.sahra.org.za/map/palaeo">https://sahris.sahra.org.za/map/palaeo</a>			required actions based on the sensitivity.
Title Deeds	Deeds Office <a href="https://www.deeds.gov.za/index.php">https://www.deeds.gov.za/index.php</a>	Historic & Current	Ownership	Registration of property ownership

For the purpose of familiarisation and to obtain and present background information about the project and processes, this author consulted the NID and Background Information Document (BID) and annexures submitted to HWC by PERCEPTION Planning in support of the NID application (De Kock 2021). Correspondence concerning the project, including HWC's response was obtained and reviewed.

## 5.2. Field Survey

The purpose of the archaeological foot survey was; to determine whether any archaeological resources occur on the surface of exposed sediments within the study area, to assess the sensitivity of archaeological resources if present in the affected area, to determine the potential impacts on such resources if present, and to avoid and/or minimize such impacts by means of management and/or mitigation measures. Note that the archaeological study presented here considered archaeological materials of pre-colonial and colonial origin. Due to the small size of the study area, a comprehensive archaeological foot survey covered the entire property. This study was undertaken according to best practice principles and meets standards required by the heritage authorities in terms of the National Heritage Resources Act, No. 25 of 1999.

Archaeological survey tracks were fixed with a hand held Garmin X30 GPS unit (set to map datum WGS84) to record the search area and to obtain a fix on the location of any finds and observations (Figure 13, gpx tracking file is available from author). Digital audio notes, video and a comprehensive, high quality digital photographic record were made with a Samsung Galaxy A70 mobile phone, which includes location data. All coordinate and photographic data are available from this author on request.

After obtaining permission from Mr Ben Bekker (representing the applicant, Daily Double Trading 447 CC) the site was accessed by vehicle on 2 February 2022. An archaeological foot survey of the property was conducted independently. The entire property was accessible on foot, and due to extensive and intense mole activity, ground visibility was moderate to good and sufficient observations were made for the purpose of this investigation and assessment. The survey walk tracks shown in Figure 13 give an indication of the coverage achieved during the site investigation. Note that the aerial photograph in Figure 13 is not current as the vacant plot between Erf 3927 and the red roofed structures to the west of the south-western extent of the property is now developed with a single dwelling (see Figure 6, top right).

## 5.3. Grading

According to Section 7(1) of the NHRA, heritage resources are graded according to their National (Grade I), Provincial (Grade II) or Local (Grade III) significance. Grading facilitates the identification of the suitable level of management for a heritage resource. SAHRA (national heritage authority) manages Grade I, HWC (or other provincial heritage authority) manages Grade II, and a local planning authority manages Grade III heritage



resources. Although these authorities are responsible for grading, anyone may recommend grading.

Although not completed, Section 7(2) of the NHRA intends for provincial heritage authorities to formulate a more detailed grading system for heritage resources of local significance (Grade III). HWC distinguishes between heritage resources of high (Grade IIIA), medium (Grade IIIB) and low (Grade IIIC) local significance, while Not Conservation Worthy (NCW) describes those of low or no significance that require no further management or mitigation measures (Heritage Western Cape 2016).

#### **5.4. Assumptions and Limitations**

This assessment assumes that all background information and development layout plans provided by the project team are correct and current. This assessment is for the planned development activity on the property and may apply to any alternative future plans.

The assessment is limited to archaeological resources exposed at the surface or that have an above-ground component. Wherever soft surface sediments are present, it cannot be ruled out entirely that archaeological resources may be buried beneath the surface. The sediments on Erf 3927 that may contain archaeological materials, however, are substantially disturbed by bioturbation (mole activity), likely repeated vegetation clearing, possible borrow pits and impacts of the developments in the immediate surroundings. Consequently, the archaeological context of the property is compromised. This is a limitation to the archaeological potential of the study area.

Although the property is under vegetation and ground surfaces are often obscured as a result, there is a significant amount of mole activity with numerous mole heaps and exposed ground surfaces open to archaeological inspection. All parts of the property were accessible on foot, and sufficient observations were made for the purpose of this assessment. The partly limited archaeological visibility does not affect or change the conclusions or recommendations of this investigation and assessment.

Overall, there are no assumptions, limitations or gaps in knowledge that have an influence on this study, assessment, or the recommendations made here.

### **6. Description of Results from the Archaeological Study**

This author has considerable experience with the archaeology of the coastal regions of the Western and Eastern Cape provinces of South Africa. In general, the coastal strip is rich in archaeological remains due to predictable and reliable food sources in the intertidal zone as well as an abundance of fresh water sources such as rivers, streams, seeps and springs. Shell middens are most commonly found adjacent to rocky intertidal zones, and within a few hundred meters of the present shoreline. Archaeological sites occur either in the open or in caves, rock shelters and overhangs. The latter contexts provide the best opportunities for the accumulation and preservation of remains, while open sites are generally more dispersed and prone to disturbance, erosion and poor preservation of organic remains.

In descending age, the archaeological record in the area includes: Early Stone Age (ESA) stone implements such as hammer stones, cores, flakes and core tools (hand axes,



cleavers, etc), but at this time no ESA sites with associated organic remains are known to occur in this area; Middle Stone Age (MSA) sites with stone artefacts, cultural and food remains are found in caves, such as those in the Provincial Heritage Site of the Pinnacle Point Site Complex west of Mossel Bay, but when they occur in the open, they are normally lacking in organic remains; Later Stone Age (LSA) sites with artefacts, cultural and food remains are also present in some of the fore-mentioned caves as well as open sites such as shell middens normally associated with rocky intertidal zones; pastoralist or herder (pottery period) sites may occur in caves or in the open and pottery and the remains of sheep are also commonly found in shell middens; and historic period sites include ship wrecks, structures, transport infrastructure, middens, burials and cemeteries among others. Prehistoric human burials, usually of LSA or more recent age, may occur anywhere in the landscape where soft sediments are present, and are sometimes at or near sites of human occupation both in the open and in caves or rock shelters.

The approximate dates for these phases of hominin and human occupation of the coastal and near coastal zone of the Western and Eastern Cape provinces is as follows: ESA = 2 million years ago till about 300 000 years ago; MSA = 300 000 years ago till between about 40 000 and 20 000 years ago; LSA = from between about 40 000 and 20 000 years ago till about 2000 years ago; pastoralist or herder = 2000 years ago till present or arrival of colonists; historic period = from late 15<sup>th</sup> Century (1488 landfall of the seafarer Bartolomeu Dias at Mossel Bay) till present.

## **6.1. Desktop Study and Literature Review**

Several reports of previous archaeological or heritage studies were downloaded from the SAHRIS website and these include MAPID numbers in the references section (<https://sahris.sahra.org.za/map/reports>), while others were obtained from colleagues. Figure 9 shows projects and reports in the SAHRIS database while Figure 10 includes study areas with heritage-related reports that are not in the SAHRIS database. Note that projects involving linear developments that often straddle several properties are not indicated in Figure 10.

Attention was first drawn to the archaeological record of the Still Bay area by the pioneering work of Heese (1933) who identified stone walled tidal fish traps (visvywers), shell middens and Stone Age stone artefacts in deflated dunes near Blombos, some 15 km to the west, but also at Noordkapperspunt and Kleinjongensfontein between 1,5 km and 4 km to the south-east and south-west of Erf 3927 (cited in Deacon 2008 and Goosen 1999). Stone artefacts identified by Heese, including the well known “Still Bay” bifacial points, were recognized to be of MSA origin by Goodwin and Van Riet Lowe (1929) who referred to their type as the Still Bay industry (cited in Goosen 1999). Today the Still Bay industry falls under the broader MSA name.





