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BACKGROUND INFORMATION DOCUMENT (BID) TO NOTICE OF INTENT TO DEVELOP (NID) IN TERMS OF SECTION 38(8) OF THE NATIONAL HERITAGE RESOURCES ACT, 1999 (ACT 25 OF 1999)

PROPOSED PIENAARSTRAND SEWER INFRASTRUCTURE ALONG MORRISON ROAD, EEKHORING STREET AND BITOU STREET IN GREAT BRAK RIVER, MOSSEL BAY MUNICIPALITY, WESTERN CAPE PROVINCE

Prepared for Applicant: Mossel Bay Municipality

Date: 05 March 2026

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1. INTRODUCTION

Cape Environmental Assessment Practitioners was appointed by Mossel Bay Municipality to submit to Heritage Western Cape (HWC) a Notice of Intent to Develop (NID) in terms of Section 38(8) of the National Resourses Act, 1999 (Act 25 of 1999) with relation to the proposed development of sewer infrastructure along Morrison Road, Eekhoring Street and Bitou Street (Great Brak River, Mossel Bay Municipal District, Western Cape Province).

The primary objective of the Mossel Bay Municipality is to **upgrade** two (2) **existing** sewer conservancy tanks by converting them into fully functional sewer pump stations (Figure 1). The conversion of these tanks into pump stations will necessitate the installation of **new** sewer pipelines. These pipelines will run along Morrison Road, beginning at Eekhoring Street (Glentana side) and ending at Dolphins Creek Golf Estate (Great Brak side) (Figure 2).

Figure 1: Locality map of two existing conservancy tanks to be upgraded into pump stations (RED crosses).

Figure 2: Locality map of proposed sewer pipelines along Morrison Road, extending from Eekhoring Street to Dolphins Creek Golf Estate, Great Brak River, Mossel Bay Municipal District (RED solid line).

The majority of the new sewer pipelines will be installed within the Morrison Road Reserve using the **pipe cracking method**. Pipe cracking, also referred to as pipe bursting, is a trenchless technique that replaces existing pipelines without the need for extensive trench excavation. Instead, the process fractures the old pipe while simultaneously drawing a new pipe into position. In this case, the proposal is to replace the existing old asbestos water pipeline with the new sewer pipeline. This approach significantly reduces excavation and soil disturbance (Figure 3).

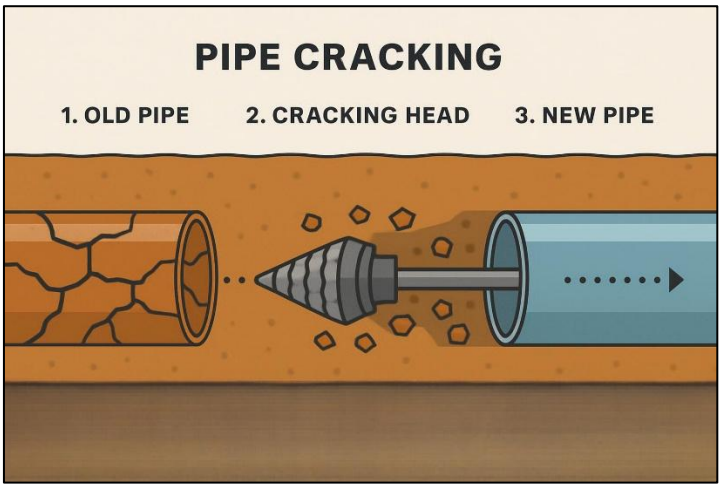

Figure 3: Example of Pipe Cracking.

The **pipe jacking method** will be used where the pipeline crosses Morrison Road. This method is also a trenchless construction method that installs underground pipelines by using high capacity hydraulic jacks to push precast pipes through the ground. This method minimize the construction footprint and overall disruption to the surrounding environment.

Standard trenching will be limited to areas where the pipe-cracking method cannot be applied, such as sections where the old asbestos water pipeline runs beneath residential erven. In these cases, the trench will be restricted to a width of 1 m and located mainly within the Morrison Road Reserve.

