HERITAGE IMPACT ASSESSMENT

In terms of Section 38(8) of the NHRA for the

Proposed subdivision and rezoning of Portion 40 of the Farm Klipfontein No. 711, Gansbaai, in the Western Cape

Case Number: 25785EJV0731

Prepared by CTS Heritage

CTS HERITAGE

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For

PHS

August 2025

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EXECUTIVE SUMMARY

1. Site Name:

Portion 40 of the Farm Klipfontein No. 711

2. Location:

Near Gansbaai on Portion 40 of the Farm Klipfontein No. 711

3. Locality Plan:

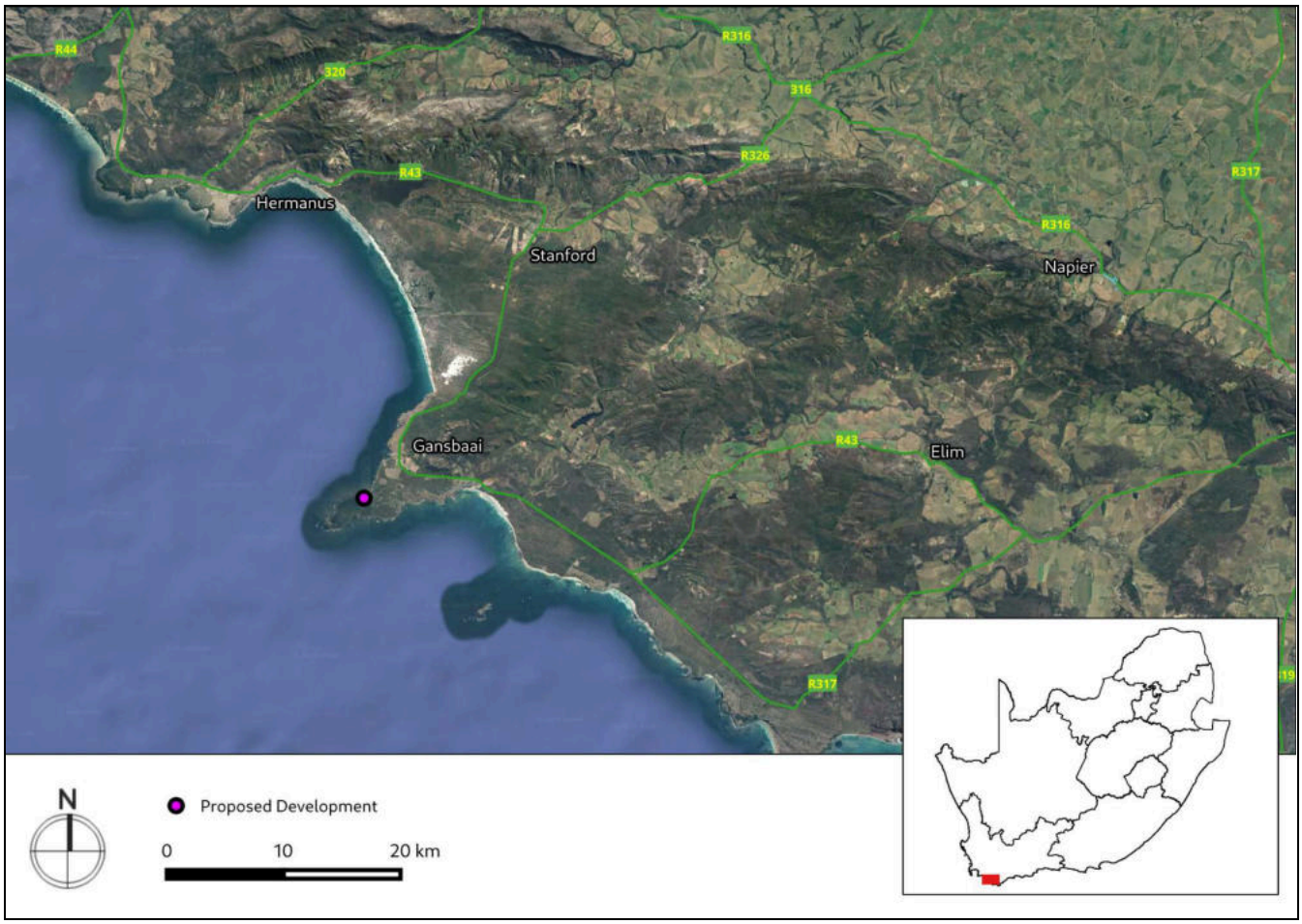


Figure A: Location of the proposed development area

4. Description of Proposed Development:

This report is drafted for the proposed subdivision and rezoning of Portion 40 of the Farm Klipfontein No. 711, Gansbaai.

5. Anticipated Impacts on Heritage Resources:

The area proposed for development is located more than 3km from the Gansbaai Harbour and the oldest parts of Gansbaai Village and as such, no direct impact on these resources is anticipated. Gansbaai remains a place dominated by fishing culture and industries and it is unlikely that the proposed development will negatively impact on these aspects of the Gansbaai area.

The historic core of Gansbaai has significance in terms of intact fabric and its early 20th Century layout. This development is located far outside of the historic core of Gansbaai, and is separated from the historic core by the existing Romansbaai Beach and Fynbos Estate. As such, while this development does not speak to the historic core of Gansbaai, it does align with the existing layout of the adjacent (linked) estate and as such, would be viewed as an extension of this estate.

The field assessment confirmed the findings of the desktop analysis which indicated that the area proposed for development has a higher sensitivity for impact to buried shell-midden archaeological resources. As such, it is recommended that proactive sampling excavations of the areas with surface scatters are undertaken.

The preferred layout has been mapped against the identified sensitivities in Figure 5.2. This layout is likely to impact the low density surface scatters identified as sites 20, 21, 24 and 25. Test excavations of these scatters will provide the necessary insight to determine the depth of scientifically significant shell-midden deposits across the development area and will provide an opportunity to sample these significant sediments.

Based on the findings of Nilssen (2008) summarised above, it is not anticipated that the results of the recommended test excavations will impact on the proposed layout. As such, on condition that the recommended test excavations take place, archaeological monitoring of all construction excavations takes place and that a Conservation Management Plan is drafted for the ongoing management of the shell midden deposits, there is no objection to the proposed development from an archaeological perspective.

The palaeontological specialist study for the proposed subdivision and rezoning of Portion 40 of the Farm Klipfontein No. 711 in Gansbaai, Western Cape, has assessed the potential impacts on palaeontological resources. The study area is underlain by sediments of the Waenhuiskrans Formation of the Bredasdorp Group, which is known to have some palaeontological significance. However, the specific geological context and the nature of the proposed development suggest that the overall impact on palaeontological heritage is expected to be **LOW**.

The study found that the Waenhuiskrans Formation, while containing some palaeontological resources such as terrestrial gastropods, freshwater molluscs, and microfossils, generally exhibits **LOW** fossil abundance and

diversity. The planned development involves only minor excavation activities limited to superficial sediment layers, further reducing the likelihood of encountering significant palaeontological resources.

6. Recommendations:

There is no objection to the proposed development from a heritage perspective on condition that:

- Pro-active sampling excavations of the areas with surface scatter take place under a workplan approval from HWC. This can take place as a condition of approval.
- Archaeological monitoring of all construction excavations takes place
- A Conservation Management Plan is drafted for the ongoing management of the shell midden deposits
- **Chance Fossil Finds Protocol**: A Chance Fossil Finds Protocol should be integrated into the Environmental Management Programme (EMPr). This protocol will guide construction personnel on the steps to take in the event of an unexpected fossil discovery.

Details of Specialist who prepared the HIA

Jenna Lavin, an archaeologist with an MSc in Archaeology and Palaeoenvironments, and since 2016 heads up the heritage division of the organisation. She has a wealth of experience in the heritage management sector. Jenna's previous position as the Assistant Director for Policy, Research and Planning at Heritage Western Cape has provided her with an in-depth understanding of national and international heritage legislation. Prior to joining CTS Heritage, her 8 years of experience at various heritage authorities in South Africa means that she has dealt extensively with permitting, policy formulation, compliance and heritage management at national and provincial level and has also been heavily involved in rolling out training on SAHRIS to the Provincial Heritage Resources Authorities and local authorities.

Jenna is a member of the Association of Professional Heritage Practitioners (APHP), and is also an active member of the International Committee on Monuments and Sites (ICOMOS) as well as the International Committee on Archaeological Heritage Management (ICAHM). In addition, Jenna has been a member of the Association of Southern African Professional Archaeologists (ASAPA) since 2009. Since 2016, Jenna has drafted over 250 Screening and Heritage Impact Assessments throughout South Africa.

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CONTENTS

1. INTRODUCTION **6**
1.1 Background Information on Project 6
1.2 Description of Property and Affected Environment 6
2. METHODOLOGY **11**
2.1 Purpose of HIA 11
2.2 Summary of Steps Followed 11
2.3 Assumptions and Uncertainties 11
2.4 Constraints & Limitations 12
3. HISTORY AND EVOLUTION OF THE SITE AND CONTEXT **13**
3.1 Desktop Assessment 13
3.1.1 Background 13
3.1.2 Built Environment & Cultural Landscapes 13
3.1.3 Heritage Character and Archaeology 15
3.1.4 Archaeology 17
3.1.5 Shipwrecks 19
3.1.6 Palaeontology 20
4. IDENTIFICATION OF HERITAGE RESOURCES **26**
4.1 Summary of Findings of Specialist Reports 26
4.1.1 Archaeology (Appendix 1) 26
4.1.2 Palaeontology (Appendix 2) 26
4.2 Heritage Resources Identified 28
4.3 Mapping and Spatialisation of Heritage Resources 29
5. ASSESSMENT OF THE IMPACT OF THE DEVELOPMENT **31**
5.1 Assessment of Impact to Heritage Resources 31
5.1.1 Cultural Landscape 31
5.1.2 Archaeology 31
5.1.3 Palaeontology 32
5.2 Sustainable Social and Economic Benefit 33
5.3 Proposed Development Alternatives 33
5.4 Site Verification Statement 34
6. RESULTS OF PUBLIC CONSULTATION **35**
7. CONCLUSION **35**
8. RECOMMENDATIONS **36**

APPENDICES

1 Archaeological Impact Assessment 2024
2 Palaeontological Desktop Impact Assessment 2024
3 Heritage Screening Assessment 2024 and NID response
4 Evidence of Consultation

1. INTRODUCTION

1.1 Background Information on Project

This report is drafted for the proposed subdivision and rezoning of Portion 40 of the Farm Klipfontein No. 711, Gansbaai. It is the intention of the owner of Portion 40 of the Farm No. 711 to rezone and subdivide the subject property in order to create a residential development consisting of 6 additional residential erven, a private road, a private open space, a conservation usage erf, and a utilities erf. The proposal entails the following:

- 6 Residential Erven (±750m² x 6)
- Private Road (±3313 m²)
- Private Open Space Zone (±20 733m²)
- Utility Services Zone (±1039m²)
- Conservation Zone (±35 389 m²)

The new private road will be accessed via the internal road infrastructure of the Romansbaai Beach & Fynbos Estate and an access servitude from an existing cul-de-sac. The private road will have a road reserve width of 8m and a proposed 3.5m wide road surface that will provide access to the 6 residential erven and the conservation usage erf. The proposed rezoning, subdivision and subsequent development can be interpreted as an extension of the existing Romansbaai Beach & Fynbos Estate.

The architectural guidelines for the Romansbaai Beach & Fynbos Estate[1] will be used to guide this development. In terms of Annexure D of the guidelines, the Height Restriction for the 6 erven will be classified as a blue category (5.5m maximum). In terms of Annexure G, the coverage for the 6 erven will be classified as purple category with a building zone of 650 m² and building footprint of 455 m².

1.2 Description of Property and Affected Environment

The proposed development falls within the Romansbaai Beach Estate, which is located on the peninsula stretching south of Gansbaai. The area is experiencing rapid development, with houses currently under construction within the beach estate. A large part of the site is located on the highest point of the coastal dune with dense vegetation. The northeastern side of the site itself slopes down towards the Atlantic Ocean. The vegetation is still dense towards the ocean but grows as smaller shrubs. This sea-facing side, as it slopes down, also shows some erosion, evident by the shell middens becoming exposed.

The southern and western edges of the study area are fenced from the areas outside of the Romansbaai Beach Estate and has approximately two metres of cleared vegetation on both sides of the fence. Some of these clearings also serve as Jeep tracks.

[1] https://romansbaai.co.za/images/MAY%202025%20ROMANSBAAI%20DESIGN%20GUIDELINES.pdf



Figure 1.1: Proposed project boundary



Figure 1.2: Proposed project boundary

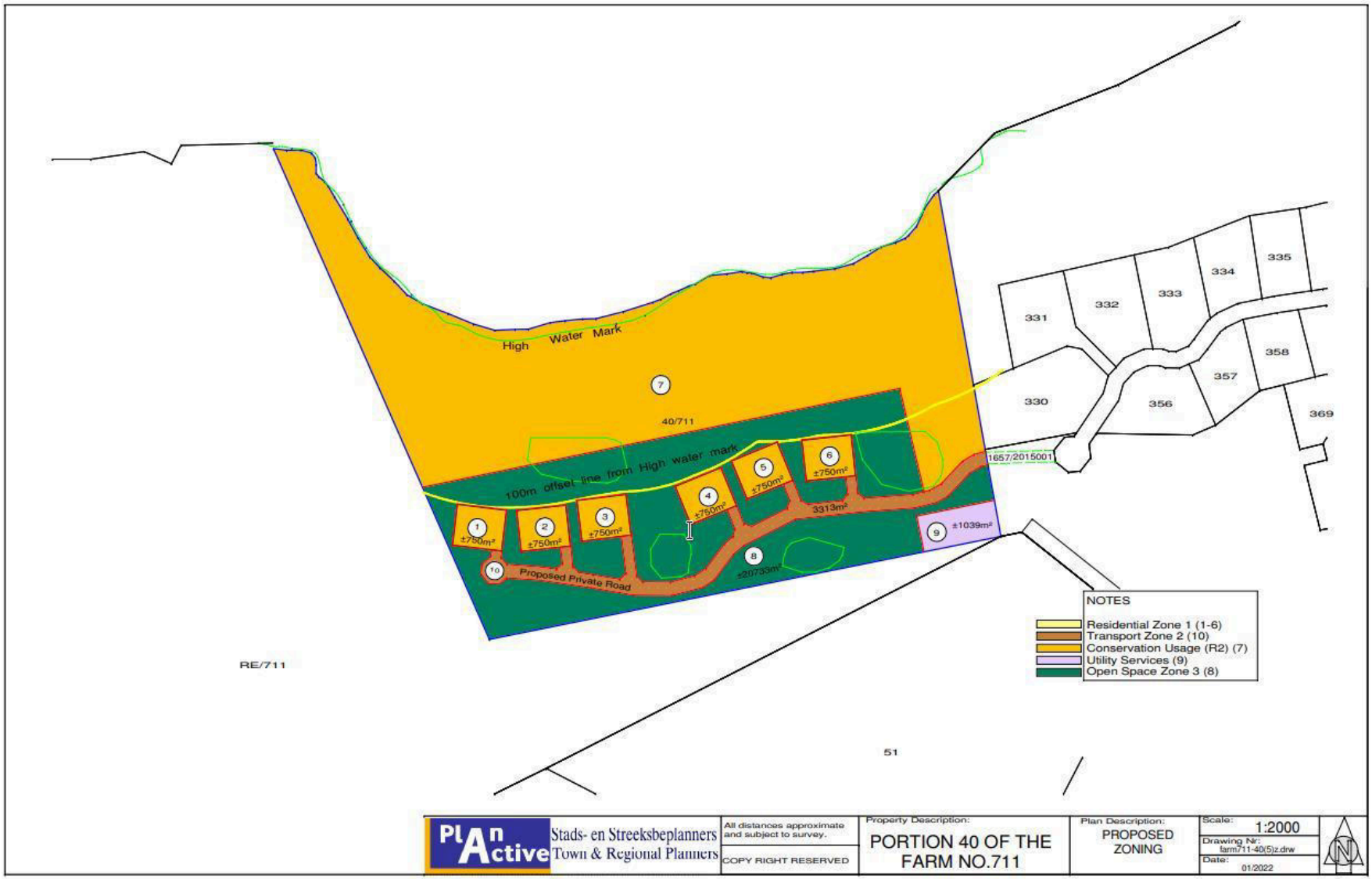


Figure 1.3 Overview Map: Proposed Subdivision Map provided by client - preferred layout

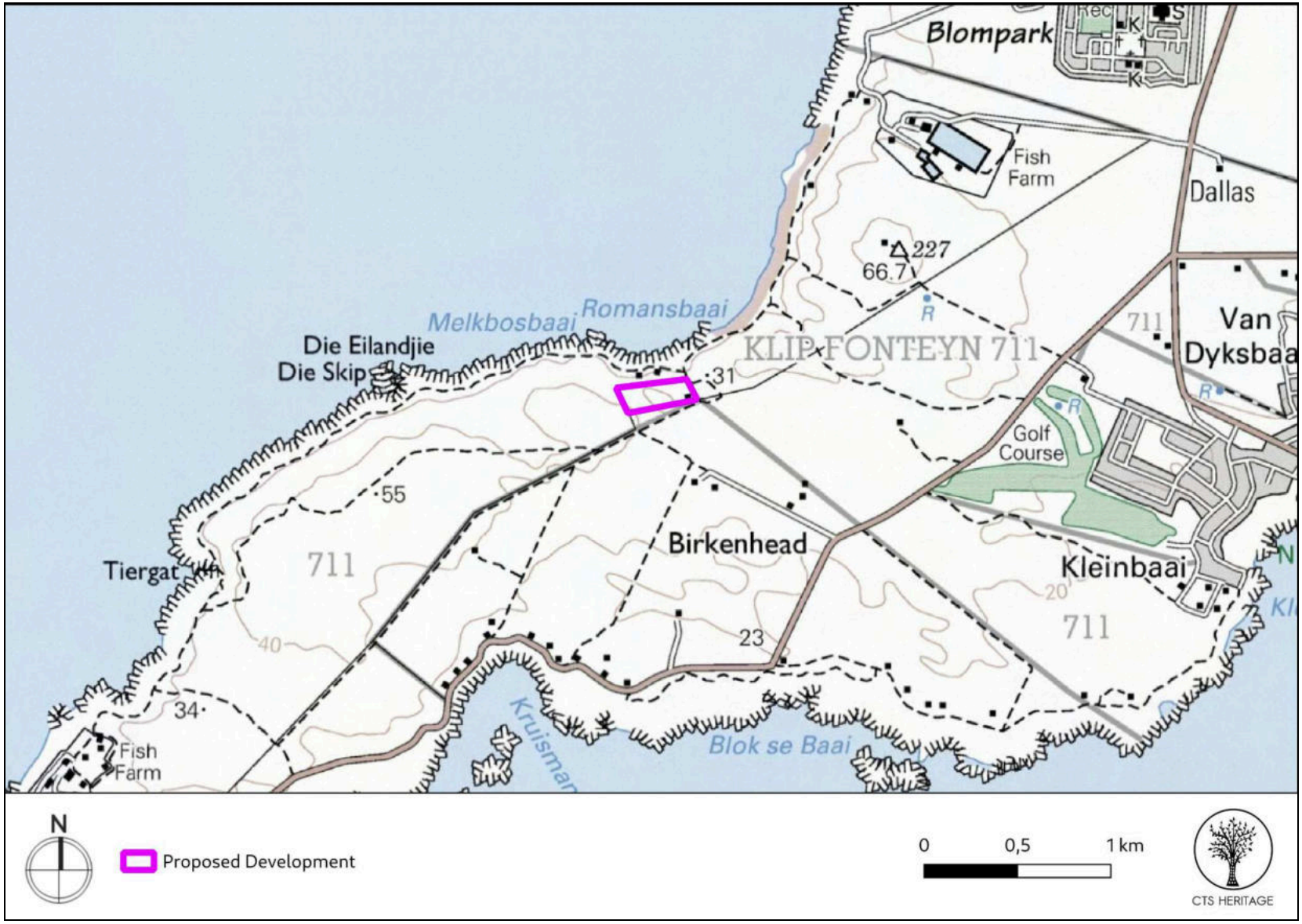


Figure 1.4: Proposed project boundary indicated on the 1:50 000 Topo Map

2. METHODOLOGY

2.1 Purpose of HIA

A Notification of Intent to Develop (NID) was submitted to HWC and was discussed at the Heritage Officers Meeting held on 11 August 2025. HWC responded indicating that "*since there is reason to believe that the proposed subdivision and rezoning for the residential development of Farm 711 Portion 40, Klipfontein, Gansbaai, will impact on heritage resources, HWC requires that a Heritage Impact Assessment (HIA) that satisfies the provisions of Section 38(3) of the NHRA be submitted.*" The purpose of this Heritage Impact Assessment (HIA) is to satisfy the requirements of section 38(8), and therefore section 38(3) of the National Heritage Resources Act (Act 25 of 1999).

2.2 Summary of Steps Followed

- A Desktop Study was conducted of relevant reports previously written (please see the reference list for the age and nature of the reports used)
- An archaeologist conducted an assessment of archaeological resources likely to be disturbed by the proposed development. The archaeologists conducted their site visit on 20 June 2024.
- A palaeontologist conducted a desktop assessment of palaeontological resources likely to be disturbed by the proposed development.
- The identified resources were assessed to evaluate their heritage significance and impacts to these resources were assessed.
- Alternatives and mitigation options were discussed with the Environmental Assessment Practitioner

2.3 Assumptions and Uncertainties

- The *significance* of the sites and artefacts is determined by means of their historical, social, aesthetic, technological and scientific value in relation to their uniqueness, condition of preservation and research potential. It must be kept in mind that the various aspects are not mutually exclusive, and that the evaluation of any site is done with reference to any number of these.
- It should be noted that archaeological and palaeontological deposits often occur below ground level. Should artefacts or skeletal material be revealed at the site during construction, such activities should be halted, and it would be required that the heritage consultants are notified for an investigation and evaluation of the find(s) to take place.

However, despite this, sufficient time and expertise was allocated to provide an accurate assessment of the heritage sensitivity of the area.

2.4 Constraints & Limitations

The dense vegetation complicated surveying as some areas were inaccessible, and visibility of the surface was limited, however, sufficient coverage was ascertained in order to determine the archaeological sensitivity of the development area.

3. HISTORY AND EVOLUTION OF THE SITE AND CONTEXT

3.1 Desktop Assessment

3.1.1 Background

This application is for the proposed subdivision and rezoning of Portion 40 of the Farm Klipfontein No. 711, Gansbaai. According to Raper et al (2018) in the Dictionary of Southern African Place Names, Gansbaai/GansBay was originally known as *Gansgat (*Goose hole) because of the wild geese in the area. It was laid out on the farm Strandfontein and in 1962 became a municipality.

3.1.2 Built Environment & Cultural Landscapes

This coastal stretch is characterised by narrow coastal belts bordered by rugged Cape Fold Mountains, opening out, as one travels east, to rolling plains. The coastline itself is characterised by rocky shorelines interspersed with sandy beaches, and several large, perennial rivers exist throughout the region, many with lagoons and estuaries.

During the 18th century stock farmers from the Cape expanded into the Overberg as well as into the Overstrand. This area was extremely remote. The remoteness of the area is highlighted by at least two leper settlements, one in the Hemel en Aarde valley (1817-1847) and the at Wolvengat (more informal settlement predating 1831 and consisting of one family). Towns were initially established in this region as small fishing villages, in the second half of the 19th century (Baumann et al 2009).

Increasingly since the post-WWII era, these towns have developed as recreational destinations. This tourism-driven boom has increasingly changed the character of the string of towns along the Overberg coastline. The development of the resort towns were facilitated by the completion of Clarence Drive (R44). Since the 1960s, the trend has intensified as the demand for holiday housing has increased. Baumann et al (2009) note that places such as Gansbaai have changed from fishing settlements to resorts, and then fully fledged towns, accompanied by commercial strip development and sprawling housing estates. Later came retirement villages and golf estates, often replacing the farmed landscape. Not all of this development has been sympathetic to the original pattern, imposing on scenic coastlines, estuaries, mountain slopes and productive farmland.

The sites sensitive to development impacts are the remaining, intact elements of the early villages, such as the local, vernacular Gansbaai holiday cottages, and the wealth of as-yet undiscovered pre-historic sites, including unexplored cave sites, and possible human burials, that are vulnerable to the development of the dune cordon and beachfront. Both of these elements require proactive protection and conservation, as well as the sensitive planning of developments that might affect them.

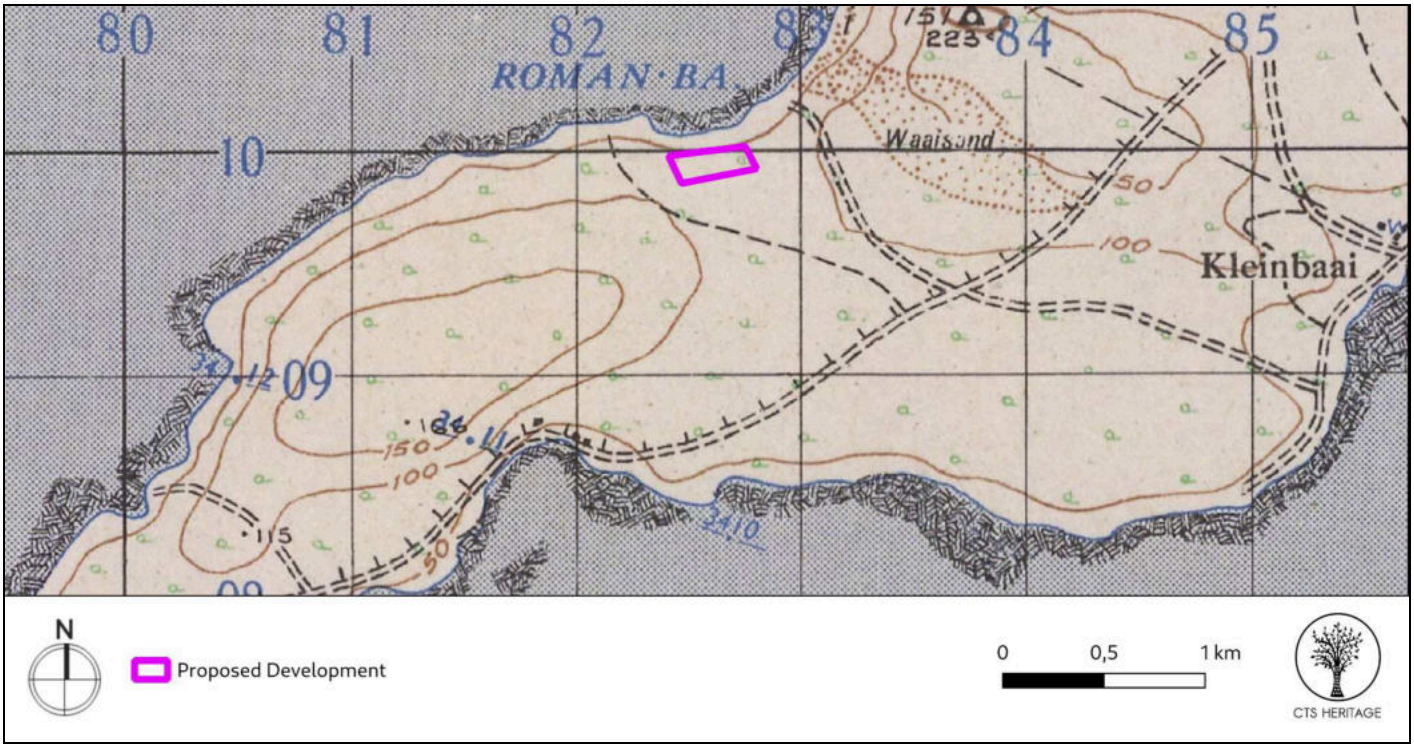


Figure 2.1 Heritage Resources. First Edition 1:50 000 Topo Map for the development area



Figure 2.2 Heritage Resources Historic Map of the Caledon Division (1900) indicating no structures on the farm Klipfontein[2]

[2]Map of the Caledon division, https://ibali.uct.ac.za/s/jacobson-africana/item/96229

According to the Overstand Heritage Survey (Baumann et al, 2009);

"*Gansbaai originally formed part of the farm Strandfontein, which was granted in quitrent in 1831. The bay was already used as landing place in the 1850s and the foreshore reserve (Erf 207 – which later became the village of Gansbaai) was surveyed in 1861. In 1919/1920, the village was resurveyed and lots laid out. The oldest cottages, dating to c1880, were situated along the edge of the bay (at the present camping site as well as at the end of Groenewald Street). The aerial photograph of 1938 shows the earlier cottages aligned with the bay's edge, rather than along the present grid. Much of this phase of the town was destroyed when the commercial harbour was developed.*

In 1938, much of the development of the village was centred around the harbour, clustering in the area below the Main Road, between Franken and Korporasie Streets. At the time of the Second World War, development at Gansbaai was stimulated by the demand for shark liver oil which was used to produce Vitamin A and lubricant. The associated boom in the fishing industry is reflected in a number of newly built cottages as well as villa-style buildings with Cape Revival gables. The cottages dating to this period have a wider roof span than the earlier cottages.

