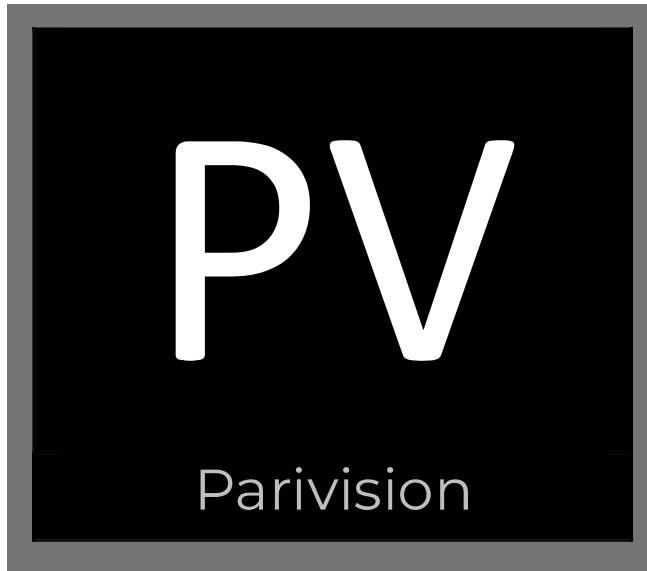




CIVIL AVIATION SITE SENSITIVITY VERIFICATION

*BASIC ASSESSMENT AND SCREENING
REPORT FOR ENVIRONMENTAL
AUTHORIZATION FOR THE PROPOSED
STEENBRAS TREATMENT PLANT ACCESS
ROAD REPAIRS*

ABSTRACT

The primary objective of this report is to either affirm or challenge the current land usage and environmental sensitivity as initially identified by the screening tool.

Hein Reid

CIVIL AVIATION SITE SENSITIVITY VERIFICATION REPORT AND BASIC ASSESSMENT AND SCREENING REPORT FOR ENVIRONMENTAL AUTHORISATION FOR THE STEENBRAS WATER TREATMENT PLANT (WTP) ACCESS ROAD REHABILITATION SLOPE 1.

Abstract

The purpose of this Civil Aviation Site Sensitivity Verification Report (SSVR) is to affirm or dispute the aviation-related environmental sensitivities assigned by the National Screening Tool for the Steenbras Water Treatment Plant (WTP) Access Road Rehabilitation project, specifically the stabilisation works on Slope 1 along the Steenbras Access Road.

The report confirms that the slope falls within a Medium Civil Aviation Sensitivity zone and that the proposed works do not pose any obstacle, radar, aerodrome, or ICAO Annex 14 OLS risks.

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1. EXECUTIVE SUMMARY

1.1 Location

The Steenbras WTP Access Road is located in mountainous terrain outside Gordon's Bay, Western Cape. The repair works are confined to existing road infrastructure.

