

Phase 1a 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 13 December 2022
(HWC Case No. 22112306AM1122)

Proposed Residential and Communal Facilities Development on Remainder Portion 21 of Farm 195 Pieterkoen, George, Western Cape Province

prepared for

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30 March 2023

Executive Summary

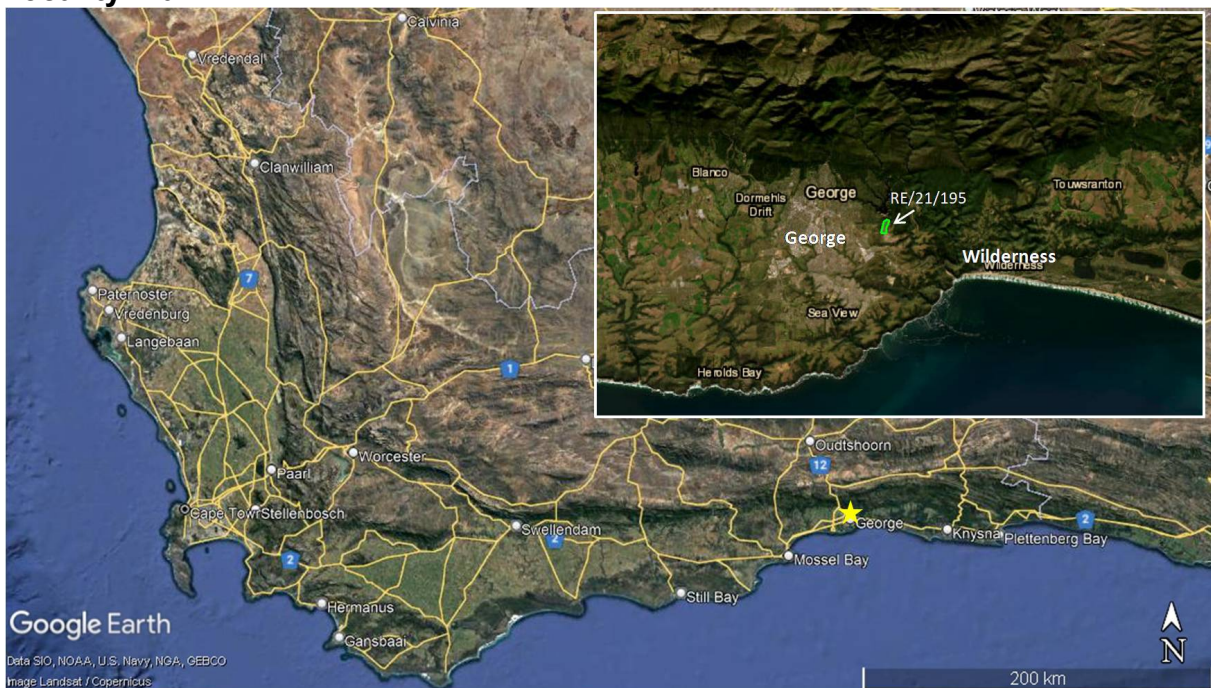
Site Name

Remainder Portion 21 of Farm 195 Pieterkoen (hereafter RE/21/195), George, Western Cape Province.

Location

Off Glenwood Avenue with the Seven Passes Road running through the northern part of RE/21/195, George District and Municipality, Western Cape Province. The approximate centre point of the property is at 33° 58' 15.15" S 20° 30' 45.96" E.

Locality Plan



General location of RE/21/195 (yellow star and green polygon [inset]) near George, Western Cape Province. Courtesy of Google Earth & Cape Farm Mapper (<https://gis.elsenburg.com/apps/cfm/>). (A4 version below)

Description of Proposed Development

A residential development designed around the existing farmstead, which will be converted into a club house and communal facilities. Housing will include a mixture of apartments (three storey blocks), group housing and free-standing houses. A small retail centre is proposed at the current farmstead entrance, and access from Glenwood Avenue will be roughly opposite the current manor house. A total of 312 housing opportunities are planned.

Identified Archaeological Resources

Colonial period archaeological resources are dealt with in the Built Environment Study (BES) and integrated Heritage Impact Assessment (HIA) while this report focuses on some

colonial aspects (graves, ruins and midden), but is mainly concerned with the pre-colonial archaeological record.

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, colonial period structures and ruins are the only archaeological resources identified on the property, and these are dealt with by Lize Malan in the BES and integrated HIA. While existing buildings have significant heritage value at the local level, the colonial period ruins identified during this archaeological study are rated as Not Conservation Worthy (NCW).

Anticipated Impacts on Archaeological Resources

Since none were identified, there are no anticipated impacts to pre-colonial archaeological resources. Because colonial period ruins are NCW, impacts to these resources will have no negative impact on the archaeological or heritage value of the property or immediate surroundings.

“The Pieterkoen werf buildings clearly have significant heritage value – both architectural and historic, and the proposed development may detract from this significance, if not approached with sensitivity” (Malan 2022, HWC NID application).

Recommendations

- Apart from recommendations concerning the colonial period structures that are given in the BES and HIA reports, there are no fatal flaws or objections to the full authorisation of the proposed development provided that the below recommendations are implemented.
- 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 Authorization and/or Environmental Management Program (EMPr) for the proposed residential development.

Author(s) / Contributor(s) and Date

Archaeological specialist study: Peter Nilssen, March 2023

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1. Introduction

1.1. Site, description and location

RE/21/195 is 21,2 ha in extent, and is situated between Glenwood Avenue in the south and the Klein Swart River in the north, and within the amended urban edge of George District and Municipality, Western Cape Province (Figures 1, 2 and 3). Madiba Drive / Seven Passes Road runs through the northern portion of the property, which is bounded in the east and west by undeveloped, rural land, while residential developments are already in place to the south of Glenwood Avenue (Figure 3). RE/21/195 is registered to Pieterkoen Trust (see details of Title Deed in the HIA report).

The approximate centre point of the property is at 33° 58' 15.15" S 20° 30' 45.96" E. (see yellow star in Locality Plan and polygons in Figures 1, 2 & 3).

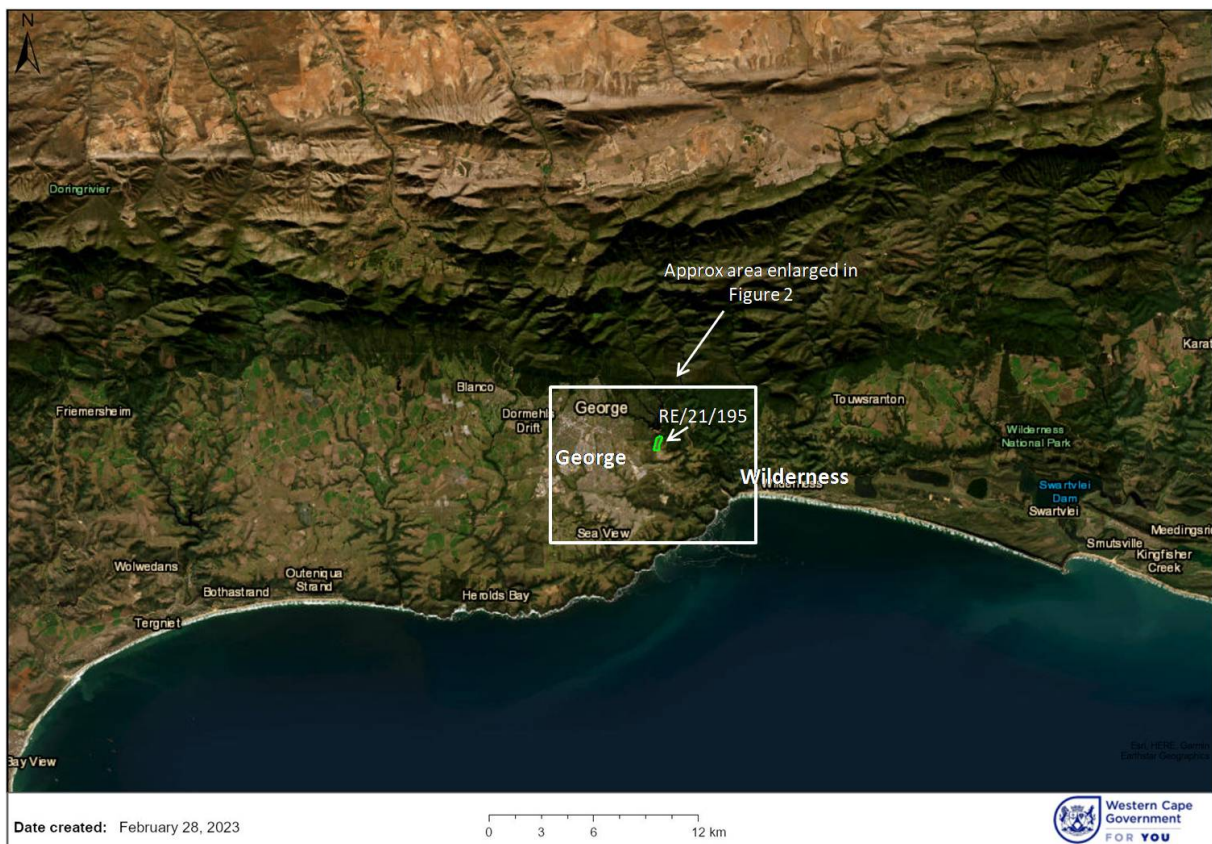


Figure 1. Location of RE/21/195 (green polygon) relative to George and Wilderness, Western Cape Province (<https://gis.elsenburg.com/apps/cfm/>). (A4 version below)

