

Rehabilitation of the Steenbras Water Treatment Plant (WTP) Access Road Repair

Site Sensitivity Verification Report (SSVR)

City of Cape Town

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1 Introduction and Project Description

The City of Cape Town (CoCT) proposes the rehabilitation of a section (referred to as “Slope 1”) of the Steenbras Water Treatment Plant (WTP) access road (Steenbras Dam Road). Slope 1 is located on Farm Faure Marine Drive (RE/933). The locality of the proposed rehabilitation area is shown in Figure 1 below.

The City of Cape Town (CoCT) proposes the rehabilitation/repair of a damaged section “Slope 1” of the Steenbras Water Treatment Plant (WTP) Access Road on Farm Faure 933, where the slope instability occurred as a result of flood damage. To address the slope damage, two slope stabilisation methods have been considered for the repair/rehabilitation of Slope 1: the Anchored gabion wall and Terramesh retaining wall. The purpose of assessing these methods is to determine the most environmentally and technically feasible for the proposed repair of Slope 1. The locality of the rehabilitation area is shown in Figure 1.

The Environmental Authorisation (EA) must be sought in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998) (“NEMA”) and Environmental Impact Assessment (EIA) Regulations 2014 (as amended) via the Basic Assessment process.

The scope includes this site sensitivity verification report (SSVR), which aims to describe the status of the baseline environment and verify the sensitivity ratings identified by the DFFE Screening Tool Report (STR) to determine which specialist assessments, as well as the type of assessment, are required for the application for EA.



Figure 1: Steenbras WTP Access Road rehabilitation area (Red)

2 Details of the Environmental Assessment Practitioner

Annexure A includes the CVs for the environmental team from Zutari. The Zutari environmental team for this project includes Jane Mahaba and Silindile Sibiya. Their experience and capabilities are summarised below.

JANE MAHABA is employed as a manager and EAP at Zutari. She has a diverse background in environmental management. Her expertise includes permitting, stakeholder engagement, compliance monitoring, and auditing. She has also been involved in impact assessments, environmental monitoring, and public participation processes.

As a project manager, she has led integrated environmental management processes, such as environmental impact assessments and the development of environmental management plans. Additionally, Jane has contributed to research and development efforts related to environmental, social and governance (ESG) products, with a focus on green economies and waste management.

Her qualifications include a Bachelor of Science in Ecology and Zoology, certification as a natural scientist, and registration as an environmental assessment practitioner.

She is registered as a Certified Natural Scientist with the South African Council for Natural Scientific Professions (SACNASP registration no. 119631) and is registered as a professional EAP with the Environmental Assessment Practitioners' Association of South Africa (EAPASA registration no. 2019/1551).

SILINDILE SIBIYA is a junior environmental consultant at Zutari. She has over 5 years' experience in the environmental consulting field. Her expertise includes environmental management, environmental impact assessments (EIAs) and environmental compliance monitoring. She is experienced compiling basic assessment reports for water projects, conducting public participation processes for these and environmental auditing. She has worked as an environmental control officer (ECO) for wastewater treatment works, water treatment works and reticulation projects. She also has experience in compiling water use license applications across different provinces in South Africa.

Her qualifications include a Bachelor of Science Honours (Environmental Science), Candidate Natural Scientist with the South African Council for Natural Scientific Professions (SACNASP registration no.122316) and is registered as an environmental assessment practitioner. She is registered as a professional EAP with EAPASA (registration no. 2021/3651).

3 Purpose of the Report

CoCT appointed Zutari to undertake the required Basic Assessment (BA) Environmental Process in terms of the National Environmental Management Act, 1998 (No. 107 of 1998; NEMA, as amended) and the 2014 Environmental Impact Assessment (EIA) Regulations (as amended) to seek authorisation for the proposed rehabilitation of slope 1 of the Steenbras WTP Access Road.

A Screening Tool Report (STR) was generated using the DFFE's online Screening Tool, and the theme sensitivities identified by the report are identified in **Table 1** below.