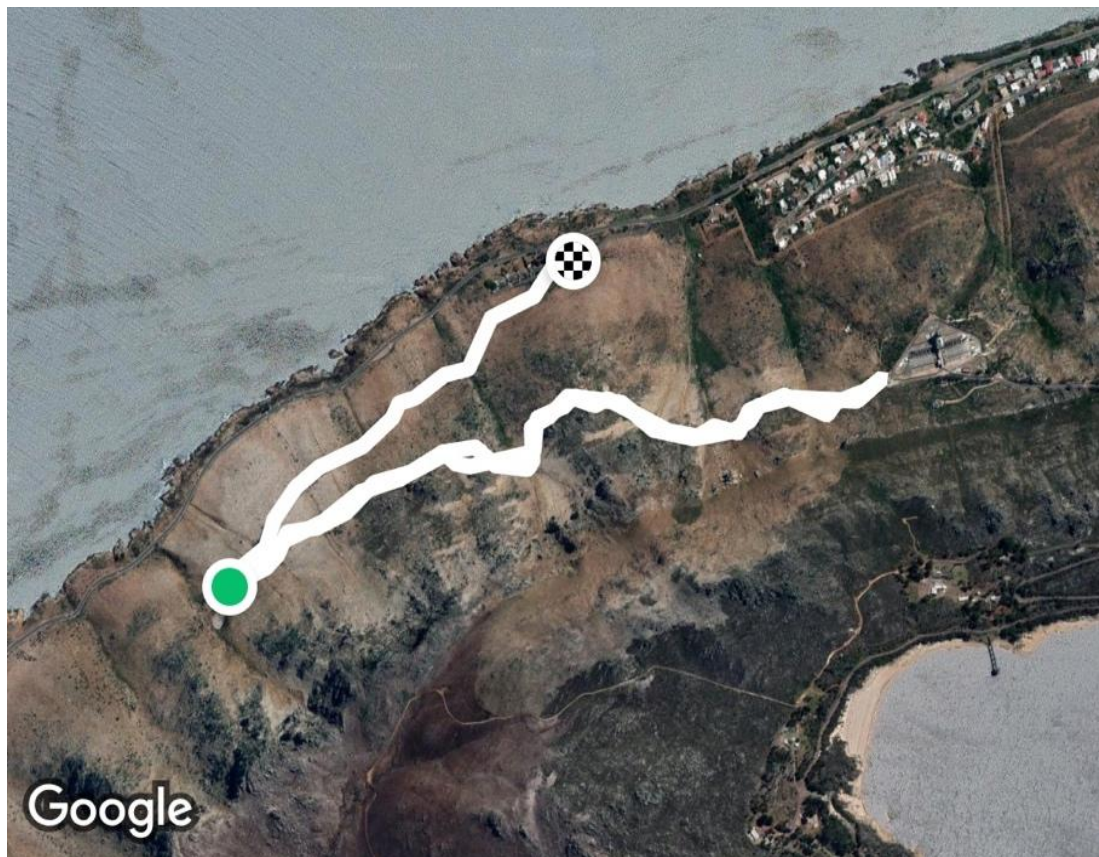


Figure 1: Steenbras Dam Access Road

Slope 1 is located along the Steenbras Water Treatment Plant access road. The slope failure site forms part of a continuous section of the existing road infrastructure and shares identical terrain characteristics, elevation context, and operational environment as the rest of the road. As a result, the civil aviation sensitivity and land-use considerations are inherently linked and

assessed as a single coherent route alignment. Figure 2 below shows the General Location of the Site

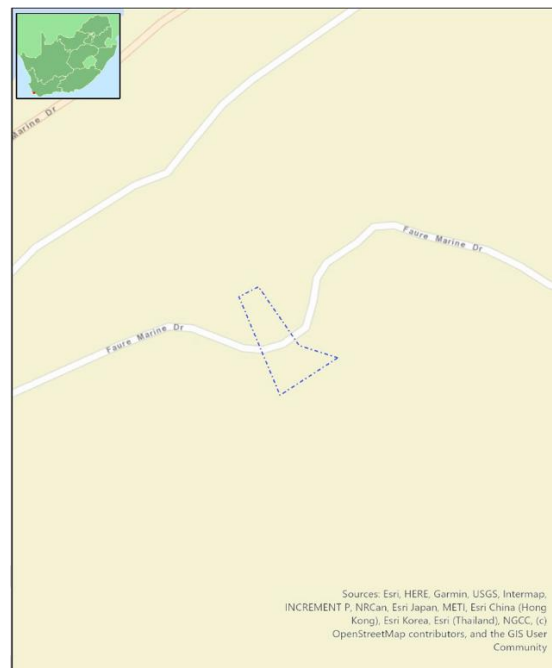


Figure 2: General Location Map

1.2 Methodology

This SSVR is prepared in accordance with Government Notice 320 of Government Gazette 43110 (2020) and includes:

- Desktop spatial analysis
- Aeronautical chart and airspace review
- Examination of GN 320 sensitivity triggers
- Verification of Slope 1 Screening Report
- On-site terrain and landform inspection
- Review of engineering slope-stabilisation designs

1.3 Scope

This report covers:

- **Slope 1:** Gabion or Terramesh retaining wall ~5 m high
- **No-Go alternative**, as required under NEMA

1.4 Findings

1.4.1 Civil Aviation Sensitivity Confirmed

Slope 1 is classified as:

- Medium Civil Aviation Sensitivity
- Caused by:
 - Location 15–35 km from a civil aviation radar
 - Location 15–35 km from a major civil aviation aerodrome

1.4.2 Obstacle & Radar Analysis

- Proposed structures are low-profile (<5 m)
- Terrain surrounding the site rises hundreds of metres above road level
- The works do not create aviation-significant vertical obstacles
- The development lies well below any ICAO Annex 14 Obstacle Limitation Surface (OLS)
- No radar interference, shadowing, or communications disruption is possible

1.4.3 Land Use Verification

- Access road rehabilitation only
- No new towers, masts, antennas, or aviation-relevant structures
- No changes to electromagnetic environment

1.5 Conclusion

The project poses no civil aviation risk, and the Medium sensitivity rating is verified.