At present, the Glentana sewer network relies on conservancy tanks that are emptied weekly by municipal services. This system has become increasingly expensive and difficult to manage as the area has densified. During peak holiday seasons, the tanks often exceed their storage capacity, requiring daily emptying. In some cases, overflows have already been reported. It is therefore necessary to implement these modifications to ensure sustainable, cost-effective, and reliable sewer management for the Glentana and Great Brak area.

2. DETAILED PROJECT DESCRIPTION

It is the intention of the Mossel Bay Municipality (Applicant) to convert two (2) existing conservancy tanks into pump stations (Figure 1). These modifications to the existing tanks will require new sewer pipelines to be installed (Figure 2).

Eekhoring Pump Station (PS1)

The Eekhoring Street Conservancy Tank, to be converted into the Eekhoring Pump Station (PS1), is located in the road reserve of Eekhoring Street (Street Parcel ID: RE/66/251) (Figure 4). The existing tank covers a footprint area of ±13m^2 and is currently servicing 20 residential properties.

Figure 4: Existing conservancy tank (RED stippled outline). Upgrade to take place inside the existing structure. A new pumping line will be installed via pipe jacking to cross Morrison Road (BLUE stippled line).

The planned upgrade to this tank will take place inside the existing structure. The tank will be divided into separate chambers using masonry walls, and fitted with mechanical sewer pumps together with the necessary pipework.

From this tank, a new pumping line will be installed. This will consist of a 90mm Class 12 HDPE pipe, laid through trenching and by pipe jacking to cross Morrison Road (Figure 4).

Pienaarstrand Pump Station (PS2)

The Pienaarstrand Conservancy Tank, to be converted into the Pienaarstrand Pump Station (PS2), is located on municipal property at Bitou Street (Erf 554). The existing tank covers a footprint area ±14m² and is currently servicing 95 residential properties (Figure 5).

Figure 5: Existing conservancy tank along Bitou Street to be converted into a pump station (RED stippled outline).

The upgrade to this tank will include the construction of a new pump sump and valve chamber alongside the existing structure. This addition will expand the overall footprint from ±14m² to ±24m² (Figure 5). Minor pipework and sewer manhole improvements will be carried out around the tank area, all within municipal property boundaries.

The pumping system will connect to the existing 110mm uPVC rising main, which will in turn link to a new 110mm Class 12 uPVC rising main to be installed along Morrison Road.

New sewer pipelines

The new sewer pipelines cover a length of approximately 3840m.

The proposal is divided into three (3) sections (breakdown provided below).

Section 01: New Ø90mm Rising Main

Commencing at Pump Station 1 (PS1) in Eekhoring Street, the pipeline alignment follows Morrison Road reserve for ±1.33 km, where it will tie in to a new transfer manhole to be connected to the existing gravity sewer system at Manatoka Lane (Figure 6).

Method of Installation will be a combination of:

- Pipe Jacking at road crossings
- Pipe Cracking into an existing Ø100mm AC water pipeline
- Standard Trenching (max 1m wide trench)

Figure 6: New Ø90mm Rising Main. BLUE line: Sewer Pipeline. RED polygon: Max Disturbance Footprint.

Section 02: New Ø160mm Gravity Line

Extending from the new manhole in Pienaar Street to the existing manhole in Manatoka Lane traversing Erf 507, Morrison Road and Erf 516 (±0.1km in length) (Figure 7). Installation will be via Pipe Jacking & standard trenching.

Figure 7: New Ø160mm sewer pipeline. GREEN line: sewer line. RED polygon: Max Disturbance Footprint.

Section 03: New Ø110mm Rising Main (±2.41km)

Extending from Manatoka Lane to Dolphins Creek Golf Estate (±2.41km in length) (Figure 8). The pipeline will be installed within the road reserve of Morrison Road with a short section (±350m) within the building line of 7/252 Searles.

Method of Installation will be a combination of Pipe Jacking at road crossings, Pipe Cracking into the existing Ø100mm AC water pipeline and standard trenching (max 1m wide trench).

Figure 8: New Ø110mm sewer pipeline. YELLOW line: Sewer Pipeline. RED Polygon: Max Disturbance Envelope.