Figure 9. The SAHRIS FindReports Map showing some of the heritage-related studies conducted in the surroundings of Erf 3927 (red star; <https://sahris.sahra.org.za/map/reports>).

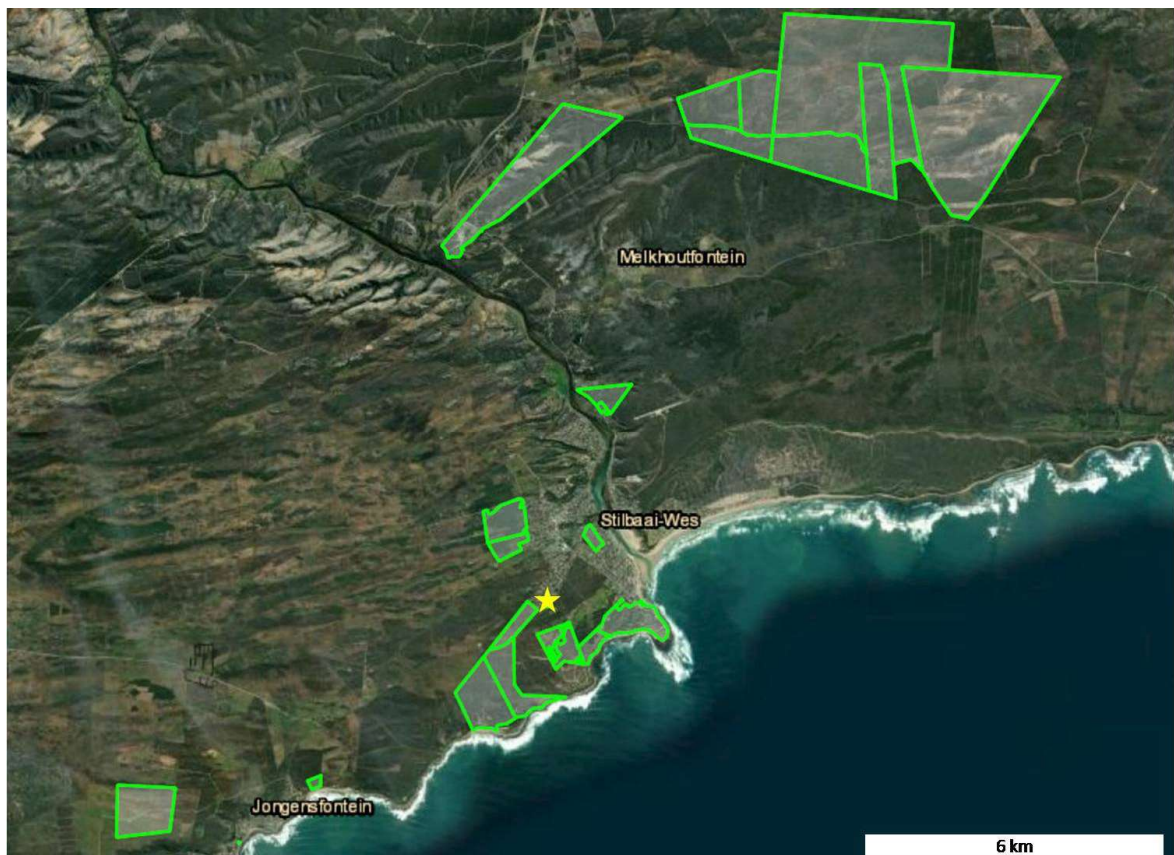


Figure 10. Properties with heritage-related studies that were reviewed for this report. Some reports are not on the SAHRIS website (<https://gis.elsenburg.com/apps/cfm/>). Note that linear projects such as MAPID 02740 are excluded, and the yellow star represents Erf 3927.



Inspired in part by Heese's early observations, the most intensive and best known archaeological research in the area is still ongoing at Blombos Cave, Klipdrift Shelter and other sites under the leadership of Christopher Henshilwood. Along with numerous international scientists, Henshilwood has published broadly on discoveries made at Blombos Cave, which includes early evidence of pastoralist habitation, evidence of LSA and MSA occupation, the latter including finds that made significant contributions to our understanding of the origins of modern human behaviour (e.g., Henshilwood 1996 and Henshilwood *et al* 2011). Nearly a hundred publications related to discoveries made at Blombos Cave are listed at [https://en.wikipedia.org/wiki/Blombos\\_Cave](https://en.wikipedia.org/wiki/Blombos_Cave), which also provides a summary of findings and their international significance. Blombos Cave was declared a Provincial Heritage Site in 2015.

Apart from results of construction phase archaeological monitoring, rescue and test excavations into shell middens, and exploration of a potential burial cairn, this author is not aware of other sub-surface archaeological investigations in the surrounding area (Hart and Halkett 1991, Nilssen 2003, 2008 and 2021a). Much of the information gained about the archaeological record of the surroundings is from archaeological and heritage-related impact assessments conducted for a range of development proposals in terms of the NHRA. The following is a chronological account of the types of archaeological resources documented in the area starting with the Early Stone Age and ending with the colonial period.

Although ESA stone implements are present in the landscape, they are notably fewer in number than MSA and LSA pieces, and are usually found away from the present shoreline on old deflated surfaces or palaeosols, on exposed calcrete outcrops and in ploughed agricultural lands (Goosen 1999 and Nilssen 2012b). There are no known ESA sites in this area that preserve any cultural or organic remains in addition to stone artefacts.

Apart from *in situ* MSA deposits (including cultural and organic remains) preserved in sites like Blombos Cave, the MSA in the area is most commonly represented by stone implements such as flakes, blades, cores, and points; all with faceted or prepared striking platforms, that most commonly occur *ex situ* on palaeosols among deflated dunes and in agricultural lands, and without any associated cultural or organic remains (Kaplan 1993, 1997a, 1997b, Nilssen 2007 and Yates 2006). MSA pieces are mostly found in isolation or at best in low density scatters (personal observations and Yates 2006).

Isolated stone tools or low density scatters of LSA stone implements are fairly common in the area (Kaplan 1993, 1997b, Nilssen 2007, 2012b and Yates 2006), but in the absence of any known caves or rock shelters in the immediate surroundings, the most common LSA sites that preserve other cultural and food remains are shell middens (Henshilwood & Yates 2001, Henshilwood 2011, Hart & Halkett 1991, Kaplan 1997a, 1997b, Nilssen 2003, 2013, and Yates 2006). Shell middens are most commonly found in association with rocky intertidal zones and are usually situated close to the shoreline and rarely more than a few hundred meters inland of the high water mark. One of the LSA shell middens, directly south of the harbour slipway, that was first identified and reported by Hart and Halkett (1991) and subsequently re-investigated by Henshilwood and Yates (2001), is open to visitors.

As mentioned above, stone walled tidal fish traps (*visvywers*) were first reported in the early to mid 1900s (Heese 1933 and Goodwin & Van Riet Lowe 1929 and Goodwin 1946). Given fluctuating sea levels and particularly the mid-Holocene high sea stand of up to 3 m above present sea level, it is likely that the earliest date for the construction of preserved fish traps post-dates the mid-Holocene high sea stand, making them younger than about 4000 years before present. In the event that fish traps were constructed earlier, they would



in all likelihood have been destroyed by the ocean during higher sea stands. It is known from historic records that early European colonists built or rebuilt and maintained fish traps, and some are still used today (Henshilwood & Yates 2001 and personal observations). The origins, dating, use, and accompanying archaeological record, such as shell middens in close proximity to fish traps, were discussed at length, but most of the details are still a mystery (Avery 1975, Goodwin 1946, Hart & Halkett 1991, Henshilwood & Yates 2001, Kaplan 1993, 1997a and 1997b). In addition to problems with dating the structures, unequivocal archaeological evidence that links coastal shell middens or sites to fish traps remains elusive. It is this author's opinion that the stone walled tidal fish traps at Skulpiesbaai (Noordkapperspunt), some 1,5 km south-west of Erf 3927 are among the finest examples in the Western Cape, and were declared a Provincial Heritage Site in 1998 (Figures 11 and 12; De Kock 2021).



