



## **SITE SENSITIVITY VERIFICATION REPORT**

PROPOSED MUIZENBERG BEACH  
BEACHFRONT REFURBISHMENT ON  
ERVEN 87143, 87374-RE, 87142-RE,  
87140-RE 87138, 87137 AND 87158-  
RE, MUIZENBERG

### **APPLICANT**

CITY OF CAPE TOWN: COASTAL  
MANAGEMENT BRANCH

MAY 2023



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# INTRODUCTION

## SCREENING TOOL AND PROTOCOLS FOR ASSESSMENT

The Minister of Environment, Forestry and Fisheries on 5 July 2019 promulgated regulations requiring the compulsory submission of a report generated by the national web based environmental screening tool, when submitting applications for environment authorisation (GN 960 of 2019). The screening tool generates a report based on mapping of environmental sensitivities and on proximity to other features such as defence installations and civil aviation installations.

On 20 March 2020, the Minister published Procedures for the Assessment and Minimum Criteria for Reporting on Identified Environmental Themes in terms of sections 24(5)(a) and (h) and 44 of the National Environmental Management Act, 1998 (GN 320 of 2020). These Procedures prescribe the general requirements for undertaking site sensitivity verification and for protocols for the assessment and minimum report content requirements of environmental impacts for specific environmental themes identified by the screening tool. Further Protocols were gazetted on 30 October 2020 for terrestrial plant and animal species assessment in GN 1150 of 2020.

## SITE SENSITIVITY VERIFICATION

Each set of specialist protocols provides for a Site Sensitivity Verification to be undertaken by an Environmental Assessment Practitioner (EAP) or suitable specialist, prior to commencing with specialist assessment and reporting on the identified themes. The purpose of a site sensitivity verification is to confirm the current use of the land and potential environmental sensitivity of the site, and to compare these with the sensitivity mapped or identified by the screening tool. The outcome of the verification must be recorded in the form of a site sensitivity verification report (**this report**) that is submitted together with the relevant environmental assessment report and confirms or disputes the environmental sensitivities mapped by the screening tool. The site sensitivity verification is to confirm the actual state of the site as compared with that what has been identified by the screening tool. The site sensitivity verification is intended to confirm or refute the need to employ specialists as identified in the screening report.

This report is prepared in accordance with the requirements of the Protocols as published in terms of GN 320 of 2020 and GN 1150 of 2020. It has been prepared Tom Smyth and the appointed environmental assessment practitioner (Tarryn Solomon of Infinity Environmental EAPASA 2019/1671) based on a desktop analysis, site inspection, and other available information.

## METHODOLOGY

A site sensitivity verification was undertaken by the EAP in February 2023. It consisted of the following key aspects:

- A desktop review of
  - Satellite imagery using Google Earth Pro.
  - High resolution aerial imagery dated 2022 provided by the City of Cape Town.
  - Historical and archival material relating to the prior developments and uses of the area (including aerial imagery from 1935 – 2022).
  - Two specialist coastal modelling reports (1. Wave and sediment transport modelling report; 2. Wave overtopping and reflection modelling) dated August and November 2022, conducted by PRDW Coastal Port and Coastal Engineers
  - A geotechnical report compiled by HHO Consulting Engineers
  - A socio-economic impact assessment compiled by Urban-Econ Development Economists
- A site inspection in August 2022, which included walking around the site and consideration of the vegetation, public use, landscape, and topography.

This report presents the outcomes of the site sensitivity verification as described above.

# FINDINGS

## CURRENT LAND USE

Muizenberg beachfront is a popular destination for locals and tourists, with its sandy beaches, gentle waves and warm waters attracting visitors year round. The area has undergone significant development over the years, with new apartment buildings, retail spaces, and restaurants opening. One of the most notable developments in recent years has been the establishment of the Surfer's Corner, a section of the beachfront that has become a hotspot for surfers and beachgoers. The beachfront has been upgraded to include amenities such as showers and changing rooms. The proposed project site is in the immediate vicinity of surfers corner. The entire project area has already been extensively developed, leaving no terrestrial natural habitat intact. This project seeks only to upgrade/refurbish the current developed area, and will not expand beyond the untouched coastline.