The cottage at Gansbaai forms part of the Strandveld vernacular style being characterised by coursed rubble calcrete exterior walls and mud brick interior walls. The cottages would have originally had thatched roofs, but have now been replaced by corrugated iron and asbestos. The plastering of these buildings appears to have been optional as historical photographs show both plastered and unplastered examples."

The study area has no indications of historic structures (Figures 2.1-2.2), nor is it likely that the proposed development will impact on any cave sites. As Gansbaai is a developing town established in 1962, and this site is located within the urban edge, it is unlikely that the proposed development will impact on any significant built environment or cultural landscape resources.

3.1.3 Heritage Character and Archaeology

As noted in the Overstand Heritage Survey (Baumann et al, 2009);

"*Gansbaai and its surrounds has a rich archaeological record: archaeological sites to be found from Gansbaai to Cape Agullhas include fish traps. Fresh water sources around Gansbaai drew Khoekhoen to the area during dry seasons. Also the role of seasonal migration between the interior and the coast to supplement the diet not only of the herds but also the herders. This pattern was followed by the trek farmers and many of the coastal villages with sources of fresh water had their roots in coastal outspans.*

In c1740s farmers settled in the Uilenkraalmond area. This area was fairly sparsely populated: by 1813, only 34 farmers were settled in the Uilenkraal area (which at the time extended from Stanford to near Cape Agulhas).

Uilenkraal farm was surveyed only in 1831 and was granted in Quitrent to Philip Conrad Fourie.

In 1853, Gansbaai was known as Hydra Bay. In the early 20th century, it was described as a small fishing village…'primitive thatched cottages situated just above the high water mark. Most roofs were tied down with poles or heavy stones because of the wind and ridges were protected by klipkous shells set close together'. None of the early cottages have survived. In 1881, Gansbaai was still part of the farm Strandfontein, owned by Koos Moolman. At the location of the old harbour was a fountain. Fishermen from Walker Bay used to find safe anchorage here when the SE blew. It is named Gansbaai. Walter Macfarlane employed 17 fishermen living at Gansbaai in 1903. The lack of infrastructure led to a slow development of the fishing industry. During WWII the demand for Vitamin A (obtained from Shark livers) gave the Gansbaai Fishing industry a boost.

In 1935 Gansbaai got a Village Management Board. Establishment of the Gansbaai Co-op and installation of cold storage etc after WWII Gansbaai became a municipality in 1962 and in 1963 a fishmeal factory was opened."

The Overstand Heritage Survey (Baumann et al, 2009) identified the following heritage significances in Gansbaai:

- Gansbaai Harbour
- Oldest parts of Gansbaai village located at the water's end of Groenewald Str and the camping site
- Historical fishing community
- Place of recreation
- The town has architectural and environmental significance in terms of the early 20th century urban frame overlooking the harbour, with its orthogonal street grid, uniform scale and form of its structures and positive building-street relationships.
- Some of its buildings have intrinsic significance in terms of the intactness of physical fabric, but most of the buildings have contextual significance.



Figure 2.3. Gansbaai Harbour c1930s (Overstand Heritage Survey, 2009)



Figure 2.4. Proposed Heritage Overlay Zone for Gansbaai (Overstand Heritage Survey, 2009)

3.1.4 Archaeology

Several HIA and AIAs have been conducted in the area surrounding the proposed development (Figure 3.1). The area is known to contain occasional Earlier Stone Age artefacts (Kaplan 2009, NID 7702); significant Middle Stone Age sequences in cave sites; extensive shell middens along the rocky shorelines and extending into the coastal dune belts, with associated burials; stone tool scatters, and stone-built fish traps in the intertidal zone (Avery 1974, Hart and Halkett 2010, NID 194682). These resources, together, reveal extensive use of the area since at least 80,000 years ago, when pre-modern humans were frequenting the coastal caves. More recently, in the Later Stone Age, hunter-gatherers and, later, herders, camped in deflation hollows in the dune belts, and made use of the seasonally available marine shellfish, fresh water, and, for the pastoral Khoe, grazing, in the relatively well-watered region. Archival and archaeological examination of the fish traps indicates that they appear to date from the colonial era (Hine 2007, NID 356929), and were maintained into the 20th century by the local

communities (Avery 1975), although the possibility remains that the tradition originated locally in pre-colonial times (Hart and Halkett 2010, NID 194682); elsewhere in the country, these resources have been declared as National Heritage Sites. No fish traps are visible on satellite imagery near the study area.

A nearby Provincial Heritage Site, located 7km north from the study area, is Die Kelders Cave 1 (SID 25308), which is an internationally renowned archaeological site of high scientific value. Die Kelders is publicly accessible without any monitoring of that access. The fragile archaeological deposits at Die Kelders Cave 1, which is within the Walker Bay Nature Reserve, and marketed locally as a tourist attraction, and Klipgat Cave - are highly vulnerable to degradation from visitors as well as acts of vandalism. Webley (2008, SAHRIS NID 7828) writes that "*To summarise the above evidence, excavations in the 1970's at Die Kelders near Gansbaai have provided early evidence (1600 years ago) for the introduction of pottery technology and domestic stock into the Cape as well as a MSA (Middle Stone Age) occupation over 40 000 years old.*" While no similar caves are known within the development area, the proximity of this significant archaeological site to the proposed development provides an indication of the possible archaeological resources that may be impacted by this development.

Webley (2008, SAHRIS NID 7828) conducted an AIA on Klipfontein 711, Portion 2, located less than 2km west of the proposed development. This assessment identified several middens (SAHRIS IDs 18268-18273) all graded as IIIB due to their high scientific significance. Webley notes that "*In the background to this report it was pointed out that only 6 sites along this stretch of the coast have been archaeologically sampled. Rampant coastal development means that many archaeological sites have been destroyed in recent decades resulting in a diminishing number of archaeological sites which can potentially inform us about the prehistoric past. For this reason, due care should be taken before permission is given to destroy an archaeological site.*"

In 2004, Doug Jeffery Environmental Consultants also conducted an EIA for development on portion 2 and portion 40 of the farm Klip Fonteyn 711, Kleinbaai. Hart consulted on the Archaeological impacts, and Baumann on the other Heritage impacts. Unfortunately, only a summary of the heritage findings from these reports was available at the time of writing. According to Hart (2004), the landscape was extensively occupied in the last 2000 years, with archaeological sites, primarily shell middens, concentrated within 500 metres of the coast, particularly along the ridge overlooking the bay (Figure 3.4). Key findings in the report include middens rich in *Haliotis midae* shells and quartzite chunks/flakes, as well as the impact on coastal sites by tracks and roads, but some stratified deposits have survived under dune vegetation. The coastal ridge at around the 20m contour contains the highest concentration of archaeological material. This includes large, continuous sites with shell-midden material, Cape Coastal pottery, and ostrich eggshell beads, with the stone artefacts mostly consisting of informal quartzite chunks and flakes. As one moves more inland the archaeological sites are more dispersed and less frequent but still present. A significant pre-colonial site (10,400m^2) was discovered on high ground near a transmission tower (500m inland), indicating that these areas can also hold archaeologically sensitive material. The report identified

several other pre-colonial sites, as well as one historical dump, but no locations were provided.

It is possible that many of these sites exist within the proposed development area, as the development falls just outside the 500m high-sensitivity area, and further investigation is warranted. In addition to the possibility of shell middens, Stone Age burials, and historic and farm graves occurring across the area, there are likely to be shore burials of victims of shipwrecks that are as yet undiscovered on the coast's sandy beaches (Kaplan 1997, NID 3844).

Farm Klipfonteyn No. 711

In 2005, Seeman conducted an AIA on the Farm Klipfontein, and noted the following:

- The only agricultural activity that Seeman could verify, was grazing of livestock
- The coastline was used for trek net fishing, shellfish gathering
- In 1950, a slipway was built, less than 100m from the northern edge of the study area, specifically for hake and grey shark fishing, and processed near the jetty. The jetty still exists, but has recently been incorporated into a modern house's beachfront area.

3.1.5 Shipwrecks

Shipwrecks represent important heritage resources in this area, and the offshore area is known to contain several wrecks. All shipwrecks are part of the national estate and are protected as Grade I resources by SAHRA. Notable wrecks off this stretch of coast include the world-famous Birkenhead (wrecked in 1852), the origin of the custom of seeing women and children off sinking vessels first, the Ellida (1888) and the Seegans (1991). Wrecks include numerous types of vessels, at varying depths and distances off shore, and in varying states of preservation.

Table 1: Shipwrecks near the proposed development

Ship	SAHRIS ID	Area	Vessel- Category (Type)	Nation	Date- Wreck	History	Image
SV Ellida	2191	Vicinity of Point	Sailing vessel (Barque)	Norwegian	04/06/1888	On June 4th, 1888, the Norwegian barque ELLIDA, on a voyage from New York to Natal with general cargo, was wrecked at Danger Point. There were no casualties.[3]	
MFV Seegans	2903	Gansbaai Harbour	Small fishing boat	South African	26/07/1991	The South African fishing vessel Seegans was wrecked during a NW gale in Gansbaai harbour.[4]	

[3] History courtesy of Wreck Site, https://www.wrecksite.eu/imgBrowser.aspx?47360
[4] History and Image courtesy of Wreck Site, https://www.wrecksite.eu/imgBrowser.aspx?47360

3.1.6 Palaeontology

According to the SAHRIS Palaeosensitivity Map the development sites are underlain by sediments of very high fossil sensitivity (Figure 4.1). According to the extract from the Council of GeoScience Map 3319 Worcester Geology Map indicating that the development area is underlain by Qw: Waenhuiksrans Formation, Bredasdorp Group. According to Almond and Pether in the Western Cape Palaeotechnic report, the **Bredasdorp group** consists of mainly regressive, prograded shallow-marine sequences comprising basal conglomerates overlain by sandy and gravelly shoreface and sometimes foreshore deposits. Estuarine to fluvial deposits occur in vicinities of rivers and locally also muddier, sheltered embayment and lagoonal deposits. The tops of marine sequences are eroded and overlain by aeolianites. These sediments are interbedded and capping calcretes and other soil profiles mark stable palaeosurfaces. The lithologies are mainly calcareous in the Bredasdorp and Sandveld Groups and sandier and decalcified in the West Coast Group. The marine deposits have discrete ages associated with high sea-levels and polar-ice melting during globally-warm periods: mid-Miocene ~16 Ma, early Pliocene ~5 Ma, late Pliocene ~3 ma and later Quaternary ‹1 Ma. Aeolianites of various intervening ages. In the marine deposits are fossil molluscan seashells, brachiopods, crustaceans (barnacles, crabs, prawns, ostracods), echinoids, polychaete worm tubes, corals, bryozoans & foraminifera. Shark teeth are common, other fish teeth occur. Bones of whales, dolphins, seals & seabirds. Trace fossils made by prawns, worms, echinoids, anemones, bivalves, fish etc, are also pervasive. These sediments also often contain bones of land mammals in estuarine and lagoonal deposits. In the aeolianites are land snails, tortoises, moles, OES, and insect traces. Larger animal bones are sparsely scattered on palaeosurfaces (bovids, zebras, rhino, elephant, pigs etc.). Deposits associated with vleis, pans, and springs are very rich, especially birds, micromammals, and Homo Sapiens.

Almond (2008, SAHRIS NID 28357) notes that "*The **Waenhuiskrans Formation** has so far only yielded a sparse range of body fossils. These are mostly terrestrial gastropods of the genera Achatina, Dorcasia, Tropidophora, Trigonephrus and Ferissia – all snails except for the last, which is an extant brackish-water slug (Malan 1989c, Roberts et al. 2008). Allochthonous marine fossils include wind-blown foraminiferans and sand-worn shell fragments. Fascinating assemblages of Late Pleistocene last interglacial vertebrate trackways, ascribed to African elephants, antelopes, equids, carnivores and tortoises, as well as rhizoliths (plant root traces, cf Klappa 1980) and calcretised termitaria, have recently been recorded from well-dated (MIS 5e to 5b) Waenhuiskrans aeolianites at Still Bay by Roberts (2003) and Roberts et al. (2008).*"

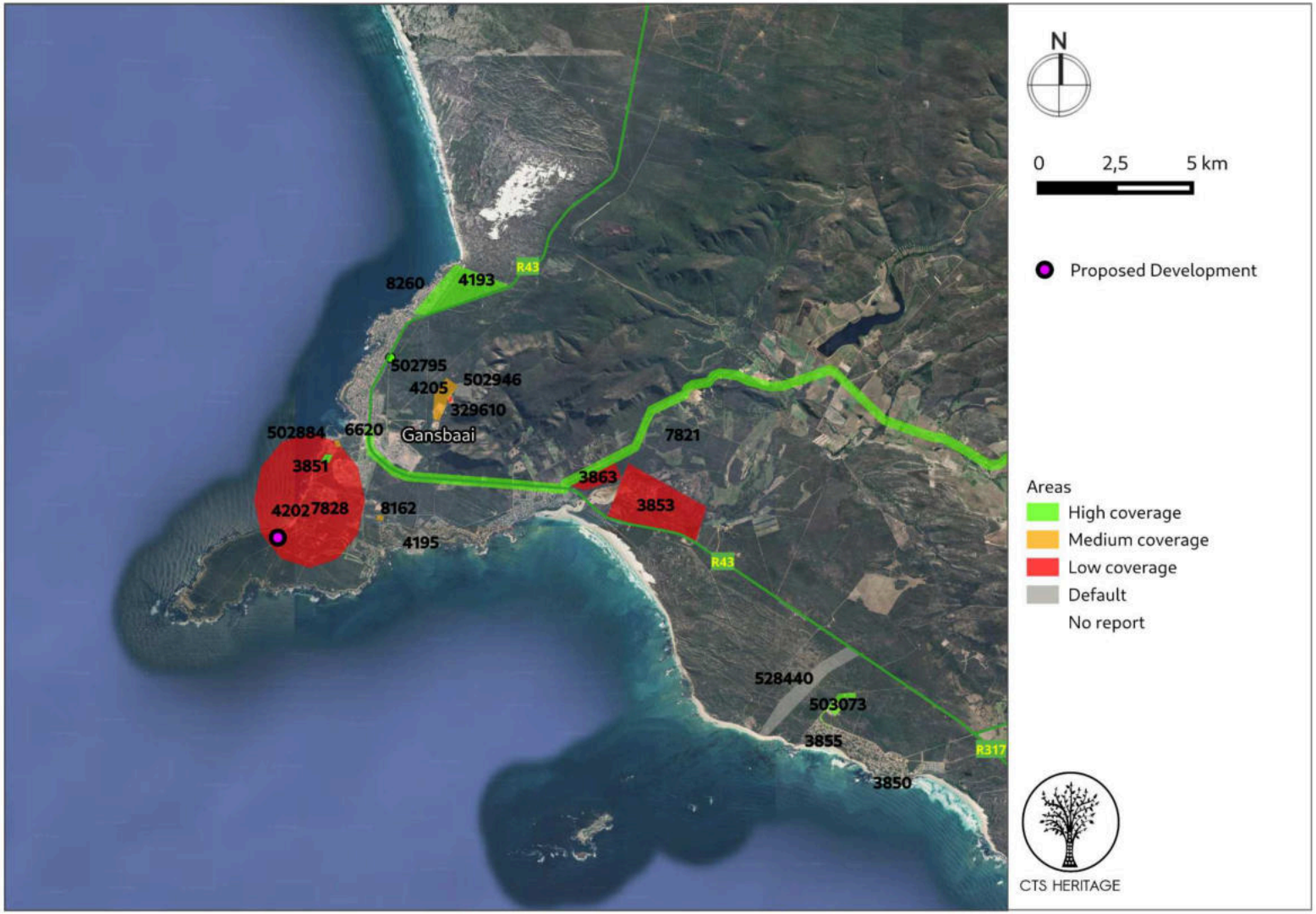


Figure 3.1: Spatialisation of heritage assessments conducted in proximity to the proposed development

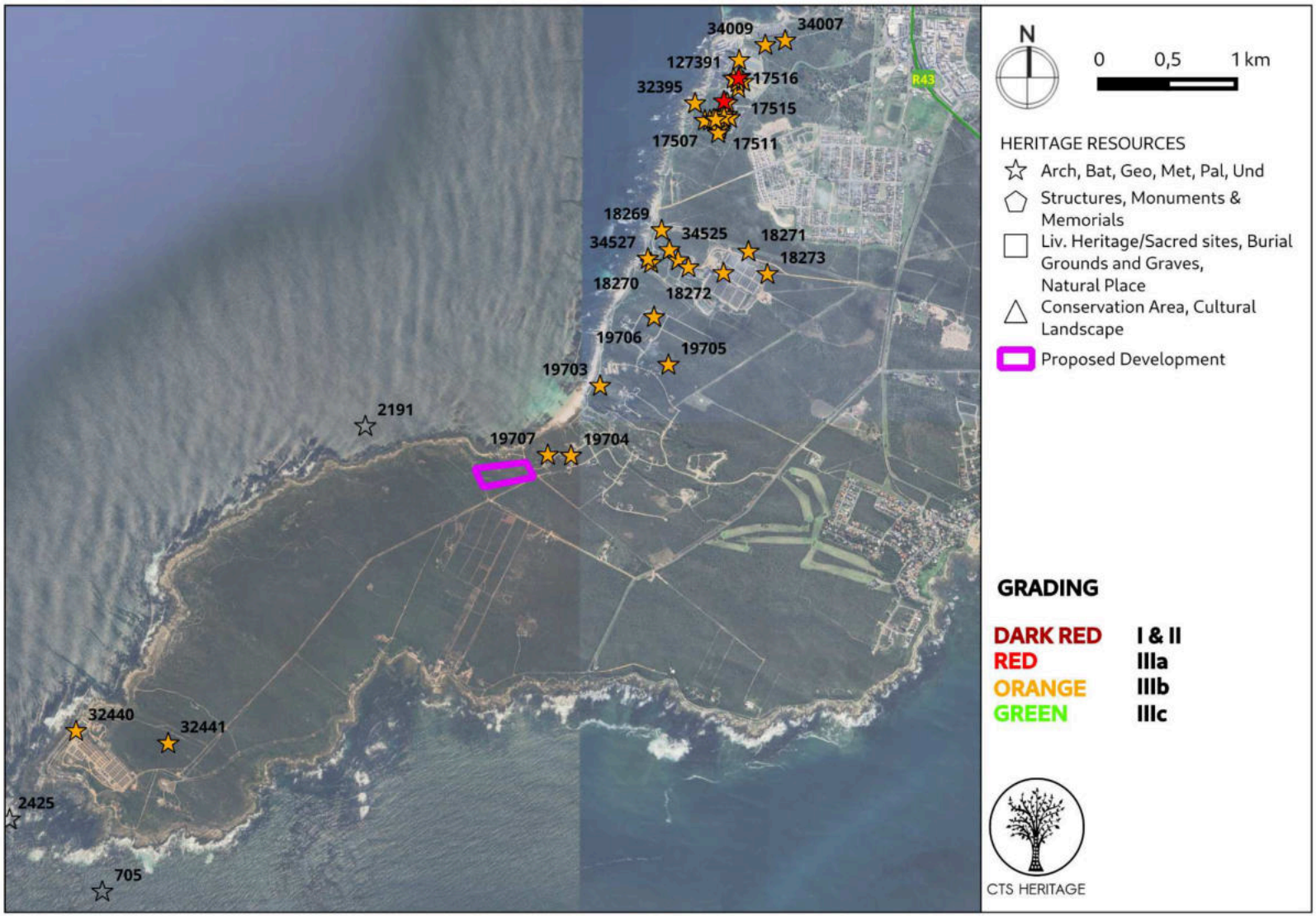


Figure 3.2 Heritage Resources Map. Heritage Resources previously identified in and near the study area, with SAHRIS Site IDs indicated



Figure 3.3 Cultural Landscape Map. Map indication sensitive receptors near the proposed development, extracted from the Topo 1:50 000 map.

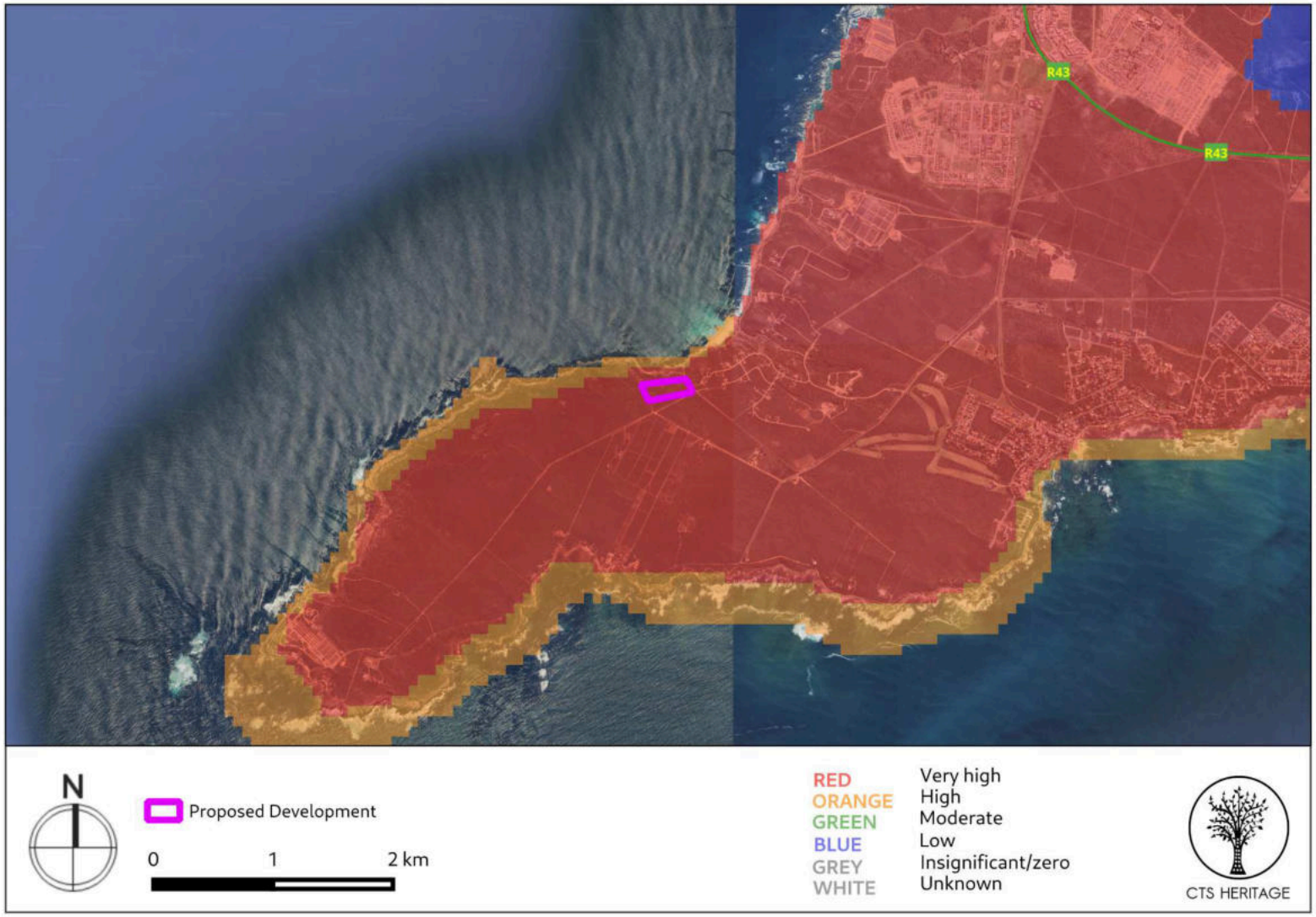


Figure 4.1: Palaeontological sensitivity of the proposed development area



Figure 4.2: Extract from the CGS 2626 West Rand Geology Map indicating that the development area is underlain by Vmd - Malmani Formation of the Chuniespoort Group

4. IDENTIFICATION OF HERITAGE RESOURCES

4.1 Summary of Findings of Specialist Reports

4.1.1 Archaeology (Appendix 1)

The field assessment identified 14 observations, including several shell middens. As the study area falls inside the 500m high-water archaeologically sensitive area, almost every surface has some evidence of limited shell scatter, with 3 areas identified as having low-density scatters, and one area exhibiting very high-density levels. The shell midden scatters contain lithics, pottery shards, and ostrich eggshell (OES). The one area is located at a noticeably higher elevation than the rest of the study area (also visible on the Topo 1:50 000 map). This area was covered in dense vegetation and as such survey opportunities were limited, however, the koppie is marked by a 20m contour line on the Topo 1:50 000 Map. The sea-facing northern side of the study area has higher density shell scatters, which were also more visible due to the vegetation being less dense and consisting of smaller shrubs and ankle-height vegetation.

One dog grave, “Boelie’s Grave” was also identified near the southern edge of the proposed area. The southeastern corner of the development footprint has a solar panel area, as well as an area cleared for a plant nursery.

4.1.2 Palaeontology (Appendix 2)

Underlying Geology of Development Area

The underlying geology of the proposed subdivision and rezoning of Portion 40 of the Farm Klipfontein No. 711, Gansbaai, area is depicted on the 1:250 000 Worcester 3319 Geological map (Council of Geoscience, Pretoria) (Figure 3). The map shows that the proposed project area is underlain by sediments of the **Waenhuiskrans Formation (Bredasdorp Group)**. The nature of the geology in the surrounding area has been well documented by Milan 1990. Below follows a description of the relevant geological units in the vicinity of the project area.

- The Waenhuiskrans Formation (Qw) is a Late Pleistocene aeolian formation within the Bredasdorp Group. Initially referenced by Haughton et al. (1937), the Waenhuiskrans Formation was formalised by Malan in 1989, having a type area at the coastal village of Waenhuiskrans. The formation represents semi-consolidated dunes extending laterally along the present coastline from Hermanus to Plettenberg Bay, forming a 0.2 to 3 km-wide discontinuous outcrop. The Waenhuiskrans Formation overlies the marine/estuarine Klein Brak Formation and was deposited during the Late Pleistocene glacial period, when sea levels were 130 m lower than present. The upper boundary is defined as the base of overlying calcrete, soil, scree, or unconsolidated aeolian sand of the Strandveld Formation.
- The thickness of the unit varies significantly, with a maximum thickness of over 200 m in the Wilderness-Sedgefield area and an inferred average thickness of 30m. It is semi-consolidated in some

areas and less so in others, with considerable variability in structure and consistency. The formation comprises calcarenite and calcareous sandstone with well-sorted medium-grained, well to very well rounded quartz grains, and finely comminuted shell fragments. The formation is characterised by large-scale planar cross-bedding with bed thicknesses up to 12 m and bedding surfaces dipping up to 30 degrees.

Palaeontological Sensitivity of the Development Area

The palaeontological heritage of the current study is part of Bredasdorp Group (Waenhuiskrans Formation). Based on the SAHRIS Palaeo Map (Figure 2), the Waenhuiskrans Formation has a very high palaeontological sensitivity.

- The **Waenhuiskrans Formation** is rich in terrestrial gastropods, freshwater molluscs, microfossils, trace fossils, and other fossilised material. Among its key palaeontological components are terrestrial gastropods such as *Achatina zebra*, *Tropidophora sp., Trigonephris sp., and Natalina sp.*, which provide insights into environmental conditions during the Late Pleistocene. Freshwater molluscs in the Waenhuiskrans Formation include *Burnupia, Planorbis,* and *Succinea,* indicating that parts of the formation were influenced by freshwater environments. Microfossils like wind-abraded benthic foraminifera (*Elphidium crispum, Poroeponides pateralis, and Ammonia spp.*) are present. (McMillan, I.K. 1986), suggest marine influence and environmental changes over time. Trace fossils have also been observed, with a notable example being feeding trails that measure 17 mm in diameter, likely made by larvae of tipulid insects (crane flies). In addition, the formation contains other fossilised material such as comminuted shell fragments, wind-abraded echinoid spines, and bryozoan fragments, reflecting the marine elements and the mixed environmental nature of the Waenhuiskrans Formation.

4.2 Heritage Resources Identified

In terms of the heritage resources identified in the archaeological field assessment, see Table 2 below and Appendix 1 for full descriptions and images.