1.6 Recommendation

Although the site attains a Medium sensitivity classification on the basis of its geographical location only, this report demonstrates that the preparation of a Civil Aviation Compliance Statement will adequately address and confirm all required Civil Aviation considerations. This report further demonstrates that no additional Civil Aviation assessment or treatment is required, and therefore no further specialist aviation studies are deemed necessary.

1.7 Endorsement

This Executive Summary forms part of the Civil Aviation SSVR for the Steenbras WTP Access Road Rehabilitation.

2. METHODOLOGY

2.1 Site Sensitivity Verification

GN 320 requires verification through:

- Spatial data review
- Screening Tool sensitivity confirmation
- Terrain and height-profile validation
- Engineering design assessment
- Suitability analysis for radar and aerodrome operations

2.2 Information Sources

A summary of the Information Sources is provided in table 1.

Table 1: Sources of Information

Source	Date	Type	Use
National Screening Tool	2025	Online	Sensitivity categories

Source	Date	Type	Use
Slope 1 Screening Report	03/03/2025	PDF	Medium sensitivity confirmation
SA AIP	2024	Aeronautical	Aerodrome & OLS data
ATNS Airspace Models	2022	KMZ	Radar & airspace geometry
Google Earth	2025	Terrain	Elevation profile verification

2.3 Specialist Assessment Requirements (GN 320)

A summary of the Specialist Assessment Requirements is provided in table 2.

Table 2: Specialist Assessment Requirements

Sensitivity	Description	Reporting Requirement
Very High	High risk to aviation	Specialist study
High	Potential risk	Specialist study
Medium	Low risk; mitigable	Compliance Statement
Low	No risk	None

The site = Medium, therefore a Compliance Statement is required.

2.4 Topographic Features

The project area is situated within a steep and rugged mountain environment characteristic of the Hottentots Holland range. The access road traverses sharp slopes carved into the natural terrain, with elevations rising rapidly on the upslope side and dropping away toward the valley and dam system below. These pronounced topographical features create a confined corridor with significant vertical relief, where road platforms are benched into the mountainside and are directly influenced by natural geological instability,

runoff patterns, and the surrounding high ridgelines that dominate the landscape. The topographical features are shown in Figure 3.



Figure 3: Topographical Features

Key elements:

- Narrow mountain access road
- Steep natural slopes
- Stabilisation walls ≤ 5 m
- No aviation structures on-site

2.5 Local Terrain

- The dam sits high in the Hottentots Holland / Kogelberg mountains above Gordon's Bay.

- The Steenbras reservoirs are around 370 m (~1 200 ft) AMSL¹ at full supply.
- The surrounding Kogelberg peaks run up to about 1 260–1 290 m (~4 150–4 230 ft) AMSL².

Local vertical relief from water to ridge tops is therefore roughly at 3 000 ft above mean sea level.

2.6 Impact

The surrounding mountain terrain already forms the dominant “obstacle environment” for aviation, and therefore the proposed project—because it does *not* extend above the existing ground level—has *no aviation impact whatsoever*.

More specifically:

- **The mountains, not the project, determine the aviation risk envelope**
With ridge tops reaching 1 260–1 290 m (4 150–4 230 ft AMSL) and the reservoir surface around 370 m (1 200 ft AMSL), aviation is already required to operate thousands of feet above the proposed works to remain terrain-safe.
- **The project sits *inside* a deep mountain bowl, far below any flight-relevant altitude** Because local vertical relief is ~3 000 ft, aircraft flying over the Steenbras area must remain well above the mountain ridgelines, not the valley floor. Thus, no aircraft will ever be operating at or near the height of the proposed slope works.
- **The project cannot become an obstacle** Since the slope repairs do not protrude above the natural terrain, they:
 - do not penetrate any ICAO Obstacle Limitation Surface
 - do not appear as detectable radar obstacles
 - do not affect instrument flight procedures

¹ [Department of Water and Sanitation](#)

² [PeakVisor App](#)

- do not influence VFR minimum safe altitudes (which are based on terrain, not man-made structures)
- **ATC and aviation users treat the area as mountainous terrain regardless of development.** Minimum safe altitudes, and radar minimum vectoring altitudes in this sector are driven by the high surrounding ridges, not any infrastructure on the slopes.