**Figure 1: Site of the proposed development**

Footprint of the proposed Muizenberg beach beachfront upgrade overlaid on satellite imagery showing the extent of development in the area (2023 © Maxar Technologies, Google Earth Pro) .

## VEGETATION COVER

There is no naturally occurring indigenous vegetation cover left in the vicinity of the Muizenberg beachfront. Any plants in the area have been planted during previous beachfront improvement projects (the vast majority of vegetation being old grass patches).



**A North-East facing view of the site showing the extensive development**



**An East facing view of the site, showing existing buildings as well as the only existing vegetation in the area – grasses planted by the city in a previous beachfront improvement project.**



Another North-East facing view of the site. This is the central area of the site. The ablution block (visible on the right) will be moved back (landward) from the beach. The current sea wall is visible in the foreground of the photo.



South-West facing view of the current promenade. More non-indigenous grass is seen on the right. The gravel parking lot visible at the end of the promenade will be formalized.

## SCREENING REPORT SUMMARY

The Procedures for the Assessment and Minimum Report Content Requirements for Environmental Themes (GN 320 of 2020) ('the Protocols') came into effect on 9 May 2020 and 30 October 2020. These protocols mandate site sensitivity verifications for identified Themes on the site based on the National Environmental Screening Tool Report. These themes include for the subject site:

- Agriculture Theme (High sensitivity)
- Animal Species Theme (Medium sensitivity)
- Aquatic Biodiversity Theme (Very High sensitivity)
- Archaeological and Cultural Heritage Theme (Very High sensitivity)
- Civil Aviation Theme (High sensitivity)
- Defence Theme (Medium sensitivity)
- Palaeontology Theme (Medium sensitivity)
- Plant Species Theme (Medium sensitivity)
- Terrestrial Biodiversity Theme (Very High sensitivity)

The following specialist assessments or verifications are identified by the screening tool:

- Landscape/Visual Impact Assessment
- Archaeological and Cultural Heritage Impact Assessment
- Palaeontology Impact Assessment
- Terrestrial Biodiversity Impact Assessment
- Aquatic Biodiversity Impact Assessment
- Marine Impact Assessment
- Avian Impact Assessment
- Geotechnical Assessment
- Socio-Economic Assessment
- Plant Species Assessment
- Animal Species Assessment

## SENSITIVITY THEME COMMENTS

### AGRICULTURE THEME

The site is classified as High sensitivity due to a moderate-high land capability rating in terms of the National Land Capability dataset that takes climate and soil type into account.

The entire site is completely developed and not appropriate for any kind of agricultural use. Almost the entire site is covered in concrete/paving material (only other sections are gravel or grass). Finally, the site is located on the beachfront which is not conducive to farming thus the site has no agricultural sensitivity.

### ANIMAL SPECIES THEME

The site is classified as medium sensitivity due to the apparent presence of the Arachnida-Erigonops littoralis. There is very little information available on this species of African Dwarf Spider.

Historically no sightings of this spider have been documented in the Muizenberg area. Considering the entire area is already heavily developed, there is no added threat to this spider as a result of the planned refurbishment of the area. Therefore, it is confirmed that the site does not have any animal species theme sensitivity in respect of the identified species.

### AQUATIC BIODIVERSITY

The site is classified as having a very high sensitivity in terms of aquatic biodiversity for three reasons: It is considered a strategic water source area, a wetland/estuary, and a priority freshwater ecosystem area.

The site is relatively close to Sandvlei and Zeekoevlei which is likely why the “wetlands and estuaries” category was flagged by the screening tool. Sandvlei and Zeekoevlei are 1.3 km and 5.2 km respectively from the project site. Neither wetlands will be affected by the project due to proximity. The entire project area is already entirely developed and no freshwater sources are present, thus a classification of the area as a “strategic water source area” and “freshwater ecosystem priority area quinary catchment” is not accurate. Considering all this, the site does not have any aquatic biodiversity sensitivities.

### **ARCHAEOLOGICAL AND CULTURAL HERITAGE THEME**

The site is classified as having a very high sensitivity due to being within 2km of a grade II heritage site (the Muizenberg Train Station). The station is not included in this project, thus will not be directly affected. The relevant authorities have been consulted for changes planned adjacent to the station.