Table 2: Artefacts identified during the field assessment development area

POINT ID	Description	Type	Density	Period	Co-ordinates		Grading	Mitigation
20	Traces of shell midden	Observation	10+	LSA	-34,6127334	19,3251353	IIIc	Pro-active sampling
21	Ephemeral shell midden with pottery and lithics	Observation	10+	LSA	-34,6126351	19,3249995	IIIc	
24	Very ephemeral shell scatter with lithic	Artefact	10+	LSA	-34,612200	19,3252353	IIIc	
25	Ephemeral shell scatter	Artefact	10+	LSA	-34,612626	19,32477691	IIIc	
27	Very ephemeral shell scatter	Artefacts	10+	LSA	-34,6123118	19,322710	IIIc	
28	Ephemeral shell scatter with crescent lithics	Artefacts	10+	LSA	-34,6122513	19,32315166	IIIc	
29	Disturbed shell midden with lithics and OES	Artefacts	10+	LSA	-34,612259	19,3234302	IIIc	
30	Disturbed shell midden	Artefacts	10+	LSA	-34,6121798	19,3236952	IIIc	

4.3 Mapping and Spatialisation of Heritage Resources

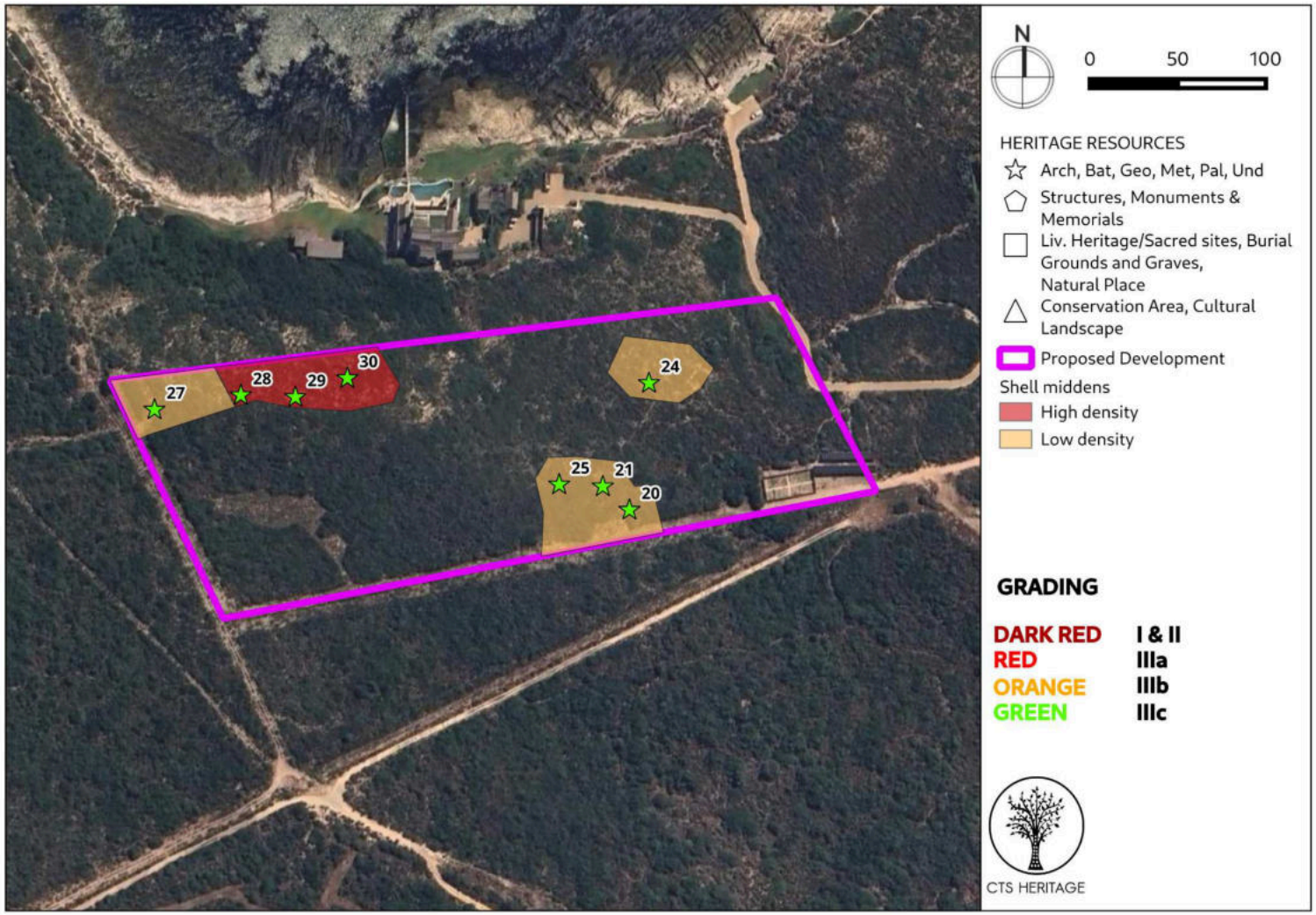


Figure 4.1: All heritage resources within proximity to the development area

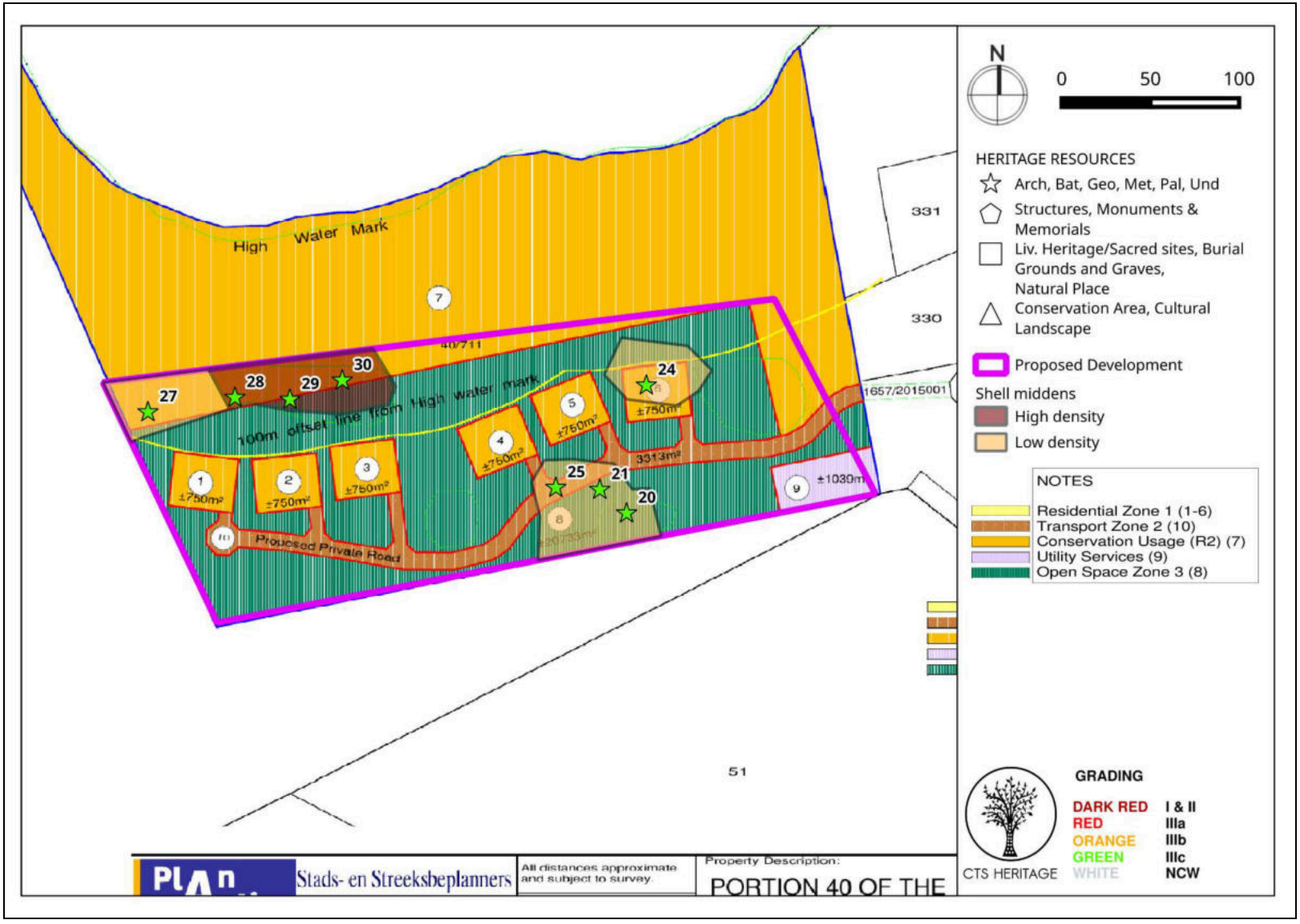


Figure 4.2: All heritage resources within proximity to the development area mapped against the SDP

5. ASSESSMENT OF THE IMPACT OF THE DEVELOPMENT

5.1 Assessment of Impact to Heritage Resources

5.1.1 Cultural Landscape

The Overstand Heritage Survey (Baumann et al, 2009) identified a number of heritage significances in Gansbaai. Below, the anticipated impact to these heritage resources is expanded upon:

- Gansbaai Harbour
- Oldest parts of Gansbaai village located at the water's end of Groenewald Str and the camping site
- Historical fishing community
- Place of recreation
- The town has architectural and environmental significance in terms of the early 20th century urban frame overlooking the harbour, with its orthogonal street grid, uniform scale and form of its structures and positive building-street relationships.
- Some of its buildings have intrinsic significance in terms of the intactness of physical fabric, but most of the buildings have contextual significance.

The area proposed for development is located more than 3km from the Gansbaai Harbour and the oldest parts of Gansbaai Village and as such, no direct impact on these resources is anticipated. Gansbaai remains a place dominated by fishing culture and industries and it is unlikely that the proposed development will negatively impact on these aspects of the Gansbaai area.

The historic core of Gansbaai has significance in terms of intact fabric and its early 20th Century layout. This development is located far outside of the historic core of Gansbaai, and is separated from the historic core by the existing Romansbaai Beach and Fynbos Estate. As such, while this development does not speak to the historic core of Gansbaai, it does align with the existing layout of the adjacent (linked) estate and as such, would be viewed as an extension of this estate.

5.1.2 Archaeology

Despite the dense vegetation, the development area was sufficiently surveyed to determine its archaeological sensitivity. Surface scatters of archaeological shell midden material located within the 500m high-water archaeologically sensitive zone are likely indicative of significant archaeological resources that exist below the surface. These findings point to the high likelihood of buried shell-midden sediments that will be impacted by the proposed development.

Kaplan (2008) and Smuts (2017) have noted that the majority of significant heritage resources along this coastline exist within 500m of the high-water mark. As such, the areas within 500m of the high water mark have been

red-flagged as particularly sensitive for impacts to significant archaeology. All of the proposed infrastructure is located within this high archaeological sensitivity zone. As such, it is usually recommended that excavations within this high-sensitivity area are ***avoided*** but due to the nature of the development and its position entirely within 500m of the high-water mark, pro-active sampling excavations of the areas with surface scatters are recommended.

The preferred layout has been mapped against the identified sensitivities in Figure 5.2. This layout is likely to impact the low density surface scatters identified as sites 20, 21, 24 and 25. Test excavations of these scatters will provide the necessary insight to determine the depth of scientifically significant shell-midden deposits across the development area and will provide an opportunity to sample these significant sediments.

Based on the findings of Nilssen (2008) summarised above, it is not anticipated that the results of the recommended test excavations will impact on this proposed layout. As such, on condition that the recommended test excavations take place, archaeological monitoring of all construction excavations takes place and that a Conservation Management Plan is drafted for the ongoing management of the shell midden deposits, there is no objection to the proposed development from an archaeological perspective.

5.1.3 Palaeontology

The area is underlain by sediments of the Bredasdorp Group, Waenhuiskrans Formation, which has been classified as having a very high palaeontological significance. However, the specific nature and scope of the development have led to the determination that the palaeontological sensitivity for this project is **LOW**. This conclusion is predicated on the fact that the construction of the housing development will necessitate only minor excavation, which is restricted to the superficial sediment layers extending a few metres into the subsurface. This limited excavation is unlikely to impact the extensive bedrock where most palaeontological resources would be found.

Given the local scale of the excavation and the measures taken to minimise the environmental footprint of the construction, the likelihood of impacting significant palaeontological resources is minimal. As such, the impact on palaeontological heritage during the development is assessed as **LOW**, with mitigation measures in place to address any unforeseen discoveries.

5.2 Sustainable Social and Economic Benefit

The proposed development is situated adjacent to the upper middle class residential estate known as Romansbaai Beach and Fynbos Estate inside the urban edge. The proposed development will serve as an extension of this estate once complete and will complement the surrounding land uses. Furthermore, it is expected that the development will generate numerous short-and-long term employment opportunities during both the construction and operational phase for skilled and unskilled labour. Therefore, no negative socio-economic impacts are expected from the proposed development. Due consideration has been given to the potential positive socio-economic impact of the proposed residential development.

Based on the outcomes of this heritage assessment, the anticipated socio-economic benefits to be derived from the project outweigh any anticipated negative impacts to heritage resources on condition that the recommendations made below are implemented.

5.3 Proposed Development Alternatives

Two Alternative layouts have been considered. Alternative 1 had the development footprint over some sensitive botanical area, so it was adjusted. Alternative 2 is the preferred layout, this is similar to layout 1 but the development footprint was moved to avoid the sensitive habitat and incorporates these areas into the open space area within the development.

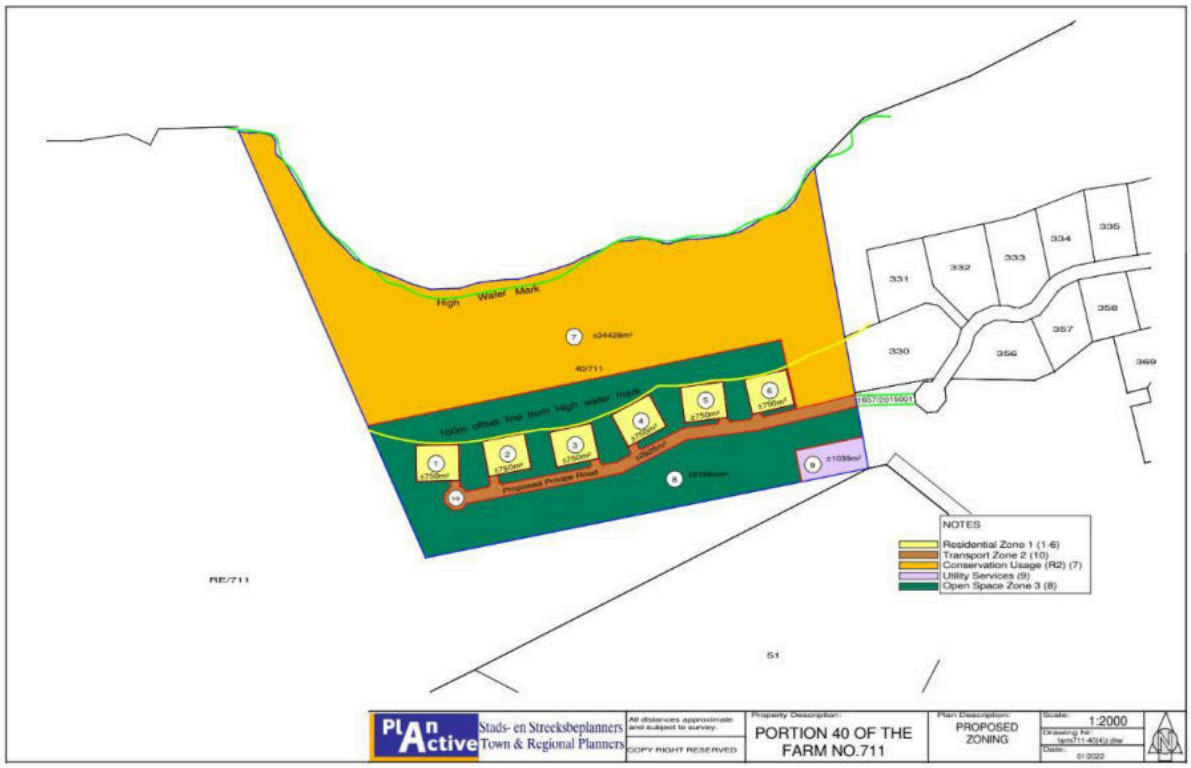


Figure 5.1: Alternative 1

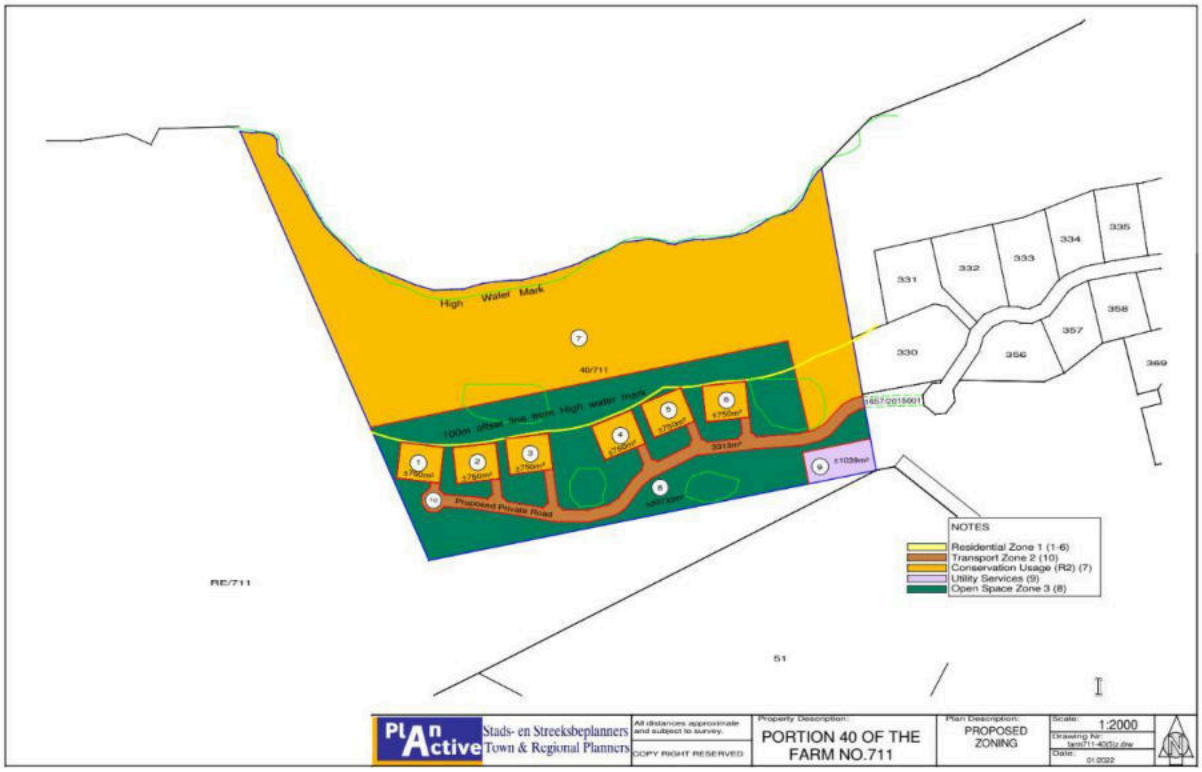


Figure 5.2: Alternative 2

5.4 Site Verification Statement

According to the DFFE Screening Tool analysis, the development area has VERY HIGH levels of sensitivity for impacts to palaeontological heritage and LOW levels of sensitivity for impacts to archaeological and cultural heritage resources. The results of this assessment in terms of site sensitivity are summarised below:

- The cultural value of the broader area has limited significance in terms of its settlement history (LOW)
- Some significant archaeological resources were identified within the development area (VERY HIGH)
- No highly significant palaeontological resources were identified within the development area, and the geology underlying the development area is not sensitive for impacts to significant fossils (LOW)

As per the findings of this assessment, and its supporting documentation, the outcome of the sensitivity verification disputes the results of the DFFE Screening Tool for Palaeontology - this should be LOW - and disputes the results of the screening tool for archaeology and cultural heritage - this should be considered to be VERY HIGH. This evidence is provided in the body of this report and in the appendices (Appendix 1 and 2).

6. RESULTS OF PUBLIC CONSULTATION

As this application is made in terms of NEMA, the public consultation on the HIA will take place with the broader public consultation process required for the Environmental Impact Assessment process and will be managed by the lead Environmental Assessment Practitioner on the project.

In addition to the public consultation required in terms of NEMA, HWC requires that the Overstrand Municipality as well as the relevant registered Conservation Bodies be provided with 30 days in which to comment on this Heritage Impact Assessment. The registered Conservation Bodies are:

- Overstrand Heritage and Aesthetics Committee - elowings@overstrand.gov.za
- Whale Coast Conservation - wcc.greenhouse@gmail.com

Evidence of the consultation undertaken and all comments received are included in Appendix 4.

7. CONCLUSION

The area proposed for development is located more than 3km from the Gansbaai Harbour and the oldest parts of Gansbaai Village and as such, no direct impact on these resources is anticipated. Gansbaai remains a place dominated by fishing culture and industries and it is unlikely that the proposed development will negatively impact on these aspects of the Gansbaai area.

The historic core of Gansbaai has significance in terms of intact fabric and its early 20th Century layout. This development is located far outside of the historic core of Gansbaai, and is separated from the historic core by the existing Romansbaai Beach and Fynbos Estate. As such, while this development does not speak to the historic core of Gansbaai, it does align with the existing layout of the adjacent (linked) estate and as such, would be viewed as an extension of this estate.

The field assessment confirmed the findings of the desktop analysis which indicated that the area proposed for development has a higher sensitivity for impact to buried shell-midden archaeological resources. As such, it is recommended that proactive sampling excavations of the areas with surface scatters are undertaken.

The preferred layout has been mapped against the identified sensitivities in Figure 5.2. This layout is likely to impact the low density surface scatters identified as sites 20, 21, 24 and 25. Test excavations of these scatters will provide the necessary insight to determine the depth of scientifically significant shell-midden deposits across the development area and will provide an opportunity to sample these significant sediments.

Based on the findings of Nilssen (2008) summarised above, it is not anticipated that the results of the recommended test excavations will impact on the proposed layout. As such, on condition that the recommended

test excavations take place, archaeological monitoring of all construction excavations takes place and that a Conservation Management Plan is drafted for the ongoing management of the shell midden deposits, there is no objection to the proposed development from an archaeological perspective.

The palaeontological specialist study for the proposed subdivision and rezoning of Portion 40 of the Farm Klipfontein No. 711 in Gansbaai, Western Cape, has assessed the potential impacts on palaeontological resources. The study area is underlain by sediments of the Waenhuiskrans Formation of the Bredasdorp Group, which is known to have some palaeontological significance. However, the specific geological context and the nature of the proposed development suggest that the overall impact on palaeontological heritage is expected to be **LOW**.

The study found that the Waenhuiskrans Formation, while containing some palaeontological resources such as terrestrial gastropods, freshwater molluscs, and microfossils, generally exhibits **LOW** fossil abundance and diversity. The planned development involves only minor excavation activities limited to superficial sediment layers, further reducing the likelihood of encountering significant palaeontological resources.

8. RECOMMENDATIONS

There is no objection to the proposed development from a heritage perspective on condition that:

- Pro-active sampling excavations of the areas with surface scatter take place under a workplan approval from HWC. This can take place as a condition of approval.
- Archaeological monitoring of all construction excavations takes place
- A Conservation Management Plan is drafted for the ongoing management of the shell midden deposits
- **Chance Fossil Finds Protocol**: A Chance Fossil Finds Protocol should be integrated into the Environmental Management Programme (EMPr). This protocol will guide construction personnel on the steps to take in the event of an unexpected fossil discovery.

9. REFERENCES

Heritage Impact Assessments				
NID	**Author(s)**	**Date**	**Type**	**Title**
3851	Timothy Hart	01/08/2003	AIA Phase 1	Heritage Scoping Assessment of a Proposed Housing Development Site (Erf 623) Gansbaai, South Western Cape Province
3852	Peter Nilssen	12/08/2004	Archaeological Permit Report	Erf 623 and Access Road, Gansbaai, South Western Cape Province Archaeological Heritage Impact Assessment Based on Shovel Test Excavations
3853	Jonathan Kaplan	01/12/2004	AIA Phase 1	Phase 1 Archaeological Impact Assessment Proposed Uilenvlei Private Reserve Bredasdorp District
3854	Jonathan Kaplan	01/03/2005	AIA Phase 1	Phase 1 Archaeological Impact Assessment Erf 629 Gansbaai Bredasdorp District South Western Cape Province
3855	Jonathan Kaplan	01/05/2005	AIA Phase 1	Phase 1 Archaeological Impact Assessment Proposed Development Erf 162 Pearly Beach Bredasdorp District
3863	Jonathan Kaplan	01/10/2005	AIA Phase 1	Phase 1 Archaeological Impact Assessment Proposed Uilkraal Lagoon Sanctuary Caledon District
4193	Jonathan Kaplan	01/03/2006	AIA Phase 1	Phase 1 Archaeological Impact Assessment Proposed Housing Development Khoisan Bay De Kelders Gansbaai
4195	Timothy Hart, Dave Halkett	01/12/1993	AIA Phase 1	Phase 1 Archaeological Survey of Klipfonteyn
4202	RJ Goosen	16/09/1996	AIA Phase 1	Archaeological Impact Assessment Report: Shell Middens on the I&J Property at Gansbaai
4205	John Lanham, Royden Yates	09/07/2006	AIA Phase 1	Gansbaai Sand Mine Extension - a Portion of Erf 210 (Gansbaai Commonage), District Bredasdorp, Western Cape: Archaeological Heritage Impact Assessment Report
6620	Renee Rust, Liezl van Pletzen-Vos, Sarah Wurz	01/09/2007	AIA Phase 1	Phase 1 Archaeological Impact Assessment for Remainder of Erf 210, Gansbaai, Overstrand Municipality, Division Caledon
7092	Peter Nilssen	13/10/2008	AIA Phase 1	The Proposed Development of Romansbaai on Portions 2, 17, 18 of Farm Klipfonteyn 711, Romansbaai, Gansbaai, Western Cape Province
7821	Timothy Hart	01/01/2005	AIA Phase 1	Phase 1 Heritage Impact Assessment of Upgrading the Road from Gansbaai to Bredasdorp Western Cape Province
7828	**Lita Webley**	**01/11/2008**	**AIA Phase 1**	**Phase 1 Archaeological Impact Assessment: Proposed Expansion at Roman Bay Sea Farm (Portion 2 of the Farm Klipfonteyn 711), Gansbaai, Overstrand Municipality, Western Cape**
8162	Liezl van	10/09/2009	AIA Phase 1	Phase 1 Archaeological Impact Assessment on a 1.4 Ha Area (Erven 1224, 1225 &

	Pletzen-Vos			1226) van Dyksbaai, Overstrand Municipality, Division Caledon, Western Cape
8260	Graham Avery	01/01/2006	AIA Phase 1	Report on Archaeological & Palaeontological Potential: Proposed Whale Cove Development (3419 CB Gansbaai)
329610	Jonathan Kaplan	24/02/2011	AIA Phase 1	ARCHAEOLOGICAL IMPACT ASSESSMENT PROPOSED GRAVEL MINE ERF 210 GANSBAAI, WESTERN CAPE
28357	**John Almond**	**30/06/2008**	**PIA Desktop**	**Palaeontological Desktop Study For Bantamsklip (W. Cape) And Thyspunt (E. Cape) Reactor Sites**

Additional References

Raper, P.E., Moller, L.A. and Plessis, T. (2018) Dictionary of Southern African Place Names. Jeppestown: Jonathan Ball.

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APPENDICES

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APPENDIX 1: Archaeological Assessment (2024)

ARCHAEOLOGICAL SPECIALIST STUDY

In terms of Section 38(8) of the NHRA for a

Proposed subdivision and rezoning of Portion 40 of the Farm Klipfontein No. 711, Gansbaai, in the Western Cape

Prepared by

CTS HERITAGE

Jenna Lavin
Mabeth Crafford

In Association with

PHS

July 2024

Updated July 2025

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EXECUTIVE SUMMARY

This report is drafted for the proposed subdivision and rezoning of Portion 40 of the Farm Klipfontein No. 711, Gansbaai.

The field assessment confirmed the findings of the desktop analysis which indicated that the area proposed for development has a higher sensitivity for impact to buried shell-midden archaeological resources. As such, it is recommended that proactive sampling excavations of the areas with surface scatters are undertaken.

The preferred layout has been mapped against the identified sensitivities in Figure 6.3. This layout is likely to impact the low density surface scatters identified as sites 20, 21, 24 and 25. Test excavations of these scatters will provide the necessary insight to determine the depth of scientifically significant shell-midden deposits across the development area and will provide an opportunity to sample these significant sediments.

Based on the findings of Nilssen (2008) summarised above, it is not anticipated that the results of the recommended test excavations will impact on the proposed layout. As such, on condition that the recommended test excavations take place, archaeological monitoring of all construction excavations takes place and that a Conservation Management Plan is drafted for the ongoing management of the shell midden deposits, there is no objection to the proposed development from an archaeological perspective.

Recommendations

There is no objection to the proposed development from an archaeological perspective on condition that:

- Pro-active sampling excavations of the areas with surface scatter take place under a workplan approval from HWC. This can take place as a condition of approval.
- Archaeological monitoring of all construction excavations takes place
- A Conservation Management Plan is drafted for the ongoing management of the shell midden deposits

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CONTENTS

1. INTRODUCTION **3**
1.1 Background Information on Project 3
1.2 Description of Property and Affected Environment 3
2. METHODOLOGY **8**
2.1 Purpose of Archaeological Study 8
2.2 Summary of Steps Followed 8
2.3 Constraints & Limitations 8
3. HISTORY AND EVOLUTION OF THE SITE AND CONTEXT **10**
3.1 Background 10
3.2 Built Environment and Cultural Landscape 10
3.3 Heritage Character and Archaeology 11
3.4 Shipwrecks 13
4. IDENTIFICATION OF HERITAGE RESOURCES **17**
4.1 Field Assessment 17
4.2 Archaeological Resources Identified 22
4.3 Selected photographic record 26
5. ASSESSMENT OF THE IMPACT OF THE DEVELOPMENT **31**
5.1 Assessment of Impact to Archaeological Resources 31
6. CONCLUSION AND RECOMMENDATIONS **31**
7. REFERENCES **33**

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1. INTRODUCTION

1.1 Background Information on Project

This report is drafted for the proposed subdivision and rezoning of Portion 40 of the Farm Klipfontein No. 711, Gansbaai.