Figure 11. Aerial images of the stone walled tidal fish traps (visvywers) at Skulpiesbaai, Still Bay, in 2003 during a calm high tide (top) and in 2021 at low tide (bottom). Scale bar at bottom right is 200 m. Courtesy of Google Earth 2003 and 2021.





Figure 12. Stone walled tidal fish traps (visvuyers) at Skulpiesbaai, Still Bay (photos Peter Nilssen 2019).

Although indigenous pastoralists, often referred to as KhoeKhoe, were present in the area since about 2000 years ago, archaeological sites with definitive evidence of their presence - pottery and/or sheep - in the surroundings are rare. Only two shell middens containing shards of pottery were recorded in the area, with the largest of these situated near the shoreline to the south-east of Erf 3927 (Henshilwood & Yates 2001, Kaplan 1997a).

The most recent arrivals in South Africa are European colonists who appeared in the region from around the late 1500s, and this era is referred to as the colonial period. A good overview of the social context, perceptions, relationships and conflicts involving foragers (hunter-gatherers), pastoralists and colonists is given by Henshilwood & Yates (2001) and is not repeated here. While both pastoralists and colonists had a devastating impact on foraging societies (including government authorised and permitted genocide up to 1927), it is thought that smallpox was responsible for killing up to 90% of the KhoeKhoe population in 1713, thus opening the land for easier colonial settlement (Henshilwood & Yates 2001).

The built environment – colonial period homesteads, outbuildings, features and transport infrastructure - is the most common evidence for the presence of colonists in the area from roughly the late 18<sup>th</sup>C or early 19<sup>th</sup>C. Graves and small cemeteries are often in close proximity to homesteads on farms, but none were reported in studies consulted for this investigation. Numerous historic structures, ruins, walls or kraals, and water collection features were recorded in the surrounding landscape (De Kock 2013, De Vynck 2021, Deacon 2008, and Nilssen 2012b, 2021b). The Provincial Heritage Site of Palingsgat, some 1,5 km to the NNE, is the nearest early colonial structure to Erf 3927. Palingsgat was



apparently the first formal farmstead built in Still Bay in 1805, but was rebuilt in 1814 after a destructive fire (De Kock 2021). Numerous of the early structures in the area were built with calcrete or limestone, a building material occurring locally in abundance. Similarly, many of the early structures were likely roofed with thatch, a resource also available locally in abundance.

The town of Still Bay was originally established in 1894 for holiday purposes, but today it is increasingly used for permanent residence. Between 1930 and 1955 a pontoon ferried vehicles across the river and in 1955 a bridge was completed (<https://www.western-cape-info.com/provinces/town/163/still-bay>).

Several investigations reported that no archaeological resources were identified, but several also pointed to the variable potential for buried archaeological remains including unmarked pre-colonial burials (Goosen 1999, Halkett 2007, 2008, and Nilssen 2009, 2012a, 2019b). Consequently, some studies, particularly for properties within the first few hundred meters of the shoreline, recommended the implementation of part-time or full-time archaeological monitoring during the construction phase of development (e.g., Kaplan 1997a, 1997b and Nilssen 2008, and 2013).

Based on the above findings, and particularly studies conducted in close proximity and with similar spatial and sedimentary context to that of Erf 3927, it is anticipated that the most likely archaeological resources to occur on Erf 3927 are isolated Stone Age implements of mainly MSA and LSA origin, or at best, low density scatters of the same materials (Halkett 2007, 2008, Nilssen 2008, 2012a, 2019a, 2019b, 2021a, and Yates 2006). On at least two occasions when isolated Stone Age implements were recorded in association with low density scatters of marine shells, archaeological monitoring or test excavations were recommended (Nilssen 2019a and Yates 2006). When these management and mitigation measures were implemented, it was found on both occasions that no sub-surface anthropogenic horizons were present, but that only a few additional shell fragments and stone implements were documented in surface sediments (Nilssen 2008 and 2021a). It is this author's opinion, therefore, that if similar archaeological materials in similar contexts to those described above are encountered, then such finds are considered to be of low to no archaeological value and hence given Not Conservation Worthy status.

None of the above-mentioned Provincial Heritage Sites or any other known significant heritage sites will be impacted by the proposed development

## **6.2. Field Survey**

This section documents the identification and assessment of the significance of archaeological resources as set out in Sections 3 (2), 3 (3) and/or prescribed under Sections 6 (2) and 7 of the NHRA as per the heritage assessment criteria. Identified archaeological resources are also mapped and tabulated.

On 2 February 2022 this author conducted a comprehensive archaeological foot survey of Erf 3927 (Figures 5 through 8 and 13). As is evident from the survey walk tracks (Figure 13) and photographs (Figures 5 through 8), the whole property was accessible and surface sediments are significantly disturbed by mole activity providing good archaeological visibility and a window onto sub-surface materials.





Figure 13. Google Earth (2022) aerial image showing Erf 3927 (white polygon), vehicle access track (red line), survey walk tracks (red lines), and archaeological finds (labelled blue markers). (A4 version on page 45)

Two stone artefacts of likely LSA origin were identified at waypoints 103 and 104 (Figure 13). Coordinates of their locations (WGS 84), a brief description and field rating are given in Table 2.

Table 2. List of heritage resources identified during the field survey.

Waypoint	Location	Description	Significance (Grade)
103	S34° 23' 09.3" E21° 24' 12.4"	Isolated, retouched or flaked piece of milky quartz with notch suggestive of an adze – most likely of LSA origin.	Very Low (NCW)
104	S34° 23' 08.3" E21° 24' 12.4"	Isolated, un-retouched quartzite flake with cobble cortex of indeterminate age, but most likely of LSA origin.	Very low (NCW)

The context of a flaked piece of milky quartz at waypoint 103 is shown in Figure 14. The area is heavily impacted by mole activity, previous vegetation clearing, possible borrow pit as well as the construction of the Main Road 331. As a result, the context of this find is significantly compromised. As seen in the photograph, the one flaked edge is notched, resembling an adze (woodworking implement; Figure 14). Whether the knapped flake or resulting notch was the desired outcome is unknown, but regardless, the piece is modified or retouched and hence classified as a formal tool. Although its age is indeterminate, the unpolished, un-weathered state of the piece suggests an LSA rather than MSA origin. Due to its disturbed context, isolated occurrence and absence of any associated cultural or organic remains, the piece is considered to be of very low archaeological scientific value or significance, and is given a field rating of Not Conservation Worthy (NCW).