A substantial portion of the pipeline will be installed within an existing redundant water pipeline via pipe cracking, thereby reducing excavation and limiting environmental and heritage impacts.

The Basic Assessment process is currently in progress, with the Notice of Intent having been submitted to the DEA&DP on 06 October 2025. Feedback from the DEA&DP is awaited.

3. DESCRIPTION OF THE STUDY AREA

The study area includes the road reserve of Morrison Road and Eekhoring Street, Municipal Public Property on Erf 554, building lines of private residential erven 507 and 516 and building line of 7/252 Searles.

The study area is already **transformed**:

- Located within the **Urban Edge of Great Brak River**, dominated by residential development.
- Contains extensive **service infrastructure** (fibre, electrical, water pipelines, stormwater channels).
- Historical aerial imagery confirms progressive transformation from natural thicket (1939) to full urbanisation (2025).

Both the proposed Eekhoring Pump Station and Pienaarstrand Pump Station are situated within areas characterized by lawn and existing sewer infrastructure (existing conservancy tanks & sewer pipelines).

According to Confluent Environmental (specialists who conducted aquatic, biodiversity and fauna assessments in the study area) the proposed sewer infrastructure is largely positioned within already transformed sections of an established residential area. The Morrison Road reserve does not encompass threatened ecosystems, Critical Biodiversity Areas, or Ecological Support Areas. While some patches of sensitive vegetation are present in the broader vicinity, these occur mostly outside the project's area of influence. In instances where vegetation is included, the impact on overall habitat integrity is considered minimal.

Civil Engineers have further noted that the study area contains existing service infrastructure such as fibre lines, electrical lines and water pipelines, confirming that the area has already been disturbed. A long section of the pipeline will be installed within an existing redundant water pipeline via pipe cracking, thereby minimizing additional ground disturbance.

Given the already transformed nature of the study area, the project will not have an impact on heritage or agricultural resources. No heritage features of significance are present within the affected footprint. The dominance of residential infrastructure and service networks underscores that the project area has long been disturbed and does not contribute to heritage conservation.

Kindly refer to the photographs below, taken by the botanical/biodiversity specialist of the study area (Confluent Environmental, 2025).

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4. BRIEF HISTORIC BACKGROUND

Brief Historical Background of Great Brak River

During the 18th and early 19th centuries, farms such as Wolwedans (1731), Voorburg (1748), Rheeboksfontein (1762), and Sorgfontein (1779) were established for grazing and hunting. In 1777, the Dutch East India Company created a woodcutter's post near George to regulate forest harvesting and supply timber to Cape Town, though transport difficulties arose due to river crossings, including the Groot Brak River. An outspan was later established on the eastern banks of the river, opposite Wolwedans, and is recorded on maps from 1814 and 1901 (Source: Great Brak Sewer System Upgrades NID submitted by Perception Planning, 2024).

George was founded in 1811, prompting the need for improved access routes. In 1844, a wooden bridge was built across the Groot Brak River, though it proved short-lived; records from 1849 show heavy wagon traffic across the crossing. Under British administration (c. 1806–1880), agricultural activity intensified, with quitrent grants formalizing land use for grazing and hunting (Source: Great Brak Sewer System Upgrades NID submitted by Perception Planning, 2024).

Brief Historic Background of Lot 1389

From a colonial perspective, Morrison Road forms part of early *Lot 1389*, later reframed in 1851 as the farm *Eigendomsgrond 251*. This property, granted in freehold to Marthinus Christoffel Botha in 1852, was also known as "Botha's Freehold" and measured about 317 ha, extending along the coastal strip between the Great Brak River and Hoogekraal. *Eigendomsgrond* was bordered by the farms Voorbrug (granted in 1868 to Charles Searle) and Dwarsweg (granted in 1818 to Hendrik Louis Boshoff, later transferred to M.C. Botha in 1910). Early diagrams of *Eigendomsgrond* show no buildings near Lot 1389, though the alignment of the current railway line is already indicated (Figure 9) (Source: Erf 720 Dwarswegstrand NID submitted by Perception Planning, 2022).