2.7 Summary:

Because the proposed project remains below surrounding ground level and is overshadowed by significantly higher natural terrain, it is completely irrelevant to aviation safety, navigation, radar, or obstacle protection surfaces.

3. CIVIL AVIATION THEME SENSITIVITY VERIFICATION RESULTS

3.1 Sensitivity Summary Table

A sensitivity summary is provided in table 3

Table 3: Sensitivity Summary

Sensitivity	Screening Tool Feature	Interpretation
Medium	15–35 km from radar; 15–35 km from major aerodrome	No aviation constraints

3.2 Preferred Solution – Aviation Impact Analysis

Findings:

- No encroachment into ICAO OLS
- No proximity to runway approach or departure surfaces
- No impact on any published instrument procedures

3.3 No-Go Option

- No change to aviation safety
- Continued slope instability risk
- No environmental benefit
- Confirms Preferred Option as optimal

4. Summary and Sensitivity Interpretation

The national screening tool assigns a Medium civil aviation sensitivity classification to the site. This classification arises solely from the site's geographical location, and not from any aviation-related operational, technical, or safety constraints. The detailed assessment undertaken for this report confirms that the proposed activities introduce no civil aviation risks, do not affect any ICAO Annex 14 obstacle limitation surfaces, and have no impact on aviation operations in the surrounding area.

On this basis, the Medium sensitivity rating is acknowledged but not indicative of actual aviation concern. Rather, it reflects the precautionary framework of the national sensitivity tool, which triggers Medium sensitivity in certain elevated or mountainous regions regardless of the nature of the proposed development.

This report demonstrates that the project complies fully with civil aviation requirements and that the appropriate regulatory mechanism for addressing aviation considerations is a Civil Aviation Compliance Statement. The findings further confirm that no additional civil aviation assessment, mitigation, or specialist study is required. The required Compliance Statement will adequately provide the necessary assurance to the competent authority.

5. CONCLUSION AND RECOMMENDATION

5.1 Conclusion

- (1) The Medium sensitivity classification for Slope 1 is confirmed on the basis of geographical location.
- (2) No civil aviation risks are created by the proposed works.
- (3) No ICAO Annex 14 surfaces are affected.

5.2 Recommendation

- (1) Proceed with the project.
- (2) Submit the required Civil Aviation Compliance Statement.
- (3) No further aviation analysis is required.

6. ENDORSEMENT

I, **Hein Reid**, endorse this Civil Aviation Site Sensitivity Verification Report for the Steenbras WTP Access Road Rehabilitation.

(Signature).....

Date: 20 May 2026

7. DETAILS OF THE ASSESSMENT PRACTITIONER

GN 320 notes that the Site Sensitivity Verification must be undertaken by an Environmental Assessment Practitioner (EAP) or specialist with expertise in radar. This chapter describes the credentials and provides a summary of the air traffic control experience of the expert and how it affords him a deep understanding of radar technology and its application, solidifying his status as a Specialist with Expertise in Radar.

I am a seasoned air traffic controller with over four decades of dedicated experience in radar operations and I stand out as an exceptional and highly respected figure in the field of civil aviation. The following demonstrates my extraordinary level of expertise:

- **Mastery of Radar Technology:** With decades of hands-on experience, as a seasoned air traffic controller I have an intimate knowledge of radar technology. I am well-versed in the intricacies of radar equipment, its capabilities, and its limitations. My deep understanding allows me to harness the full potential of radar systems to enhance air traffic control operations.
- **International Experience:** I have international experience in air traffic management, having participated in international air traffic control optimization projects and in air traffic control capacity improvement projects.
- **Efficient Radar Deployment:** I am skilled in deploying radar equipment effectively. I understand the strategic placement and configuration of radar installations to maximize coverage and ensure seamless surveillance of aircraft within their jurisdiction. My expertise ensures that radar systems are correctly set up and maintained to function optimally.
- **Rapid Data Interpretation:** My extensive experience enables me to interpret radar data swiftly and accurately. I can extract critical information from radar screens, such as aircraft positions, altitudes,

speeds, headings, and identification data, with remarkable speed and precision.