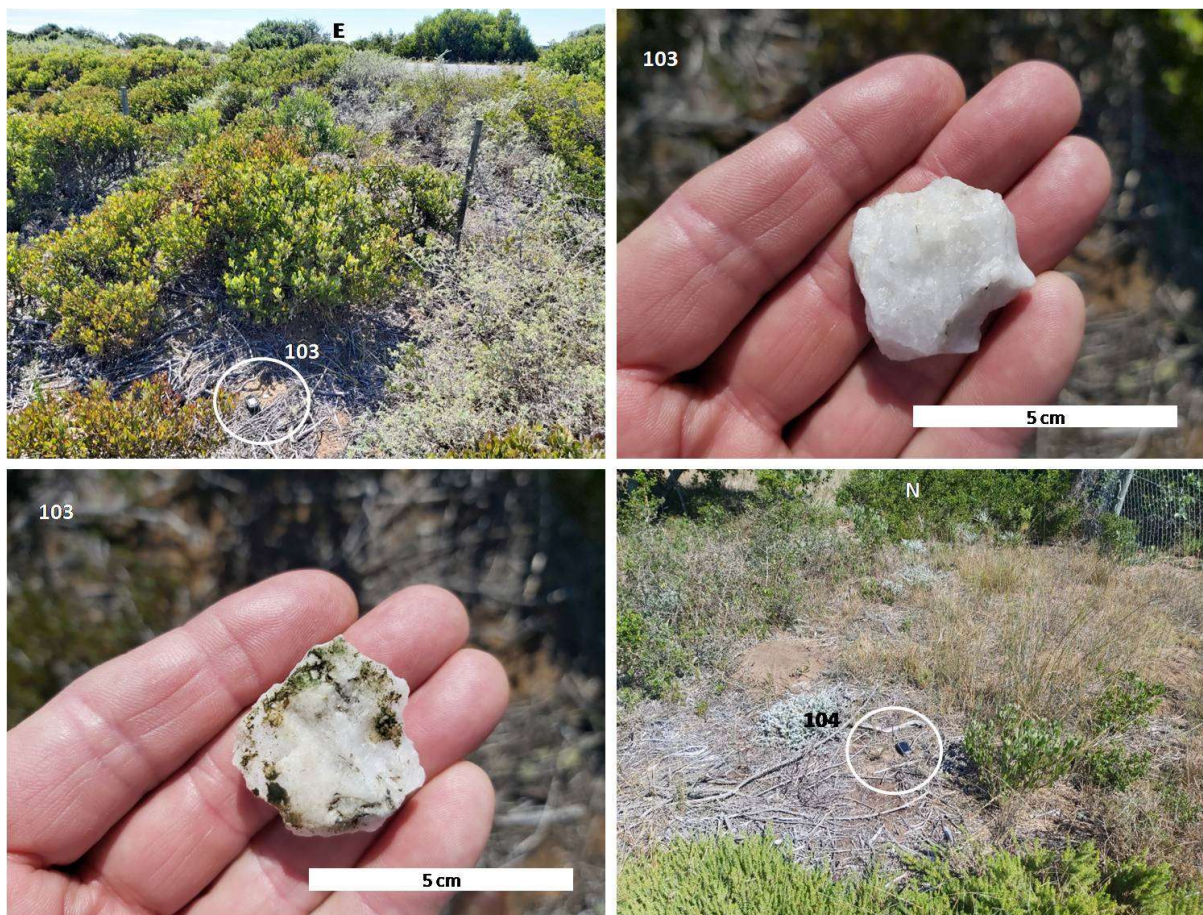


Figure 14. The context of stone artefacts at waypoints 103 and 104 are shown in the top left and bottom right images (white ellipses with GPS unit = 10 cm long). The flaked piece of quartz has a distinct notch (bottom right edge in top right image), suggestive of an adze (woodworking implement). (A4 version on page 46)

The context of a chunky quartzite flake with cobble cortex identified at waypoint 104 is shown above in Figure 14 (bottom right). The area is heavily impacted by mole activity, previous vegetation clearing, the installation of a boundary fence, as well as the construction of the Main Road 331. As a result, the context of this find is significantly compromised. The piece retains water worn cobble cortex, indicating that it was sourced from a cobble beach or river bed / terrace (Figure 15). There is no evidence of use-wear and the piece is not retouched, suggesting that it is debris from a stone knapping or core reduction event. As with the other artefact, its age is indeterminate, but given its un-polished, un-weathered state, it is more likely to be of LSA rather than MSA origin. Due to its disturbed context, isolated occurrence and absence of any associated cultural or organic remains, the piece is considered to be of very low archaeological research value or significance, and is given a field rating of Not Conservation Worthy (NCW).



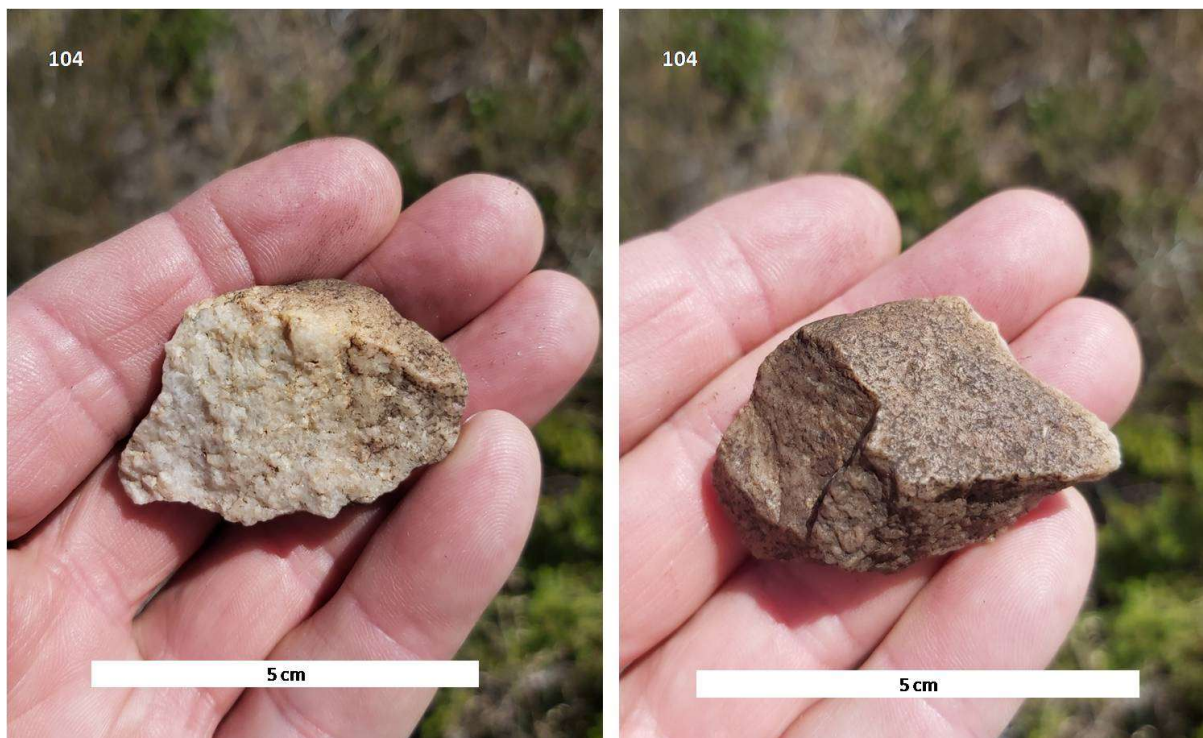


Figure 15. The context of the find at waypoint 104 is shown above in Figure 14 (bottom right). This chunky quartzite flake retains cobble cortex (right), which is indicative of its source being a cobble beach or river bed / terrace. (A4 version on page 47)

No other archaeological resources of colonial or pre-colonial origin were identified in the study area. Although it cannot be ruled out entirely, it is not anticipated that significant archaeological resources are buried in sub-surface sediments. Due to the extensive and intense level of mole activity, any significant sub-surface anthropogenic deposits are expected to be represented and visible at the surface.

### 6.3. Graves

No colonial period graves or burials were identified during the foot survey, but it cannot be ruled out entirely that unmarked pre-colonial human burials are in subsurface sands. However, given the absence of archaeological remains and the fact that no unmarked human burials are documented in the surrounding area, the chance discovery of human remains is considered to be low.