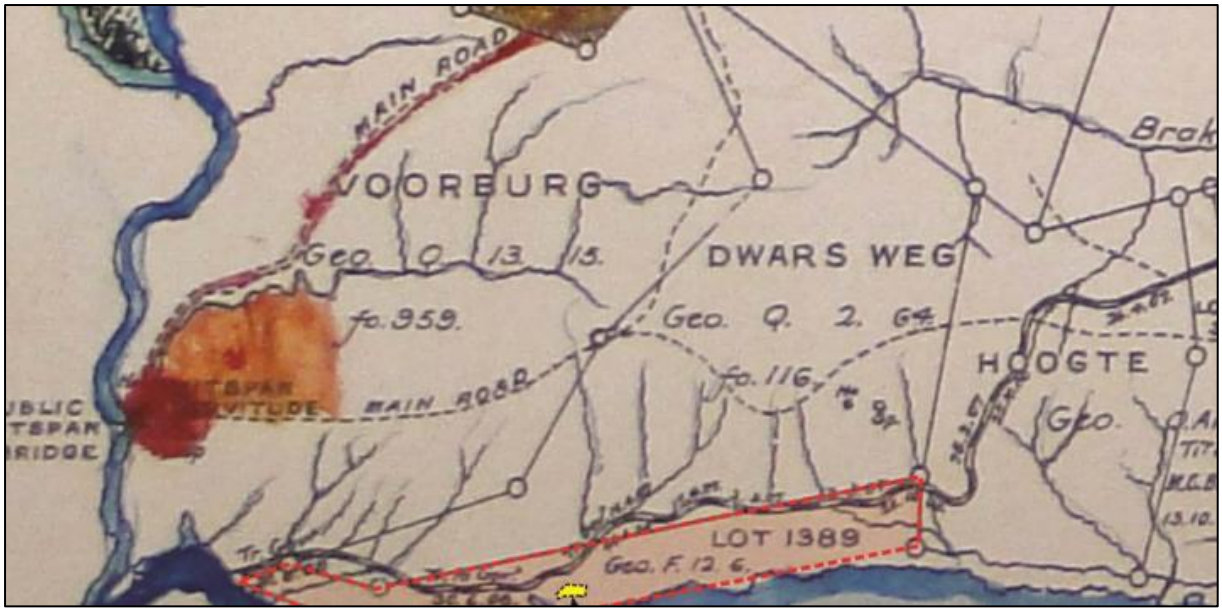

Figure 9: Morrison Road within LOT 1389 (South of the Railway Line).

Historical background research did not reveal any significant heritage-related features within the study area. It is considered unlikely that more detailed archival investigation would yield additional meaningful information regarding past land use or broader heritage themes associated with the site.

Historical Aerial Imagery

Summary of Landscape Changes (1939 – 2004) (Confluent Environmental, 2025) (Figure 10):

- **1939**
  - Area dominated by natural woody thicket and coastal forest.
  - Large bare dune field present (later stabilised).
  - Railway line already established; Morrison Road not yet built.
  - Agricultural activity visible, though much natural vegetation remained.
  - Sewer line–railway reserve area densely vegetated.
- **1991**
  - Morrison Road constructed, linking to residential areas in the east.
  - Dune field no longer visible (stabilised).
  - Agricultural fields south of the road abandoned, beginning to revert to woody thicket.
  - Vegetation type (strandveld vs. Milkwood Thicket/Coastal Forest) indistinguishable from imagery.
- **2004**
  - Residential development expanded, especially west Pienaarstrand and Dolphins Creek.
  - Agricultural areas north of the railway line undergoing natural revegetation.
  - Woody thicket gradually recovering in previously disturbed areas.

- **2025**
    - Residential development continued, with much of the project area now urbanised.
    - Only one agricultural field remains, located north of Morrison Road in the eastern section.
    - Remnant patches of natural vegetation persist between urbanised areas.
    - Abandoned agricultural fields show partial recovery but are increasingly dominated by invasive species such as Rooikrans (Acacia cyclops), castor bean (Ricinus communis), and large stands of Eucalyptus spp.