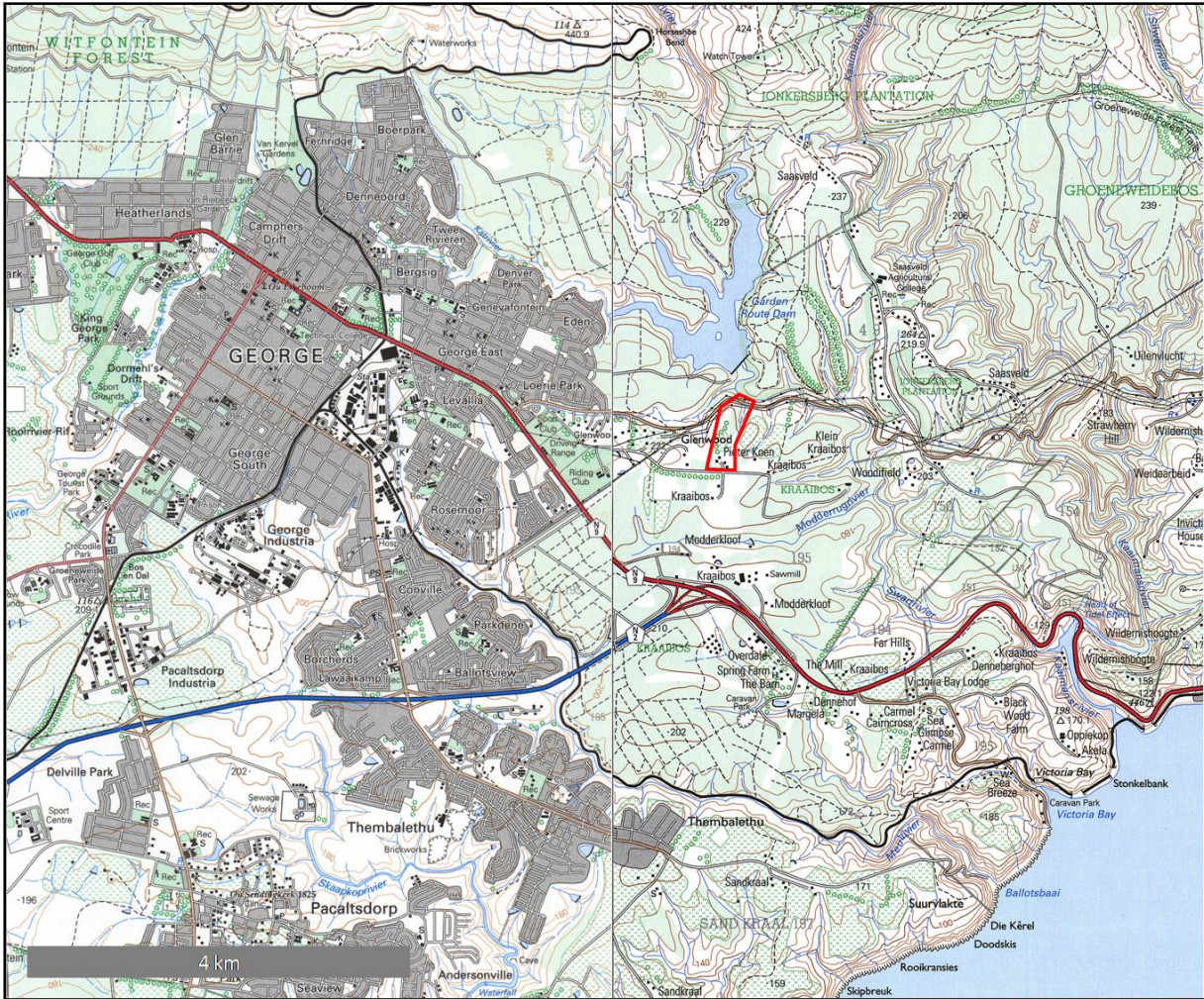


Figure 2. Area enlarged from Figure 1 showing the location of RE/21/195 (red polygon), George, Western Cape Province. Enlarged portion of 1:50 000 topographic maps 3322CD & 3422AB George and 3322DC & 3422BA Wilderness (2000). Courtesy of the Chief Directorate: Surveys and Mapping, Mowbray.



Figure 3. RE/21/195 and surrounding context showing Garden Route Dam and Klein Swart River in the north, residential developments south of Glenwood Avenue, Madiba Drive / Seven Passes Road running through the northern portion of the property, and rural lands to the west and east (<https://gis.elsenburg.com/apps/cfm/>). (A4 version below)

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 12 December 2022, to which they responded on 13 December 2022, requesting

a HIA with specific reference to an Archaeological Impact Assessment (AIA), a Visual Impact Assessment (VIA) and a Built Environment Study (BES). The report submitted here fulfils the requirement for the AIA, focused mainly on the pre-colonial record, while the colonial period archaeological resources fall under the BES conducted by Ms Lize Malan, who is also compiling the integrated HIA report.

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 260 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 the 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 is for a residential development designed around the existing colonial period farmstead, which will be converted into a club house and communal facilities (Figure 4). Housing will include a mixture of apartments (three storey blocks), group housing and free-standing houses. A small retail centre is proposed at the current farmstead entrance,

and access from Glenwood Avenue will be roughly opposite the current manor house. A total of 312 housing opportunities are planned. A more detailed description of the proposed rezoning, subdivision, development and required applications are given in the HIA.

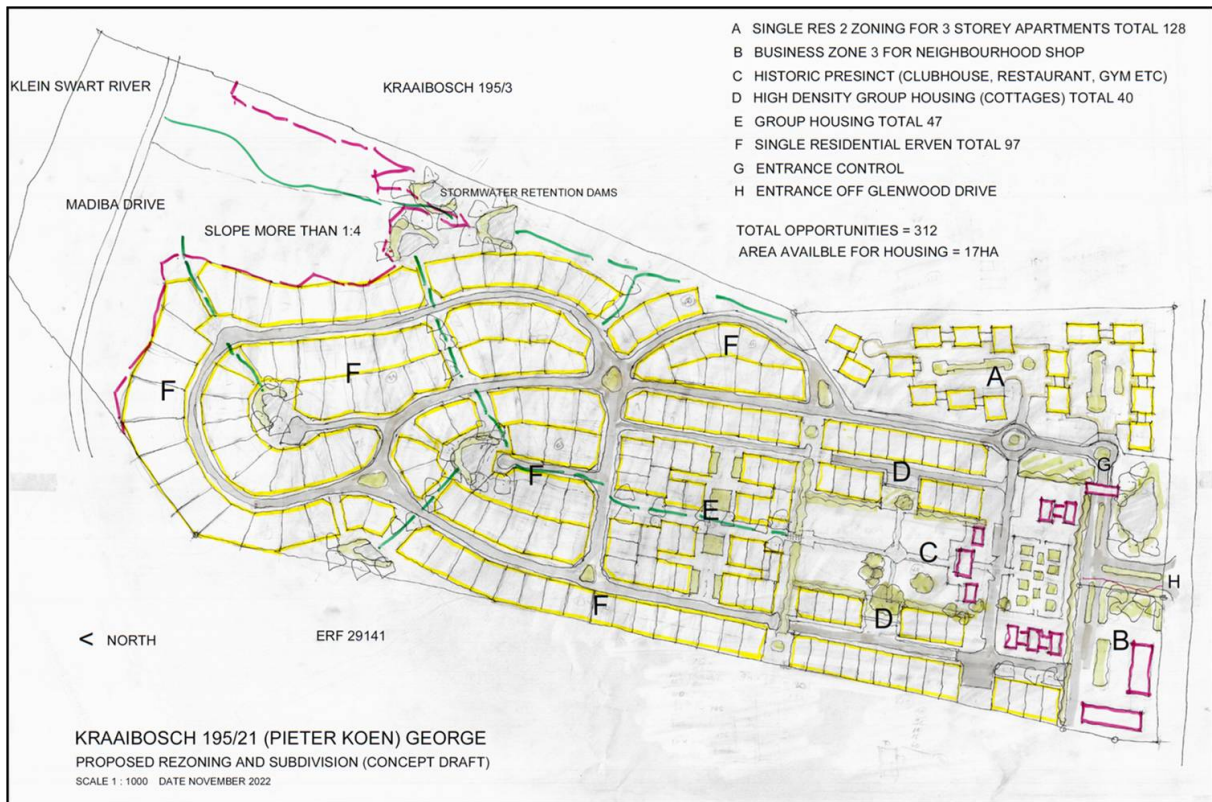


Figure 4. Conceptual Site Development Plan for the proposed rezoning and subdivision of RE/21/195. Courtesy of the applicant and client. (A4 version below)

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 herein.

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 for building foundations and bulk services may reach a maximum depth of between 1, 5 m and 2 m.

Colonial period archaeological resources in the form of buildings / structures are dealt with in the BES conducted by Ms Malan. It is understood that existing colonial period structures of heritage value will be incorporated into the development, but structures older than 60 years will require an alteration or demolition permit from HWC and from local authorities. These matters are dealt with in more detail in the BES and integrated HIA.

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 detectible 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	Title page & Section 1.4 and Appendix B
	(ii) the expertise of that specialist to compile a specialist report including a curriculum vitae;	
(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-	Sections 9, 10 & 11
	(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;	
(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

RE/21/195 falls within the amended urban edge of George and is situated approximately 7 km NE of the “historic” centre of Pacaltsdorp and about 5 km East of “historic” George with the nearest shoreline some 5, 5 km to the south-east (Figure 2). The Klein Swart River and Glenwood Avenue are the north and south boundaries respectively (Figure 3). As is evident in Figure 3, the predominant land use of surrounding properties includes vacant land, but with approved residential development, residential development, Municipal commonage and the Garden Route Dam.

The study area is readily accessed by vehicle via Madiba Drive and Glenwood Avenue. The property immediately west of RE/21/195 is mostly cleared of vegetation and appears to be under preparation for development. Apart from the latter and the property immediately east, which are as yet undeveloped, the immediate surroundings to the south are developed with roads, bulk service infrastructure and residential units. The Provincial Heritage Site (PHS) of the old George-Knysna Road (Seven Passes Road) runs through the northern portion of the property.

4.2. Site Description

About 2/3 of the property is situated on relatively flat, gently undulating, high lying ground with a small drainage line immediately west and another drainage line near the north-eastern boundary (Figure 5).

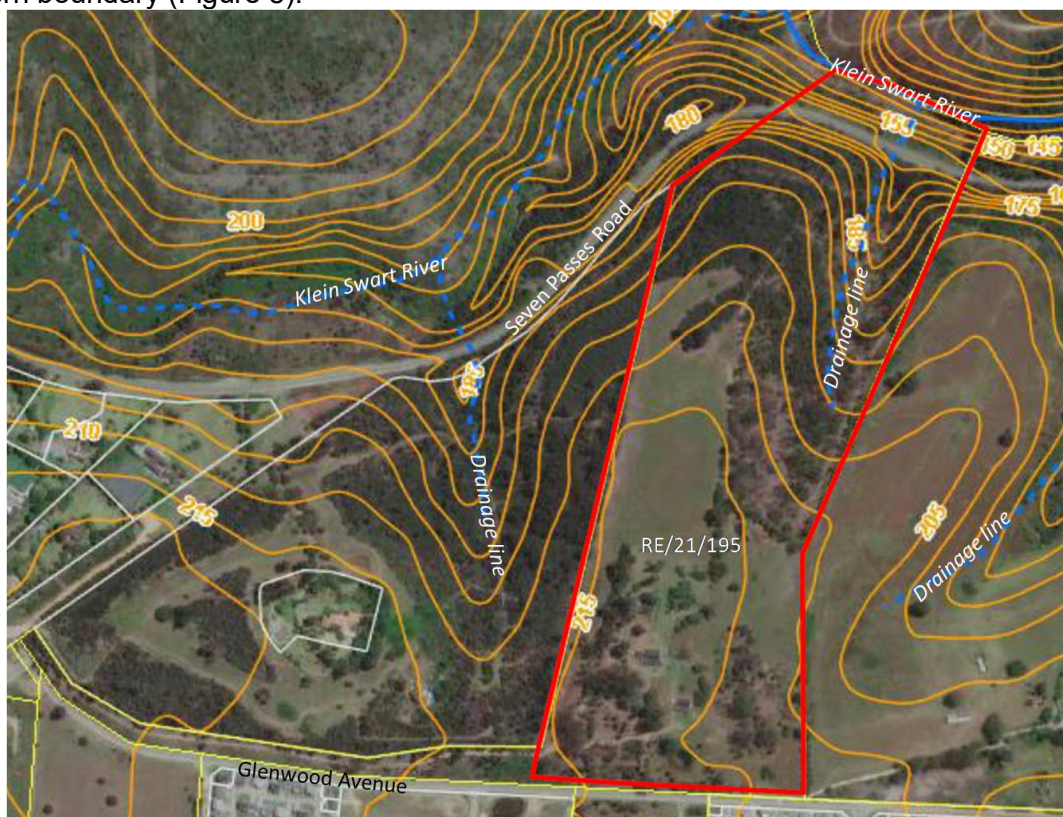


Figure 5. Topography of RE/21/195 and immediate surroundings (annotated after Malan 2022, pg. 5 - source <https://qis.elsenburg.com/apps/cfm/>).