Table 1: Environmental sensitivities picked up by the national screening tool

Theme	Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
Agriculture Theme				X
Animal Species Theme		X		
Aquatic Biodiversity Theme	X			
Archaeological and Cultural Heritage Theme				X
Civil Aviation Theme			X	
Defence Theme				X
Plant Species Theme	X			
Terrestrial Biodiversity Theme	X			

Several specialist studies have been identified by the STR for inclusion in the environmental process. It is the responsibility of the Environmental Assessment Practitioner (EAP) to confirm this list and motivate for the exclusion of any of the identified specialist studies, as well as provide photographic evidence of the site situation. The specialist studies identified by the DFFE STR are as follows:

- Landscape/Visual Impact Assessment
- Archaeological and Cultural Heritage Impact Assessment
- Palaeontology Impact Assessment
- Terrestrial Biodiversity Impact Assessment
- Aquatic Biodiversity Impact Assessment
- Hydrology Assessment
- Socioeconomic Assessment
- Plant Species Assessment
- Animal Species Assessment

In accordance with the 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 NEMA, Zutari compiled this Site Sensitivity Verification Report (SSVR) to provide a rationale for the specialist studies to form part of the environmental process.

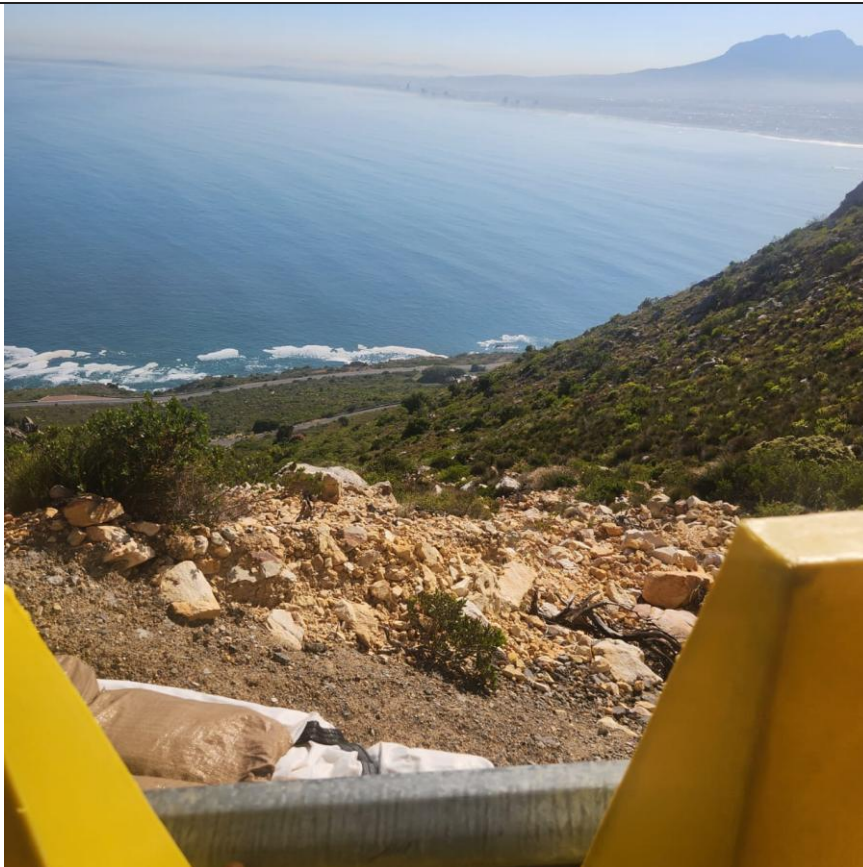
4 Site photographs



Temporary roadside reinforcement using sandbags and barriers to prevent further erosion of slope 1 along the Steenbras WTP access road



Natural water channel within the rocky terrain and dense fynbos vegetation within the proposed slope 1 rehabilitation area



Evidence of slope instability and erosion on slope 1 and views of the vegetation in the area (Kogelberg Sandstone Fynbos)