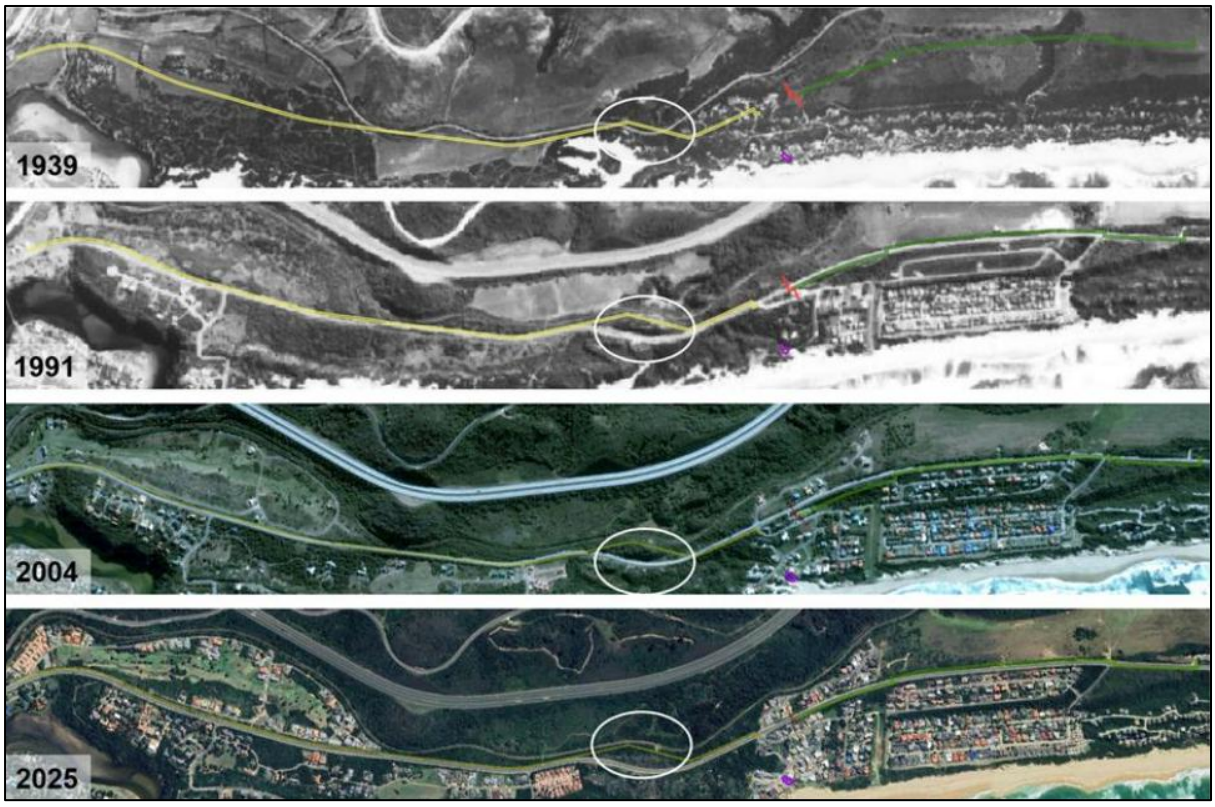

Figure 10: A series of historical imagery for the landscape surrounding the proposed new sewer infrastructure for Pienaarstrand (Confluent Environmental, 2025).

5. HERITAGE RESOUCES AND ISSUES

5.1. Visual

Due to the proposed sewer infrastructure being installed underground (including the pump stations), it is our considered opinion that the proposal will not transform the character of the Morrison Road reserve. The study area are transformed and located within the Urban Edge of Great Brak River.

6.2. Archaeological

The majority of the proposed sewer infrastructure is located within the Morrison Road reserve, which has already been transformed through the presence of existing services infrastructure such as electrical lines, fiber connections, water pipelines, concrete walkways and concrete swale structures for stormwater management. Additional sections fall within the building lines of private properties and municipal land, both of which are characterized by lawn areas and existing service infrastructure (existing conservancy tanks and sewer pipelines). It must also be noted that a large section of the proposed sewer line will be installed within an existing redundant water pipeline via pipe cracking, minimizing surface disturbance.