1.2 Description of Property and Affected Environment

The proposed development falls within the Romansbaai Beach Estate, which is located on the peninsula stretching south of Gansbaai. The area is experiencing rapid development, with houses currently under construction within the beach estate. A large part of the site is located on the highest point of the coastal dune with dense vegetation. The northeastern side of the site itself slopes down towards the Atlantic Ocean. The vegetation is still dense towards the ocean but grows as smaller shrubs. This sea-facing side, as it slopes down, also shows some erosion, evident by the shell middens becoming exposed.

The southern and western edges of the study area are fenced from the areas outside of the Romansbaai Beach Estate and has approximately two metres of cleared vegetation on both sides of the fence. Some of these clearings also serve as Jeep tracks.

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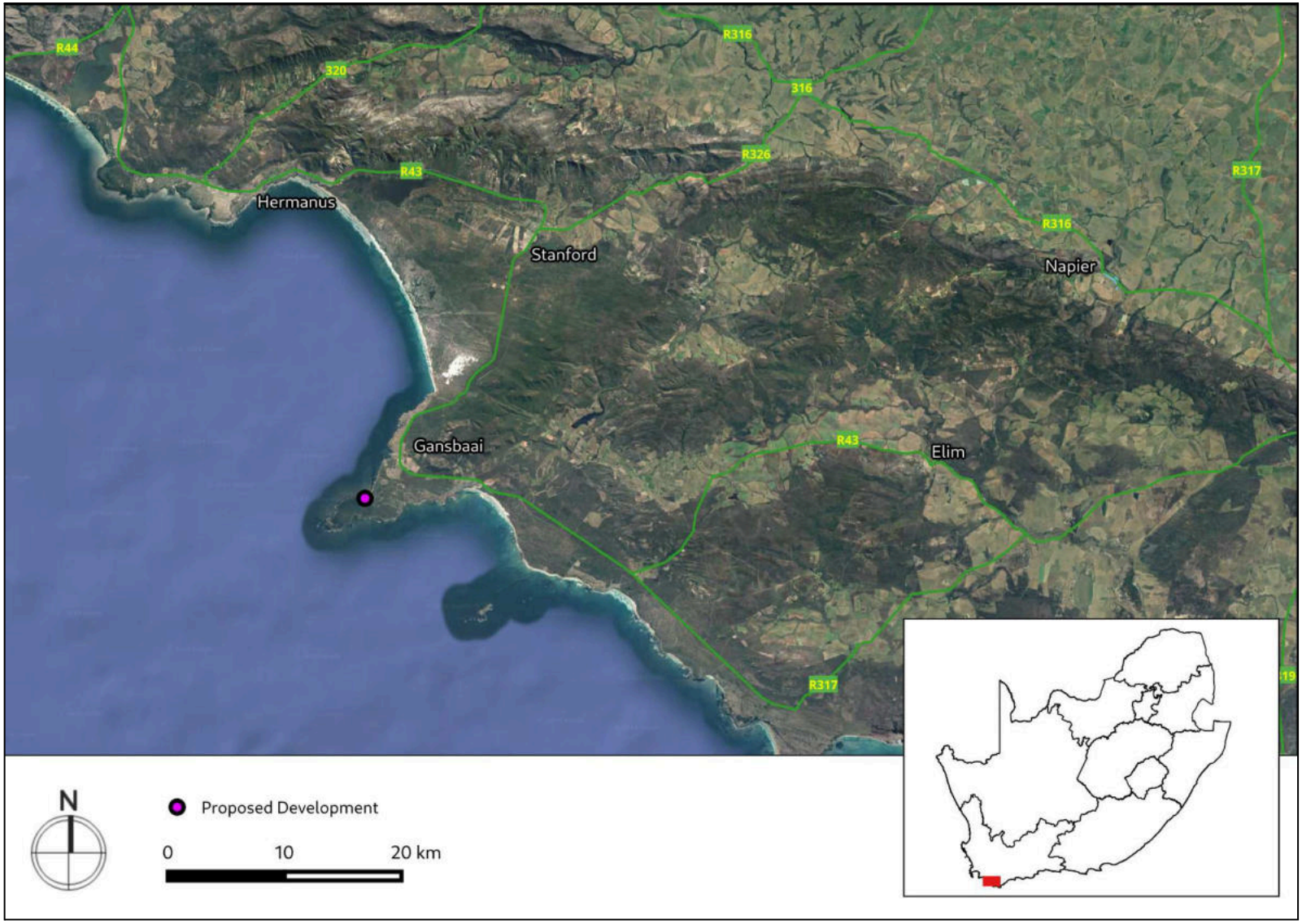


Figure 1.1: Satellite image indicating proposed location of development

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Figure 1.2: Proposed project boundary

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Figure 1.3: Proposed project boundary

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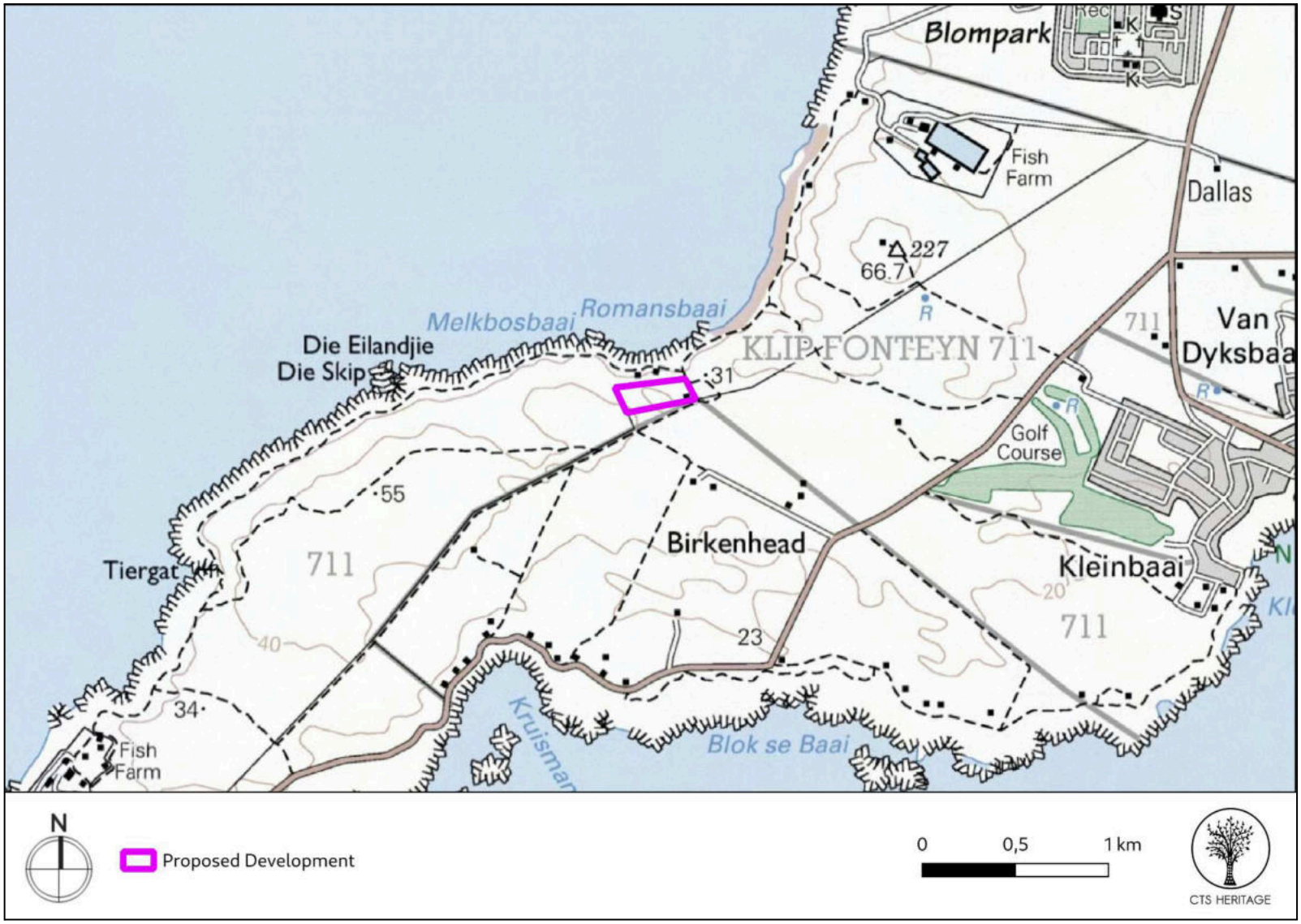


Figure 1.4: Proposed project boundary indicated on the 1:50 000 Topo Map

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2. METHODOLOGY

2.1 Purpose of Archaeological Study

The purpose of this archaeological study is to satisfy the requirements of section 38(8), and therefore section 38(3) of the National Heritage Resources Act (Act 25 of 1999) in terms of impacts to archaeological resources.

2.2 Summary of Steps Followed

- An archaeologist (M. Crafford) conducted a survey of the site and its environs from 20 June 2024 to determine what archaeological resources are likely to be impacted by the proposed development.
- The area proposed for development was assessed on foot, photographs of the context and finds were taken, and tracks were recorded using a GPS.
- The identified resources were assessed to evaluate their heritage significance in terms of the grading system outlined in section 3 of the NHRA (Act 25 of 1999).
- Alternatives and mitigation options were discussed with the Environmental Assessment Practitioner.

2.3 Constraints & Limitations

The dense vegetation complicated surveying as some areas were inaccessible, and visibility of the surface was limited, however, sufficient coverage was ascertained in order to determine the archaeological sensitivity of the development area.

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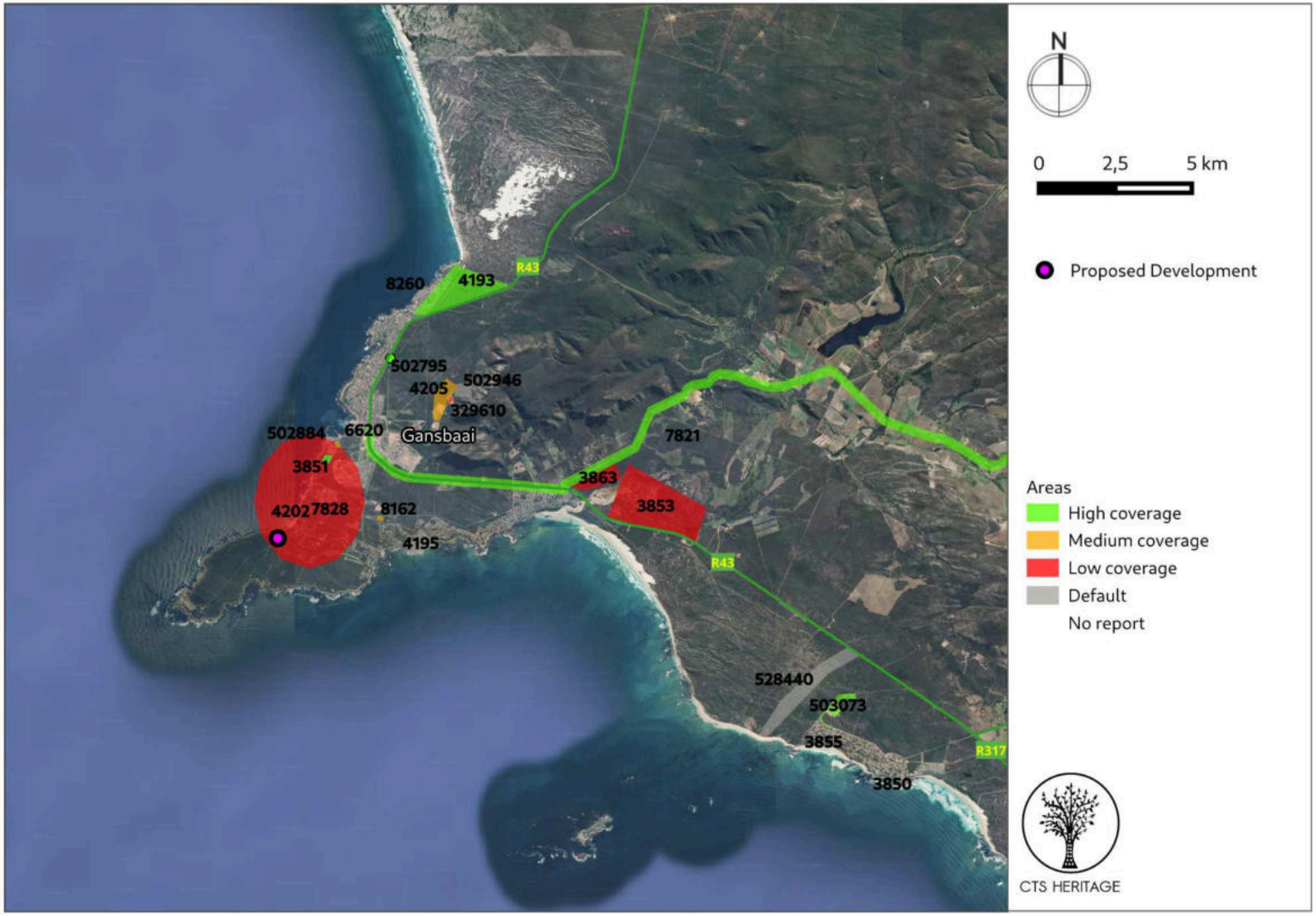


Figure 2: Close up satellite image indicating proposed location of development in relation to heritage studies previously conducted

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3. HISTORY AND EVOLUTION OF THE SITE AND CONTEXT

3.1 Background

This application is for the proposed subdivision and rezoning of Portion 40 of the Farm Klipfontein No. 711, Gansbaai. According to Raper et al (2018) in the Dictionary of Southern African Place Names, Gansbaai/GansBay was originally known as *Gansgat (*Goose hole) because of the wild geese in the area. It was laid out on the farm Strandfontein and in 1962 became a municipality.

3.2 Built Environment and Cultural Landscape

This coastal stretch is characterised by narrow coastal belts bordered by rugged Cape Fold Mountains, opening out, as one travels east, to rolling plains. The coastline itself is characterised by rocky shorelines interspersed with sandy beaches, and several large, perennial rivers exist throughout the region, many with lagoons and estuaries. Towns were initially established in this region as small fishing villages, in the second half of the 19th century (Baumann et al 2009). Increasingly since post-WWII era, these towns have developed as recreational destinations. This tourism-driven boom has increasingly changed the character of the string of towns along the Overberg coastline. The sites sensitive to development impacts are the remaining, intact elements of the early villages, such as the local, vernacular Hermanus/ Gansbaai holiday cottages, and the wealth of as-yet undiscovered pre-historic sites, including unexplored cave sites, and possible human burials, that are vulnerable to the development of the dune cordon and beachfront. Both of these elements require proactive protection and conservation, as well as the sensitive planning of developments that might affect them. The study area has no indications of historic structures (Figures 3.1-3.2), nor is it unlikely that the proposed development will impact on any cave sites. As Gansbaai is a developing town established in 1962, and this site is located within the urban edge, it is unlikely that the proposed development will impact on any significant built environment or cultural landscape resources.

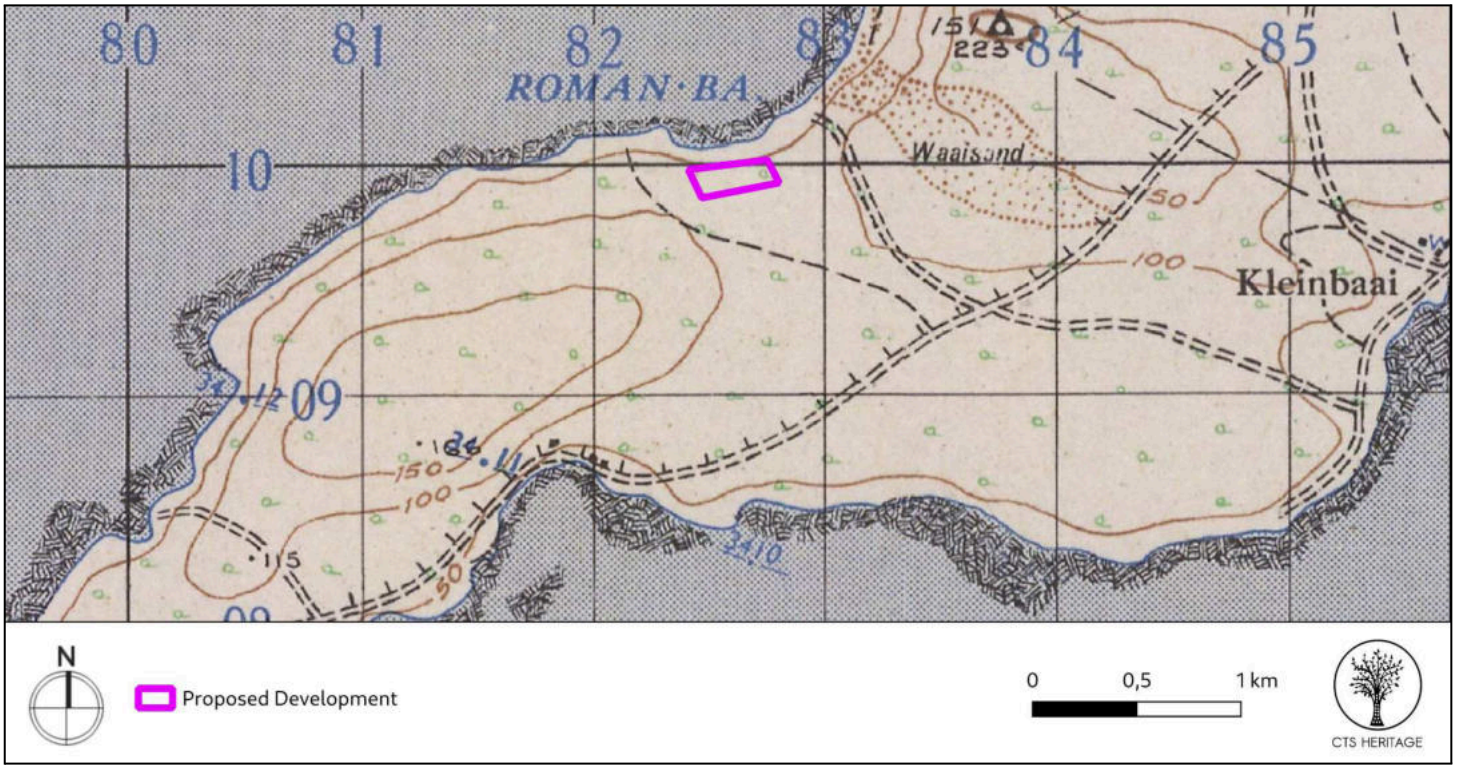


Figure 3.1 Heritage Resources. First Edition 1:50 000 Topo Map for the development area

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Figure 3.2 Heritage Resources Historic Map of the Caledon Division (1900) indicating no structures on the farm Klipfontein[1]

3.3 Heritage Character and Archaeology

Several HIA and AIAs have been conducted in the area surrounding the proposed development (Figure 2). The area is known to contain occasional Earlier Stone Age artefacts (Kaplan 2009, NID 7702); significant Middle Stone Age sequences in cave sites; extensive shell middens along the rocky shorelines and extending into the coastal dune belts, with associated burials; stone tool scatters, and stone-built fish traps in the intertidal zone (Avery 1974, Hart and Halkett 2010, NID 194682). These resources, together, reveal extensive use of the area since at least 80,000 years ago, when pre-modern humans were frequenting the coastal caves. More recently, in the Later Stone Age, hunter-gatherers and, later, herders, camped in deflation hollows in the dune belts, and made use of the seasonally available marine shellfish, fresh water, and, for the pastoral Khoe, grazing, in the relatively well-watered region. Archival and archaeological examination of the fish traps indicates that they appear to date from the colonial era (Hine 2007, NID 356929), and were maintained into the 20th century by the local communities (Avery 1975), although the possibility remains that the tradition originated locally in pre-colonial times (Hart and Halkett 2010, NID 194682); elsewhere in the country, these resources have been declared as National Heritage Sites. No fish traps are visible on satellite imagery near the study area.

A nearby Provincial Heritage Site, located 7km north from the study area, is Die Kelders Cave 1 (SID 25308), which is an internationally renowned archaeological site of high scientific value. Die Kelders is publicly accessible without any monitoring of that access. The fragile archaeological deposits at Die Kelders Cave 1, which is within the Walker Bay Nature Reserve, and marketed locally as a tourist attraction, and Klipgat Cave - are highly vulnerable to degradation from visitors as well as acts of vandalism. Webley (2008, SAHRIS NID 7828) writes that "*To summarise the above*

[1]Map of the Caledon division, https://ibali.uct.ac.za/s/jacobson-africana/item/96229

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evidence, excavations in the 1970's at Die Kelders near Gansbaai have provided early evidence (1600 years ago) for the introduction of pottery technology and domestic stock into the Cape as well as a MSA (Middle Stone Age) occupation over 40 000 years old." While no similar caves are known within the development area, the proximity of this significant archaeological site to the proposed development provides an indication of the possible archaeological resources that may be impacted by this development.

Webley (2008, SAHRIS NID 7828) conducted an AIA on Klipfontein 711, Portion 2, located less than 2km west of the proposed development. This assessment identified several middens (SAHRIS IDs 18268-18273) all graded as IIIB due to their high scientific significance. Webley notes that "*In the background to this report it was pointed out that only 6 sites along this stretch of the coast have been archaeologically sampled. Rampant coastal development means that many archaeological sites have been destroyed in recent decades resulting in a diminishing number of archaeological sites which can potentially inform us about the prehistoric past. For this reason, due care should be taken before permission is given to destroy an archaeological site."*

In 2004, Doug Jeffery Environmental Consultants also conducted an EIA for development on portion 2 and portion 40 of the farm Klip Fonteyn 711, Kleinbaai. Hart consulted on the Archaeological impacts, and Baumann on the other Heritage impacts. Unfortunately, only a summary of the heritage findings from these reports was available at the time of writing. According to Hart (2004), the landscape was extensively occupied in the last 2000 years, with archaeological sites, primarily shell middens, concentrated within 500 metres of the coast, particularly along the ridge overlooking the bay (Figure 3.4). Key findings in the report include middens rich in *Haliotis midae* shells and quartzite chunks/flakes, as well as the impact on coastal sites by tracks and roads, but some stratified deposits have survived under dune vegetation. The coastal ridge at around the 20m contour contains the highest concentration of archaeological material. This includes large, continuous sites with shell-midden material, Cape Coastal pottery, and ostrich eggshell beads, with the stone artefacts mostly consisting of informal quartzite chunks and flakes. As one moves more inland the archaeological sites are more dispersed and less frequent but still present. A significant pre-colonial site (10,400m^2) was discovered on high ground near a transmission tower (500m inland), indicating that these areas can also hold archaeologically sensitive material. The report identified several other pre-colonial sites, as well as one historical dump, but no locations were provided.

It is possible that many of these sites exist within the proposed development area, as the development falls just outside the 500m high-sensitivity area, and further investigation is warranted. In addition to the possibility of shell middens, Stone Age burials, and historic and farm graves occurring across the area, there are likely to be shore burials of victims of shipwrecks that are as yet undiscovered on the coast's sandy beaches (Kaplan 1997, NID 3844).

In 2008, Nilssen completed test excavations of a number of surface scatters located on the property immediately adjacent to the assessment are, following the initial Phase 1 Archaeological Impact Assessment (AIA) carried out by the Archaeology Contracts Office based at the University of Cape Town (Hart 2006). His findings provide an insight into the kinds of resources likely to be present within this development area. Nilssen (2008) concludes that "*The archaeological deposits at Romansbaai appear to be of considerable importance (see Hart 2006) and it is highly desirable that sampling operations in affected areas be conducted prior to the commencement of any earth moving or construction*

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work. The shell deposits and associated archaeological material were remarkably uniform over the whole area investigated varying only in the quantity of shell present. There was no consolidated shell midden located although scattered sub-surface shell was present over almost the entire area. The archaeological material and the limited range of shell species is intriguing and not typical for other areas investigated on the south coast (personal experience and references to be cited in future reports). It is possible that they may represent pastoral life styles rather than the more commonly encountered hunter-gatherer subsistence strategies."

Nilssen (2008) makes the following recommendations which are relevant to this report:

"*In support of and/or echoing some of Mr. Hart's recommendations for the conservation, management and mitigation of heritage and archaeological resources, please note the following (Hart 2006);*

- *The building operations should be allowed to commence once the excavations in Area 2 and Area 6 have been completed and a conservation and monitoring programme has been set in place.*
- *Monitoring operations would need to be carried out, by experienced personnel, during any construction or earth moving activities. If any important archaeological material, and especially any human remains, were to be uncovered the building operations must cease until the relevant remedial action has been completed. The likelihood of human burials being discovered is quite high, noting the fact that a human mandible was discovered on the surface near the milk wood grove in Area 6.*
- *Areas such as the milk wood grove in Area 6, which are to be preserved in perpetuity, must be cordoned off with hazard tape before and development takes and the developers made aware that this area is not to be impacted in any way. Monitoring of these areas needs to be particularly vigilant."*

3.4 Shipwrecks

Shipwrecks represent important heritage resources in this area, and the offshore area is known to contain several wrecks. All shipwrecks are part of the national estate and are protected as Grade I resources by SAHRA. Notable wrecks off this stretch of coast include the world-famous Birkenhead (wrecked in 1852), the origin of the custom of seeing women and children off sinking vessels first, the Ellida (1888) and the Seegans (1991). Wrecks include numerous types of vessels, at varying depths and distances off shore, and in varying states of preservation.

Table 1: Shipwrecks near the proposed development

Ship	SAHRIS ID	Area	Vessel-Category (Type)	Nation	Date-Wreck	History	Image
SV Ellida	2191	Vicinity of Point	Sailing vessel (Barque)	Norwegian	04/06/1888	On June 4th, 1888, the Norwegian barque ELLIDA, on a voyage from New York to Natal with general cargo, was wrecked at Danger Point. There were no casualties.[2]	

[2] History courtesy of Wreck Site, https://www.wrecksite.eu/imgBrowser.aspx?47360

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MFV Seegans	2903	Gansbaai Harbour	Small fishing boat	South African	26/07/1991	The South African fishing vessel Seegans was wrecked during a NW gale in Gansbaai harbour.[3]	

Farm Klipfonteyn No. 711

In 2005, Seeman conducted an AIA on the Farm Klipfontein, and noted the following:

- The only agricultural activity that Seeman could verify, was grazing of livestock
- The coastline was used for trek net fishing, shellfish gathering
- In 1950, a slipway was built, less than 100m from the northern edge of the study area, specifically for hake and grey shark fishing, and processed near the jetty. The jetty still exists, but has recently been incorporated into a modern house's beachfront area.