The existing farmstead and buildings are situated on the flat, high-ground in the southern quarter of the property while the ground slopes down steeply toward the Seven Passes Road and Klein Swart River in the north (Figure 5). As indicated in Figure 4, the latter area is too steep for development.

In addition to the farmstead buildings and features, the vast bulk of the property is significantly transformed and disturbed by human related activities. These include agricultural-related activities such as vegetation clearing, dams and other earthmoving operations, grazing, ploughing, landscaping, roads and single vehicle tracks, fencing, tree felling and wood cutting operations. As a result, surface sediments are significantly disturbed and any pre-colonial archaeological remains on the property would be displaced, mixed and *ex situ* rendering them to be of low significance and Not Conservation Worthy (NCW).

Apart from mainly exotic trees associated with the farmstead, the steep slopes in the north as well as the drainage line, the bulk of the property is cleared of indigenous vegetation and is covered in grasses, shrub, bush, and the stumps of felled pine, blue gum and wattle trees. Quartzitic gravels, sands and top soils are underlain by quartzitic sandstones that are exposed in the north-eastern drainage line, and along the steep slopes adjacent to the Seven Passes Road and Klein Swart River. A vehicle track along the north-eastern drainage line joins up with the Seven Passes Road. Tree felling and wood cutting was in progress while conducting field work for this study. Several modern rubbish and rubble dumps were noted in the north, south and south-western extents of the property. In addition to the above-mentioned human-related disturbances, there are numerous mole heaps and cattle tracks.

The spatial layout of the farmstead (“werf”) and locations of roads, buildings, structures, ruins and features in the southern portion of RE/21/195 are shown in Figure 6. An aerial view of the northern part of the property is shown in Figure 7 while examples of the site, context and features are shown in Figures 8 through 18. Where appropriate, directions of views are indicated on photographs with abbreviated compass bearing names like NNW = north-north-west, SW = south-west, and so on.



Figure 6. Spatial layout of farmstead in southern part of RE/21/196 (red polygon) showing roads, structures, ruins and features. (A4 version below)



Figure 7. Rotated aerial view of the northern part of RE/21/195 (red polygon) with North to the left. Note vehicle tracks, cleared fields, dams and fencing lines. The farmstead ("werf") with buildings is in the south as indicated by the dashed line (right). (A4 version below)



Figure 8. Current access road to RE/21/195 with left fork to main house and right to barn.



Figure 9. Seven Passes Road running through northern portion of site with steep slopes on either side. Vehicle track connecting property with Seven Passes Road (bottom).



Figure 10. Large stumps of burnt and felled trees near the main access point (top). View from the SE corner with Glenwood Avenue at left and semi-ruin near southern boundary (bottom).

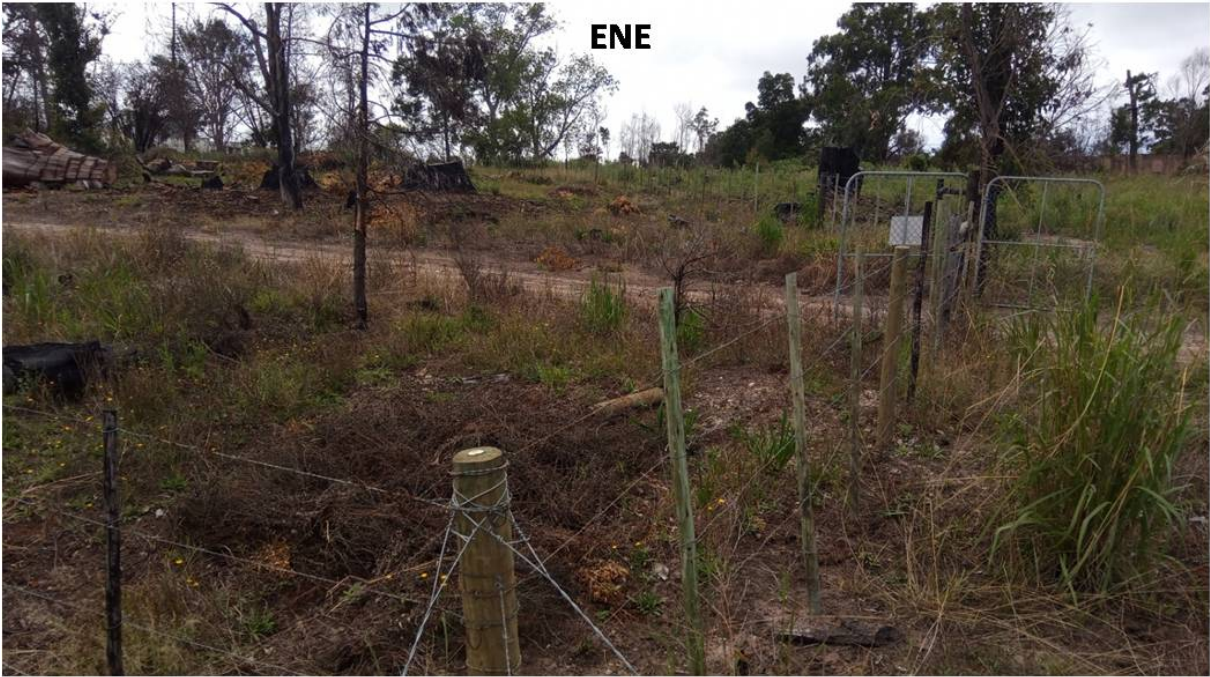


Figure 11. Views from the SW extent of the property with the western boundary fence at bottom left.



Figure 12. Views in the SE portion of the property showing, topography, vegetation cover, structures and cleared fields. Note mole heaps in foreground (bottom).



Figure 13. Views in the southern portion of the property showing dam, main house, outbuilding, barn, semi-ruin (top), sun dial, pool and main house (bottom).



Figure 14. Examples of existing developments, topography and vegetation cover in the southern (top) and northern (top) parts of RE/21/195.



Figure 15. Examples of topography and vegetation cover in the northern part of the property. Vehicle track visible at right of top image leads to the Seven Passes Road in the north.



Figure 16. Examples of topography and vegetation cover in the northern part of the property, a short distance from where steep slopes descend to the Seven Passes Road and Klein Swart River in the north.



Figure 17. Examples of topography and vegetation cover in the north where the land slopes down steeply to the Seven Passes Road and Klein Swart River in the north.



Figure 18. Tree felling and wood cutting operations on slopes of drainage line in the north-eastern quadrant of RE/21/195.

5. Description of Methodology

This investigation involved a desktop study and literature review as well as an archaeological foot survey of RE/21/195. All work was carried out by this author with inputs and information provided by Ms Malan, who submitted the HWC NID application, is conducting the BES study, and is compiling the integrated HIA for the project. Although Ms Malan is dealing with the colonial period built environment, she requested this author to investigate the potential presence of graves and colonial period middens that may be associated with the farmstead. Apart from the latter, and since it is being covered in the BES

and HIA, this investigation excludes the colonial period archaeological remains on RE/21/195.

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 “historic” aerial photographs and early diagrams (Malan 2022 & pers. comm.) as well as 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 http://www.cdngiportal.co.za/cdngiportal/	Historic & Current	Spatial	Maps of various type and scale, and aerial images
Maps & Aerial Photographs	CapeFarmMapper https://gis.elsenburg.com/apps/cfm/#	Historic & Current	Spatial	Maps of various type and scale, and aerial images
Aerial Photographs and for Superimposing Spatial Data	Google Earth Software Application or https://earth.google.com/web/	Historic & Current	Spatial	Aerial images and overlays of SDPs, GPS data, Surveyor General Diagrams and aerial images
Cadastral Data	CapeFarmMapper https://gis.elsenburg.com/apps/cfm/#	Current	Spatial	Cadastral boundaries and extents
Cadastral Data	Chief Directorate: National Geo-Spatial Information http://www.cdngiportal.co.za/cdngiportal/	Various	Survey Diagrams	Historical & current diagrams, survey data and registration dates
Cadastral Data	Chief Surveyor-General http://csq.dla.gov.za/d ata.htm	Current & Historic	Survey Diagrams	Historical & current diagrams, survey data and registration dates
Background Information	South African Heritage Resources Information System (SAHRIS) https://sahris.sahra.org.za/map/reports	Current	Reports and Spatial	Previous impact assessments for developments in the immediate surroundings area
Palaeontological Sensitivity	South African Heritage Resources Information System (SAHRIS) https://sahris.sahra.org.za/map/palaeo	Current	Spatial	Map showing palaeontological sensitivity and required actions based on the sensitivity.
Title Deeds	Deeds Office https://www.deeds.gov.za/index.php	Historic & Current	Ownership	Registration of property ownership

For the purpose of familiarisation and to obtain and present background information about the project, this author consulted the NID and Illustrative Material submitted to HWC by Ms Malan in support of the NID application (Malan 2022). “Historic” aerial photographs were supplied by Ms Malan and correspondence concerning the project, including HWC’s response to the NID application, was obtained and reviewed.

5.2. Field Survey

The purpose of the archaeological foot survey was; to determine whether any pre-colonial archaeological resources occur on the surface of exposed sediments within the study area, to identify graves or colonial period middens that may be associated with the farmstead, 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, but does not deal with the Built Environment other than materials not documented by Ms Malan during the NID application phase.

Due to the relatively small size of the study area, a comprehensive archaeological foot survey covered the vast bulk of the property. The very steep slopes at the northern extent of the property cannot be surveyed on foot. 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 26, gpx tracking file is available from author). A comprehensive, high quality digital photographic record was made with a Doogee S86 mobile phone, which includes location data. All coordinate and photographic data are available from this author on request.

After obtaining permission from Mr Janiel de Kock (representing the applicant, Pieterkoen Trust) the site was accessed by vehicle in the company of Mr de Kock on 1 March 2022. After Mr de Kock pointed out some of the heritage-related features and access points to the remainder of the property, an archaeological foot survey of the property was conducted independently. Apart from the very steep slopes in the north and a few patches of impenetrable vegetation, the vast bulk of the property was accessible on foot. Due to extensive disturbances and mole activity, ground visibility was moderate and sufficient observations were made for the purpose of this investigation and assessment. The walk tracks shown in Figure 26 give an indication of the coverage achieved during the archaeological foot survey.

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 RE/21/195 that may contain archaeological materials, however, are significantly disturbed by human-related activities as described above and to some extent by bioturbation (mole activity) and cattle trampling. Consequently, the pre-colonial archaeological context of the property is severely compromised. This is a limitation to the pre-colonial 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 for 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.

This assessment assumes that the pre-colonial period will be dealt with in the BES and HIA reports and is not duplicated here. Regarding the colonial period archaeological record, this study is limited to the search for graves, middens and features not documented by Ms Malan during the NID application phase of the heritage process.