Temporary roadside reinforcement using sandbags and barriers to prevent erosion and support slope stability on the proposed rehabilitation area



Example of the blocked culvert and Kogelberg Sandstone Fynbos on the proposed slope 1 rehabilitation area



Dense Kogelberg Sandstone Fynbos vegetation in a mountainous landscape (proposed slope 1 rehabilitation area near the tar road). Natural water channel (encircled in yellow)



View of the Kogelberg Sandstone Fynbos and the damage to the slope 1 area

5 Desktop Analysis

According to the 2018 National Vegetation Map, the site falls entirely within the Kogelberg Sandstone Fynbos, which is listed in the National List of Threatened Ecosystems (Government Gazette, 2022) as a 'critically endangered' vegetation type.

According to the 2023 Western Cape Biodiversity Spatial Plan (WCBSP, 2023), there are Critical Biodiversity Areas at the site. There is no Ecological Support Area (ESA) on the site. (Figure 2) The site is located within CoCT conservation area (Not formally protected under the Protected Areas Act). The rehabilitation area also falls within the Kogelberg Biosphere Reserve

The National Wetlands Map indicates that there is a seep wetland located approximately 450m east of the rehabilitation area (not shown in Figure 3 below). There is also a non-perennial river passing through the middle of the proposed slope 1 rehabilitation area (see blue dotted line in Figure 3). The intersection of the rehabilitation area and the non-perennial river triggers the need to register a water use, as identified in the National Water Act, with the Department of Water Affairs (DWS).



Figure 2: Critical Biodiversity Areas (CBA)s.