[3] History and Image courtesy of Wreck Site, https://www.wrecksite.eu/imgBrowser.aspx?47360

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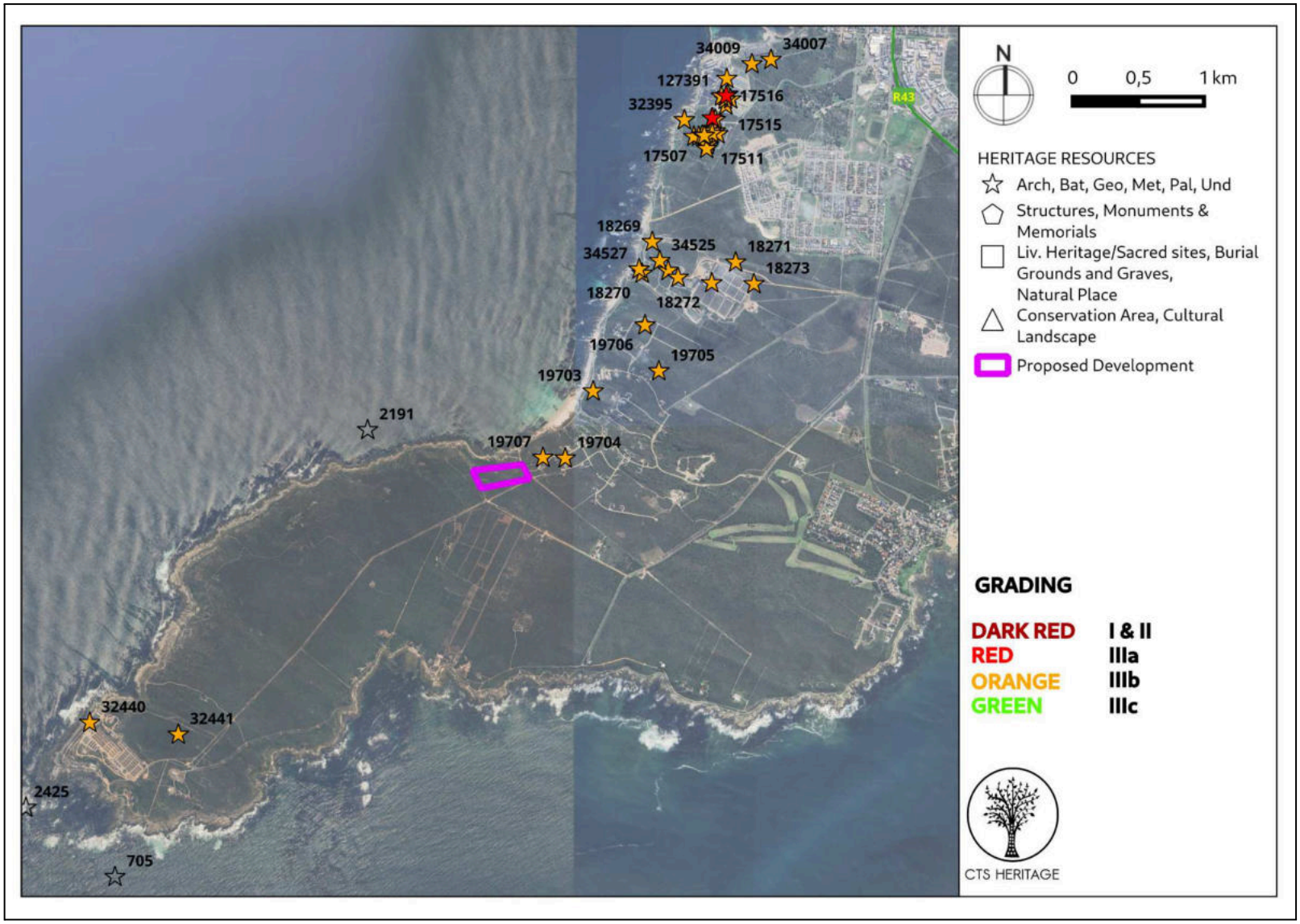


Figure 3.3 Heritage Resources Map. Heritage Resources previously identified in and near the study area, with SAHRIS Site IDs indicated

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Figure 3.4 Cultural Landscape Map. Map indication sensitive receptors near the proposed development, extracted from the Topo 1:50 000 map.

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4. IDENTIFICATION OF HERITAGE RESOURCES

4.1 Field Assessment

The field assessment identified 14 observations, including several shell middens. As the study area falls inside the 500m high-water archaeologically sensitive area, almost every surface has some evidence of limited shell scatter, with 3 areas identified as having low-density scatters, and one area exhibiting very high-density levels. The shell midden scatters contain lithics, pottery shards, and ostrich eggshell (OES). The one area is located at a noticeably higher elevation than the rest of the study area (also visible on the Topo 1:50 000 map) and has been marked as a "koppie" (Figures 6.1 and 6.2). This area was covered in dense vegetation so survey opportunities were limited, however, the koppie is marked by a 20m contour line on the Topo 1:50 000 Map (Figure 6.2 below). The sea-facing northern side of the study area has higher density shell scatters, which were also more visible due to the vegetation being less dense and consisting of smaller shrubs and ankle-height vegetation.

One dog grave, "Boelie's Grave" was also identified near the southern edge of the proposed area. The southeastern corner of the development footprint has a solar panel area, as well as an area cleared for a plant nursery.



Figure 4.1: Facing south on the eastern side of the proposed area

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Figure 4.2: Dense vegetation hampered thorough assessment of the site



Figure 4.3: Facing east, with some structures of the Romansbaai Beach Estate visible, as well as the access route

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Figure 4.4: Facing west with the house that has since incorporated the shark fishing jetty into their beach front area



Figure 4.5: The dense vegetation reach heights of almost 1.7m on the ridgeline

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Figure 4.6: The jeep track and fence that borders the southwestern borders



Figure 4.7: A clearing near the southwestern end which was formed by the jeep track



Figure 4.8: Facing northeast towards the site and the shark and hake fishing jetty

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Figure 5. Track paths of archaeological field assessment - the dense vegetation impacted the survey (see Constraints and Limitations)

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4.2 Archaeological Resources Identified

Table 1: Observations noted during the field assessment

POINT ID	Description	Type	Density	Period	Co-ordinates		Grading	Mitigation
17	Solar panels	Observation	n/a	Modern	-34,61250	19,3263152	NCW	n/a
18	Nursery area	Observation	n/a	Modern	-34,612603	19,3260463	NCW	n/a
19	Boelie's grave	Observation	n/a	Modern	-34,612778	19,32510137	NCW	n/a
20	Traces of shell midden	Observation	10+	LSA	-34,6127334	19,3251353	IIIc	Pro-active sampling
21	Ephemeral shell midden with pottery and lithics	Observation	10+	LSA	-34,6126351	19,3249995	IIIc	
22	Core with cortex	Artefacts	n/a	MSA	-34,612040	19,3257521	NCW	n/a
23	Metal stake	Observation	n/a	Modern	-34,6119116	19,3254899	NCW	n/a
24	Very ephemeral shell scatter with lithic	Artefact	10+	LSA	-34,612200	19,3252353	IIIc	Pro-active sampling
25	Ephemeral shell scatter	Artefact	10+	LSA	-34,612626	19,32477691	IIIc	
26	Koppie	Landscape	n/a		-34,612606	19,3242733	NCW	n/a
27	Very ephemeral shell scatter	Artefacts	10+	LSA	-34,6123118	19,322710	IIIc	Pro-active sampling
28	Ephemeral shell scatter with crescent lithics	Artefacts	10+	LSA	-34,6122513	19,32315166	IIIc	
29	Disturbed shell midden with lithics and OES	Artefacts	10+	LSA	-34,612259	19,3234302	IIIc	
30	Disturbed shell midden	Artefacts	10+	LSA	-34,6121798	19,3236952	IIIc	

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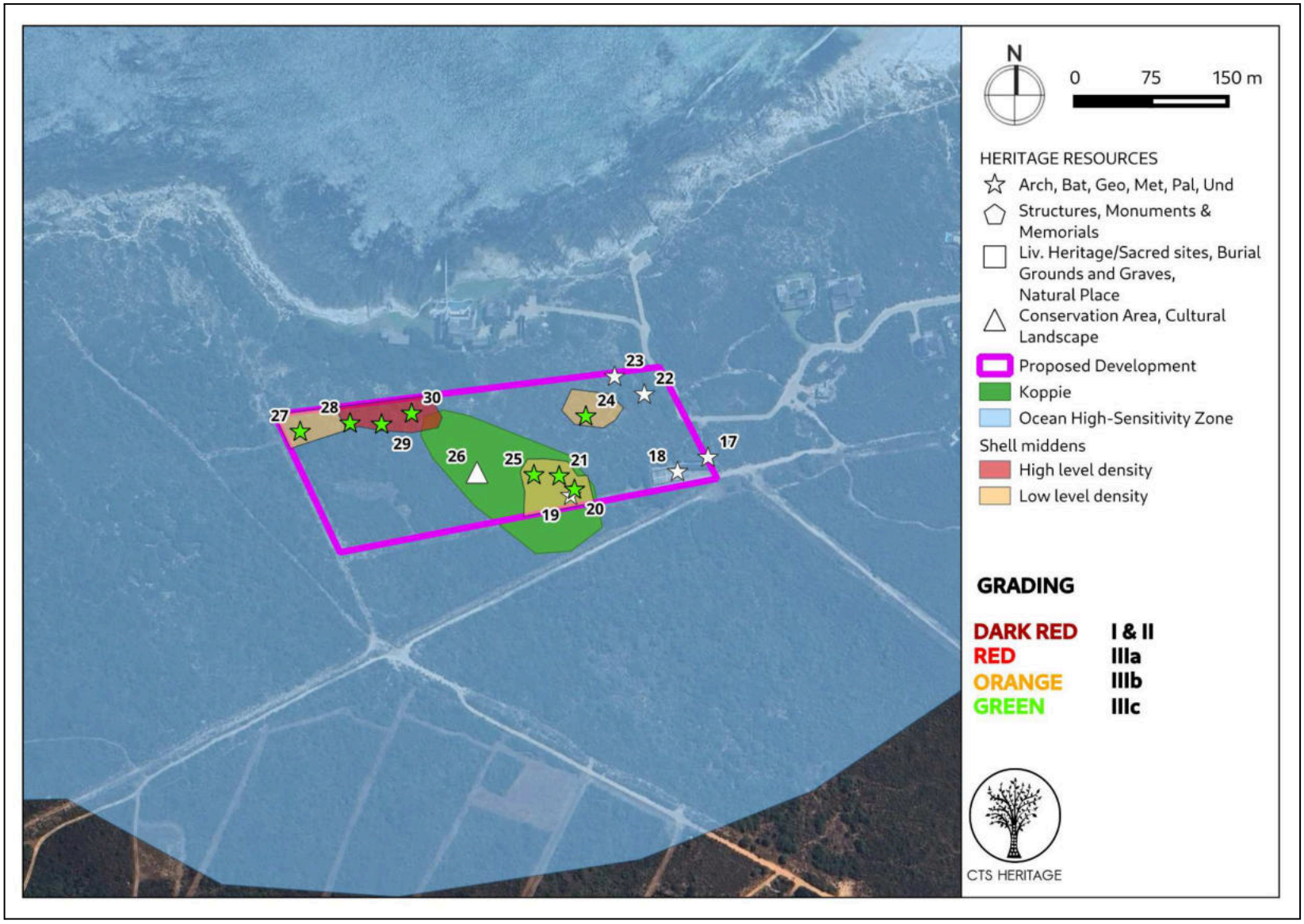


Figure 6.1: Map of all sites and observations noted within the development area

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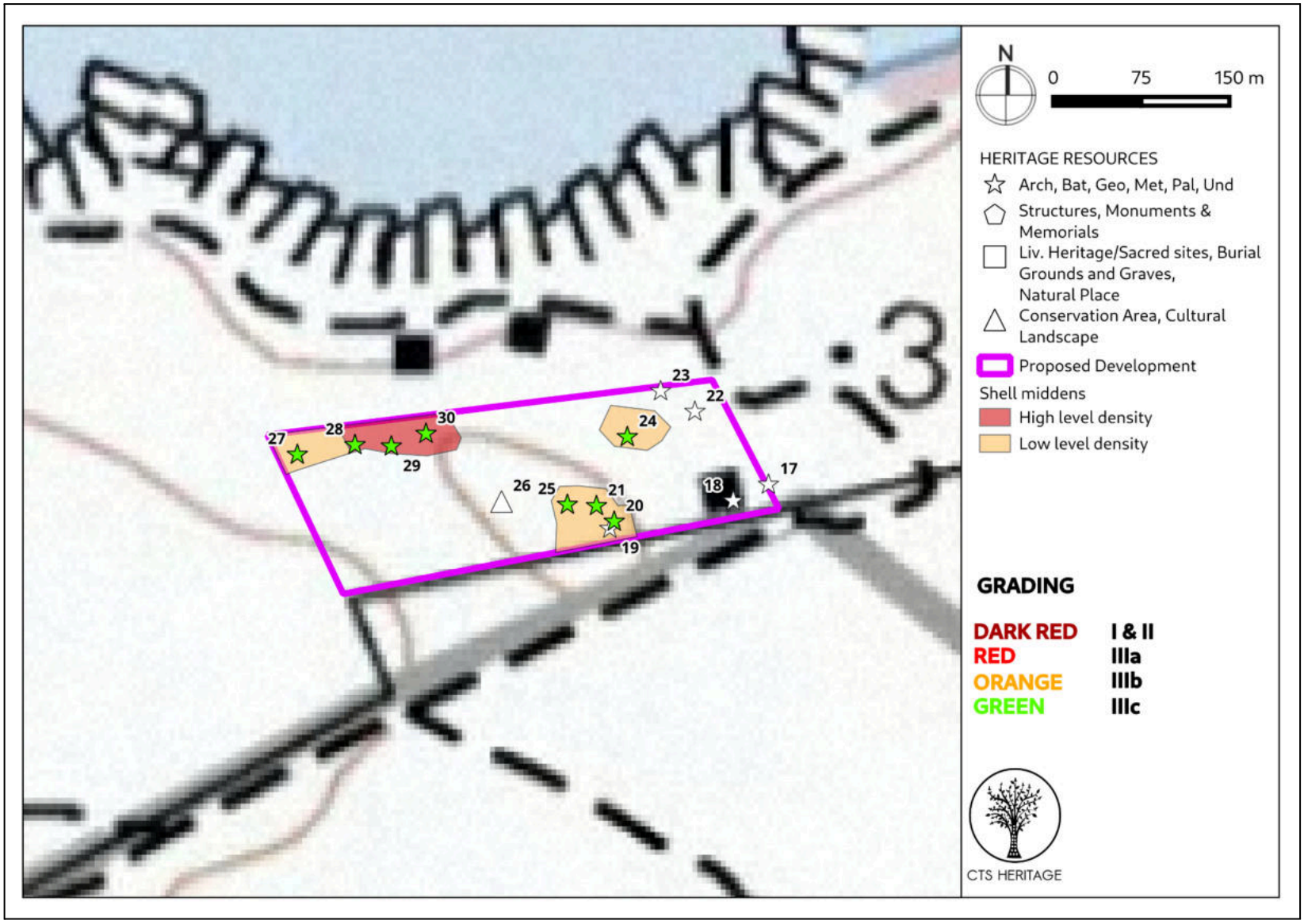


Figure 6.2: Topo 1:50 000 Map of all sites and observations noted within the development area indicating the koppie

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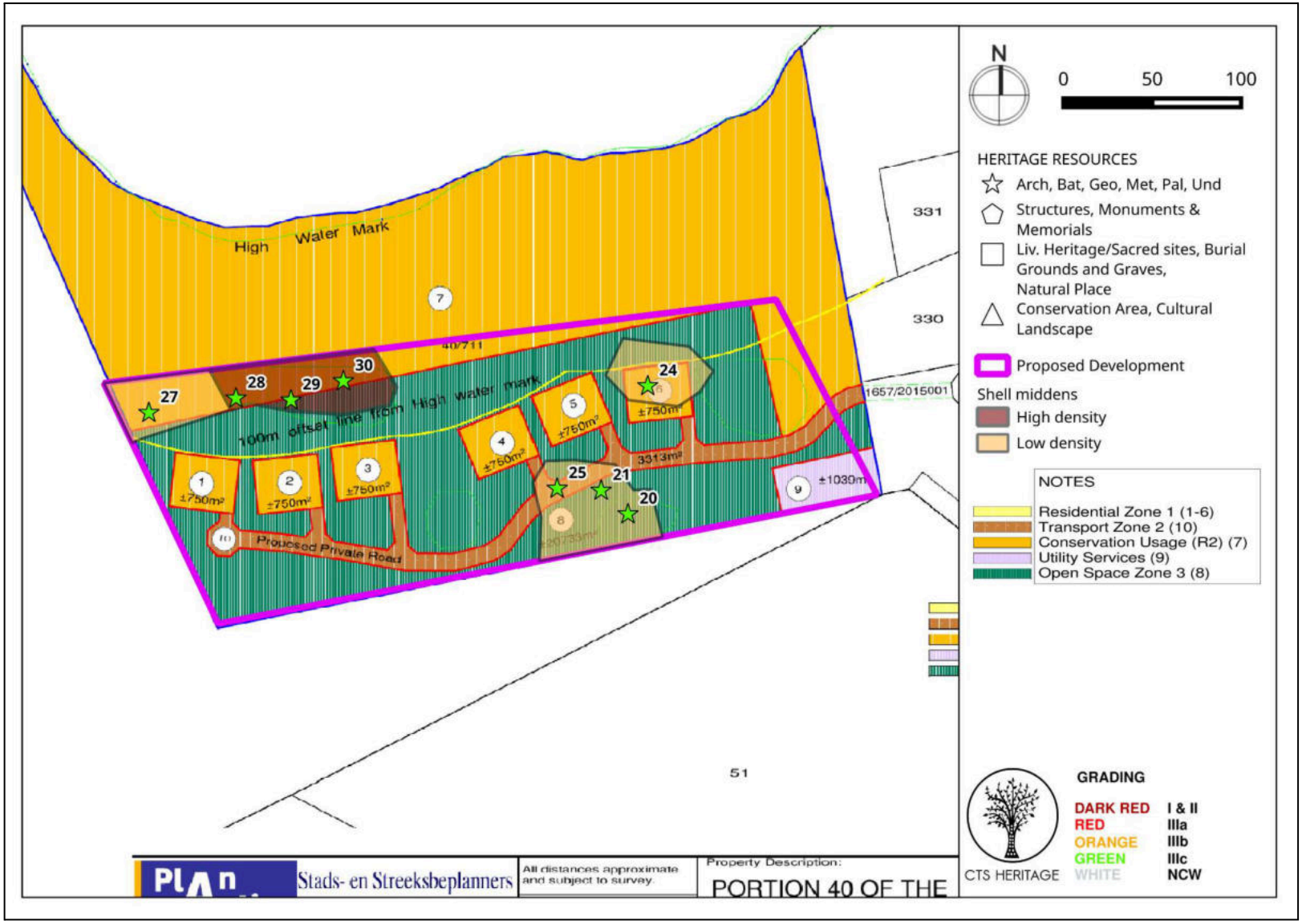


Figure 6.3: Preferred layout overlaid with heritage sensitivities identified

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4.3 Selected photographic record

(a full photographic record is available upon request)



Figure 7.1: Observation 017



Figure 7.2: Observation 018



Figure 7.3: Observation 019

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Figure 7.4: Observation 020



Figure 7.5: Observation 021



Figure 7.6: Observation 022

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Figure 7.7: Observation 023 and 024



Figure 7.8: Observation 025



Figure 7.10: Observation 026

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Figure 7.11: Observation 027



Figure 7.12: Observation 028



Figure 7.13: Observation 029

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Figure 7.14: Observation 030

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5. ASSESSMENT OF THE IMPACT OF THE DEVELOPMENT

5.1 Assessment of Impact to Archaeological Resources

Despite the dense vegetation, the development area was sufficiently surveyed to determine its archaeological sensitivity. Surface scatters of archaeological shell midden material located within the 500m high-water archaeologically sensitive zone are likely indicative of significant archaeological resources that exist below the surface. These findings point to the high likelihood of buried shell-midden sediments that will be impacted by the proposed development.

Kaplan (2008) and Smuts (2017) have noted that the majority of significant heritage resources along this coastline exist within 500m of the high-water mark. As such, the areas within 500m of the high water mark have been red-flagged as particularly sensitive for impacts to significant archaeology. All of the proposed infrastructure is located within this high archaeological sensitivity zone. As such, it is usually recommended that excavations within this high-sensitivity area are ***avoided*** but due to the nature of the development and its position entirely within 500m of the high-water mark, pro-active sampling excavations of the areas with surface scatters are recommended.

The preferred layout has been mapped against the identified sensitivities in Figure 6.3. This layout is likely to impact the low density surface scatters identified as sites 20, 21, 24 and 25. Test excavations of these scatters will provide the necessary insight to determine the depth of scientifically significant shell-midden deposits across the development area and will provide an opportunity to sample these significant sediments.

Based on the findings of Nilssen (2008) summarised above, it is not anticipated that the results of the recommended test excavations will impact on this proposed layout. As such, on condition that the recommended test excavations take place, archaeological monitoring of all construction excavations takes place and that a Conservation Management Plan is drafted for the ongoing management of the shell midden deposits, there is no objection to the proposed development from an archaeological perspective.

6. CONCLUSION AND RECOMMENDATIONS

The field assessment confirmed the findings of the desktop analysis which indicated that the area proposed for development has a higher sensitivity for impact to buried shell-midden archaeological resources. As such, it is recommended that proactive sampling excavations of the areas with surface scatters are undertaken.

The preferred layout has been mapped against the identified sensitivities in Figure 6.3. This layout is likely to impact the low density surface scatters identified as sites 20, 21, 24 and 25. Test excavations of these scatters will provide the necessary insight to determine the depth of scientifically significant shell-midden deposits across the development area and will provide an opportunity to sample these significant sediments.

Based on the findings of Nilssen (2008) summarised above, it is not anticipated that the results of the recommended test excavations will impact on the proposed layout. As such, on condition that the recommended test excavations take place, archaeological monitoring of all construction excavations takes place and that a Conservation Management

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Plan is drafted for the ongoing management of the shell midden deposits, there is no objection to the proposed development from an archaeological perspective.

Recommendations

There is no objection to the proposed development from an archaeological perspective on condition that:

- Pro-active sampling excavations of the areas with surface scatter take place under a workplan approval from HWC. This can take place as a condition of approval.
- Archaeological monitoring of all construction excavations takes place
- A Conservation Management Plan is drafted for the ongoing management of the shell midden deposits

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7. REFERENCES

Heritage Impact Assessments				
NID	**Author(s)**	**Date**	**Type**	**Title**
3851	Timothy Hart	01/08/2003	AIA Phase 1	Heritage Scoping Assessment of a Proposed Housing Development Site (Erf 623) Gansbaai, South Western Cape Province
3852	Peter Nilssen	12/08/2004	Archaeological Permit Report	Erf 623 and Access Road, Gansbaai, South Western Cape Province Archaeological Heritage Impact Assessment Based on Shovel Test Excavations
3853	Jonathan Kaplan	01/12/2004	AIA Phase 1	Phase 1 Archaeological Impact Assessment Proposed Uilenvlei Private Reserve Bredasdorp District
3854	Jonathan Kaplan	01/03/2005	AIA Phase 1	Phase 1 Archaeological Impact Assessment Erf 629 Gansbaai Bredasdorp District South Western Cape Province
3855	Jonathan Kaplan	01/05/2005	AIA Phase 1	Phase 1 Archaeological Impact Assessment Proposed Development Erf 162 Pearly Beach Bredasdorp District
3863	Jonathan Kaplan	01/10/2005	AIA Phase 1	Phase 1 Archaeological Impact Assessment Proposed Uilkraal Lagoon Sanctuary Caledon District
4193	Jonathan Kaplan	01/03/2006	AIA Phase 1	Phase 1 Archaeological Impact Assessment Proposed Housing Development Khoisan Bay De Kelders Gansbaai
4195	Timothy Hart, Dave Halkett	01/12/1993	AIA Phase 1	Phase 1 Archaeological Survey of Klipfonteyn
4202	RJ Goosen	16/09/1996	AIA Phase 1	Archaeological Impact Assessment Report: Shell Middens on the I&J Property at Gansbaai
4205	John Lanham, Royden Yates	09/07/2006	AIA Phase 1	Gansbaai Sand Mine Extension - a Portion of Erf 210 (Gansbaai Commonage), District Bredasdorp, Western Cape: Archaeological Heritage Impact Assessment Report
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7092	**Peter Nilssen**	**13/10/2008**	**AIA Phase 1**	**The Proposed Development of Romansbaai on Portions 2, 17, 18 of Farm Klipfonteyn 711, Romansbaai, Gansbaai, Western Cape Province**
7821	Timothy Hart	01/01/2005	AIA Phase 1	Phase 1 Heritage Impact Assessment of Upgrading the Road from Gansbaai to Bredasdorp Western Cape Province
7828	**Lita Webley**	**01/11/2008**	**AIA Phase 1**	**Phase 1 Archaeological Impact Assessment: Proposed Expansion at Roman Bay Sea Farm (Portion 2 of the Farm Klipfonteyn 711), Gansbaai, Overstrand Municipality, Western Cape**
8162	Liezl van Pletzen-Vos	10/09/2009	AIA Phase 1	Phase 1 Archaeological Impact Assessment on a 1.4 Ha Area (Erven 1224, 1225 & 1226) van Dyksbaai, Overstrand Municipality, Division Caledon, Western Cape
8260	Graham Avery	01/01/2006	AIA Phase 1	Report on Archaeological & Palaeontological Potential: Proposed Whale Cove Development (3419 CB Gansbaai)
329610	Jonathan Kaplan	24/02/2011	AIA Phase 1	ARCHAEOLOGICAL IMPACT ASSESSMENT PROPOSED GRAVEL MINE ERF 210 GANSBAAI, WESTERN CAPE
28357	**John Almond**	**30/06/2008**	**PIA Desktop**	**Palaeontological Desktop Study For Bantamsklip (W. Cape) And Thyspunt (E. Cape) Reactor Sites**

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APPENDIX 2: Palaeontological Desktop Impact Assessment (2024)

PALAEONTOLOGICAL SPECIALIST STUDY

In terms of Section 38(8) of the NHRA for a

Proposed subdivision and rezoning of Portion 40 of the Farm Klipfontein No. 711, Gansbaai, in the Western Cape

Prepared by

CTS HERITAGE

And Ryan Nel

In Association with

PHS

July 2024

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EXECUTIVE SUMMARY

The proposed project involves the subdivision and rezoning of Portion 40 of the Farm Klipfontein No. 711, located in Gansbaai, Western Cape, South Africa. This palaeontological specialist study was conducted to assess the potential impacts of the development on palaeontological resources, as required by Section 38(8) of the National Heritage Resources Act (Act 25 of 1999).

The development area is situated on the western coastline of South Africa, near the regions of Danger Point Light and Kleinbaai, southwest of Gansbaai. The area features a mix of dense shrubland, and rocky coastal outcrops. It is accessible via the R43 road, connecting to the broader Overberg district.

The current palaeontological assessment study used published research literature, geological maps, and the SAHRIS Palaeosensitivity Map to evaluate the area's geological and palaeontological contexts. The study focused on identifying represented geological units and assessing the palaeontological sensitivity of the development area.

The development site is underlain by sediments of the Waenhuiskrans Formation, Bredasdorp Group, which has been classified as having a HIGH palaeontological sensitivity. The formation includes terrestrial gastropods, freshwater molluscs, and microfossils, indicative of the environmental conditions during the Late Pleistocene. Despite the presence of these fossils, the overall fossil abundance and diversity are low.

The construction activities associated with the subdivision and rezoning project will involve only minor excavation of superficial sediment layers. This limited excavation is unlikely to impact the extensive bedrock where most significant palaeontological resources are located. Consequently, the impact on palaeontological heritage for the current project area is assessed as **LOW**.

To mitigate any potential impacts, it is recommended that a Chance Fossil Finds Protocol be integrated into the Environmental Management Programme (EMPr). This protocol will guide construction personnel on the steps to take in the event of an unexpected fossil discovery.

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CONTENTS

1. INTRODUCTION **3**
1.1 Background Information on Project 3
1.2 Description of Property and Affected Environment 3
2. METHODOLOGY **7**
2.1 Purpose of Palaeontological Study 7
2.2 Summary of Steps Followed 7
3. SITE SENSITIVITY **9**
4. IDENTIFICATION OF HERITAGE RESOURCES **12**
4.1 Underlying Geology of Development Area 12
4.2 Palaeontological Sensitivity of the Development Area 12
5. ASSESSMENT OF THE IMPACT OF THE DEVELOPMENT **13**
5.1 Assessment of Impact to Palaeontological Resources 13
6. CONCLUSION AND RECOMMENDATIONS **13**
7. REFERENCES **14**

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1. INTRODUCTION

1.1 Background Information on Project

Proposed subdivision and rezoning of Portion 40 of the Farm Klipfontein No. 711, Gansbaai

1.2 Description of Property and Affected Environment

The proposed development area is located on the western coastline, in the Western Cape of South Africa, near Danger Point Light and Kleinbaai, southwest of Gansbaai (Fig. 1.1, Fig. 1.3). This broader region is known for its proximity to the Atlantic Ocean, to the west, as well as local fishing activities. The development site is depicted in purple on the various scaled maps, including satellite and topographic maps (Fig. 1.1 - FIg. 1.3). The maps highlight the site's position within a broader area of natural vegetation and coastal terrain. This area encompasses Birkenhead and Kruismansbaai, characterised by their rugged coastline and fynbos vegetation.

In terms of accessibility, the proposed site is connected to the R43 road via a gravel road, linking it to the Overberg district and neighbouring towns such as Kleinbaai and Gansbaai (Fig. 1.1). Satellite images depict a mix of dense natural habitats, including shrubland, alongside infrastructure like gravel roads and residential buildings (Fig. 1.1, Fig. 1.2).

The development area features a varied topography, with elevation varying from 30m above mean sea level (msl) and gradually rising to 40m above msl away from the coast, indicating a gently sloping terrain (Fig. 1.3). The elevation gradient indicated a natural elevation gain of about 10m across the property. The topographic profile (running northwest to southeast) obtained from Google Earth indicates an average slope of around 16.3%, with some areas reaching a maximum slope of up to 49.8%. This suggests the terrain includes relatively steep sections near the coast, transitioning to more moderate slopes inland.

The presence of roads and existing infrastructure, such as gravel paths and nearby buildings, indicates that the area is already somewhat developed and accessible (Fig. 1.2). Main access roads, including Lord Roberts Street, provide direct routes to the development site and connect it to surrounding residential areas and amenities. Hydra Bay is located near the proposed development, located to the north of the development site. Hydra Bay offers potential residents and visitors easy access to beach activities.