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

6. Description of Results from the Archaeological Study

This author has considerable experience with the archaeology of the coastal and near-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 and bulk services infrastructure, middens, burials and cemeteries among others.

Pre-colonial 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 as early as the late 15th Century (1488 landfall of the seafarer Bartolomeu Dias at Mossel Bay), but more commonly from the mid-to late-1700s till present.

6.1. Desktop Study and Literature Review

SG Diagrams and Historic Aerial Photographs

A detailed account of the colonial period occupation and property ownership is given in the HIA report and is not repeated here. Early SG Diagrams indicate that the original homestead associated with the parent farm, the loan farm Zwart River granted in 1778, was located some distance south of the subdivided RE/21/195 (Malan 2022 and De Kock 2013). It appears that some of the structures on the property were built by at least 1925, and possibly as early as 1919, prior to occupation by the Branford family who have owned RE/21/195 since 1938 (Malan 2022). It is possible that the earliest structures date to the mid-1800s (Malan 2022).

A comparison of the current farmstead shown in Figure 6 with the below historic aerial photographs shows that the property was already significantly transformed by 1936 and that

the main structures (main house, barn and “labourer’s” cottage) were already in place (Figures 19 through 22).

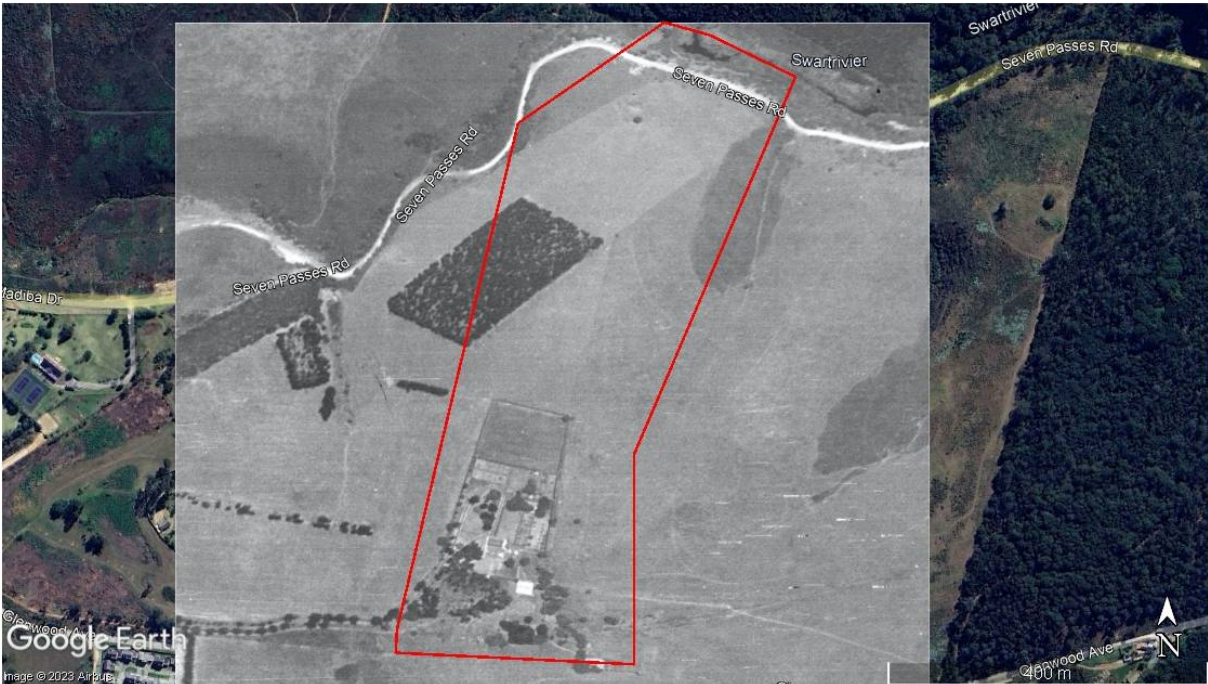


Figure 19. Cropped portion of 1936 aerial photograph superimposed via Google Earth with RE/21/195 boundary in red. Note that the southern boundary should be south of structure. Courtesy of NGS, aerial survey 114, Flight strip 17, Image 18481.



Figure 20. Enlarged from Figure 19 showing farmstead (“werf”) portion of property in 1936. Note that there is no structure at yellow marker and the southern boundary (red) should be south of “labourer’s” cottage. Courtesy of NGS, aerial survey 114, Flight strip 17, Image 18481. (A4 version below)

A structure was built at the location of the yellow marker between 1936 and 1939 (Figure 21) and a second “labourer’s” cottage was built between 1939 and 1974 (Figure 22).



Figure 21. Cropped portion of 1939 aerial photograph superimposed via Google Earth showing farmstead portion of RE/21/195. Note structure in white circle and that the southern boundary (red) should be south of “labourer’s” cottage. Courtesy of NGS, aerial survey 140, Flight strip 36, Image 34058. (A4 version below)

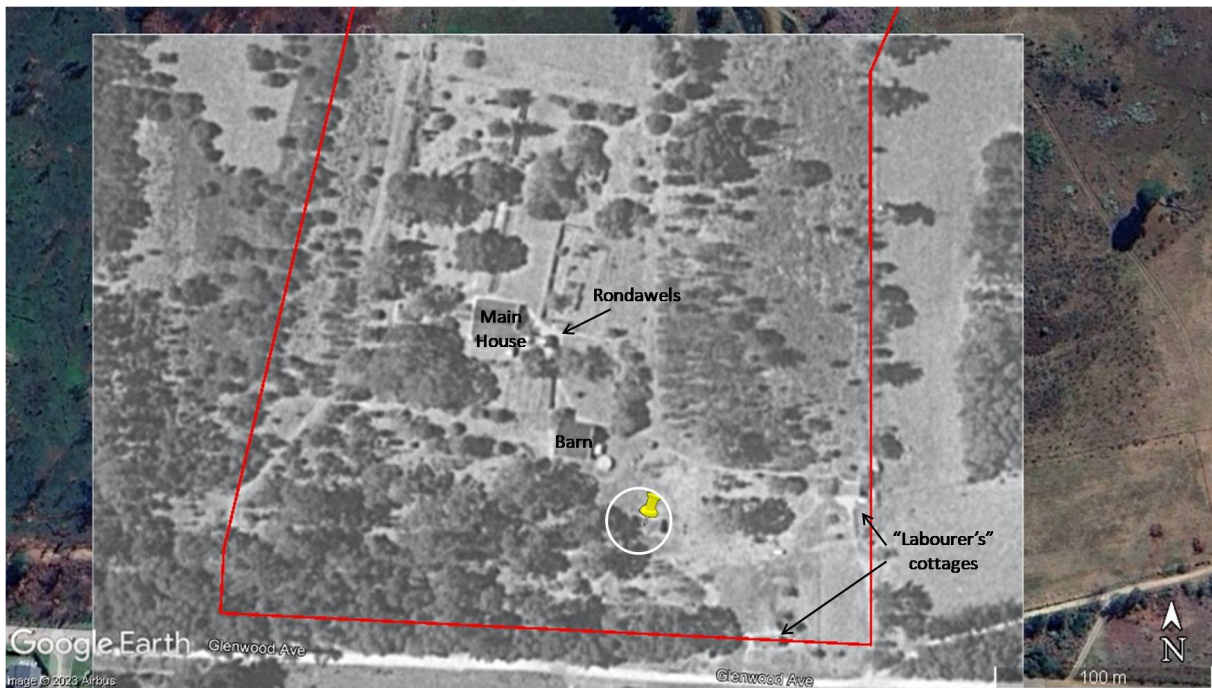


Figure 22. Cropped portion of 1974 aerial photograph superimposed via Google Earth showing farmstead portion of RE/21/195. Note structure in white circle, second “labourer’s” cottage and that southern boundary (red) should be south of “labourer’s” cottage. Courtesy of NGS, aerial survey 498, Flight strip 61_01, Image 09356. (A4 version below)

The 2000 topographic map shows that the main access road (closed today) into RE/21/195 from Glenwood Avenue was south of the barn and main house (Figure 23). The structure mapped to the SW of the main house does not exist today and is absent from the historic aerial photographs. Both “labourer’s” cottages were also mapped in 2000, but placement of structures seems inaccurate (Figure 23).

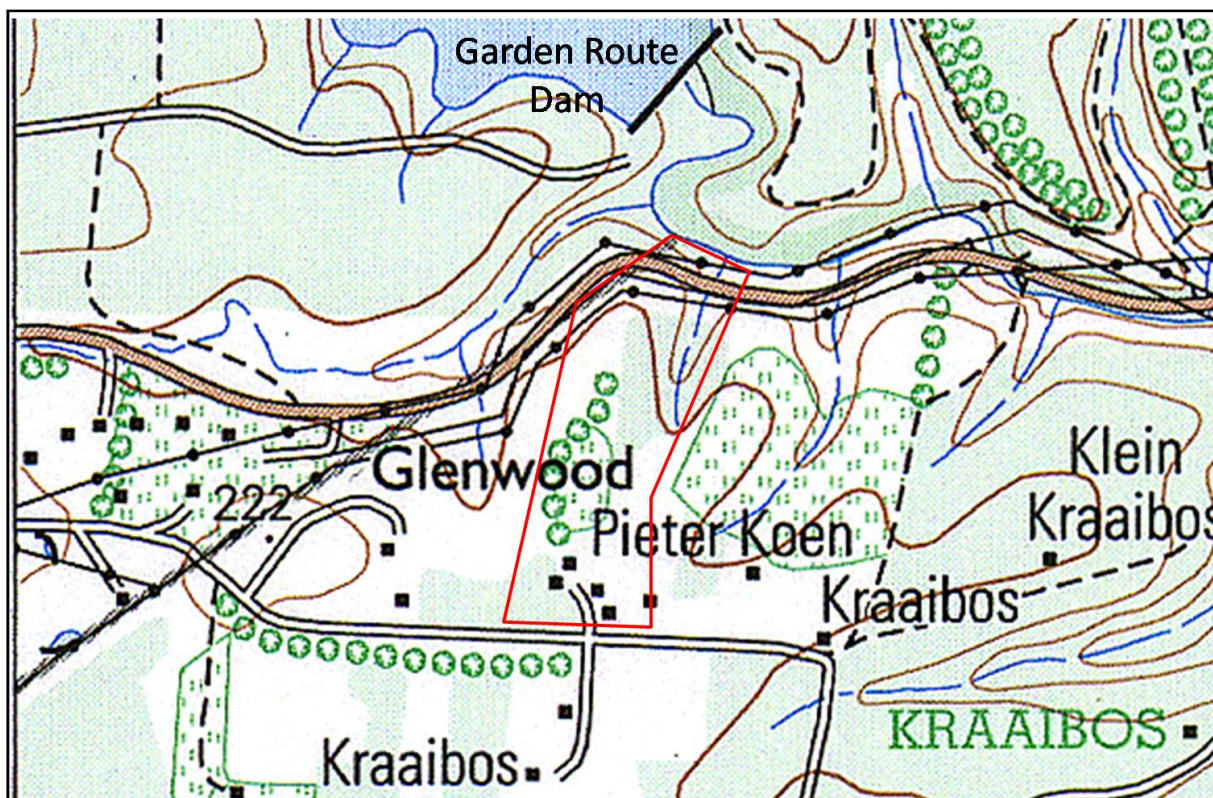


Figure 23 – Enlarged portion of 1:50 000 topographic maps 3322DC & 3422BA Wilderness (2000) showing RE/21/195 (red polygon), structures and access road. Courtesy of the Chief Directorate Surveys and Mapping, Mowbray.