## 7. Statement of Significance and Provisional Grading

Section 38(3)(b) of the NHRA requires an assessment of the significance of all identified heritage resources. In terms of Section 2(vi), “cultural significance” means aesthetic, architectural, historical, scientific, social, spiritual, linguistic or technological value or significance. The reasons that a place may have cultural significance are outlined in Section 3(3) of the NHRA (see Section 3 above).

Due to their disturbed context, isolated occurrence and absence of any associated cultural or organic remains, both artefacts recorded at waypoints 103 and 104 are considered



to be of very low archaeological research value or significance, and are given a field rating of Not Conservation Worthy (NCW). These finds require no further investigation, management or mitigation, and due to their NCW status and compromised context, a permit from the heritage authorities is not needed for their further disturbance.

In the event of the chance discovery of human remains, these will be considered to be of high significance at the local level (Grade IIIA).

Since there are no significant archaeological components of the cultural landscape on the affected property, there is no statement of significance or provisional grading.

## **7.1. Summary of Archaeological Indicators**

Identified archaeological remains at waypoints 103 and 104 are of low significance and NCW.

- Indicator: Identified NCW archaeological remains may be damaged or destroyed without a permit from HWC.

The significance of potentially buried archaeological resources is unknown, but indications are that they should be treated as of low significance.

- Indicator: Significant archaeological resources may not be damaged or destroyed without a permit from HWC.

If unmarked human burials or human remains lie buried beneath surface sediments, then they are regarded to be of high local significance.

- Indicator: Human remains may not be disturbed without a permit from the relevant heritage authorities.

## **8. Assessment of Impacts**

The impacts to archaeological resources will occur during the construction phase of development, will be restricted to the property and will be permanent.

### **8.1. Impacts to Archaeological Resources**

Because they are a non-renewable resource, impacts to archaeological resources will be permanent and will occur during the construction phase of development. Because the cultural significance is considered to be low, an intensity rating of low is given. The overall impact significance without mitigation is considered to be low negative (Table 3).

Due to the NCW status of identified archaeological remains, impacts to these resources resulting from the proposed development are considered to be low to insignificant.

It is not anticipated that significant archaeological resources will be uncovered during construction, but the nature and content of sub-surface sediments are unknown.

There are no fatal flaws regarding impacts to identified archaeological resources and no measures for management or mitigation are required.



Table 3. Assessment of Impacts on Archaeological Resources

Potential impacts on archaeological resources	
Nature and status of impact:	Direct, negative
Extent and duration of impact:	Local, permanent
Intensity	Low
Probability of occurrence:	Definite
Degree to which the impact can be reversed:	Low
Degree to which the impact may cause irreplaceable loss of resources:	High
Cumulative impact prior to mitigation:	Low
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Low, negative
Degree to which the impact can be mitigated:	Low
Proposed mitigation:	None
Cumulative impact post mitigation:	Low
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low, negative

## 8.2. Evaluation of Impacts Relative to Sustainable Social and Economic Benefits

Section 38(3)(d) of the NHRA requires an evaluation of the impacts on heritage resources relative to the sustainable social and economic benefits to be derived from the development.

Given the NCW status of identified archaeological resources on the affected property, the impact to the archaeological value of the area is anticipated to be negligible. As a result, the negative impacts of the proposed development on archaeological resources will be less than the positive contribution the development will make to the local community and economy during the construction and operational phases of the project. Albeit relatively small, the benefits of the proposed development to sustainable social and economic development outweigh its impacts on archaeological resources.

## 8.3. Existing Impacts to Archaeological Resources

The archaeological context of Erf 3927 and the immediate surroundings are already significantly altered by residential development and construction of Main Road 331. In addition, extensive and intense mole activity, repeated vegetation clearing, possible use for sand borrow pits, and the dumping of building materials has further degraded the archaeological context of the affected area. Given the scarcity and low quality of archaeological resources on Erf 3927 and in the immediate surroundings, these impacts to the archaeological record have been low to negligible (Halkett 2007, 2008, Nilssen 2008, 2012a, 2019a, 2019b, and 2021a, and Yates 2006).



#### **8.4. The No-Go Alternative**

If the development does not proceed, then the site will remain as is with continued impacts of natural processes. Considering that the socio-economic benefits from the proposed development outweigh its negative impacts on archaeological resources, it can be argued that the proposed development is preferable to the No-Go option.

#### **8.5. Cumulative Impacts**

We know that infrastructural and residential developments in the surrounding area have impacted negatively on heritage resources, particularly shell midden sites in close proximity to the shoreline (Kaplan 1997a). Several of the existing developments in the immediate surroundings did not undergo heritage impact assessments, and hence it is possible that some anthropogenic materials were lost to development. As mentioned before, however, the archaeology of the immediate surroundings, like that of Erf 3927, is of low quality and compromised context and hence the cumulative impact in this specific instant is considered to be low (Halkett 2007, 2008, Nilssen 2008, 2012a, 2019a, 2019b, and 2021a, and Yates 2006).

Given the locality, relatively small scale of the proposed development, the disturbed context, and the absence of significant archaeological resources on site and in the immediate surroundings, the proposed development will have negligible additional cumulative impact on archaeological resources.

#### **8.6. Levels of Acceptable Change**

No negative impacts to archaeological resources should occur until such resources are evaluated and then studied, sampled or conserved as deemed necessary in accordance with their cultural significance.

There is no anticipated change to the archaeological value of the area since no significant archaeological resources were identified. It follows that the level of change to the archaeological record of the area is negligible and therefore acceptable. Furthermore, the proposed development is in keeping with existing residential developments within the urban edge and in the surroundings of Erf 3927.

#### **8.7. Consideration of Alternatives and Plans for Mitigation**

The proposed development will impact the bulk of Erf 3927 and any alternative layout or permissible development will have an equivalent impact on archaeological resources. Given the low significance attributed to the archaeological resources on site and in its immediate surroundings, the impacts will be negligible and will remain negligible irrespective of development alternatives.

Because the identified archaeological resources are given a NCW status, there is no need or plan for mitigation.



## **9. Input to the Environmental Management Program**

If an Environmental Management Program (EMPr) is applicable to the project, then it should make provision for the following:

- If any human remains or significant archaeological materials are exposed during development activities, then the find should be protected from further disturbance and work in the immediate area should be halted and Heritage Western Cape must be notified immediately. These heritage resources are protected by Section 36(3)(a) and Section 35(4) of the NHRA (Act 25 of 1999) respectively and may not be damaged or disturbed in any way without a permit from the heritage authorities. Any work in mitigation, if deemed appropriate, should be commissioned and completed before construction continues in the affected area and will be at the expense of the developer.
- If an EMPr is not developed for the project, then the above recommendations must be implemented by the applicant or developer.

## **10. Conclusions**

A comprehensive foot survey of Erf 3927 yielded two Stone Age implements of likely LSA origin. Due to their disturbed context, isolated occurrence and absence of any associated cultural or organic remains, both artefacts recorded at waypoints 103 and 104 are considered to be of very low archaeological research value or significance, and are given a field rating of Not Conservation Worthy (NCW). These finds require no further investigation, management or mitigation, and due to their NCW status and compromised context, a permit from the heritage authorities is not needed for their further disturbance.

Given the locality, relatively small scale of the proposed development, the disturbed context, and the absence of significant archaeological resources on site and in the immediate surroundings, the proposed development will have a negligible additional cumulative impact on archaeological resources (Halkett 2007, 2008, Nilssen 2008, 2012a, 2019a, 2019b, and 2021a, and Yates 2006).