According to Perception Planning, there have been no archaeological research projects in the vicinity of Great Brak River. The closest significant archaeological sites are those of Pinnacle Point, near Mossel Bay, about 19km to the south of the study area. This World Heritage site is located on the coast, while the study area is located inland from the coastline.

Peter Nilssen (CARM) carried out an archaeological heritage scoping survey on a property located next to Morrison Road reserve where the new sewer pipelines will be installed (Figure 11 – red stippled outline). The survey confirmed that low-density scatters and isolated Stone Age artifacts occur, suggesting that similar traces could exist in the area. However, the steep, densely vegetated ravine was considered an unlikely setting for past human occupation. As a result, the site was assessed as having **low archaeological sensitivity**, with no indication of heritage resources. Given that residential developments are already underway nearby, it is unlikely that archaeological record be impacted.

A Notice of Intent to Develop (NID) application, located adjacent to the Morrison Road reserve and opposite the proposed Eekhoring Pump Station, was submitted by Perception Planning in 2022 ("*Proposed Development of a Resort on a Portion of Erf 720, Dwarswegstrand, Mossel Bay District and Municipality*" - HWC Ref: 2208 2902) (Figure 11 – yellow stippled outline).

Figure 11: Location of the archaeological survey on Farm Eigendomsgrond 4/251 in relation to the NID study area submitted by Perception Planning for Erf 720 (SAHRIS, 2022, as edited by Perception Planning). The proposed sewer lines are to be installed within the Morrison Road reserve towards Dolphins Creek Golf Estate (red arrow) next to these two study areas. The orange filled circle indicates the locality of the photograph taken in Figure 12. The purple filled circle indicates the locality of the photograph taken in Figure 13. The green-filled circle indicates the locality of the photograph taken in Figure 14. The blue-filled circle, as edited by Cape EAPrac, indicates the proposed Eekhoring Pump Station (Figure 15).

Perception Planning, referencing the above findings of Nilssen (2007), noted that the existing urban development pattern and intensity in the immediate vicinity, together with earthworks undertaken during the construction of Morrison Road and historical vegetation clearance visible in 1940 aerial imagery, suggest that significant archaeological resources are unlikely to be affected.

In response to the NID, HWC confirmed that no further action under Section 38 of the National Heritage Resources Act (Act 25 of 1999) is required since there is no reason to believe that heritage resources be impacted.

Kindly refer to below photographs of the study area (Morrison Road reserve) in relation to the archaeological heritage scoping survey (Nillsen, 2007) and Erf 720 (Perception Planning, 2022).

Figure 12: Eastward view along the Morrison Road reserve, showing the location of the proposed 90 mm sewer rising main. Photograph taken adjacent to the site where Dr Peter Nilssen conducted an archaeological survey (SAHRIS Map ID 01892).

Figure 13: Westward view along the Morrison Road reserve, showing the location of the proposed 90 mm sewer rising main. Photograph taken adjacent to the site where Dr Peter Nilssen conducted an archaeological survey (SAHRIS Map ID 01892).

Figure 14: Westward view along the Morrison Road reserve, showing the location of the proposed 90 mm sewer rising main. Photograph taken adjacent to the site where Perception Planning submitted a NID to HWC (Erf 720, Dwarswegstrand – Yellow Arrow).

Figure 15: End location of the proposed 90 mm sewer rising main at the Eekhoring Conservancy Tank to be internally upgrade into a pump station (PS1).

6.3. Paleontology

According to the South African Heritage Resources Authority (SAHRA) palaeontological sensitivity map, the study area for the proposed sewer infrastructure is classified as high sensitivity (Figure 16). However, the results of the field investigation clearly indicate that no palaeontological resources are present, owing to the extensively disturbed and transformed condition of the Morrison Road reserve.