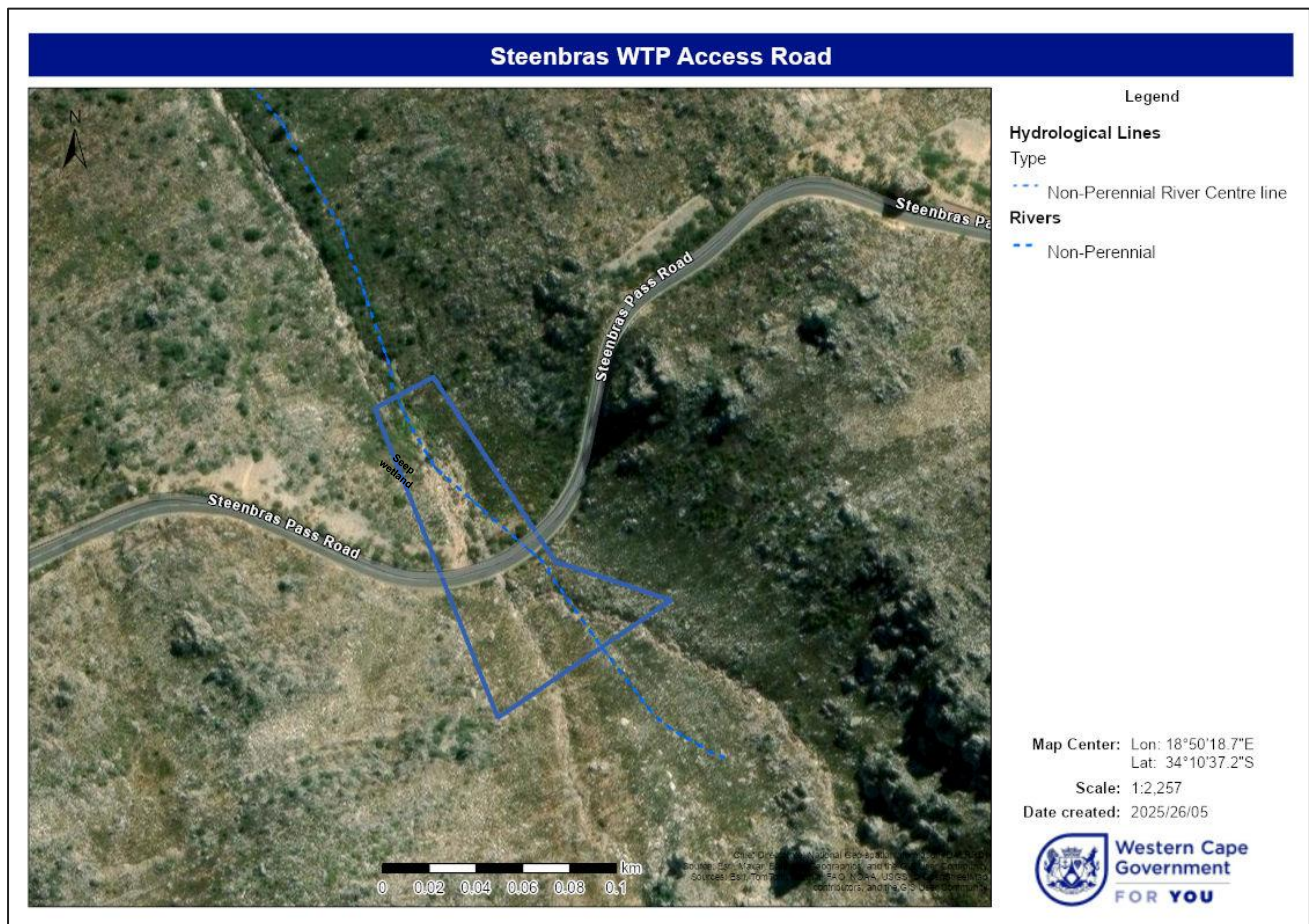


Figure 3: Aquatic Resources

6 Rationale for Specialist Studies

The STR sensitivity rating, verified sensitivity rating and the implications for specialist studies are disclosed for each of the relevant themes to follow:

- **Landscape/Visual Impact Assessment**
 - The STR recommends that a Landscape/Visual Impact Assessment be considered for the proposed project, even though a sensitivity has not been picked up for this theme.
 - The project is not located adjacent to any residential areas it will have minimal public visibility, it is not visible from the Steenbras viewpoint, there are no significant visual receptors. The proposed GTMS will blend in with the landscape. Therefore, a **Landscape/Visual Impact Assessment will not be undertaken** as part of the application for Environmental Authorisation.
- **Archaeological and Cultural Heritage Impact Assessment**
 - The DFFE STR gives the site a **Low** Archaeological and Cultural Heritage sensitivity.
 - A Notice of Intent to Development (NID) will be submitted to Heritage Western Cape (HWC)/ South African Heritage Resources Information System (SAHRIS). The outcome of the NID will determine whether an **archaeological and cultural heritage impact assessment will be undertaken** as part of the application for Environmental Authorisation.
- **Palaeontology Impact Assessment**
 - The DFFE STR gives the site a High Palaeontology sensitivity.
 - A Notice of Intent to Development (NID) will be submitted to Heritage Western Cape (HWC). The outcome of the NID, response from HWC will determine whether a **Palaeontology**

impact assessment will be undertaken as part of the application for Environmental Authorisation.