The significance of potentially buried archaeological resources is unknown, but indications are that they should be treated as of low significance.

If unmarked human burials or human remains lie buried beneath surface sediments, then they are regarded to be of high local significance. Human remains may not be disturbed without a permit from the relevant heritage authorities.

Overall, from an archaeological standpoint, there are no fatal flaws associated with the proposed development activities. There is no indication that development activities will have a negative impact on the archaeological value of the area.

### **10.1. Reasoned Opinion of the Specialist**

Based on results from this study, there are no fatal flaws and there is no indication that development activities will have a negative impact on the archaeological value of the area. Consequently, it is this author's opinion that the proposed development on Erf 3927, Still Bay West, should be authorized in full.



## 11. Recommendations

- There are no fatal flaws or objections to the full authorisation of the proposed development provided that the below recommendations are implemented.
- No further archaeological studies or mitigation / management measures are necessary for identified archaeological resources.
- If any human remains or significant archaeological materials are exposed during development activities, then the find should be protected from further disturbance and work in the immediate area should be halted and Heritage Western Cape must be notified immediately. These heritage resources are protected by Section 36(3)(a) and Section 35(4) of the NHRA (Act 25 of 1999) respectively and may not be damaged or disturbed in any way without a permit from the heritage authorities. Any work in mitigation, if deemed appropriate, should be commissioned and completed before construction continues in the affected area and will be at the expense of the developer.
- The above recommendations should be included in the Environmental Management Program (EMPr) for the proposed residential development.
- If an EMPr is not developed for the project, then the above recommendations must be implemented by the applicant or developer.

## 12. References

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### **13. A4 Sized Graphics (on following pages)**



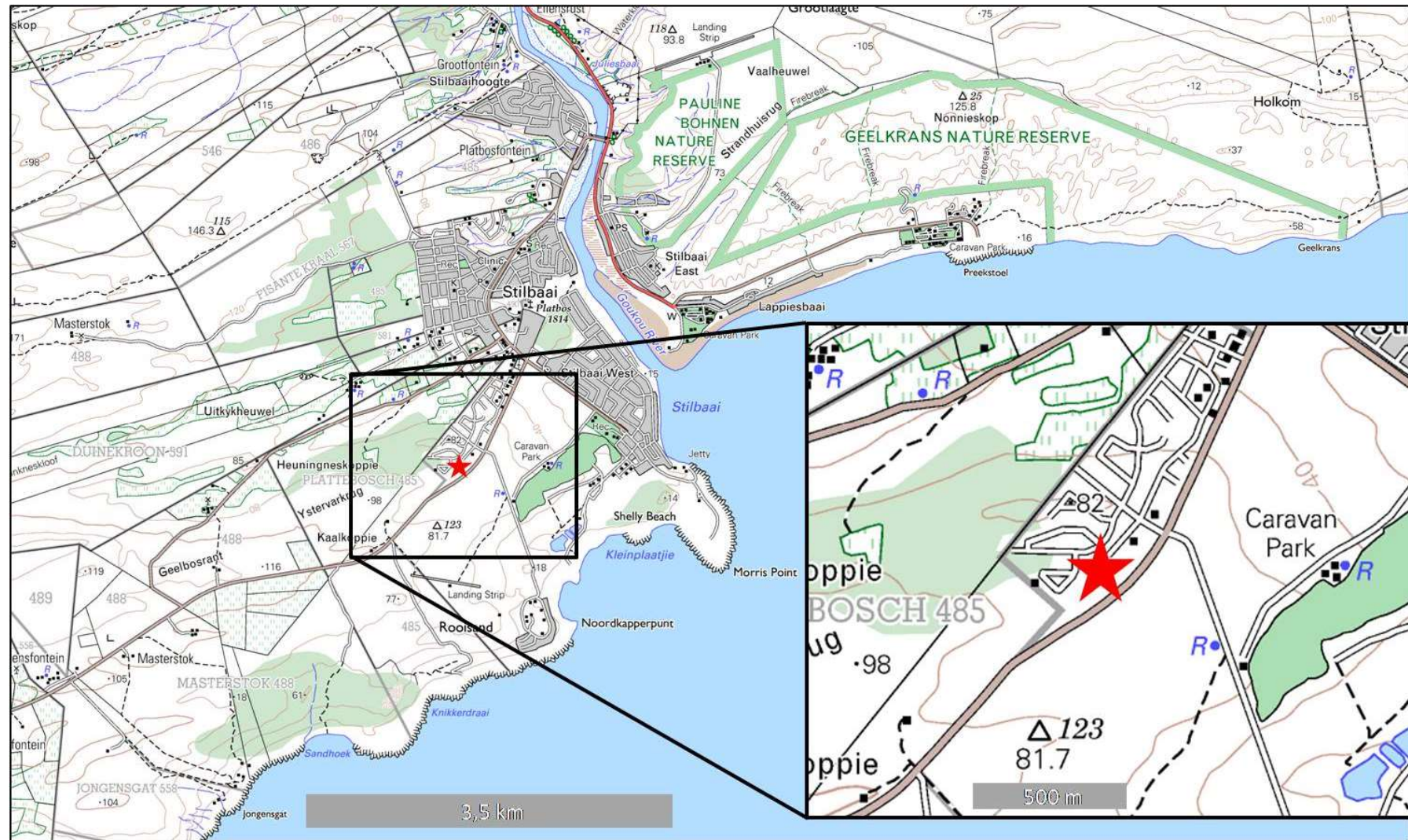


Figure 1. General location of Erf 3927, Still Bay West, Western Cape Province (red star). Enlarged portion of 1:50 000 topographic map 3421AD STILBAAI (1999). Courtesy of the Chief Directorate: Surveys and Mapping, Mowbray.





Figure 2. Aerial image showing the general location of Erf 3927 (green polygon), Still Bay West, Western Cape Province (<https://gis.elsenburg.com/apps/cfm/>).





Figure 3. Enlarged inset from Figure 2 showing the immediate surroundings and context of Erf 3927, Still Bay West (<https://gis.elsenburg.com/apps/cfm/>).









Figure 5. Examples of the affected property viewed from Bessie Street (top) and along the SE and NE boundaries (bottom left and right respectively). Note Jongensfontein Road (Main Road 331) in bottom left image. Directions of views are indicated with abbreviated compass bearing names.





Figure 6. Shown are examples of the affected property with existing disturbances, exposed sandy surfaces, vegetation and topography. Note the disused vehicle track and remains of imported gravel (bottom left and right respectively). Directions of views are indicated with abbreviated compass bearing names.





Figure 7. Shown are examples of the affected property with extensive and intense mole activity, vegetation, including some large Milkwood trees, and topography. An approximately 10 m X 5 m depression in the middle of the bottom left image suggests earlier borrow pit for sand. The adjacent property, largely cleared for development, is shown in the bottom right image. Directions of views are indicated with abbreviated compass bearing names.





Figure 8. Shown are examples of the affected property with extensive and intense mole activity (top), vegetation cover and dumped rubble (bottom). The pieces of concrete in the bottom right image are well buried. The GPS unit is 10 cm long. Directions of views are indicated with abbreviated compass bearing names.





Figure 13. Google Earth (2022) aerial image showing Erf 3927 (white polygon), vehicle access track (red line), survey walk tracks (red lines), and archaeological finds (labelled blue markers).