Literature Review

This desktop study and literature review provide an overview of the types and significance of heritage resources that can be expected to occur in the study area (De Kock 2013, Dreyer 2006 & 2007, Halkett & Hart 1997, Kaplan 1993, 2001, 2004, 2005, 2006, 2007a, 2007b & 2022, Lavin & Smuts 2018, Malan 2022, Nilssen 2003, 2007, 2011a, 2011b, 2013, 2022a & 2022b and Orton & Hart 2011).

The location of studies shown in Figure 24 can be matched by their MAPID numbers in the references section. Reports of studies that are not in the SAHRIS database are represented by green polygons in Figure 25 while they are identified by their property names in the references section.

Note that ID 8384 in Figure 24 was a BA notification without any heritage related report. Although the most distant study is about 14 km from RE/21/195, most of the selected studies are within a 10 km radius of the study area.

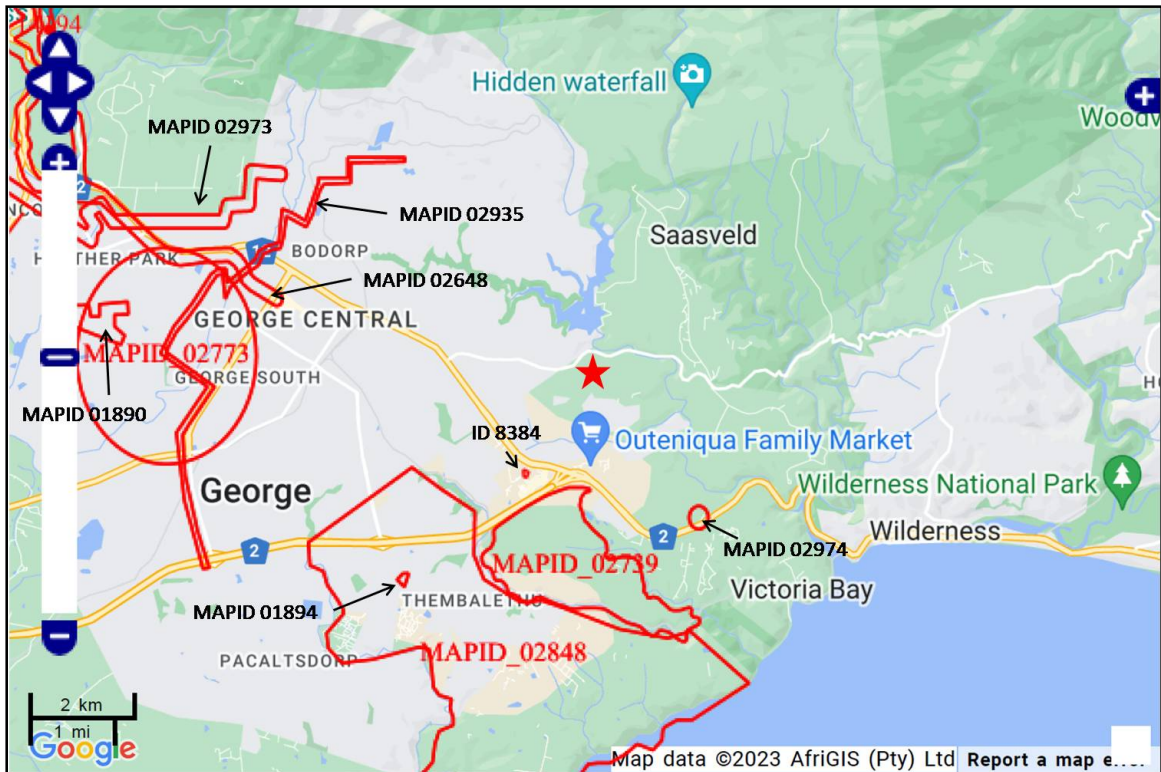


Figure 25. The SAHRIS FindReports Map showing heritage-related studies conducted in the surroundings of RE/21/195 (red star) (<https://sahris.sahra.org.za/map/reports>).

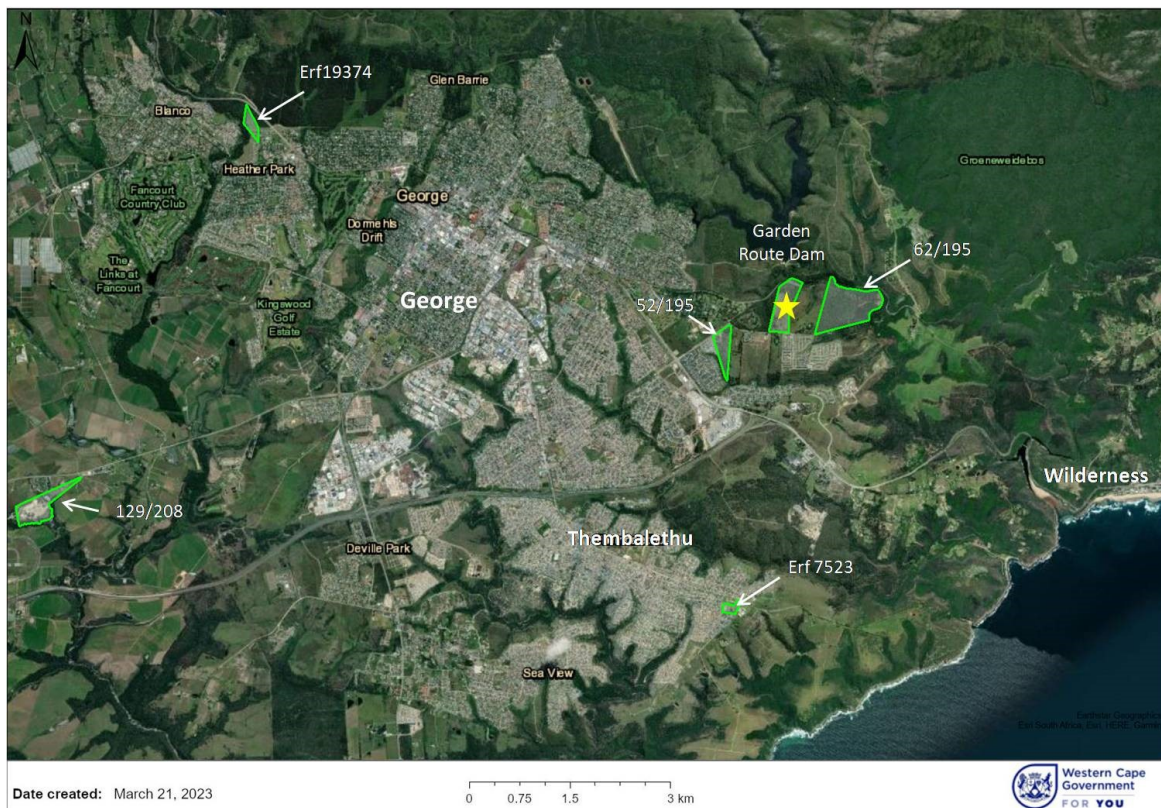


Figure 25. Properties with heritage-related studies reviewed for this report and that are not in the SAHRIS database (<https://gis.elsenburg.com/apps/cfm/>). The yellow star indicates RE/21/195.

Early Stone Age (ESA), Middle Stone Age (MSA) and Later Stone Age (LSA) stone implements are present in the landscape, but they are usually found in transformed contexts such as ploughed fields, road cuttings, excavations, erosion gullies and other disturbed areas (Dreyer 2006, Kaplan 2001, 2004, 2205, 2006, 2007a & 2022, Halkett & Hart 1997 and Orton & Hart 2011). Due to their low densities or isolated nature, derived contexts as well as the entire absence of associated organic and cultural remains, these remains are considered to be of low significance and Non Conservation Worthy. There are no known Stone Age sites in the immediate surroundings that preserve other cultural or organic remains.

Apart from *in situ* MSA deposits (including cultural and organic remains) preserved in coastal cave sites, the MSA in the area is most commonly represented by stone implements such as flakes, blades, cores, and points; many with faceted or prepared striking platforms, that most commonly occur *ex situ* in disturbed contexts and without any associated cultural or organic remains (Dreyer 2006, Kaplan 2001, 2004, 2205, 2006, 2007a & 2022 and Halkett & Hart 1997). MSA pieces are mostly found in isolation or at best in low density scatters and without any associated organic or cultural remains (Dreyer 2006, Kaplan 2001, 2004, 2205, 2006, 2007a & 2022 and Halkett & Hart 1997). These finds are considered to be of low significance and NCW.

Isolated stone tools or low density scatters of LSA stone implements are rare in the area (Kaplan 2001, 2004 & 2006 and Orton & Hart 2011), 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 coastal shell middens (personal observations and Kaplan 2001). 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 (Kaplan 2001). Since the study area is roughly 6 km from the shoreline, the presence of shell midden sites is highly unlikely (Orton & Hart 2011).

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 are not known in the immediate surroundings.

The built environment – colonial period structures, transport and bulk services infrastructure and graves - is the most common evidence for the presence of colonists in the area from roughly the mid to late 18thC (De Kock 2013, Halkett & Hart 1997, Kaplan 2001 & 2002, Malan 2022, Nilssen 2003 & 2013 and Orton & Hart 2011). The historic cores of George and Pacaltsdorp house several Provincial Heritage Sties and other protected heritage sites and resources, but these are situated more than 5 km from the affected area and will not be impacted in any way by the proposed activity. The old Goerge – Knysna road (now Seven Passes Road) is a PHS and runs through the northern part of RE/21/195. This PHS will not be impacted in any way by the proposed development.

Seven of the reports consulted for this literature review found no heritage resources of either pre-colonial or colonial origin (Dreyer 2007, Kaplan 2007b, Lavin & Smuts 2018 and Nilssen 2011a, 2011b, 2022a, and 2022b).

Based on the above, and particularly studies conducted in close proximity and with similar spatial and sedimentary contexts to that of the affected area, it is anticipated that, if any, the most likely pre-colonial archaeological resources to occur are isolated Stone Age implements of ESA and MSA origin, or at best, low density scatters of the same materials (Dreyer 2006, Kaplan 2001, 2004, 2205, 2006, 2007a & 2022, Halkett & Hart 1997 and Orton & Hart 2011). Such finds are generally considered to be of low to no archaeological value

and hence given the status of NCW. Given the developed and extensively transformed nature of the study area, it is not anticipated that any pre-colonial archaeological resources of significance occur in the affected area.

The most likely colonial period archaeological resources to occur are structures, features, transport and bulk services infrastructure, graves and cemeteries (De Kock 2013, Halkett & Hart 1997, Kaplan 2001 & 2002, Malan 2022, Nilssen 2003 & 2013 and Orton & Hart 2011).