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Figure 1.1: Close up satellite image indicating proposed location of study area

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Figure 1.2: Study Area

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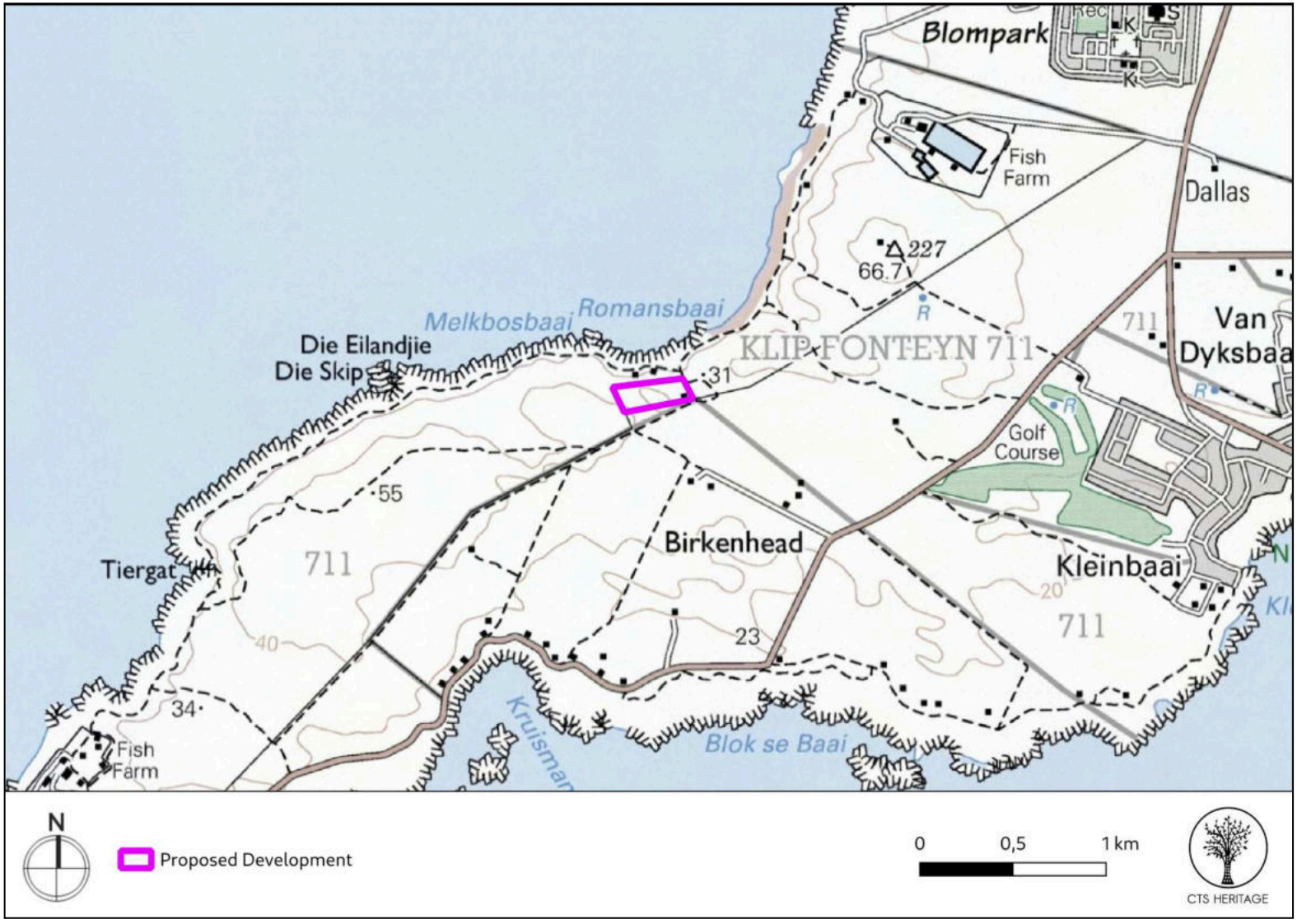


Figure 1.3: Study Area reflected on the 1:50 000 Topo Map

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2. METHODOLOGY

2.1 Purpose of Palaeontological Study

According to the SAHRIS Palaeosensitivity Map (Figure 2), the area proposed for development is underlain by sediments of moderate and very high paleontological sensitivity. The purpose of this palaeontological study is to satisfy the requirements of section 38(8), and therefore section 38(3) of the National Heritage Resources Act (Act 25 of 1999) in terms of impacts to palaeontological resources.

2.2 Summary of Steps Followed

- Primary research literature was consulted for detailed accounts of the geology and palaeontological representation across the study area. References of these primary research articles are provided.
- Geological maps (provided at various scales by CTS Heritage and the South African Council for Geosciences) were consulted to identify represented geological contexts within the study area.
- Where possible, other Palaeontological Impact Assessments were consulted to provide additional information on local geomorphological, geological and palaeontological contexts. These often provide valuable additional information to primary research publications and formal geological maps, which can lack resolution at a local scale and it is important that discussions regarding alternative stratigraphic attributions of exposed rocks are noted and considered.

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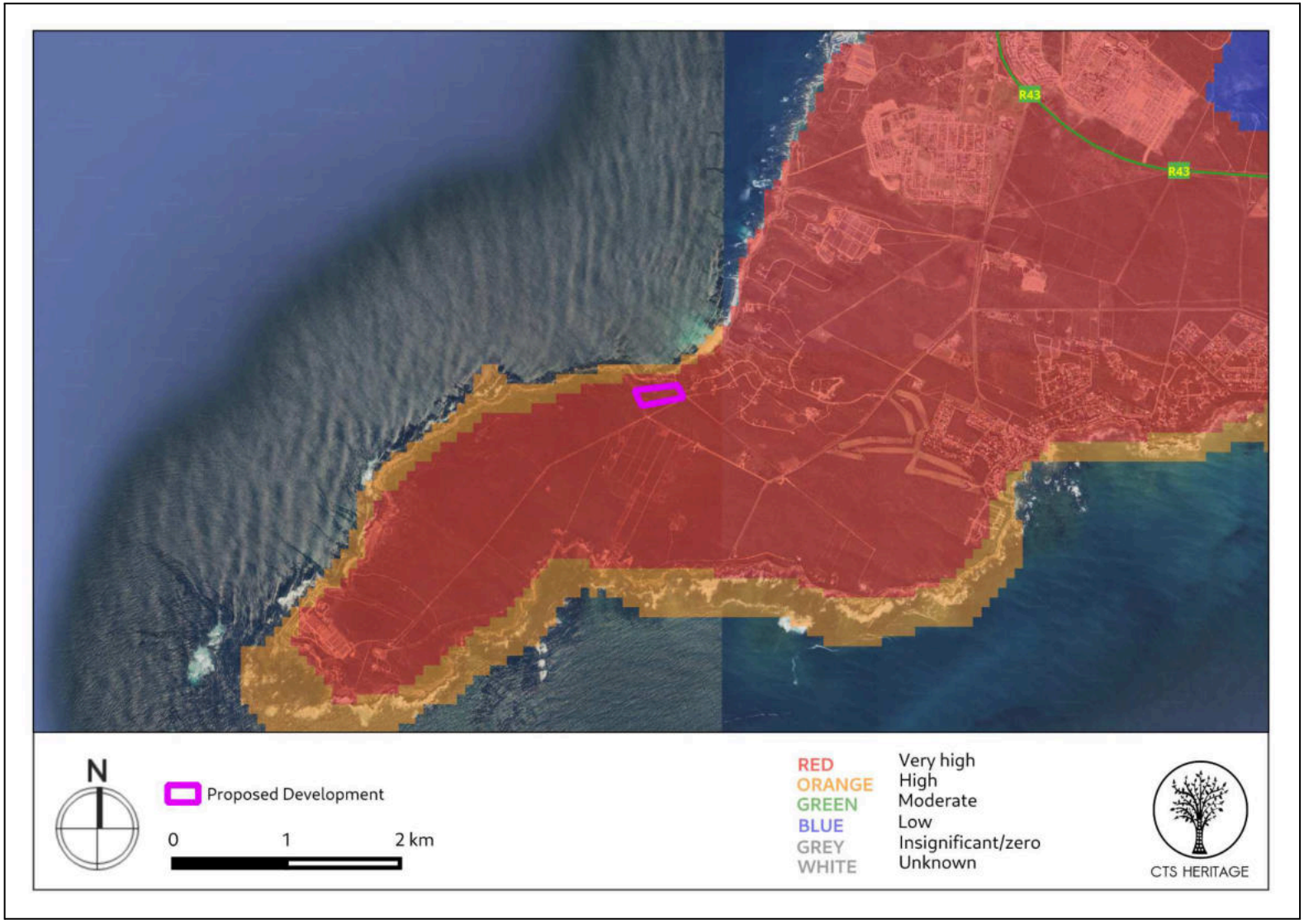


Figure 2: Palaeontological sensitivity of the development area from the SAHRIS PalaeoMap

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3. SITE SENSITIVITY

According to the SAHRIS Palaeosensitivity Map the development sites are underlain by sediments of very high fossil sensitivity (Figure 4). According to the extract from the Council of GeoScience Map 3319 Worcester Geology Map indicating that the development area is underlain by Qw: Waenhuiksrans Formation, Bredasdorp Group. According to Almond and Pether in the Western Cape Palaeotechnic report, the **Bredasdorp Group** consists of mainly regressive, prograded shallow-marine sequences comprising basal conglomerates overlain by sandy and gravelly shoreface and sometimes foreshore deposits. Estuarine to fluvial deposits occur in vicinities of rivers and locally also muddier, sheltered embayment and lagoonal deposits. The tops of marine sequences are eroded and overlain by aeolianites. These sediments are interbedded and capping calcretes and other soil profiles mark stable palaeosurfaces. The lithologies are mainly calcareous in the Bredasdorp and Sandveld Groups and sandier and decalcified in the West Coast Group. The marine deposits have discrete ages associated with high sea-levels and polar-ice melting during globally-warm periods: mid-Miocene ~16 Ma, early Pliocene ~5 Ma, late Pliocene ~3 ma and later Quaternary ‹1 Ma. Aeolianites of various intervening ages. In the marine deposits are fossil molluscan seashells, brachiopods, crustaceans (barnacles, crabs, prawns, ostracods), echinoids, polychaete worm tubes, corals, bryozoans & foraminifera. Shark teeth are common, other fish teeth occur. Bones of whales, dolphins, seals & seabirds. Trace fossils made by prawns, worms, echinoids, anemones, bivalves, fish etc, are also pervasive. These sediments also often contain bones of land mammals in estuarine and lagoonal deposits. In the aeolianites are land snails, tortoises, moles, OES, and insect traces. Larger animal bones are sparsely scattered on palaeosurfaces (bovids, zebras, rhino, elephant, pigs etc.). Deposits associated with vleis, pans, and springs are very rich, especially birds, micromammals, and Homo Sapiens.

Almond (2008, SAHRIS NID 28357) notes that "*The **Waenhuiskrans Formation** has so far only yielded a sparse range of body fossils. These are mostly terrestrial gastropods of the genera Achatina, Dorcasia, Tropidophora, Trigonephrus and Ferissia – all snails except for the last, which is an extant brackish-water slug (Malan 1989c, Roberts et al. 2008). Allochthonous marine fossils include wind-blown foraminiferans and sand-worn shell fragments. Fascinating assemblages of Late Pleistocene last interglacial vertebrate trackways, ascribed to African elephants, antelopes, equids, carnivores and tortoises, as well as rhizoliths (plant root traces, cf Klappa 1980) and calcretised termitaria, have recently been recorded from well-dated (MIS 5e to 5b) Waenhuiskrans aeolianites at Still Bay by Roberts (2003) and Roberts et al. (2008).*"

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Figure 3. Geology Map. Extract from the CGS 3319 Worcester Geology Map indicating that the development area is underlain by Qw: Waenhuiskrans Formation, Bredasdorp Group

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Table 1: Geological Summary Table

Geological unit	Age	Lithology	Symbol on figure 3	Fossil heritage	Palaeontological sensitivity (Almond and Pether, 2008)	Recommended mitigation
Bredasdorp Group Waenhuiskrans Formation	Late Pleistocene	Semi consolidate d aeolian sands with calcrete lenses	Qw	Generally sparse fossils mainly recording late Caenozoic evolution of terrestrial mammal fauna of Southern Africa, including Homo sapiens. Locally very rich e.g. Langebaanweg	Low	Any fossil find to be reported by developer

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4. IDENTIFICATION OF HERITAGE RESOURCES

4.1 Underlying Geology of Development Area

The underlying geology of the proposed subdivision and rezoning of Portion 40 of the Farm Klipfontein No. 711, Gansbaai, area is depicted on the 1:250 000 Worcester 3319 Geological map (Council of Geoscience, Pretoria) (Figure 3). The map shows that the proposed project area is underlain by sediments of the **Waenhuiskrans Formation (Bredasdorp Group)**. The nature of the geology in the surrounding area has been well documented by Milan 1990. Below follows a description of the relevant geological units in the vicinity of the project area.

- The Waenhuiskrans Formation (Qw) is a Late Pleistocene aeolian formation within the Bredasdorp Group. Initially referenced by Haughton et al. (1937), the Waenhuiskrans Formation was formalised by Malan in 1989, having a type area at the coastal village of Waenhuiskrans. The formation represents semi-consolidated dunes extending laterally along the present coastline from Hermanus to Plettenberg Bay, forming a 0.2 to 3 km-wide discontinuous outcrop. The Waenhuiskrans Formation overlies the marine/estuarine Klein Brak Formation and was deposited during the Late Pleistocene glacial period, when sea levels were 130 m lower than present. The upper boundary is defined as the base of overlying calcrete, soil, scree, or unconsolidated aeolian sand of the Strandveld Formation.
- The thickness of the unit varies significantly, with a maximum thickness of over 200 m in the Wilderness-Sedgefield area and an inferred average thickness of 30m. It is semi-consolidated in some areas and less so in others, with considerable variability in structure and consistency. The formation comprises calcarenite and calcareous sandstone with well-sorted medium-grained, well to very well rounded quartz grains, and finely comminuted shell fragments. The formation is characterised by large-scale planar cross-bedding with bed thicknesses up to 12 m and bedding surfaces dipping up to 30 degrees.

4.2 Palaeontological Sensitivity of the Development Area

The palaeontological heritage of the current study is part of Bredasdorp Group (Waenhuiskrans Formation). Based on the SAHRIS Palaeo Map (Figure 2), the Waenhuiskrans Formation has a very high palaeontological sensitivity.

- The **Waenhuiskrans Formation** is rich in terrestrial gastropods, freshwater molluscs, microfossils, trace fossils, and other fossilised material. Among its key palaeontological components are terrestrial gastropods such as *Achatina zebra*, *Tropidophora sp., Trigonephris sp., and Natalina sp.*, which provide insights into environmental conditions during the Late Pleistocene. Freshwater molluscs in the Waenhuiskrans Formation include *Burnupia, Planorbis,* and *Succinea,* indicating that parts of the formation were influenced by freshwater environments. Microfossils like wind-abraded benthic foraminifera (*Elphidium crispum, Poroeponides pateralis, and Ammonia spp.*) are present. (McMillan, I.K. 1986), suggest marine influence and environmental changes over time. Trace fossils have also been observed, with a notable example being feeding trails that measure 17 mm in diameter, likely made by larvae of tipulid insects (crane flies). In addition, the formation contains other fossilised material such as comminuted shell fragments, wind-abraded echinoid spines, and bryozoan fragments, reflecting the marine elements and the mixed environmental nature of the Waenhuiskrans Formation.

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5. ASSESSMENT OF THE IMPACT OF THE DEVELOPMENT

5.1 Assessment of Impact to Palaeontological Resources

The area is underlain by sediments of the Bredasdorp Group, Waenhuiskrans Formation, which has been classified as having a very high palaeontological significance. However, the specific nature and scope of the development have led to the determination that the palaeontological sensitivity for this project is **LOW**. This conclusion is predicated on the fact that the construction of the housing development will necessitate only minor excavation, which is restricted to the superficial sediment layers extending a few metres into the subsurface. This limited excavation is unlikely to impact the extensive bedrock where most palaeontological resources would be found.

Given the local scale of the excavation and the measures taken to minimise the environmental footprint of the construction, the likelihood of impacting significant palaeontological resources is minimal. As such, the impact on palaeontological heritage during the development is assessed as **LOW**, with mitigation measures in place to address any unforeseen discoveries.

6. CONCLUSION AND RECOMMENDATIONS

The palaeontological specialist study for the proposed subdivision and rezoning of Portion 40 of the Farm Klipfontein No. 711 in Gansbaai, Western Cape, has assessed the potential impacts on palaeontological resources. The study area is underlain by sediments of the Waenhuiskrans Formation of the Bredasdorp Group, which is known to have some palaeontological significance. However, the specific geological context and the nature of the proposed development suggest that the overall impact on palaeontological heritage is expected to be **LOW**.

The study found that the Waenhuiskrans Formation, while containing some palaeontological resources such as terrestrial gastropods, freshwater molluscs, and microfossils, generally exhibits **LOW** fossil abundance and diversity. The planned development involves only minor excavation activities limited to superficial sediment layers, further reducing the likelihood of encountering significant palaeontological resources.

To ensure the protection of any potential palaeontological resources during the development of the proposed subdivision and rezoning, the following recommendations should be implemented:

- **Chance Fossil Finds Protocol**: A Chance Fossil Finds Protocol should be integrated into the Environmental Management Programme (EMPr). This protocol will guide construction personnel on the steps to take in the event of an unexpected fossil discovery.

By implementing these measures, the proposed development can proceed with minimal risk to palaeontological resources, ensuring that any significant finds are appropriately managed and preserved.

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7. REFERENCES

Heritage Impact Assessments				
NID	**Author(s)**	**Date**	**Type**	**Title**
3851	Timothy Hart	01/08/2003	AIA Phase 1	Heritage Scoping Assessment of a Proposed Housing Development Site (Erf 623) Gansbaai, South Western Cape Province
3852	Peter Nilssen	12/08/2004	Archaeological Permit Report	Erf 623 and Access Road, Gansbaai, South Western Cape Province Archaeological Heritage Impact Assessment Based on Shovel Test Excavations
3853	Jonathan Kaplan	01/12/2004	AIA Phase 1	Phase 1 Archaeological Impact Assessment Proposed Uilenvlei Private Reserve Bredasdorp District
3854	Jonathan Kaplan	01/03/2005	AIA Phase 1	Phase 1 Archaeological Impact Assessment Erf 629 Gansbaai Bredasdorp District South Western Cape Province
3855	Jonathan Kaplan	01/05/2005	AIA Phase 1	Phase 1 Archaeological Impact Assessment Proposed Development Erf 162 Pearly Beach Bredasdorp District
3863	Jonathan Kaplan	01/10/2005	AIA Phase 1	Phase 1 Archaeological Impact Assessment Proposed Uilkraal Lagoon Sanctuary Caledon District
4193	Jonathan Kaplan	01/03/2006	AIA Phase 1	Phase 1 Archaeological Impact Assessment Proposed Housing Development Khoisan Bay De Kelders Gansbaai
4195	Timothy Hart, Dave Halkett	01/12/1993	AIA Phase 1	Phase 1 Archaeological Survey of Klipfonteyn
4202	RJ Goosen	16/09/1996	AIA Phase 1	Archaeological Impact Assessment Report: Shell Middens on the I&J Property at Gansbaai
4205	John Lanham, Royden Yates	09/07/2006	AIA Phase 1	Gansbaai Sand Mine Extension - a Portion of Erf 210 (Gansbaai Commonage), District Bredasdorp, Western Cape: Archaeological Heritage Impact Assessment Report
6620	Renee Rust, Liezl van Pletzen-Vos, Sarah Wurz	01/09/2007	AIA Phase 1	Phase 1 Archaeological Impact Assessment for Remainder of Erf 210, Gansbaai, Overstrand Municipality, Division Caledon
7092	Peter Nilssen	13/10/2008	AIA Phase 1	The Proposed Development of Romansbaai on Portions 2, 17, 18 of Farm Klipfonteyn 711, Romansbaai, Gansbaai, Western Cape Province
7821	Timothy Hart	01/01/2005	AIA Phase 1	Phase 1 Heritage Impact Assessment of Upgrading the Road from Gansbaai to Bredasdorp Western Cape Province
7828	**Lita Webley**	**01/11/2008**	**AIA Phase 1**	**Phase 1 Archaeological Impact Assessment: Proposed Expansion at Roman Bay Sea Farm (Portion 2 of the Farm Klipfonteyn 711), Gansbaai, Overstrand Municipality, Western Cape**
8162	Liezl van Pletzen-Vos	10/09/2009	AIA Phase 1	Phase 1 Archaeological Impact Assessment on a 1.4 Ha Area (Erven 1224, 1225 & 1226) van Dyksbaai, Overstrand Municipality, Division Caledon, Western Cape
8260	Graham Avery	01/01/2006	AIA Phase 1	Report on Archaeological & Palaeontological Potential: Proposed Whale Cove Development (3419 CB Gansbaai)
329610	Jonathan	24/02/2011	AIA Phase 1	ARCHAEOLOGICAL IMPACT ASSESSMENT PROPOSED GRAVEL MINE ERF 210

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	Kaplan			GANSBAAI, WESTERN CAPE
28357	**John Almond**	**30/06/2008**	**PIA Desktop**	**Palaeontological Desktop Study For Bantamsklip (W. Cape) And Thyspunt (E. Cape) Reactor Sites**

Additional Relevant Literature Cited:

1. Haughton, S. H., Frommurze, H. D., & Visser, D. J. L. (1937). Geology of the country around Mossel Bay, Cape Province. Sheet Expl. Geol. Surv. S. Afr., Sheet 201: 1-48.
2. McMillan, I.K. (1986). A Foraminiferal Biostratigraphy and Chronostratigraphy for the "Bredasdorp Formation", Southern Cape Coast, South Africa. Unpublished Internal Report, Soekor, Parow, pp. 1-23.
3. Milan, J. A. (1990). The stratigraphy and sedimentology of the Bredasdorp Group, Southern Cape Province (Master's thesis). University of Cape Town, Faculty of Science.

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APPENDIX 3: Heritage Screening Assessment and HWC NID Response

Our Ref: HM / OVERBERG / OVERSTRAND / GANSBAAI / FARM 711 PORTION 40
Case No.: 25785EJV0731
Enquiries: Emily-Jane Vowles
E-mail: emily.vowles@westerncape.gov.za
Tel: 021 829 3324

ILifa leMveli leNtshona Koloni
Erfenis Wes-Kaap
Heritage Western Cape

Jenna Lavin
jenna.lavin@ctsheritage.com / david@mosterts.co.za

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

NOTIFICATION OF INTENT TO DEVELOP: PROPOSED SUBDIVISION AND REZONING FOR THE RESIDENTIAL DEVELOPMENT OF FARM 711 PORTION 40, KLIPFONTEIN, GANSBAAI, SUBMITTED IN TERMS OF SECTION 38(1) OF THE NATIONAL HERITAGE RESOURCES ACT (ACT 25 OF 1999)

The matter above has reference.

Heritage Western Cape is in receipt of your application for the above matter. This matter was discussed at the Heritage Officers Meeting held on 11 August 2025.

You are hereby notified that, since there is reason to believe that the proposed subdivision and rezoning for the residential development of Farm 711 Portion 40, Klipfontein, Gansbaai, will impact on heritage resources, HWC requires that a Heritage Impact Assessment (HIA) that satisfies the provisions of Section 38(3) of the NHRA be submitted. Section 38(3) of the NHRA provides

(3) *The responsible heritage resources authority must specify the information to be provided in a report required in terms of subsection (2)(a)**: Provided that the following must be included:***

(a) The identification and mapping of all heritage resources in the area affected;
(b) an assessment of the significance of such resources in terms of the heritage assessment criteria set out in section 6(2) or prescribed under section 7;
(c) an assessment of the impact of the development on such heritage resources;
(d) an evaluation of the impact of the development on heritage resources relative to the sustainable social and economic benefits to be derived from the development;
(e) the results of consultation with communities affected by the proposed development and other interested parties regarding the impact of the development on heritage resources;
(f) if heritage resources will be adversely affected by the proposed development, The consideration of alternatives; and
(g) plans for mitigation of any adverse effects during and after the completion of the proposed development.

(Our emphasis)
This HIA must in addition have specific reference to the following:

- Archaeological Impact Assessment
- Palaeontological Impact Assessment

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

The required HIA must have an integrated set of recommendations.

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

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Our Ref: HM / OVERBERG / OVERSTRAND / GANSBAAI / FARM 711 PORTION 40
Case No.: 25785EJV0731
Enquiries: Emily-Jane Vowles
E-mail: emily.vowles@westerncape.gov.za
Tel: 021 829 3324

ILifa leMveli leNtshona Koloni
Erfenis Wes-Kaap
Heritage Western Cape

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

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

HWC reserves the right to request additional information as required.

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

.....
Waseefa Dhansay
Assistant Director: Professional Services

Heritage Western Cape
Erfenis Wes-Kaap
ILifa leMveli leNtshona Koloni

11 August 2025

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CTS HERITAGE

HERITAGE SCREENER

CTS Reference Number:	**CTS24_156**
SAHRIS CaseID:	
Client:	**PHS**
Date:	**June 2024**
Title:	**Proposed subdivision and rezoning of Portion 40 of the Farm Klipfontein No. 711, Gansbaai, in the Western Cape**

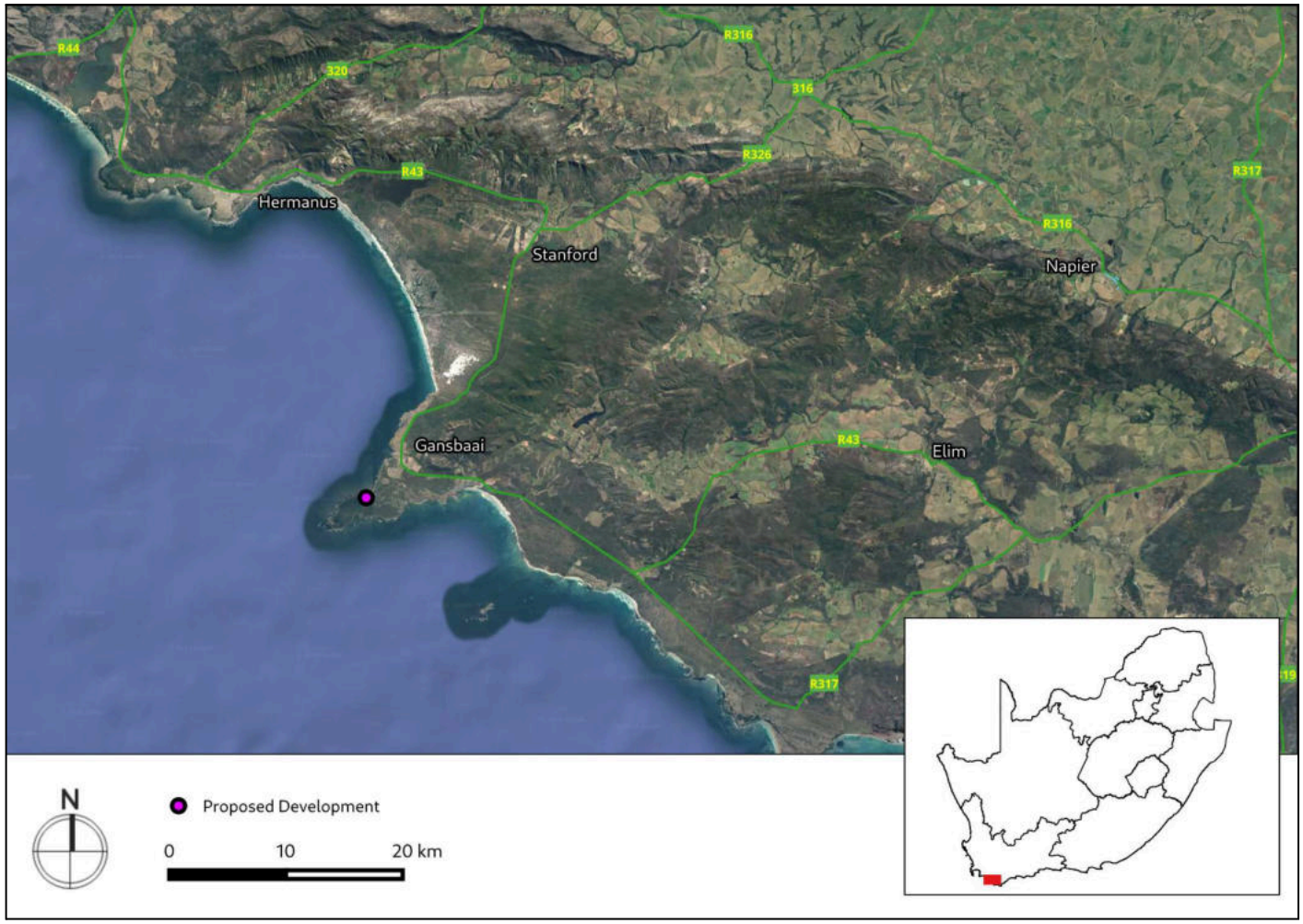


Figure A. Satellite map indicating the location of the proposed development in the Western Cape Province.