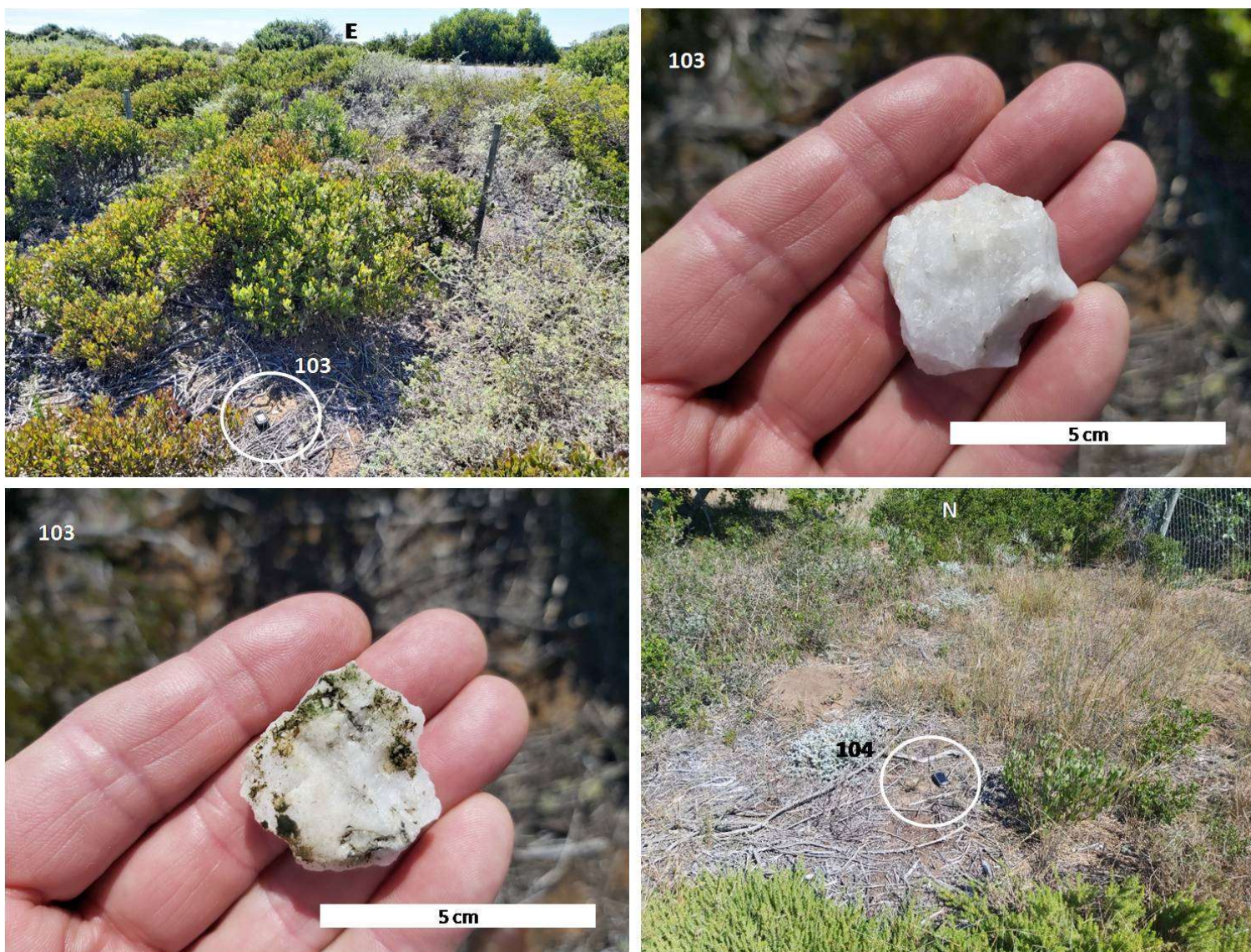


Figure 14. The context of stone artefacts at waypoints 103 and 104 are shown in the top left and bottom right images (white ellipses with GPS unit = 10cm long). The flaked piece of quartz has a distinct notch (bottom right edge in top right image), suggestive of an adze.





Figure 15. The context of the find at waypoint 104 is shown in Figure 14 (bottom right). This chunky quartzite flake retains cobble cortex (right), which is indicative of its source being a cobble beach or river bed / terrace.



## 14. Appendices

### Appendix A: Methodology for Assessing the Significance of Impacts

<b>EFFECT</b>	<b>Extents/Spatial Scale</b>		<b>E</b>
	Localized	At localized scale and a few hectares in extent.	1
	Study area	The proposed site and its immediate environs.	2
	Regional	District and Provincial level.	3
	National	Country.	4
	International	Internationally.	5
	<b>Duration/Temporal Scale</b>		<b>D</b>
	Very short	Less than 1 year.	1
	Short term	Between 2 to 5 years.	2
	Medium term	Between 5 and 15 years.	3
	Long term	Exceeding 15 years and from a human perspective almost permanent.	4
	Permanent	Resulting in a permanent and lasting change.	5
	<b>Magnitude/Intensity (Archaeological Sensitivity / Significance)</b>		<b>M</b>
	No potential	Locations or sediments entirely lacking archaeological remains or context suitable for scientific value.	0
	Marginal	Limited probability for producing archaeological resources from certain contexts and localities.	2
	Low	Archaeological resources present but of Not Conservation Worthy status – requiring no further archaeological investigation or mitigation.	4
	Medium	Archaeological resources present and rated as Grade III – local significance – requiring some archaeological investigation or mitigation.	6
	High	Archaeological resources present and rated as Grade II – regional significance – requiring archaeological investigation or mitigation, possible complete protection as No-Go area.	8
	Very high	Archaeological resources present and rated as Grade I – national or international significance – requiring complete protection as No-Go area.	10
	<b>Probability/Likelihood</b>		<b>P</b>
	Very improbable	Probably will not happen.	1
	Improbable	Some possibility, but low likelihood.	2
	Probable	Distinct possibility of these impacts occurring.	3
	Highly probable	The impact is most likely to occur.	4
	Definite	The impact will definitely occur regardless of prevention measures.	5

<b>SIGNIFICANCE = (E+D+M) x P</b>		
< 30	LOW	The impact would not have a direct influence on the decision to develop in the area
30-60	MEDIUM	The impact could influence the decision to develop in the area unless it is effectively mitigated
>60	HIGH	The impact must have an influence on the decision process to develop in the area



## Appendix B: Curriculum vitae

### Biographics:

<b>Names &amp; Surname:</b>	Peter John Nilssen
<b>Address:</b>	41, 21 <sup>st</sup> Avenue Mossel Bay 6500, South Africa
<b>Postal Address:</b>	P.O. Box 2635, Mossel Bay, 6500, South Africa
<b>Telephone/Contact:</b>	Cellular phone: (27) 082 783 5896, E-mail: <a href="mailto:peter@carm.co.za">peter@carm.co.za</a>
<b>Identity Number:</b>	641214 5081 080
<b>Nationality:</b>	South African
<b>Family Status:</b>	Married with two children
<b>Drivers Licence:</b>	Code 02, 11/02/1987, Code 08, 15/12/1982
<b>Health:</b>	Excellent
<b>Languages:</b>	English, Afrikaans

### Education:

<b>School &amp; Certificate:</b>	Rondebosch Boys High School, 1978 – 1982, Cape Senior Certificate, Full Matriculation Exemption
<b>University &amp; Degrees:</b>	University of Cape Town (UCT), South Africa - Ph.D. in archaeology (2000), BA HONS in archaeology (1989), and BA major in archaeology (1988)

### Professional Accreditation & Affiliation

Professional member of the Association of Southern African Professional Archaeologists (ASAPA) since 1989, including the Cultural Resource Management section of the same association (ASAPA professional member # 097).

#### Accreditation:

- Principal Investigator for archaeozoology (specialist analysis), coastal & shell midden archaeology and Stone Age archaeology;
- Field Director for Colonial Period;
- Field Supervisor for Iron Age and Rock Art.