None of the Provincial Heritage Sites or other heritage sites and resources referred to above will be impacted by the proposed activity. To the best of my knowledge, no registered, graded, or significant pre-colonial heritage sites occur on RE/21/195.

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. Note that colonial period archaeological resources on the property are dealt with in the BES and HIA. Nevertheless, archaeological resources not highlighted in the NID application process are documented here (Malan 2022).

On 1 March 2023 this author conducted a comprehensive archaeological foot survey of RE/21/195 (Figures 26 through 30). As is evident from the survey walk tracks (Figure 26), the vast bulk of the property was accessible and surface sediments are significantly disturbed by human-related disturbances and mole activity. Archaeological visibility was moderate, providing sufficient observations for the purpose of this assessment.

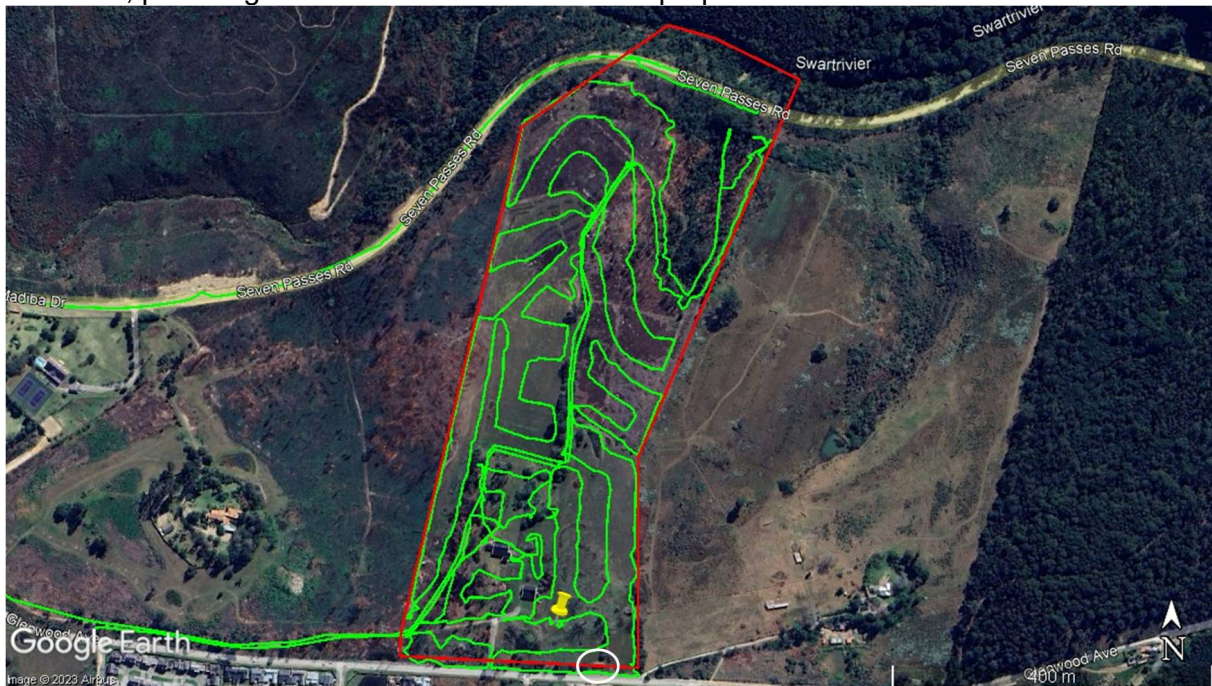


Figure 26. Google Earth (2023) aerial image showing RE/21/195 (red polygon), vehicle / survey walk tracks (green lines), and archaeological finds (yellow marker and white ellipse). (A4 version below)

Not a single definitive Stone Age specimen was identified on the property. No marked graves or colonial period middens were identified on the property. Building rubble and rubbish (glass, plastic, metal, etc.) seen on site is modern and of no heritage value.

The semi ruin of a “labourer’s” cottage adjacent to Glenwood Avenue was not presented during the NID application process and is indicated with the white circle in Figure 26. The overgrown wall footing and cement/concrete slab of a rectangular structure visible in current Google Earth imagery (Figure 6) and historic aerial photographs (Figures 21 and 22) was identified at the yellow marker in Figure 26. Coordinates of 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)
“labourer’s” cottage	S33° 58.449' E22° 30.782'	Semi-ruins of “labourer’s” cottage, roughly 13 m x 4 m – colonial period	Low at local level (Grade IIIC) & NCW
Footing & slab	S33° 58.421' E22° 30.747'	Wall footing and cement / concrete slab, roughly 13 m x 4 m – colonial period	Low at local level (Grade IIIC) & NCW

The nature and state of the semi-ruined “labourer’s” cottage is evident from the photographs in Figure 27.



Figure 27. Semi-ruined “labourer’s” cottage adjacent to Glenwood Avenue. Note outdoor ablution facility under tree to the left (top). (A4 version below).

The wall footing and cement/concrete slab has a stone foundation that measures approximately 13 m by 4 m and the long axis is oriented to face North. These dimensions are the same as those of the older “labourer’s” cottage adjacent to Glenwood Avenue. The foundations are almost completely covered in thick grass and no associated structures, features or material culture was seen (Figures 28, 29 & 30). It is possible that such remains are covered by grass. Nevertheless, the foundations are all that remain of this former structure and it is given a field rating of low at the local level (Grade IIIC) and NCW.



Figure 28. Wall footing and cement/concrete slab (foundations) of demolished structure. Note barn (top) and two “labourer’s” cottages (bottom) in background. Dashed lines represent approximate outline.



Figure 29. Example of stone wall footing and collapsing cement/concrete slab (left of stone wall footing).



Figure 30. Example of stone wall footing in quartzitic sandstone (top) and cement/concrete slab / floor (bottom). Hand and boot for rough scale.

Apart from the built environment and very modern rubbish and rubble, no other archaeological resources were identified in the study area. Although it cannot be ruled out entirely, it is not anticipated that significant archaeological resources are obscured by vegetation or buried in sub-surface sediments. Due to the extensive and intense level of disturbances and 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).

As stated before, the colonial period archaeological remains identified and included here will be dealt in the BES as they form part of the built environment. Nevertheless, as described above, the semi-ruins and structural foundations presented in Table 2 are considered to be of low local significance (Grade IIIC) and rated as NCW.

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 pre-colonial archaeological components of the cultural landscape on the affected property, there is no statement of significance or provisional grading. Colonial period heritage will be included in the cultural landscape assessment made in the BES and integrated HIA.

7.1. Summary of Archaeological Indicators

Identified archaeological remains are of low significance and NCW.

- Indicator: Identified NCW archaeological remains may 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. The colonial period archaeological remains, i.e. structures, will be dealt with in the BES and HIA.

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 of the semi-ruins (“labourer’s” cottage) and structural foundations reported here are 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). Note that this assessment does not apply to other colonial period structures on the property, which are assessed in the BES and HIA.

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 since sediments are significantly disturbed.

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 these resources 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 moderate, the benefits of the proposed development to sustainable social and economic development outweigh its impacts on pre-colonial archaeological resources.

8.3. Existing Impacts to Archaeological Resources

The pre-colonial archaeological context of RE/1/195 and the immediate surroundings are already significantly altered by agricultural activities and residential developments. Given the absence of pre-colonial archaeological resources on RE/21/195 and in the immediate surroundings, these impacts to the pre-colonial archaeological record have been low to negligible (Dreyer 2006 & 2007, Halkett & Hart 1997, Kaplan 2006, 2007a, 2007b & 2022, Nilssen 2007, 2011a, 2011b, 2013, 2022a & 2022b and Orton & Hart 2011).

8.4. The No-Go Alternative

If the development does not proceed, then the site will remain as is with continued impacts of agricultural and natural processes. Incorporating the existing colonial period structures into the proposed development will be a positive impact on the retention and management of these heritage resources. This matter is dealt with in detail in the BES and HIA. Considering that the socio-economic benefits from the proposed development outweigh its negative impacts on pre-colonial archaeological resources, it can be argued that the proposed development is preferable to the No-Go option.

8.5. Cumulative Impacts

It is likely that infrastructural and residential developments in the surrounding area have impacted negatively on heritage resources and that agricultural activities have transformed RE21/195 significantly since at least the late 18th C or early 19th C. We know, however, that apart from colonial period archaeological resources, the pre-colonial archaeological record in this area is mostly of low significance and usually rated as NCW (Dreyer 2006 & 2007, Halkett & Hart 1997, Kaplan 2006, 2007a, 2007b & 2022, Nilssen 2007, 2011a, 2011b, 2013, 2022a & 2022b and Orton & Hart 2011). Consequently, and given that existing colonial period heritage resources will be incorporated into the proposed development, the cumulative impact on archaeological resources in this instance is considered to be negligible to zero.

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. The valuable archaeological resources on RE/21/195, namely colonial period structures, will be conserved as part of the proposed development. This study of pre-colonial heritage resources concludes that they are of low significance. The change associated with the proposed activity will have an inconsequential impact on the archaeological value of the property or the immediate surroundings.

There is no anticipated change to the archaeological value of the area since significant archaeological resources will be conserved. 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 RE/21/195.

8.7. Consideration of Alternatives and Plans for Mitigation

The proposed development will impact the bulk of RE/21/195 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.

Colonial period structures of heritage value will be conserved as part of the proposed development. This aspect is dealt with in the BES and HIA.

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.

10. Conclusions

A comprehensive foot survey of RE/21/195 yielded no pre-colonial archaeological resources. There are no caves or rock shelters on the property and no evidence for colonial period middens or graves were seen. The only identified archaeological resources reported here are ruins and foundations of colonial period structures that are of low significance and NWC. Being part of the built environment, these will be dealt with in the BES and HIA. Structures on the property that are of heritage value will be conserved as part of the proposed development. This positive impact on heritage resources is detailed in the BES and HIA.

Given the results of this investigation into the pre-colonial archaeological record on RE/21/195 and the immediate surroundings, the proposed development will have a negligible additional cumulative impact on archaeological resources (Dreyer 2006 & 2007, Halkett & Hart 1997, Kaplan 2006, 2007a, 2007b & 2022, Nilssen 2007, 2011a, 2011b, 2013, 2022a & 2022b and Orton & Hart 2011).

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 and apart from the built environment, 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 RE/21/195, George, should be authorized in full.

11. Recommendations

- Apart from recommendations concerning the colonial period structures that are given in the BES and HIA reports, there are no fatal flaws or objections to the full authorisation of the proposed development provided that the below recommendations are implemented.
- 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 Authorization and/or Environmental Management Program (EMPr) for the proposed residential development.