Recommendation by CTS Heritage Specialists	**RECOMMENDATION** **Based on the available information, it is likely that the proposed development will impact on significant archaeological and palaeontological resources and as such, it is recommended that further heritage studies are required.**

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CTS HERITAGE

1. Proposed Development Summary

Proposed subdivision and rezoning of Portion 40 of the Farm Klipfontein No. 711, Gansbaai

2. Application References

Name of relevant heritage authority(s)	HWC
Name of decision making authority(s)	DFFE

3. Property Information

Latitude / Longitude	-34.6124446, 19.3245053
Erf number / Farm number	Portion 40 of the Farm Klipfontein No. 711, Gansbaai
Local Municipality	Overstrand Local Municipality
District Municipality	Overberg District Municipality
Province	Western Cape
Current Use	Agricultural
Current Zoning	Agricultural

4. Nature of the Proposed Development

Total Surface Area of development	Approximately 3.36 ha
Depth of excavation (m)	TBA
Height of development (m)	TBA

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5. Category of Development

X	Triggers: Section 38(8) of the National Heritage Resources Act
	Triggers: Section 38(1) of the National Heritage Resources Act
	1. Construction of a road, wall, powerline, pipeline, canal or other similar form of linear development or barrier over 300m in length.
	2. Construction of a bridge or similar structure exceeding 50m in length.
	3. Any development or activity that will change the character of a site-
x	a) exceeding 5 000m^2 in extent
	b) involving three or more existing erven or subdivisions thereof
	c) involving three or more erven or divisions thereof which have been consolidated within the past five years
	4. Rezoning of a site exceeding 10 000m^2
	5. Other (state):

6. Additional Infrastructure Required for this Development

TBA

7. Mapping (please see Appendix 3 and 4 for a full description of our methodology and map legends)



Figure 1.1 Overview Map. Satellite image (2024) indicating the proposed development area at closer range.



Figure 1.2 Overview Map. Satellite image (2024) indicating the proposed development at closer range.

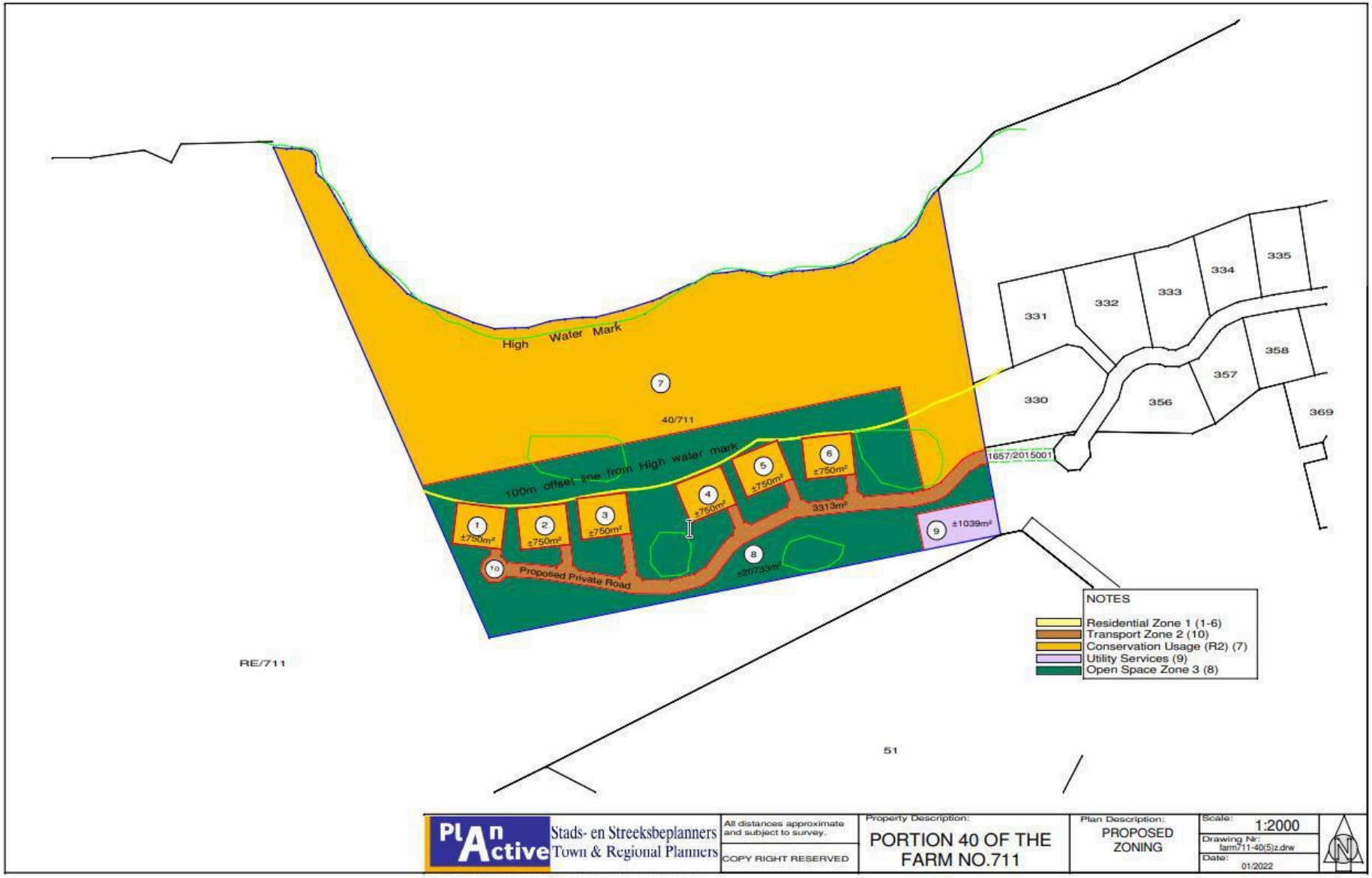


Figure 1.3 Overview Map: Proposed Subdivision Map provided by client

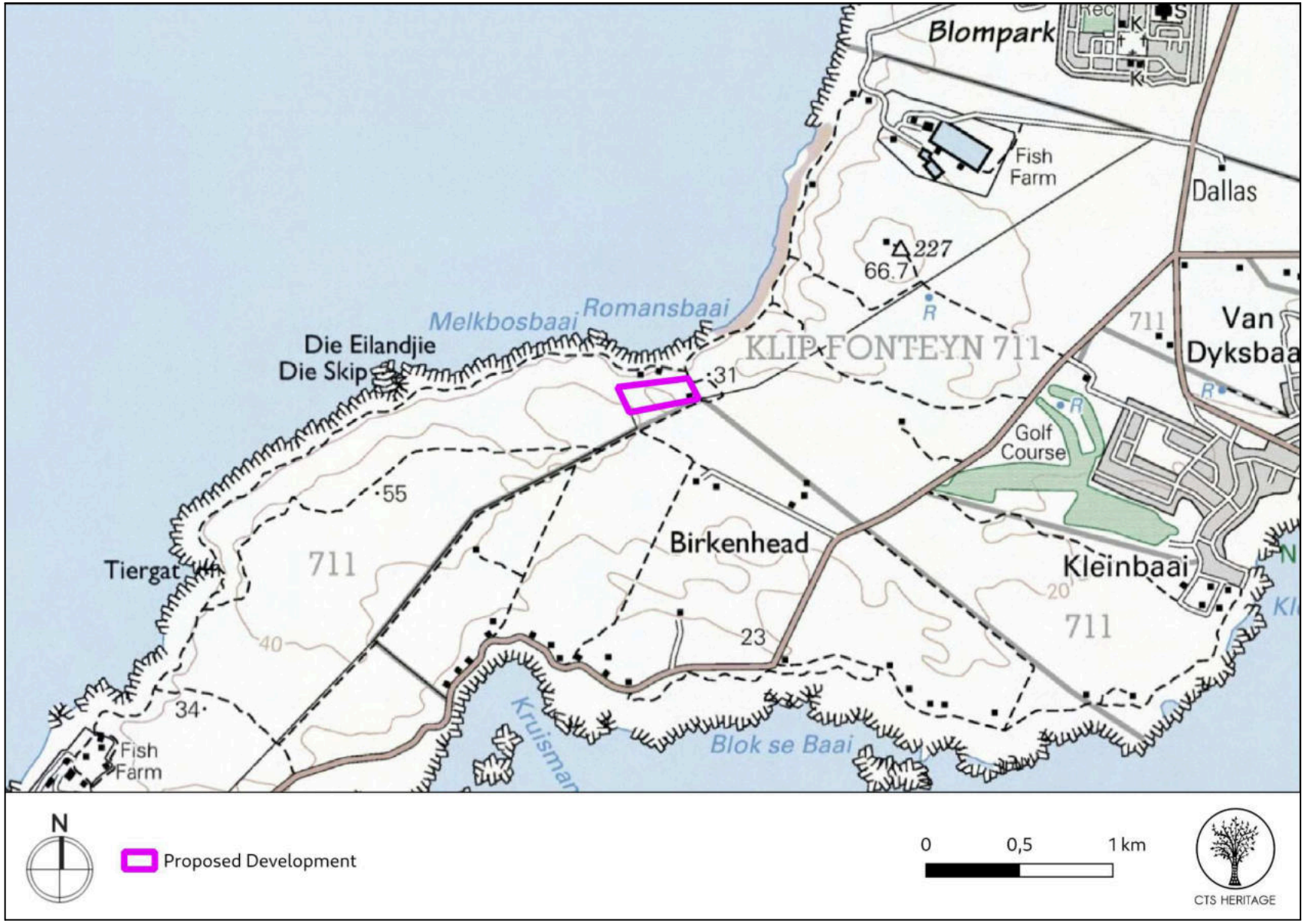


Figure 1.4 Overview Map. 1:50 000 Topo Map for the development area

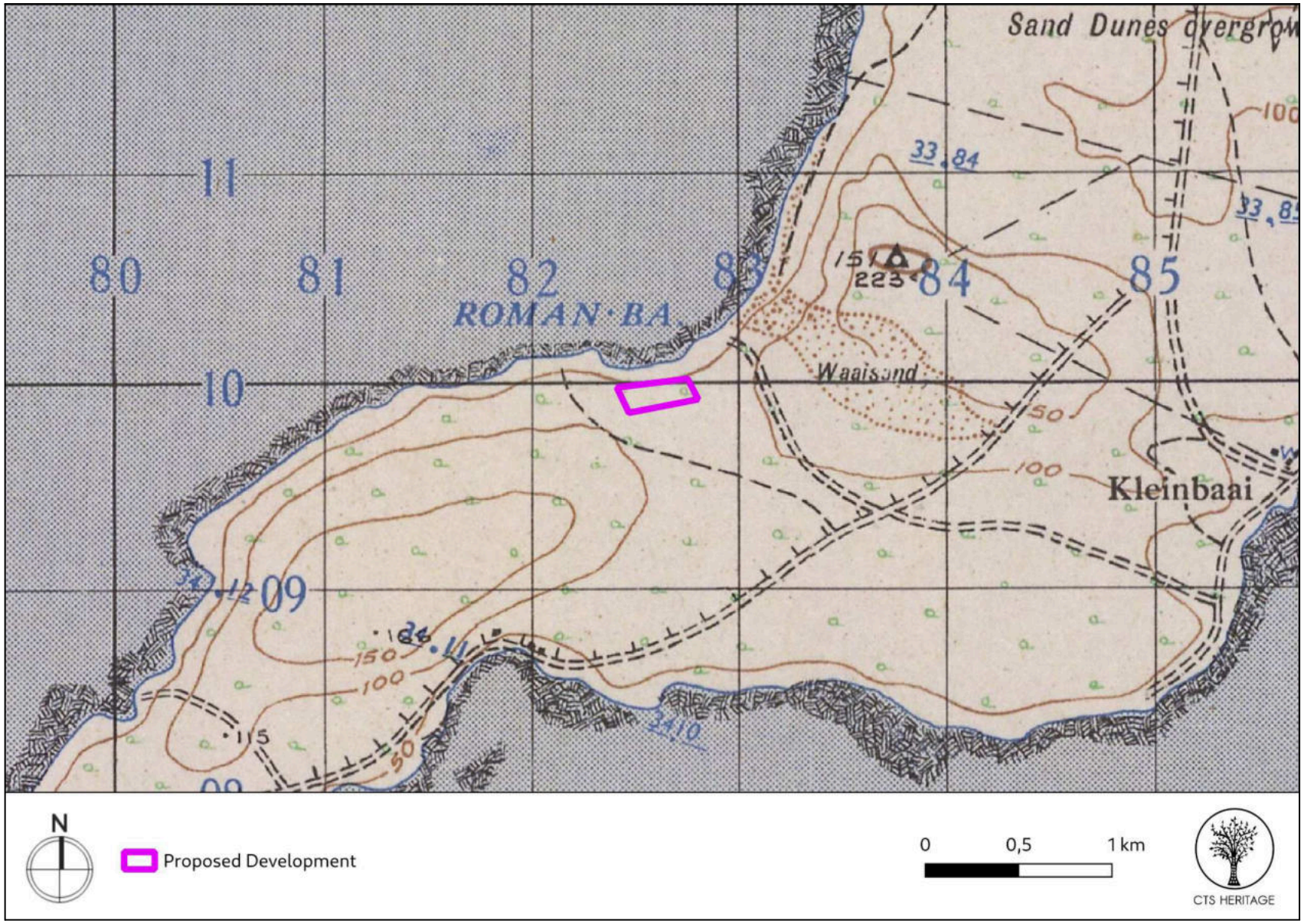


Figure 1.5 Overview Map. First Edition 1:50 000 Topo Map for the development area



Figure 1.6 Overview Map. Historic Map of the Caledon Division (1900) indicating no structures on the farm Klipfontein[1]

[1]Map of the Caledon division, https://ibali.uct.ac.za/s/jacobson-africana/item/96229



Figure 2. Previous HIAs Map. Previous Heritage Impact Assessments surrounding the proposed development area, with SAHRIS NIDs indicated. Please see Appendix 2 for a full reference list.

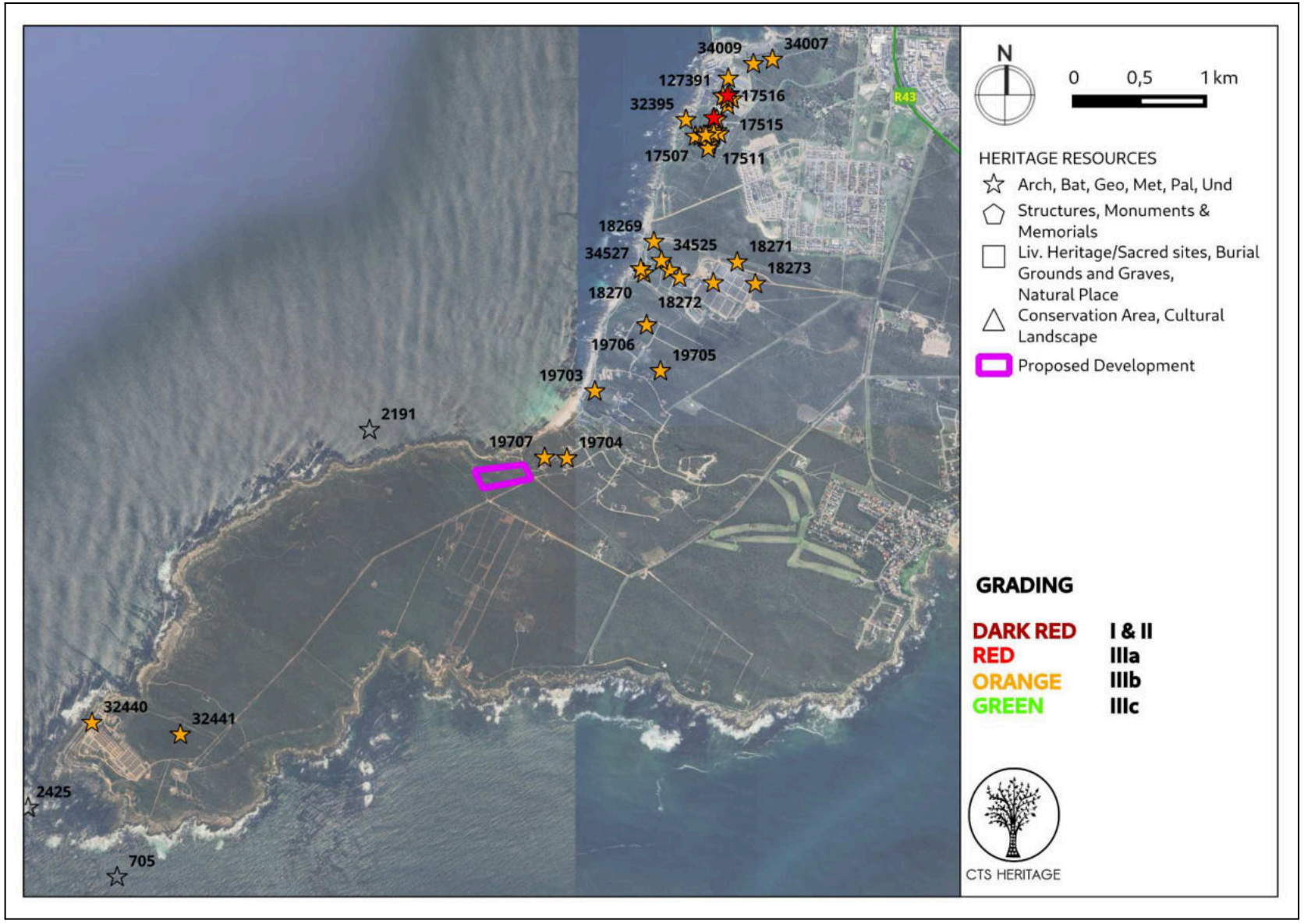


Figure 3.1 Heritage Resources Map. Heritage Resources previously identified in and near the study area, with SAHRIS Site IDs indicated. Please See Appendix 4 for a full description of heritage resource types.



Figure 3.2 Cultural Landscape Map. Map indication sensitive receptors near the proposed development, extracted from the Topo 1:50 000 map.

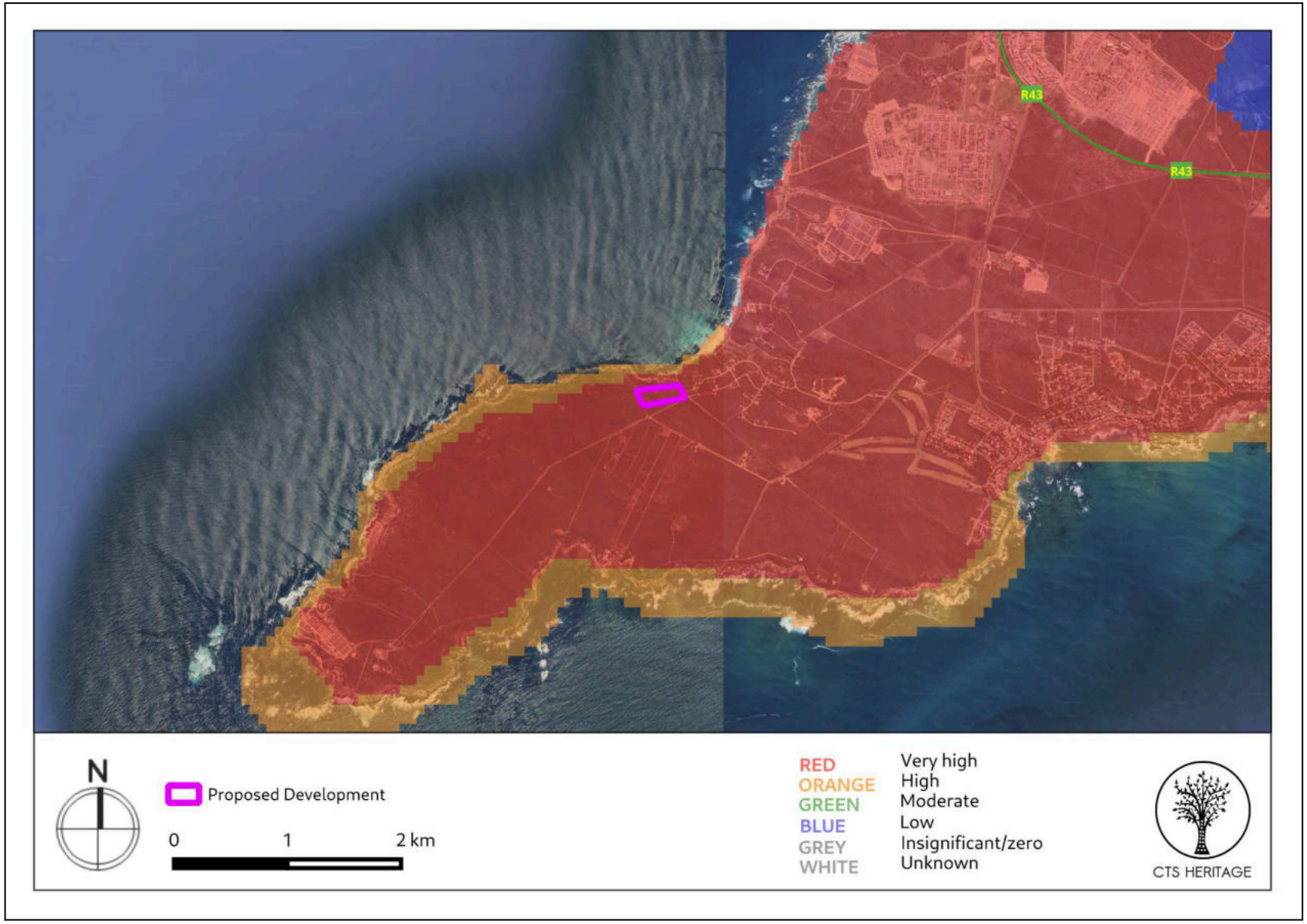


Figure 4.1 Palaeosensitivity Map. Indicating Very High fossil sensitivity underlying the study area. Please See Appendix 3 for a full guide to the legend.



Figure 4.2 Geology Map. Extract from the CGS 3319 Worcester Geology Map indicating that the development area is underlain by Qw: Waenhuiksrans Formation, Bredasdorp Group

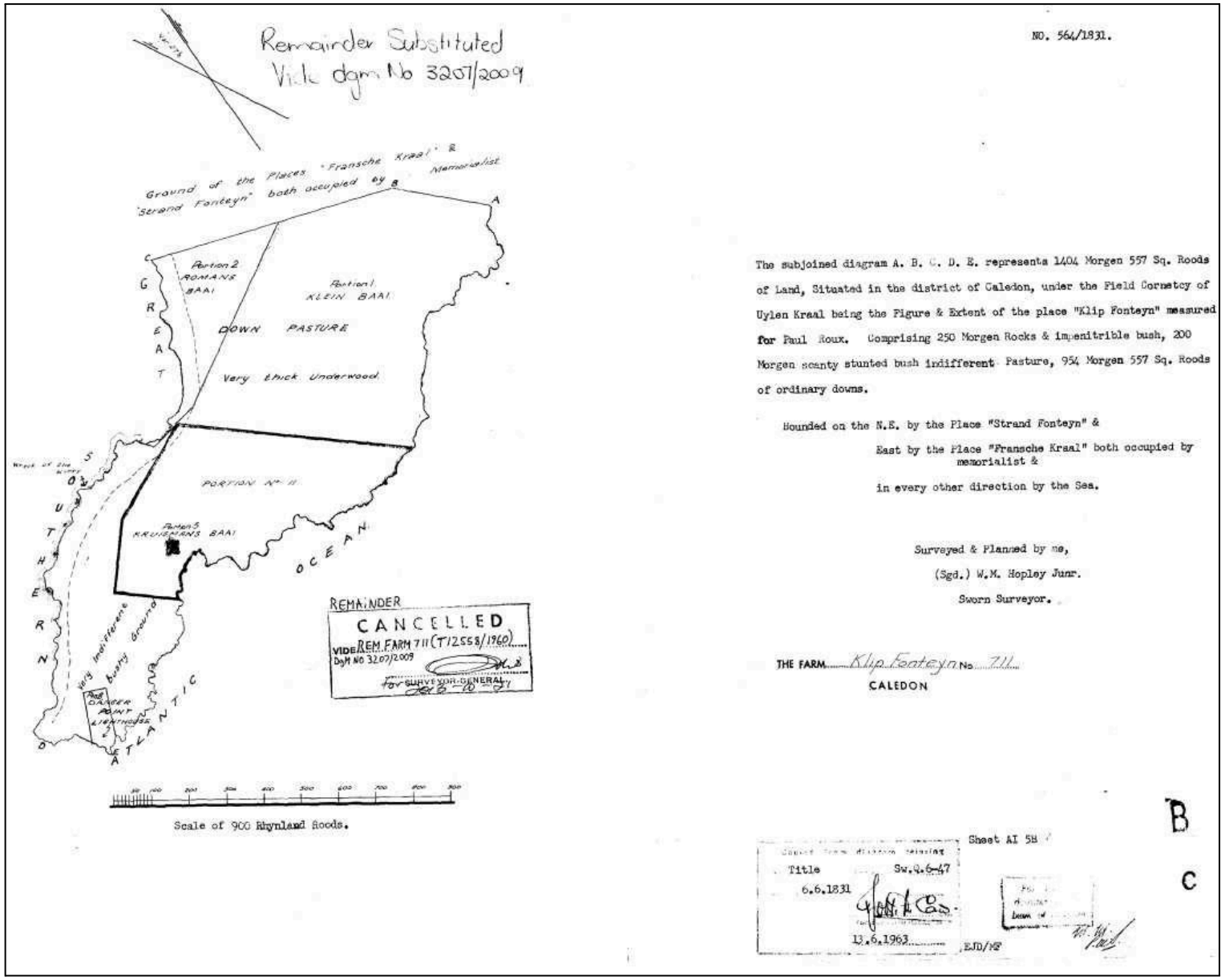
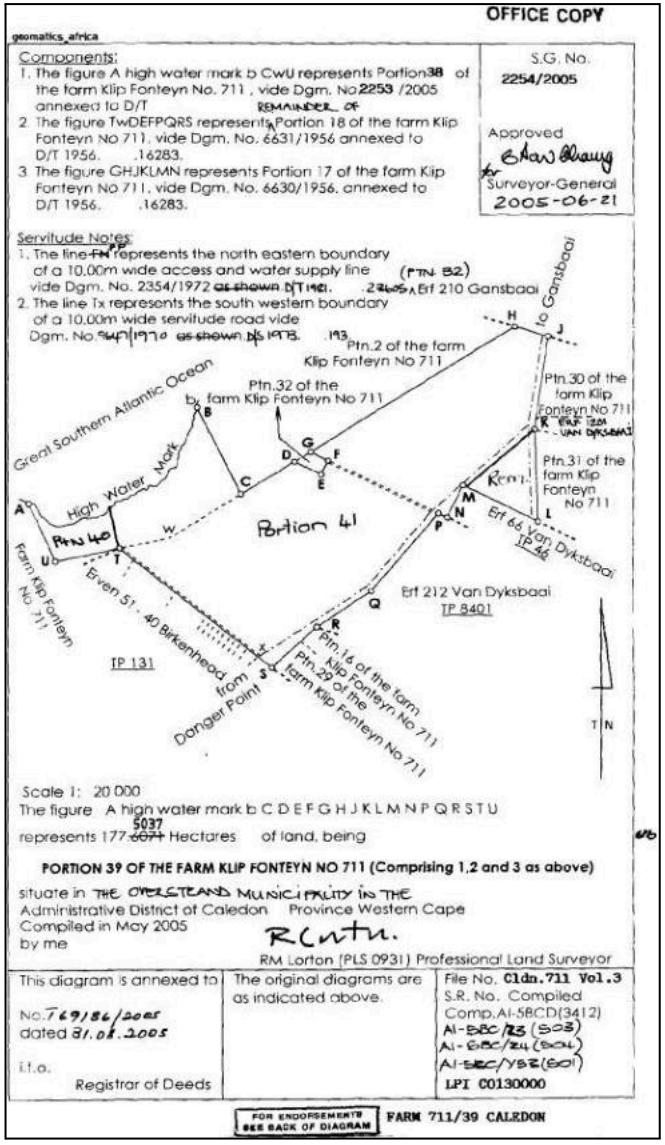
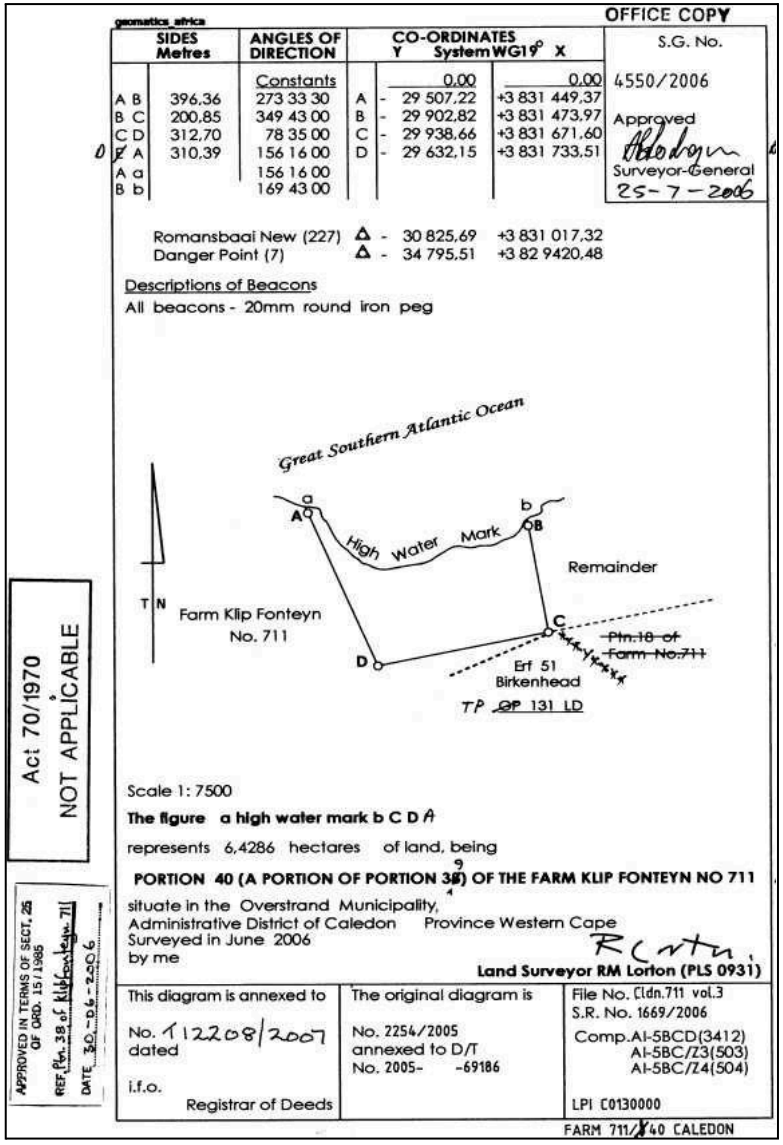