The City of Cape Town's Heritage Branch had completed and submitted a Notice of Intent to Develop (NID) to Heritage Western Cape (HWC) in March 2020. A comment from HWC was subsequently received confirming that no heritage studies were required.

Based on further review of the development proposal in late 2022, a second NID was submitted based on particular aspects of the development proposal not being contained in the 2020 NID submission. Although the outcome of the 2023 submission requested a Heritage Impact Assessment (HIA) with additional studies, the outcome was refuted by the City of Cape Town's Heritage department. HWC's responded accordingly noting the following: *“The 2023 application is substantially in accordance with that of the 2020 with the addition of the removal of ad-hoc structures deemed to be not conservation worthy. These structures will require the submission of a Section 34 application as they are older than 60 years.”* They also advised that the that the applicant withdraw the 2023 NID application by formal letter to HWC, rendering the 2023 request for an HIA void and the 2020 comment still valid and actionable.

Following a meeting with the South African Heritage Resources Agency (SAHRA) in April 2023, an HIA was requested for the portion of the work area that falls below the highwater mark.

A specialist HIA including a maritime archaeological impact assessment was conducted. Findings are included within the dBAR.

### **CIVIL AVIATION THEME**

The site is classified as having high sensitivity due to being partially covered by “dangerous and restricted airspace”. Additionally, falling between 15 and 35 km from a major civil aviation aerodrome and a civil aviation radar classifies the other half of the development area as medium sensitivity.

The potential for a new development to impact civilian aviation radar functionality or be an obstacle to air traffic is likely to be the reason for part of the area being flagged as medium sensitivity. The South African Civil Aviation Authority (SACAA) requires the evaluation of developments/structures which may have serious effects on radar functionality and general aviation safety. Structures above taller than 45 m above ground level and overhead cables/wires crossing valleys or major roads fall into this category.

The height of the proposed structures will be much lower (single story) than the surrounding developments (4-5 stories across the street), with most of the project being focused on ground level construction like the sea wall re-construction and parking formalization.

The classification of dangerous and restricted airspace above part of the proposed site is likely as a result of the South African National Defence Force base in Simon's Town. This airspace is used for military aircraft operations and training. As discussed above, the development will not have any significant impacts on the airspace in the area.

For these reasons, the proposed project site has no civil aviation related sensitivities.

### **DEFENCE THEME**

The site is classified as having medium sensitivity due to apparently having a "military and defence site".

The screening tool does not provide any background information explaining the reason for this classification, and there is no formal guidance available on methods for determining a site's Defence Theme sensitivity. It is most likely the SANDF base and surrounding establishments in Simon's Town are the reason for the medium sensitivity classification. One of the only possible reasons for the medium sensitivity rating is due to the potential of new developments to negatively impact military radar or communications equipment. As discussed in the aviation theme, this development will not be building above the height of surrounding developments or installing any electrical equipment that has the potential to interfere with radar or communication equipment. Additionally, the naval base in Simon's Town is approximately 9.8 km away from the project and thus will not be impacted by the project in any way.

### **PALAEONTOLOGY THEME**

The site is classified as having medium and low sensitivity due to potentially containing features with Medium and low paleontological sensitivity.

The screening tool does not provide metadata indicating the reasons for such classifications. Considering the fact the site has already been extensively developed, and this project is a redevelopment (not expansion), it is not feasible that there are any intact fossils in the area that would not have been destroyed or lost during previous construction.

### **PLANT SPECIES THEME**

The site is classified as having medium sensitivity due to the apparent presence of 39 species with medium sensitivity and 1 species with low sensitivity.

As the site is already heavily developed and commercialised, it is not possible for these plants to exist at the project site. The only patches of vegetation in the area are raised plant beds (mainly grasses) that were planted during previous beachfront improvement projects. The site visit confirmed this (see photos of the area for further confirmation).



## **TERRESTRIAL BIODIVERSITY THEME**

The site is classified as having very high sensitivity due to the apparent presence of FEPA sub catchments and a critically endangered ecosystem.