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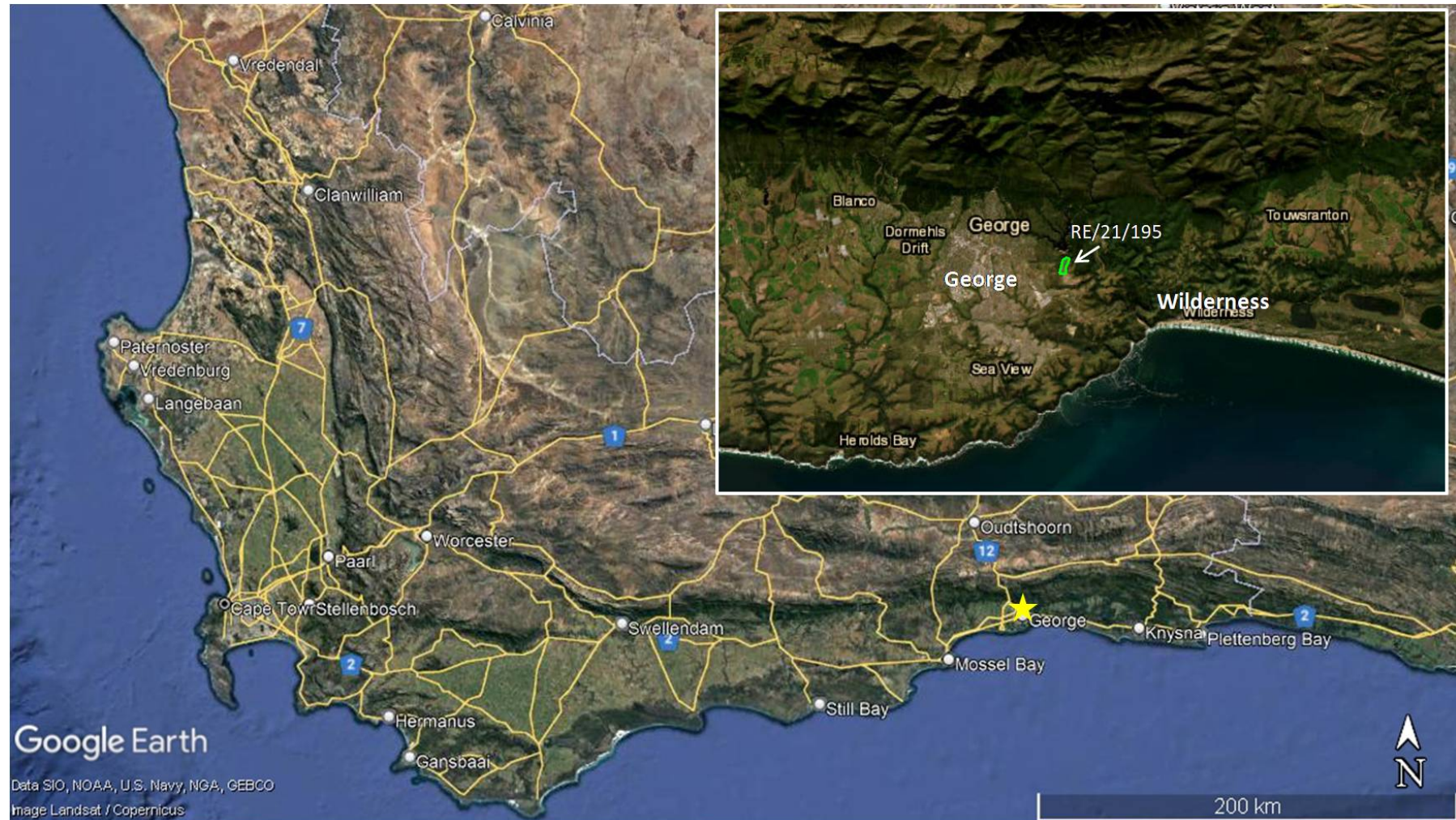
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13. A4 Sized Graphics (on following pages)



Locality Map: General location of RE/21/195 (yellow star and green polygon) near George, Western Cape Province. Courtesy of Google Earth & Cape Farm Mapper (<https://gis.elsenburg.com/apps/cfm/>).

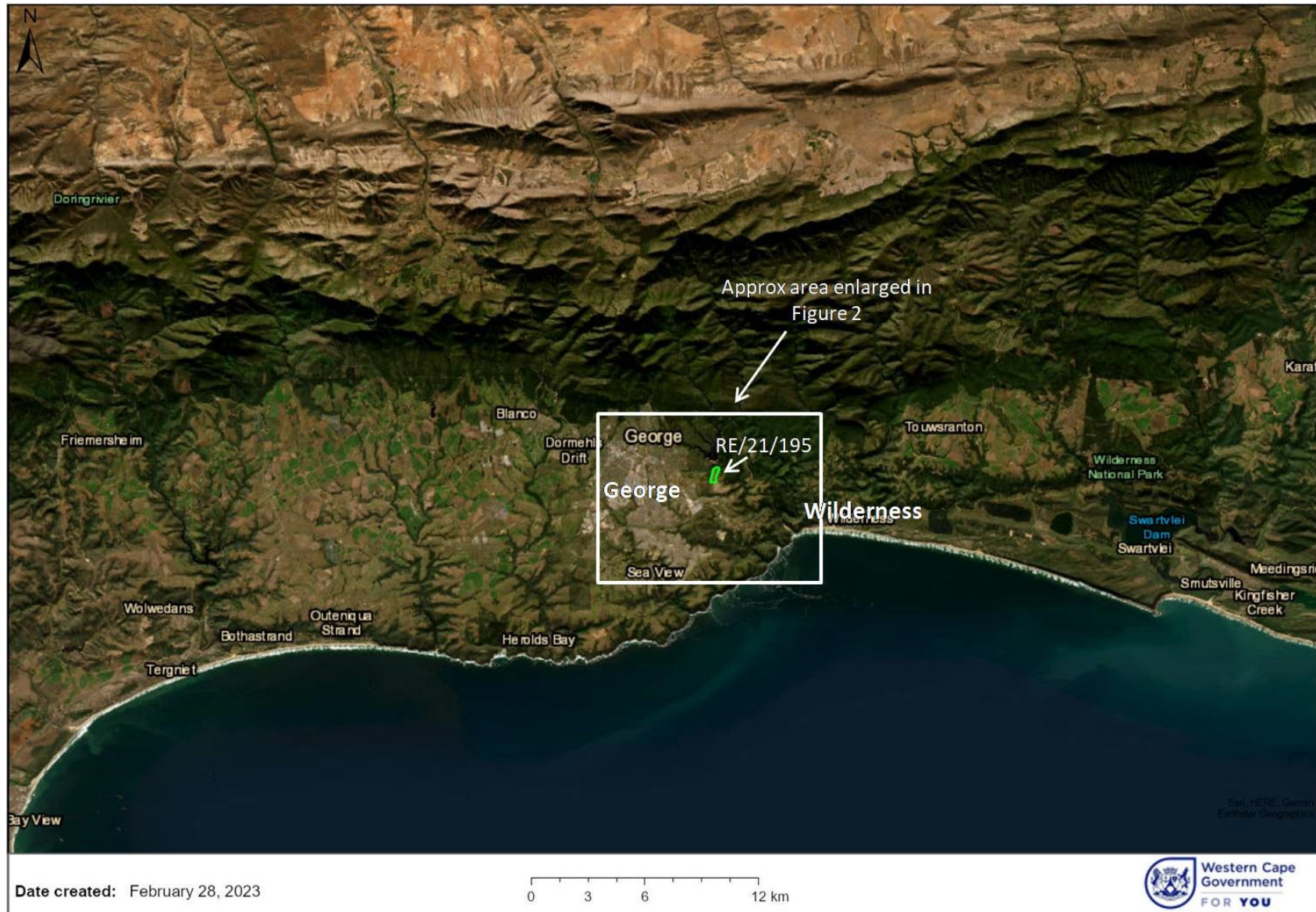


Figure 1. Location of RE/21/195 relative to George and Wilderness, Western Cape Province (<https://gis.elsenburg.com/apps/cfm/>).



Figure 3. RE/21/195 and surrounding context (<https://gis.elsenburg.com/apps/cfm/>).

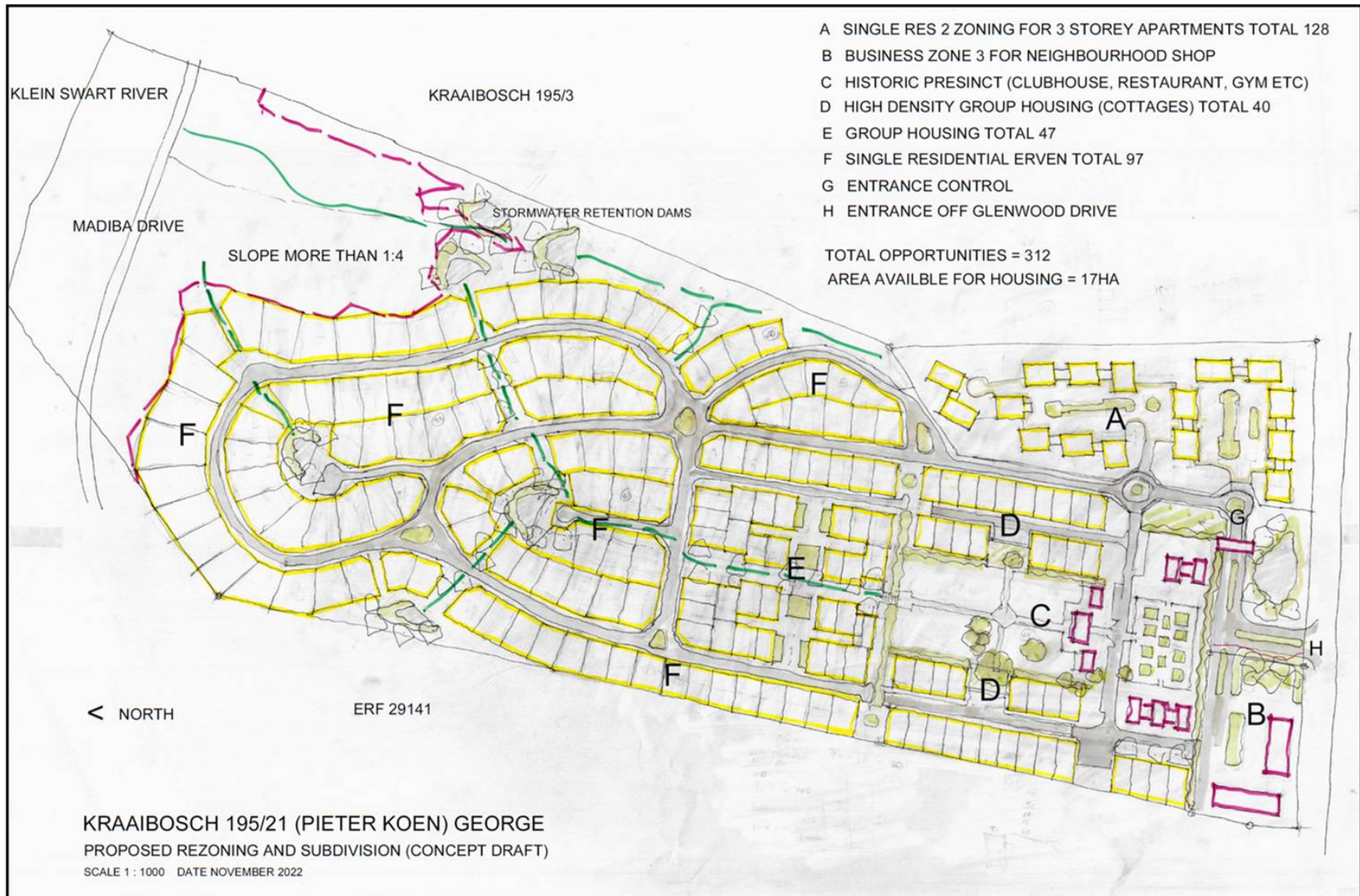


Figure 4. Conceptual Site Development Plan for the proposed rezoning and subdivision of RE/21/195. Courtesy of the applicant / client.