Figure 5.1 SG Diagram. (1963)





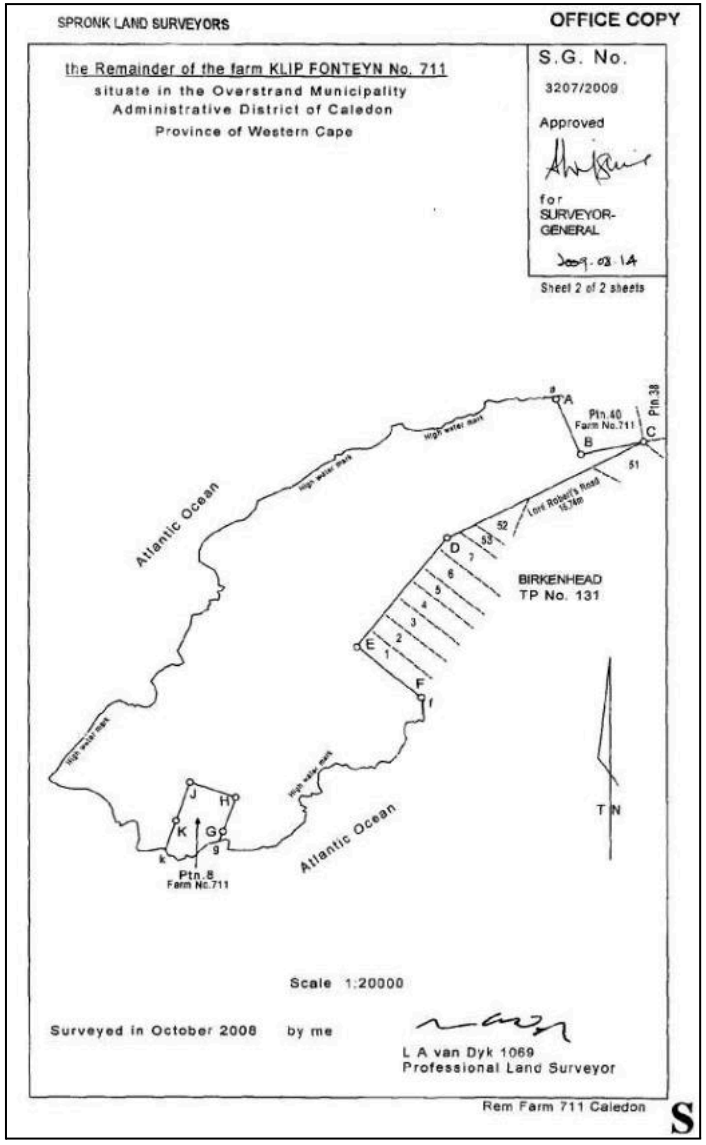


Figure 5.2-5.4 SG Diagrams. (2005, 2006 and 2009)

8. Heritage statement and character of the area

Background
This application is for the proposed subdivision and rezoning of Portion 40 of the Farm Klipfontein No. 711, Gansbaai. According to Raper et al (2018) in the Dictionary of Southern African Place Names, Gansbaai/GansBay was originally known as *Gansgat (*Goose hole) because of the wild geese in the area. It was laid out on the farm Strandfontein and in 1962 became a municipality.

Built Environment and Cultural Landscape
This coastal stretch is characterised by narrow coastal belts bordered by rugged Cape Fold Mountains, opening out, as one travels east, to rolling plains. The coastline itself is characterised by rocky shorelines interspersed with sandy beaches, and several large, perennial rivers exist throughout the region, many with lagoons and estuaries. Towns were initially established in this region as small fishing villages, in the second half of the 19th century (Baumann et al 2009). Increasingly since post-WWII era, these towns have developed as recreational destinations. This tourism-driven boom has increasingly changed the character of the string of towns along the Overberg coastline. The sites sensitive to development impacts are the remaining, intact elements of the early villages, such as the local, vernacular Hermanus/ Gansbaai holiday cottages, and the wealth of as-yet undiscovered pre-historic sites, including unexplored cave sites, and possible human burials, that are vulnerable to the development of the dune cordon and beachfront. Both of these elements require proactive protection and conservation, as well as the sensitive planning of developments that might affect them. The study area has no indications of historic structures (Figures 1.5-1.6), nor is it unlikely that the proposed development will impact on any cave sites. As Gansbaai is a developing town established in 1962, and this site is located within the urban edge, it is unlikely that the proposed development will impact on any significant built environment or cultural landscape resources.

Heritage Character and Archaeology
Several HIA and AIAs have been conducted in the area surrounding the proposed development (Figure 2). The area is known to contain occasional Earlier Stone Age artefacts (Kaplan 2009, NID 7702); significant Middle Stone Age sequences in cave sites; extensive shell middens along the rocky shorelines and extending into the coastal dune belts, with associated burials; stone tool scatters, and stone-built fish traps in the intertidal zone (Avery 1974, Hart and Halkett 2010, NID 194682). These resources, together, reveal extensive use of the area since at least 80,000 years ago, when pre-modern humans were frequenting the coastal caves. More recently, in the Later Stone Age, hunter-gatherers and, later, herders, camped in deflation hollows in the dune belts, and made use of the seasonally available marine shellfish, fresh water, and, for the pastoral Khoe, grazing, in the relatively well-watered region. Archival and archaeological examination of the fish traps indicates that they appear to date from the colonial era (Hine 2007, NID 356929), and were maintained into the 20th century by the local communities (Avery 1975), although the possibility remains that the tradition originated locally in pre-colonial times (Hart and Halkett 2010, NID 194682); elsewhere in the country, these resources have been declared as National Heritage Sites. No fish traps are visible on satellite imagery near the study area.

A nearby Provincial Heritage Site, located 7km north from the study area, is Die Kelders Cave 1 (SID 25308), which is an internationally renowned archaeological site of high scientific value. Die Kelders is publicly accessible without any monitoring of that access. The fragile archaeological deposits at Die Kelders Cave 1, which is within the Walker Bay Nature Reserve, and marketed locally as a tourist attraction, and Klipgat Cave - are highly vulnerable to degradation from visitors as well as acts of vandalism. Webley (2008, SAHRIS NID 7828) writes that "*To summarise the above evidence, excavations in the 1970's at Die Kelders near Gansbaai have provided early evidence (1600 years ago) for the introduction of pottery technology and domestic stock into the Cape as well as a MSA (Middle Stone Age) occupation over 40 000 years old."* While no similar caves are known within the development area, the proximity of this significant archaeological site to the proposed development provides an indication of the possible archaeological resources that may be impacted by this development.

Webley (2008, SAHRIS NID 7828) conducted an AIA on Klipfontein 711, Portion 2, located less than 2km west of the proposed development. This assessment identified several middens (SAHRIS IDs 18268-18273) all graded as IIIB due to their high scientific significance. Webley notes that "*In the background to this report it was pointed out that only 6 sites along this stretch of the coast have been archaeologically sampled. Rampant coastal development means that many archaeological sites have been destroyed in recent decades*

resulting in a diminishing number of archaeological sites which can potentially inform us about the prehistoric past. For this reason, due care should be taken before permission is given to destroy an archaeological site."

In 2004, Doug Jeffery Environmental Consultants also conducted an EIA for development on portion 2 and portion 39 of the farm Klip Fonteyn 711, Kleinbaai. Hart consulted on the Archaeological impacts, and Baumann on the other Heritage impacts. Unfortunately, only a summary of the heritage findings from these reports was available at the time of writing. According to Hart (2004), the landscape was extensively occupied in the last 2000 years, with archaeological sites, primarily shell middens, concentrated within 500 metres of the coast, particularly along the ridge overlooking the bay (Figure 3.2). Key findings in the report include middens rich in *Haliotis midae* shells and quartzite chunks/flakes, as well as the impact on coastal sites by tracks and roads, but some stratified deposits have survived under dune vegetation. The coastal ridge at around the 20m contour contains the highest concentration of archaeological material. This includes large, continuous sites with shell-midden material, Cape Coastal pottery, and ostrich eggshell beads, with the stone artefacts mostly consisting of informal quartzite chunks and flakes. As one moves more inland the archaeological sites are more dispersed and less frequent but still present. A significant pre-colonial site (10,400m²) was discovered on high ground near a transmission tower (500m inland), indicating that these areas can also hold archaeologically sensitive material. The report identified several other pre-colonial sites, as well as one historical dump, but no locations were provided.

It is possible that many of these sites exist within the proposed development area, as the development falls just outside the 500m high-sensitivity area, and further investigation is warranted. In addition to the possibility of shell middens, Stone Age burials, and historic and farm graves occurring across the area, there are likely to be shore burials of victims of shipwrecks that are as yet undiscovered on the coast's sandy beaches (Kaplan 1997, NID 3844).

Shipwrecks

Shipwrecks represent important heritage resources in this area, and the offshore area is known to contain several wrecks. All shipwrecks are part of the national estate and are protected as Grade I resources by SAHRA. Notable wrecks off this stretch of coast include the world-famous Birkenhead (wrecked in 1852), the origin of the custom of seeing women and children off sinking vessels first, the Ellida (1888) and the Seegans (1991). Wrecks include numerous types of vessels, at varying depths and distances off shore, and in varying states of preservation.

Table 1: Shipwrecks near the proposed development

Ship	SAHRIS ID	Area	Vessel-Category (Type)	Nation	Date-Wreck	History	Image
SV Ellida	2191	Vicinity of Point	Sailing vessel (Barque)	Norwegian	04/06/1888	On June 4th, 1888, the Norwegian barque ELLIDA, on a voyage from New York to Natal with general cargo, was wrecked at Danger Point. There were no casualties.[2]	

[2] History courtesy of Wreck Site, https://www.wrecksite.eu/imgBrowser.aspx?47360

MFV Seegans	2903	Gansbaai Harbour	Small fishing boat	South African	26/07/1991	The South African fishing vessel Seegans was wrecked during a NW gale in Gansbaai harbour.[3]	

Palaeontology

According to the SAHRIS Palaeosensitivity Map the development sites are underlain by sediments of very high fossil sensitivity (Figure 4). According to the extract from the Council of GeoScience Map 3319 Worcester Geology Map indicating that the development area is underlain by Qw: Waenhuiksrans Formation, Bredasdorp Group. According to Almond and Pether in the Western Cape Palaeotechnic report, the **Bredasdorp group** consists of mainly regressive, prograded shallow-marine sequences comprising basal conglomerates overlain by sandy and gravelly shoreface and sometimes foreshore deposits. Estuarine to fluvial deposits occur in vicinities of rivers and locally also muddier, sheltered embayment and lagoonal deposits. The tops of marine sequences are eroded and overlain by aeolianites. These sediments are interbedded and capping calcretes and other soil profiles mark stable palaeosurfaces. The lithologies are mainly calcareous in the Bredasdorp and Sandveld Groups and sandier and decalcified in the West Coast Group. The marine deposits have discrete ages associated with high sea-levels and polar-ice melting during globally-warm periods: mid-Miocene ~16 Ma, early Pliocene ~5 Ma, late Pliocene ~3 ma and later Quaternary ‹1 Ma. Aeolianites of various intervening ages. In the marine deposits are fossil molluscan seashells, brachiopods, crustaceans (barnacles, crabs, prawns, ostracods), echinoids, polychaete worm tubes, corals, bryozoans & foraminifera. Shark teeth are common, other fish teeth occur. Bones of whales, dolphins, seals & seabirds. Trace fossils made by prawns, worms, echinoids, anemones, bivalves, fish etc, are also pervasive. These sediments also often contain bones of land mammals in estuarine and lagoonal deposits. In the aeolianites are land snails, tortoises, moles, OES, and insect traces. Larger animal bones are sparsely scattered on palaeosurfaces (bovids, zebras, rhino, elephant, pigs etc.). Deposits associated with vleis, pans, and springs are very rich, especially birds, micromammals, and Homo Sapiens.

Almond (2008, SAHRIS NID 28357) notes that "*The **Waenhuiskrans Formation** has so far only yielded a sparse range of body fossils. These are mostly terrestrial gastropods of the genera Achatina, Dorcasia, Tropidophora, Trigonephrus and Ferissia – all snails except for the last, which is an extant brackish-water slug (Malan 1989c, Roberts et al. 2008). Allochthonous marine fossils include wind-blown foraminiferans and sand-worn shell fragments. Fascinating assemblages of Late Pleistocene last interglacial vertebrate trackways, ascribed to African elephants, antelopes, equids, carnivores and tortoises, as well as rhizoliths (plant root traces, cf Klappa 1980) and calcretised termitaria, have recently been recorded from well-dated (MIS 5e to 5b) Waenhuiskrans aeolianites at Still Bay by Roberts (2003) and Roberts et al. (2008).*"

Even though the footprint of the development is limited, based on the very high sensitivity, further studies are recommended.

RECOMMENDATION

Based on the available information, it is likely that the proposed development will impact on significant archaeological and palaeontological resources and as such, it is recommended that further heritage studies are required.

[3] History and Image courtesy of Wreck Site, https://www.wrecksite.eu/imgBrowser.aspx?47360

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APPENDIX 1

List of heritage resources within close proximity to the development area from SAHRIS

Site ID	Site no	Full Site Name	Site Type	Grading
2191	**SHIPWRECKID1986**	**Ellida**	**Shipwreck**	
2903	**SHIPWRECKID2701**	**Seegans**	**Shipwreck**	
17506	GANS623-1	Gansbaai Erf 623 - 1	Artefacts, Shell Midden	Grade IIIb
17507	GANS623-10	Gansbaai Erf 623 - 10	Artefacts, Shell Midden	Grade IIIb
17508	GANS623-11	Gansbaai Erf 623 - 11	Artefacts, Shell Midden	Grade IIIb
17509	GANS623-12	Gansbaai Erf 623 - 12	Artefacts, Shell Midden	Grade IIIb
17510	GANS623-13	Gansbaai Erf 623 - 13	Artefacts, Shell Midden	Grade IIIb
17511	GANS623-14	Gansbaai Erf 623 - 14	Artefacts, Shell Midden	Grade IIIb
17512	GANS623-15	Gansbaai Erf 623 - 15	Artefacts, Shell Midden	Grade IIIb
17513	GANS623-16	Gansbaai Erf 623 - 16	Artefacts, Shell Midden	Grade IIIb
17514	GANS623-17	Gansbaai Erf 623 - 17	Artefacts, Shell Midden	Grade IIIb
17515	GANS623-18	Gansbaai Erf 623 - 18	Artefacts, Shell Midden	Grade IIIb
17516	GANS623-19	Gansbaai Erf 623 - 19	Artefacts, Shell Midden	Grade IIIb
17517	GANS623-2	Gansbaai Erf 623 - 2	Artefacts, Shell Midden	Grade IIIb
17518	GANS623-3	Gansbaai Erf 623 - 3	Artefacts, Shell Midden	Grade IIIb
17519	GANS623-4	Gansbaai Erf 623 - 4	Artefacts, Shell Midden	Grade IIIb

17520	GANS623-5	Gansbaai Erf 623 - 5	Artefacts, Shell Midden	Grade IIIb
17521	GANS623-6	Gansbaai Erf 623 - 6	Artefacts, Shell Midden	Grade IIIb
17522	GANS623-7	Gansbaai Erf 623 - 7	Artefacts, Shell Midden	Grade IIIb
17523	GANS623-8	Gansbaai Erf 623 - 8	Artefacts, Shell Midden	Grade IIIb
17524	GANS623-9	Gansbaai Erf 623 - 9	Artefacts, Shell Midden	Grade IIIb
18268	**KLIPF1**	**Klipfonteyn 711 - 1**	**Shell Midden**	**Grade IIIb**
18269	**KLIPF2**	**Klipfonteyn 711 - 2**	**Shell Midden**	**Grade IIIb**
18270	**KLIPF3**	**Klipfonteyn 711 - 3**	**Shell Midden**	**Grade IIIb**
18271	**KLIPF4**	**Klipfonteyn 711 - 4**	**Artefacts, Shell Midden**	**Grade IIIb**
18272	**KLIPF5**	**Klipfonteyn 711 - 5**	**Artefacts, Shell Midden**	**Grade IIIb**
18273	**KLIPF6**	**Klipfonteyn 711 - 6**	**Shell Midden**	**Grade IIIb**
19703	ROM1	Romansbaai 1	Shell Midden	Grade IIIb
19704	ROM10	Romansbaai 10	Shell Midden	Grade IIIb
19705	ROM14	Romansbaai 14	Shell Midden	Grade IIIb
19706	ROM15	Romansbaai 15	Shell Midden	Grade IIIb
19707	ROM9	Romansbaai 9	Shell Midden	Grade IIIb
32107	Hannington Court-001		Structures	
32395	IJA-001	Irvine and Johnson Abolone Farm	Archaeological	Grade IIIb
34007	GB629/1	Gansbaai Bredasdorp 629/1	Artefacts	Grade IIIb

34009	GB629/2	Gansbaai Bredasdorp 629/2	Artefacts	Grade IIIb
34524	KLIPF7	Klipfonteyn 711 - 7	Artefacts, Shell Midden	Grade IIIb
34525	KLIPF8	Klipfonteyn 711 - 8	Artefacts, Shell Midden	Grade IIIb
34527	KLIPF9	Klipfonteyn 711 - 9	Shell Midden	Grade IIIb
105121	GB 1	Gansbaai 1	Shell Midden	Grade IIIa
105122	GB 2	Gansbaai 2	Archaeological	Grade IIIa
127388	EAO M1	Expansion of an Aquaculture Operation M1	Shell Midden	Grade IIIb
127389	EAO M2	Expansion of an Aquaculture Operation M2	Shell Midden	Grade IIIb
127390	EAO M3	Expansion of an Aquaculture Operation M3	Shell Midden	Grade IIIb
127391	EAO M4	Expansion of an Aquaculture Operation M4	Shell Midden	Grade IIIb

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APPENDIX 2

Reference List from SAHRIS

NID	Author(s)	Date	Type	Title
3851	Timothy Hart	01/08/2003	AIA Phase 1	Heritage Scoping Assessment of a Proposed Housing Development Site (Erf 623) Gansbaai, South Western Cape Province
3852	Peter Nilssen	12/08/2004	Archaeological Permit Report	Erf 623 and Access Road, Gansbaai, South Western Cape Province Archaeological Heritage Impact Assessment Based on Shovel Test Excavations
3853	Jonathan Kaplan	01/12/2004	AIA Phase 1	Phase 1 Archaeological Impact Assessment Proposed Uilenvlei Private Reserve Bredasdorp District
3854	Jonathan Kaplan	01/03/2005	AIA Phase 1	Phase 1 Archaeological Impact Assessment Erf 629 Gansbaai Bredasdorp District South Western Cape Province
3855	Jonathan Kaplan	01/05/2005	AIA Phase 1	Phase 1 Archaeological Impact Assessment Proposed Development Erf 162 Pearly Beach Bredasdorp District
3863	Jonathan Kaplan	01/10/2005	AIA Phase 1	Phase 1 Archaeological Impact Assessment Proposed Uilkraal Lagoon Sanctuary Caledon District
4193	Jonathan Kaplan	01/03/2006	AIA Phase 1	Phase 1 Archaeological Impact Assessment Proposed Housing Development Khoisan Bay De Kelders Gansbaai
4195	Timothy Hart, Dave Halkett	01/12/1993	AIA Phase 1	Phase 1 Archaeological Survey of Klipfonteyn
4202	RJ Goosen	16/09/1996	AIA Phase 1	Archaeological Impact Assessment Report: Shell Middens on the I&J Property at Gansbaai
4205	John Lanham, Royden Yates	09/07/2006	AIA Phase 1	Gansbaai Sand Mine Extension - a Portion of Erf 210 (Gansbaai Commonage), District Bredasdorp, Western Cape: Archaeological Heritage Impact Assessment Report
6620	Renee Rust, Liezl van Pletzen-Vos, Sarah Wurz	01/09/2007	AIA Phase 1	Phase 1 Archaeological Impact Assessment for Remainder of Erf 210, Gansbaai, Overstrand Municipality, Division Caledon
7092	Peter Nilssen	13/10/2008	AIA Phase 1	The Proposed Development of Romansbaai on Portions 2, 17, 18 of Farm Klipfonteyn 711, Romansbaai, Gansbaai, Western Cape Province

7821	Timothy Hart	01/01/2005	AIA Phase 1	Phase 1 Heritage Impact Assessment of Upgrading the Road from Gansbaai to Bredasdorp Western Cape Province
7828	**Lita Webley**	**01/11/2008**	**AIA Phase 1**	**Phase 1 Archaeological Impact Assessment: Proposed Expansion at Roman Bay Sea Farm (Portion 2 of the Farm Klipfonteyn 711), Gansbaai, Overstrand Municipality, Western Cape**
8162	Liezl van Pletzen-Vos	10/09/2009	AIA Phase 1	Phase 1 Archaeological Impact Assessment on a 1.4 Ha Area (Erven 1224, 1225 & 1226) van Dyksbaai, Overstrand Municipality, Division Caledon, Western Cape
8260	Graham Avery	01/01/2006	AIA Phase 1	Report on Archaeological & Palaeontological Potential: Proposed Whale Cove Development (3419 CB Gansbaai)
329610	Jonathan Kaplan	24/02/2011	AIA Phase 1	ARCHAEOLOGICAL IMPACT ASSESSMENT PROPOSED GRAVEL MINE ERF 210 GANSBAAI, WESTERN CAPE
28357	**John Almond**	**30/06/2008**	**PIA Desktop**	**Palaeontological Desktop Study For Bantamsklip (W. Cape) And Thyspunt (E. Cape) Reactor Sites**

Additional References

Raper, P.E., Moller, L.A. and Plessis, T. (2018) Dictionary of Southern African Place Names. Jeppestown: Jonathan Ball.

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APPENDIX 3 - Keys/Guides

Key/Guide to Acronyms

AIA	Archaeological Impact Assessment
DARD	Department of Agriculture and Rural Development (KwaZulu-Natal)
DEA	Department of Environmental Affairs (National)
DEADP	Department of Environmental Affairs and Development Planning (Western Cape)
DEDEAT	Department of Economic Development, Environmental Affairs and Tourism (Eastern Cape)
DEDECT	Department of Economic Development, Environment, Conservation and Tourism (North West)
DEDT	Department of Economic Development and Tourism (Mpumalanga)
DEDTEA	Department of economic Development, Tourism and Environmental Affairs (Free State)
DENC	Department of Environment and Nature Conservation (Northern Cape)
DMR	Department of Mineral Resources (National)
GDARD	Gauteng Department of Agriculture and Rural Development (Gauteng)
HIA	Heritage Impact Assessment
LEDET	Department of Economic Development, Environment and Tourism (Limpopo)
MPRDA	Mineral and Petroleum Resources Development Act, no 28 of 2002
NEMA	National Environmental Management Act, no 107 of 1998
NHRA	National Heritage Resources Act, no 25 of 1999
PIA	Palaeontological Impact Assessment
SAHRA	South African Heritage Resources Agency
SAHRIS	South African Heritage Resources Information System
VIA	Visual Impact Assessment

Full guide to Palaeosensitivity Map legend

	RED:	VERY HIGH - field assessment and protocol for finds is required
	ORANGE/YELLOW:	HIGH - desktop study is required and based on the outcome of the desktop study, a field assessment is likely
	GREEN:	MODERATE - desktop study is required
	BLUE/PURPLE:	LOW - no palaeontological studies are required however a protocol for chance finds is required
	GREY:	INSIGNIFICANT/ZERO - no palaeontological studies are required
	WHITE/CLEAR:	UNKNOWN - these areas will require a minimum of a desktop study.

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APPENDIX 4 - Methodology

The Heritage Screener summarises the heritage impact assessments and studies previously undertaken within the area of the proposed development and its surroundings. Heritage resources identified in these reports are assessed by our team during the screening process.

The heritage resources will be described both in terms of **type**:

- Group 1: Archaeological, Underwater, Palaeontological and Geological sites, Meteorites, and Battlefields
- Group 2: Structures, Monuments and Memorials
- Group 3: Burial Grounds and Graves, Living Heritage, Sacred and Natural sites
- Group 4: Cultural Landscapes, Conservation Areas and Scenic routes

and **significance** (Grade I, II, IIIa, b or c, ungraded), as determined by the author of the original heritage impact assessment report or by formal grading and/or protection by the heritage authorities.

Sites identified and mapped during research projects will also be considered.

DETERMINATION OF THE EXTENT OF THE INCLUSION ZONE TO BE TAKEN INTO CONSIDERATION

The extent of the inclusion zone to be considered for the Heritage Screener will be determined by CTS based on:

- the size of the development,
- the number and outcome of previous surveys existing in the area
- the potential cumulative impact of the application.

The inclusion zone will be considered as the region within a maximum distance of 50 km from the boundary of the proposed development.

DETERMINATION OF THE PALAEONTOLOGICAL SENSITIVITY

The possible impact of the proposed development on palaeontological resources is gauged by:

- reviewing the fossil sensitivity maps available on the South African Heritage Resources Information System (SAHRIS)
- considering the nature of the proposed development
- when available, taking information provided by the applicant related to the geological background of the area into account

DETERMINATION OF THE COVERAGE RATING ASCRIBED TO A REPORT POLYGON

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Each report assessed for the compilation of the Heritage Screener is colour-coded according to the level of coverage accomplished. The extent of the surveyed coverage is labeled in three categories, namely low, medium and high. In most instances the extent of the map corresponds to the extent of the development for which the specific report was undertaken.

Low coverage will be used for:

- desktop studies where no field assessment of the area was undertaken;
- reports where the sites are listed and described but no GPS coordinates were provided.
- older reports with GPS coordinates with low accuracy ratings;
- reports where the entire property was mapped, but only a small/limited area was surveyed.
- uploads on the National Inventory which are not properly mapped.

Medium coverage will be used for

- reports for which a field survey was undertaken but the area was not extensively covered. This may apply to instances where some impediments did not allow for full coverage such as thick vegetation, etc.
- reports for which the entire property was mapped, but only a specific area was surveyed thoroughly. This is differentiated from low ratings listed above when these surveys cover up to around 50% of the property.

High coverage will be used for

- reports where the area highlighted in the map was extensively surveyed as shown by the GPS track coordinates. This category will also apply to permit reports.

RECOMMENDATION GUIDE

The Heritage Screener includes a set of recommendations to the applicant based on whether an impact on heritage resources is anticipated. One of three possible recommendations is formulated:

(1) The heritage resources in the area proposed for development are sufficiently recorded - The surveys undertaken in the area adequately captured the heritage resources. There are no known sites which require mitigation or management plans. No further heritage work is recommended for the proposed development.

This recommendation is made when:

- enough work has been undertaken in the area
- it is the professional opinion of CTS that the area has already been assessed adequately from a heritage perspective for the type of development proposed

(2) The heritage resources and the area proposed for development are only partially recorded - The surveys undertaken in the area have not adequately captured the heritage resources and/or there are sites which require mitigation or management plans. Further specific heritage work is recommended for the proposed development.

This recommendation is made in instances in which there are already some studies undertaken in the area and/or in the adjacent area for the proposed development. Further studies in a limited HIA may include:

- improvement on some components of the heritage assessments already undertaken, for instance with a renewed field survey and/or with a specific specialist for the type of heritage resources expected in the area
- compilation of a report for a component of a heritage impact assessment not already undertaken in the area
- undertaking mitigation measures requested in previous assessments/records of decision.

(3) The heritage resources within the area proposed for the development have not been adequately surveyed yet - Few or no surveys have been undertaken in the area proposed for development. A full Heritage Impact Assessment with a detailed field component is recommended for the proposed development.