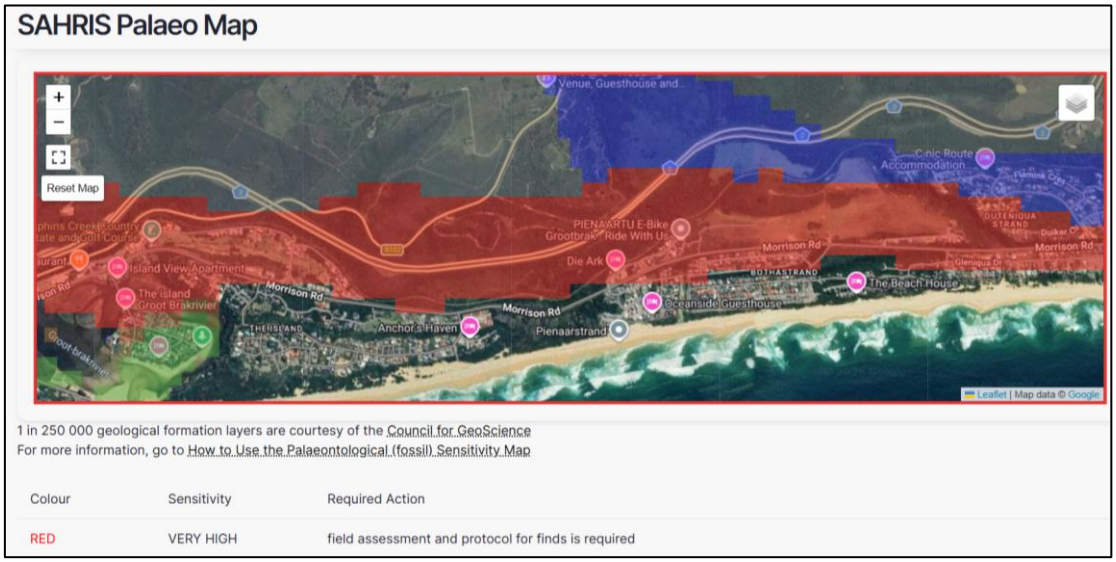

Figure 16: SAHRIS Palaeo Map of study area – Morrison Road reserve.

Further evidence is provided by the **Notification of Intent to Develop** (NID) submitted for Erf 720 (property located adjacent to the study area) (Figure 11), in which Perception Planning concluded that the proposal is unlikely to impact palaeontological resources. This conclusion was based on the established pattern of urban development, previous earthworks, and vegetation clearance within the sandy soils underlying the area.

The **1:50 000 Geological Survey Map (3322CD George)** identifies the Morrison Road reserve as comprising unconsolidated, medium-grained, calcareous sands of the Strandveld Formation (Cenozoic – Quaternary) (Figure 17). Expert opinion from Dr Peter Nilssen confirms that the fossil potential of these sands is poor, with shallow excavations expected to affect only the upper loose sands. These horizons are not anticipated to contain significant fossil heritage resources, given their low to marginal palaeontological sensitivity.

In addition to the above, the majority of the pipeline will be installed using the **trenchless pipe-cracking method**, which involves the like-for-like replacement of an existing redundant water pipeline. This approach substantially limits soil disturbance and further reduces the likelihood of any impact on palaeontological resources.