Figure 6. Spatial layout of farmstead in southern part of RE/21/196 showing roads, structures, ruins and features.

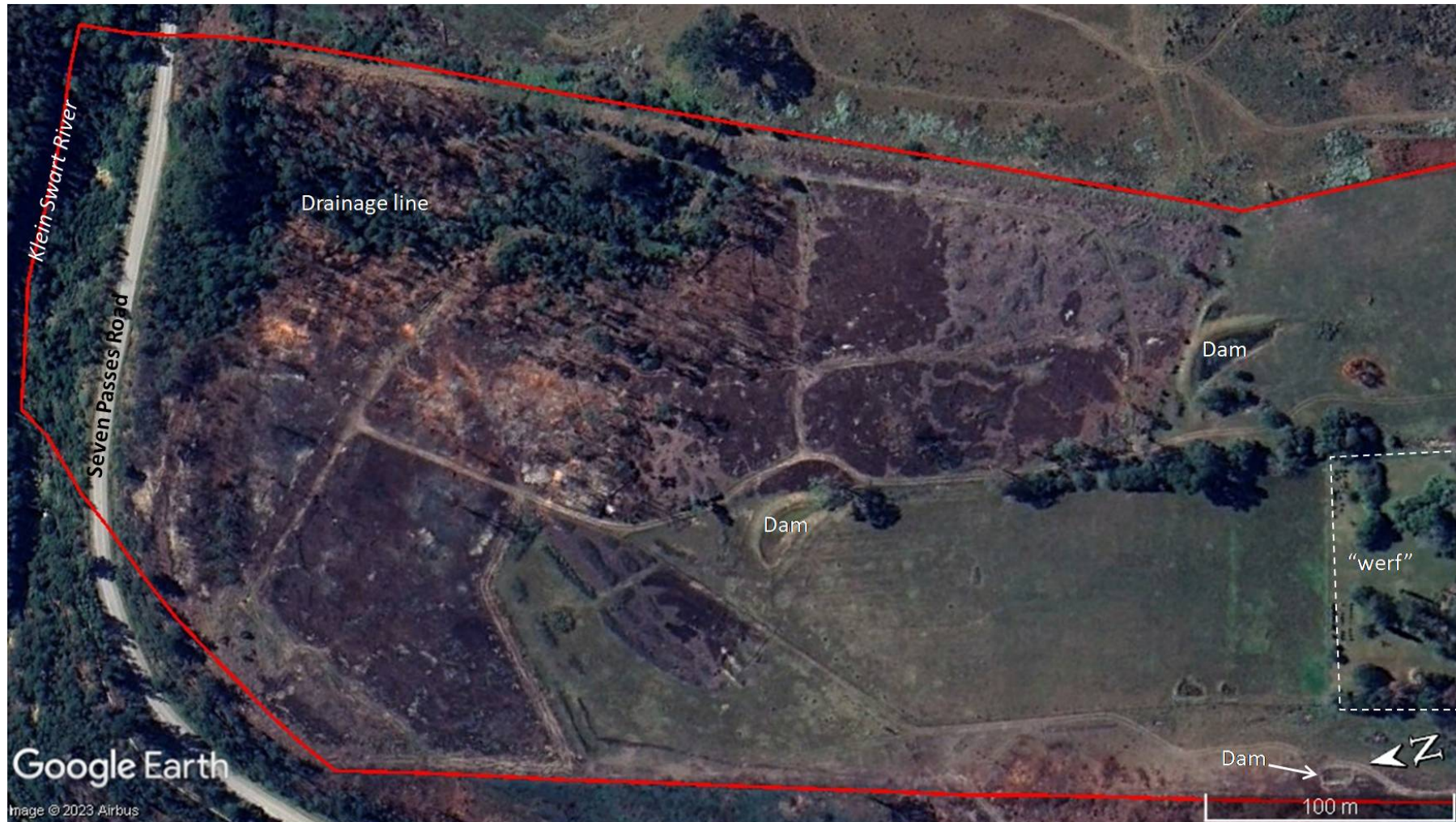


Figure 7. Rotated aerial view of the northern part of RE/21/195 (red polygon) with North to the left. Note vehicle tracks, cleared fields, dams and fencing lines. The farmstead (“werf”) with buildings is in the south as indicated by the dashed line (right).



Figure 20. Enlarged from Figure 19 showing farmstead ("werf") portion of property in 1936. Note that there is no structure at yellow marker and the southern boundary (red) should be south of "labourer's" cottage. Courtesy of NGS, aerial survey 114, Flight strip 17, Image 18481.



Figure 21. Cropped portion of 1939 aerial photograph superimposed via Google Earth showing farmstead portion of RE/21/195. Note structure in white circle and that southern boundary (red) should be south of "labourer's" cottage. Courtesy of NGSi, aerial survey 140, Flight strip 36, Image 34058.



Figure 22. Cropped portion of 1974 aerial photograph superimposed via Google Earth showing farmstead portion of RE/21/195. Note structure in white circle, second “labourer’s” cottage and that southern boundary (red) should be south of “labourer’s” cottages. Courtesy of NGSi, aerial survey 498, Flight strip 61_01, Image 09356.

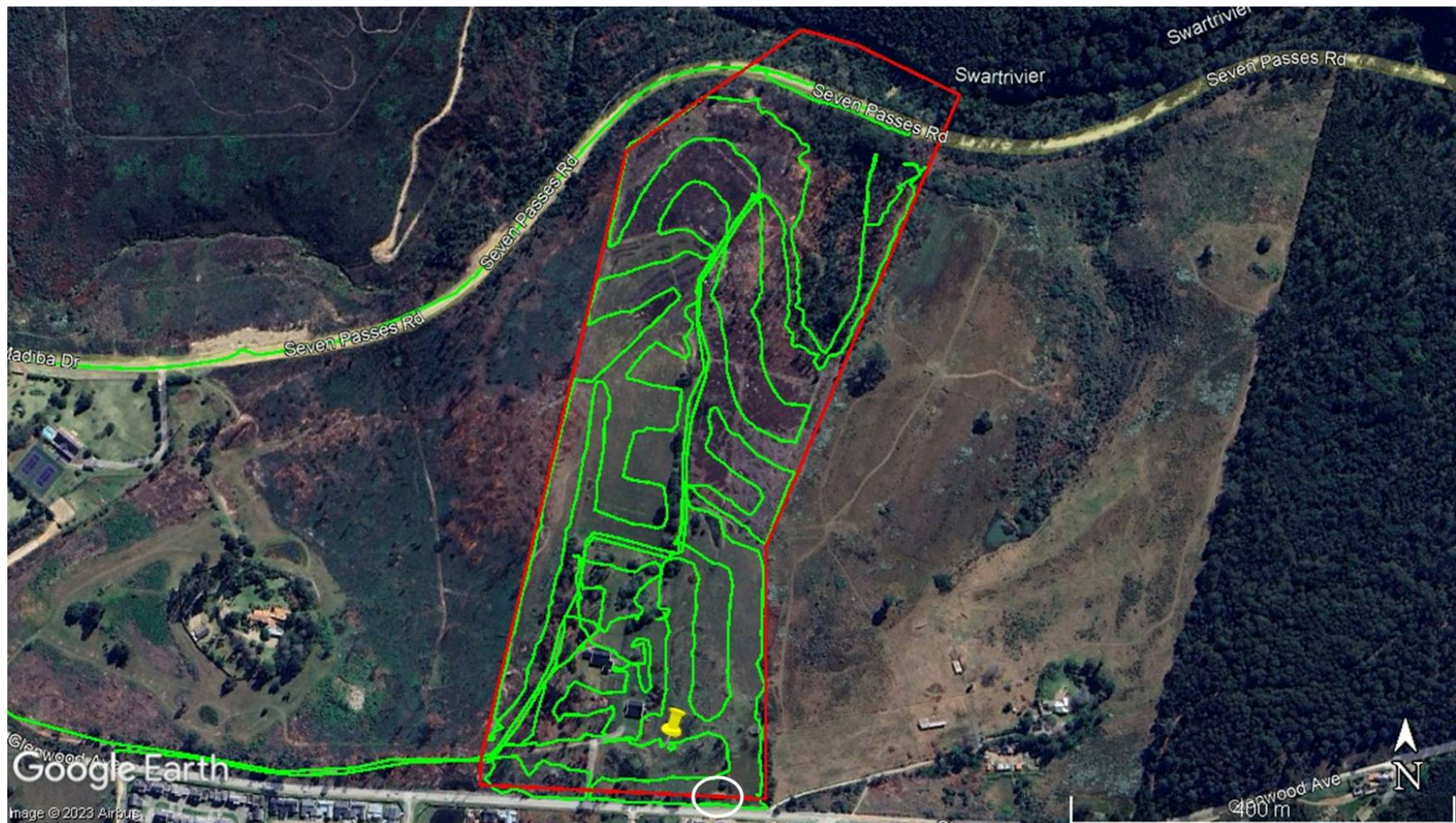


Figure 26. Google Earth (2023) aerial image showing RE/21/195 (red polygon), vehicle / survey walk tracks (green lines), and archaeological finds (yellow marker and white ellipse).



Figure 27. Semi-ruined “labourer’s” cottage adjacent to Glenwood Avenue. Note outdoor ablution facility under tree to the left (top).

14. Appendices

Appendix A: Methodology for Assessing the Significance of Impacts

EFFECT	Extents/Spatial Scale		E
	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
	Duration/Temporal Scale		D
	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
	Magnitude/Intensity (Archaeological Sensitivity / Significance)		M
	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
	Probability/Likelihood		P
	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

SIGNIFICANCE = (E+D+M) x P		
< 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:

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

Education:

School & Certificate:	Rondebosch Boys High School, 1978 – 1982, Cape Senior Certificate, Full Matriculation Exemption
University & Degrees:	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)

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- 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
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- Marean, C.W., Bar-Matthews, M., Nilssen, P.J., Fisher, E., Herries, A., and Karkanas, P. 2006. Paleoclimatic context of the origins of modern humans in South Africa: Based on speleothems isotopic record. *Geochimica et Cosmochimica Acta* 70(18) DOI: 10.1016/j.gca.2006.06.788
- 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:
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Heritage-related Reports & Impact Assessments:

More than 260 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

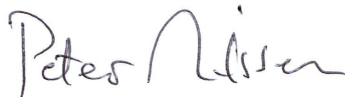
Archaeological Impact Assessment: (HWC Case No. 20190809SB0909E) Proposed Residential Development on Erf 3927 (Still Bay West), Riversdale District and Hessequa Municipality

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: 30 March 2022

Appendix D: Glossary & Abbreviations

Colonial: 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

Pre-colonial: period prior to colonisation by Europeans.

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

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