As discussed in the plant species theme, there is no natural vegetation left in the area, thus there is no critically endangered ecosystem left to be disturbed by the proposed project. Additionally, there are no freshwater systems within the project area. Considering all of this, there is no reason for the site to have any terrestrial biodiversity sensitivity.

## **SPECIALIST ASSESMENT COMMENTS**

### **Landscape/Visual Impact Assessment**

A specialist landscape/visual impact assessment report was identified by the screening tool.

A landscape / visual impact assessment will not be undertaken as a vast component of the design concept and layout is being informed by landscape architecture. Landscape designs will be included in development proposal and will be considered in the basic assessment report.

Given the above, it is expected that the design of the proposal will not create any negative visual impact.

### **Archaeological and Cultural Heritage Impact Assessment**

Archaeological and Cultural Heritage Impact Assessment was identified by the screening tool. See above, archaeological and cultural heritage theme.

A specialist HIA including a maritime archaeological impact assessment was conducted for the work area that falls below the highwater mark, as requested by SAHRA. Findings are included in the draft basic assessment report.

### **Palaeontology Impact Assessment**

A specialist palaeontology impact assessment was identified by the screening tool, likely as a result of the medium sensitivity rating for the palaeontology theme. Considering the response to this theme and conclusion that there is no palaeontological sensitivity at the site, a specialist assessment is not necessary.

### **Terrestrial Biodiversity Impact Assessment**

A specialist terrestrial biodiversity impact assessment was identified as a result of the "very high sensitivity" terrestrial biodiversity theme rating generated by the site screening tool. Considering the response to this theme and conclusion that there is no terrestrial biodiversity sensitivity at the site, a specialist assessment is not necessary.

### **Aquatic Biodiversity Impact Assessment**

A specialist aquatic biodiversity impact assessment was identified as a result of the very high sensitivity aquatic biodiversity theme rating flagged by the site screening tool. Based on the response to this theme and conclusion that there is no aquatic biodiversity sensitivity in the proposed project area, a specialist assessment is not necessary.

### **Marine Impact Assessment**

A specialist marine impact assessment was identified, likely as a result of part of the project being partly on the beach front. However, none of the proposed activities will be undertaken below the low water mark, and will not therefore necessitate a Marine Impact Assessment.

Two coastal modelling reports have been written by PRDW Coastal Port and Coastal Engineers to determine and consider potential impacts on the marine hydrodynamics, the findings and recommendations of these studies will be presented in the basic assessment report.

### **Avian Impact Assessment**

A specialist avian impact assessment was identified by the screening tool. The tool bases its recommendations for avifaunal specialist assessments on the assumption of wind energy developments. As the site is already heavily developed (and no wind energy generation units are included in this project), birds will not be impacted by the refurbishment of the Muizenberg beachfront any more than they already are impacted, thus an avian impact assessment is not necessary.

### **Geotechnical Assessment**

A geotechnical assessment was identified by the screening tool. A geotechnical report has already been compiled by HHO Consulting Engineers and its findings have been taken into account. The basic assessment report will include the Geotechnical report and will highlight the findings.

### **Socio-Economic Assessment**

A socio-economic assessment was identified by the screening tool. A socio-economic report has been compiled by Urban-Econ Development Economists to inform the feasibility of the development. The report's findings will be included in the basic assessment report. No further socio-economic studies will be undertaken.

### **Plant Species Assessment**

A specialist plant species assessment was identified as a result of the Plant Species Theme and Terrestrial Biodiversity Theme sensitivity ratings.

Based on the reasons presented in the Plant Species Theme above, no impact assessment will be undertaken.

### **Animal Species Assessment**

A specialist animal species assessment was identified as a result of the Animal Species Theme and Terrestrial Biodiversity Theme sensitivity ratings.

Based on the reasons presented in the Animal Species Theme above, no impact assessment will be undertaken.

## **CONCLUSION**

The site sensitivity verification is intended to confirm or refute the need to employ specialists as identified in the screening report.

Based on the findings of the site sensitivity verification, it is confirmed that the site has no significant sensitivities under any of the identified themes, and no additional specialist assessments are therefore required.