#### Affiliation:

- Honorary Research Associate of Iziko – South African Museum, Cape Town

### Professional Employment

Date	Employer	Description
1989 - 1994	Prof. J.E. Parkington, UCT	Research Assistant
1990 – 1992	Prof. J.E. Parkington, UCT	Tutor for excavations
1991 & 1992	Dept. Archaeology, UCT	Tutor - Archaeology
1995 & 1996	Prof. A. Sillen, UCT	Research Assistant
1993 - 1999	Various scientists	Faunal analysis
1991 - 1999	Archaeology Contracts Office (UCT)	Cultural Resource Management
1991 - 1999	Agency for CRM (J Kaplan)	Cultural Resource Management
1999 - 2004	Prof. C.W. Marean, State University of New York, Stony Brook, USA	Contracted researcher and faunal analyst
2000 - 2001	Dr. C.S. Henshilwood, IZIKO	Faunal analysis, Blombos Cave
2003	Prof. Judith C. Sealy, UCT	Faunal analysis
2004 - 2006	Institute of Human Origins (IHO) Arizona State University, Tempe, USA	Co- Director & researcher, Pinnacle Point Site Complex, Mossel Bay
2007 to present	self employed	Archaeological & Heritage Consultant
2013 to present	Point of Human Origins	Founder and owner – anchor site for



		the Cradle of Human Culture tourism route - Pinnacle Point Site Complex, Mossel Bay
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### **Experience:**

Considerable fieldwork (survey, recording, mapping & excavation) and project experience in both archaeological research (Western Cape Province) and cultural resource management (CRM - Western, Eastern and Northern Cape Provinces of South Africa as well as Lesotho) spanning much of the Southern African prehistoric (Stone Age and Pastoralist) and historic (Colonial) periods.

CRM Project types include:

- Notification of Intent to Develop & accompanying Heritage Statements
- Archaeological specialist studies
- Heritage Impact Assessments
- Research & CRM archaeological excavations in Historic and Prehistoric sites

Development types:

- Single and complex residential & industrial
- Golf course
- Nature reserve / game farm
- Solar and wind facilities
- Roads, walkways, pipelines, cables, powerlines
- Dams
- Mines

### **Publications & Reports**

#### **Book:**

- Nilssen, Peter. 2011. Hunting or Scavenging in the Early and Middle Stone Ages of Africa – Experimental archaeology and reconstructing hominid strategies of carcass acquisition and butchery in the Upper Pleistocene and Plio-Pleistocene. VDM Verlag Dr. Muller GmbH & Co. KG (ISBN 978-3-639-37474-2)

#### **Peer Review Publications:**

- Nilssen, Peter and Craig Foster. 2017. The key to our future is buried in the past – philosophical thoughts on saving us from ourselves. *The Digging Stick* Vol 34, 1
- Antonieta Jerardino, Jonathan Kaplan, Rene Navarro and Peter Nilssen. 2016. Filling in the gaps and testing past scenarios on the Central West Coast: Hunter-gatherer subsistence and mobility at 'Deurspring 16' Shell Midden, Lamberts Bay, South Africa. *The South African Archaeological Bulletin* June 2016.
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- Yoshiko Abe, Curtis W. Marean, Peter J. Nilssen, Zelalem Assefa, and Elizabeth Stone 2002. "The analysis of cut marks on archaeofauna: a review and critique of quantification procedures, and a new image-analysis GIS approach." *American Antiquity* 67:
- C.W. Marean, Y. Abe, P.J. Nilssen, and E. Stone 2001. "Estimating the minimum number of skeletal elements (MNE) in zooarchaeology: a review and a new image-analysis GIS approach." *American Antiquity* 66:333-348.
- Jerardino, R. Navarro, and P. Nilssen, 2001. An approach to the study of Cape rock lobster (*Jasus lalandii*) exploitation in the past: morphometric equations for estimating carapace length from mandible sizes. *South African Journal of Science* 97:59-62.
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- Henshilwood, C., Nilssen, P. and Parkington, J. 1994. Mussel drying and food storage in the late Holocene, SW Cape, South Africa. *Journal of Field Archaeology*. 21: 103 - 109.
- Parkington, J., Nilssen, P., Reeler, C. and Henshilwood, C. 1992. Making sense of space at Dunefield Midden campsite, western Cape, South Africa. *Southern African Field Archaeology*. 1 (2): 63-71.

#### **Heritage-related Reports & Impact Assessments:**

More than 240 reports completed to date as Principal Investigator

A full CV with a complete list of reports is available on request.



## Appendix C: Declaration of Independence

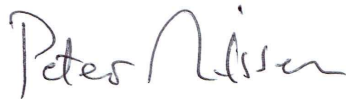
Archaeological Impact Assessment: (HWC Case No. 20190809SB0909E) Proposed Residential Development on Erf 3927 (Still Bay West), Riversdale District and Hessequa Municipality

Terms of Reference: This assessment forms part of the Heritage Impact Assessment and assesses the overall archaeological sensitivities of the project area.

Declaration:

I, **Peter Nilssen**, as the appointed independent specialist hereby declare that I:

- acted as the independent specialist in the compilation of the above report;
- regard the information contained in this report as it relates to my specialist input/study to be true and correct, and
- do not have and will not have any financial interest in the undertaking of the activity, other than remuneration for work performed in terms of the NEMA, the Environmental Impact Assessment Regulations, 2014 and any specific environmental management Act;
- have and will not have any vested interest in the proposed activity proceeding;
- have disclosed to the EAP any material information that has or may have the potential to influence the decision of the competent authority or the objectivity of any report, plan or document required in terms of the NEMA, the Environmental Impact Assessment Regulations, 2014 and any specific environmental management act;
- have provided the EAP with access to all information at my disposal regarding the application, whether such information is favourable to the applicant or not; and
- am aware that a false declaration is an offence in terms of regulation 48 of the 2014 NEMA EIA Regulations.



Signature of the specialist

Date: 10 February 2022



## Appendix D: Glossary & Abbreviations

**Historic:** period comprising the last few hundred years in South Africa (from around the year 1488) of colonial (mostly western European people) occupation

**Hominin:** Any member of the tribe Hominini, the evolutionary group that includes modern humans and now-extinct bipedal relatives

**Midden:** refuse from human occupation that may contain cultural and food remains

**Shell midden:** refuse from human occupation that may contain cultural and faunal remains, but that is dominated by the remains of shellfish

**Stone Age:** period of hominin occupation with stone implements being the dominant and often only surviving technology, spanning the period between approximately 3 million years ago and 2 thousand years ago

### Abbreviations

<b>ASAPA:</b> Association of Southern African Professional Archaeologists	<b>MSA:</b> Middle Stone Age
<b>BA:</b> Basic Assessment	<b>NCW:</b> Not Conservation Worthy
<b>CRM:</b> Cultural Resources Management	<b>NEMA:</b> National Environmental Management Act (Act No. 107 of 1998)
<b>EMPr:</b> Environmental Management Program	<b>NHRA:</b> National Heritage Resources Act (Act No. 25 of 1999)
<b>ESA:</b> Early Stone Age	<b>NID:</b> Notification of Intent to Develop
<b>GPS:</b> global positioning system	<b>PPP:</b> Public Participation Process which includes Community Consultation
<b>HIA:</b> Heritage Impact Assessment	<b>SAHRA:</b> South African Heritage Resources Agency
<b>HWC:</b> Heritage Western Cape	<b>SAHRIS:</b> South African Heritage Resources Information System
<b>LSA:</b> Later Stone Age	