- **Terrestrial Biodiversity Impact Assessment**
 - The DFFE STR gives the site a **Very high** Terrestrial Biodiversity sensitivity.
 - A **terrestrial biodiversity impact assessment as per the protocols will be undertaken** by a biodiversity specialist. The report's findings will be included in the Basic Assessment Report.
- **Aquatic Biodiversity Impact Assessment**
 - The DFFE STR gives the site a **Very high** Aquatic Biodiversity sensitivity.
 - An **aquatic impact assessment as per the protocols will be undertaken** by an aquatic specialist. The report's findings will be included in the Basic Assessment Report.
- **Socio-Economic Assessment**
 - The DFFE STR does not provide a sensitivity rating for this theme but identifies a socioeconomic assessment as a required study.
 - The proposed rehabilitation of slope 1 of Steenbras WTP Access Road will only create jobs through the installation of the erosion protection structures. Therefore, having a limited and short-term positive impact on the socio-economic environment. A Socio-economic impact assessment is not deemed required as it would not add significant value over the proposed rehabilitation activities.
 - A **socioeconomic assessment will not be undertaken** by a socioeconomic specialist and included in the Basic Assessment.
- **Plant Species Assessment**
 - The DFFE STR rates the site as having a **Very High** plant species sensitivity.
 - With the very high-sensitivity areas, **the plant species theme will form part of the Terrestrial Biodiversity Assessment** as per the protocols by a botanical specialist. The report's findings will be included in the Basic Assessment Report.
- **Animal Species Assessment**
 - The DFFE STR gives the site a **high**-rating for-animal species sensitivity.
 - The site footprint is less than 1ha, therefore the likelihood of Species of Conservation Concern (SCC) occurring the area is low.
 - The **animal species theme will form part of the Terrestrial Biodiversity Report**, this will be included in the Basic Assessment Report.
- **Agricultural Impact Assessment (Not required by the STR)**
 - The DFFE STR gives the site a **Medium** for agricultural sensitivity.
 - Due to the nature of the project and the slope of the rehabilitation area, it is highly unlikely that agricultural activities could occur in the area. Therefore, an **Agricultural Compliance Statement will not be undertaken** in the Basic Assessment process.
- **Hydrology Assessment**
 - The DFFE STR does not provide a sensitivity rating for this theme but identifies a **Hydrology Assessment** as a required study.
 - Due to the nature of the project, the is unlikely to have significant impacts on surface water and groundwater. A **Hydrology Assessment will not be undertaken** as part of the Basic Assessment process.
- **Civil Aviation Theme (Not required by the STR)**

- The DFFE STR rates the site as **High** for civil aviation sensitivity but does not identify the need for a civil aviation specialist assessment. A
- According to the STR, the site area is located with 35km of a civil aviation radar.
- As per the Protocol for the Specialist Assessment and Minimum Report Content Requirements for Environmental Impacts on Civil Aviation Installations, **a Civil Aviation Compliance Statement will be included** with the Basic Assessment Report.
- **Defence Theme (Not required by the STR)**
 - The DFFE STR gives the site as **Low** for defence sensitivity and does not identify the need for a defence specialist assessment.
 - No negative impacts are expected on defence installations in the **Low** sensitivity areas, and therefore, **no further assessment will be undertaken**.

7 Sensitivity verification summary

Table 2 provides a summary comparison of the STR sensitivity findings and the observed/verified sensitivity findings determined by the specialists and the EAP.

Table 2: Site sensitivity verification summary

Theme	STR sensitivity	Planned Input for BA
Landscape/Visual Impact Assessment	NA	NA
Archaeological and Cultural Heritage Impact Assessment	Low	No assessment (NID Submission only)
Paleontology Impact Assessment	High	No assessment (NID Submission only)
Terrestrial Biodiversity Impact Assessment	Very high	Full assessment
Aquatic Biodiversity Impact Assessment	Very high	Full assessment
Socioeconomic Assessment	NA	No assessment
Plant Species Assessment	Medium	Assessed as part of the Terrestrial Biodiversity Assessment
Animal Species Assessment	High	Assessed as part of the Terrestrial Biodiversity Assessment
Agricultural	Low	No assessment
Civil Aviation	Medium	Compliance Statement
Defence	Low	No assessment

8 Conclusion

This site sensitivity verification was compiled in line with the protocols for impact assessments and guided by the DFFE STR generated for the project.

Not all specialist inputs identified by the DFFE STR, will be undertaken as part of the Basic Assessment Process. The rationale for which specialist studies/inputs will be acquired for the project. The following studies will be undertaken as part of the Basic Assessment Report:

- Archaeological and Cultural Heritage Impact Assessment (NID)
- Palaeontology Impact Assessment (NID)
- Terrestrial Biodiversity Impact Assessment
- Civil Aviation (Compliance Statement)
- Aquatic Impact Assessment (Impact Assessment)

The animal and plant species theme will be assessed as part of the Terrestrial Biodiversity Impact Assessment.

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