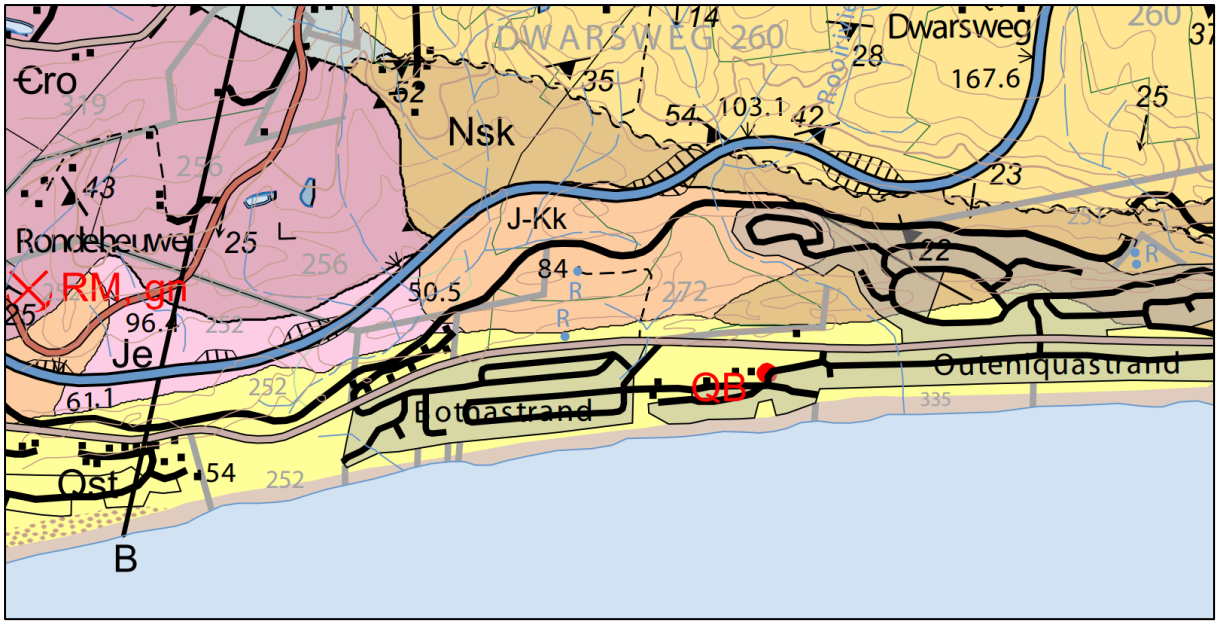

Figure 17: Geological Map of the study area (Morrison Road reserve).

When considered collectively, the SAHRA sensitivity mapping, field investigation results, geological evidence, expert opinions, and construction methodology all point to a clear and consistent outcome: the proposed sewer infrastructure presents a negligible risk to palaeontological heritage resources. The already disturbed condition of the road reserve, the poor fossil potential of the Strandveld Formation sands, and the limited excavation requirements provide a robust basis for concluding that the project will have a no palaeontological impact.

7. RECOMMENDATION

Specialist heritage studies recently carried out on nearby properties found that the proposed development is unlikely to impact any archaeological & palaeontological sites. Together with the findings of this assessment, we are confident that the proposal will not affect heritage resources of cultural importance. On this basis, no further heritage studies are considered necessary. This BID demonstrates that:

- The area is already disturbed by road construction and service networks.
- Previous surveys conducted by Peter Nilsen & Perception Planning on nearby properties confirmed low archaeological sensitivity, with no significant resources identified.
- Although SAHRIS maps indicate high sensitivity, geological analysis shows the Strandveld Formation sands have poor fossil potential. Shallow excavations will not affect fossil heritage.
- The study area is already substantially altered and urbanised. The sewer pipelines be installed largely within transformed areas and redundant pipelines, minimizing disturbance.
- Heritage sensitivity is low to negligible, with no significant resources present (obtained from studies on nearby properties).
- The majority of the pipeline will be installed using the **trenchless pipe-cracking method**, which involves the like-for-like replacement of an existing redundant water pipeline. This approach substantially limits soil disturbance and further reduces the likelihood of any impact on palaeontological resources.
- The proposal is essential for sustainable municipal service delivery.

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

8. REFERENCES

- De Kock, S. 2022. Background Information Document: Proposed Development of a resort on a Portion of Erf 720 (Dwarswegstrand) Mossel Bay District and Municipality. Perception Planning, George, Western Cape.
- Nilssen, P. 2009. Archaeological Heritage Scoping Survey: Remainder Portion 7 of the Farm Eigendomsgrond 251, Pienaarstrand, George, Western Cape Province: Proposed Residential Development.
- Thamm, A.G. and Johnson, M.R. 2006. The Cape Supergroup. In: Johnson, M.R., Anhaeusser, C.R. and Thomas, R.J. (Eds), *The Geology of South Africa*. Geological Society of South Africa, Johannesburg/Council for Geoscience, Pretoria, 443-460.