- **Enhanced Situational Awareness:** With their years of radar expertise, I have developed an exceptional level of situational awareness. I can effortlessly track multiple aircraft in real-time, anticipate potential conflicts, and make split-second decisions to ensure safe and efficient air traffic flow
- **Effective Conflict Resolution:** As a seasoned controller I excel at identifying potential conflicts or deviations from planned flight paths on radar displays. I possess the ability to proactively issue clear and timely instructions to pilots to mitigate conflicts, thereby ensuring the safety of all aircraft under their jurisdiction.
- **Weather and Environmental Expertise:** Over the years, I have honed my skills in recognizing weather-related challenges and potential environmental impacts on aviation operations. My ability to guide aircraft away from adverse weather conditions and minimize environmental impact showcases my exceptional knowledge in these critical areas.
- **Emergency Response Prowess:** In high-stress situations or emergencies, my radar expertise shines. I can rapidly assess the severity of emergencies, formulate alternative courses of action, and guide distressed aircraft to safety. My calm and efficient response is a testament to their experience and competence.
- **Efficient Traffic Management:** Managing air traffic, especially in congested or complex airspace, is a formidable task. My radar specialization equips me to make informed decisions that optimize traffic flow, minimize delays, and maintain the overall efficiency of aviation operations.
- **Compliance with Regulations:** Safety and adherence to aviation regulations are paramount in air traffic control. I place a strong emphasis on ensuring that radar equipment and operations strictly adhere to all

relevant guidelines and industry standards, contributing to a safer and more compliant airspace.

- **Mentorship and Knowledge Sharing:** With my wealth of experience, I often serve as mentors to junior controllers. I generously pass on my radar expertise, operational insights, and best practices to help groom the next generation of aviation professionals, thereby perpetuating their legacy of excellence.

In summary, as a seasoned air traffic controller with over four decades of radar operations experience, I embody the pinnacle of expertise in civil aviation. My profound knowledge, experience, rapid decision-making abilities, and commitment to safety and efficiency make me a highly regarded and invaluable asset to the aviation community. My contributions have a lasting impact on the industry's safety, effectiveness, and the development of future air traffic controllers.

8. ATTACHMENT A: Nearest Airports & Airspace Context

Nearest Major Aerodrome: Cape Town International Airport (FACT)

Distance: Within the 15–35 km sensitivity band

No interactions occur with:

- Approach/Departure paths
- STARs/SIDs
- Controlled airspace constraints

9. ATTACHMENT B: Specialist Declaration

I, **Hein Reid**, declare that –

- I act as the independent Civil Aviation Specialist in support of the environmental assessment practitioner in this site sensitivity verification;
- I have expertise in conducting environmental impact assessments, including knowledge of the Act, Regulations and any guidelines that have relevance to the proposed activity;
- I will comply with the Act, Regulations and all other applicable legislation;
- I will perform the work relating to the site sensitivity verification in an objective manner, even if this results in views and findings that are not favourable to the applicant;
- I will take into account, to the extent possible, the matters listed in Regulation 13 of the Regulations when preparing the site sensitivity verification and any report relating to the site sensitivity verification;
- I undertake to disclose to the applicant all material information in my possession that reasonably has or may have the potential of influencing
 - any decision to be taken with respect to the site sensitivity verification by the Competent Authority; and
 - the objectivity of any report, plan or

document to be prepared by myself for submission to the Competent Authority, unless access to that information is protected by law, in which case it will be indicated that such information exists and will be provided to the Competent Authority;

- I will perform all obligations as expected from an environmental assessment practitioner in terms of the Regulations; and
- I am aware of what constitutes an offence in terms of Regulation 48 and that a person convicted of an offence in terms of Regulation 48(1) is liable to the penalties as contemplated in Section 49B of the Act.

Disclosure of Vested Interest:

- I do not have and will not have any vested interest (either business, financial, personal or other) in the proposed activity proceeding other than remuneration for work performed in terms of the Regulations;

Signature of the Civil Aviation Specialist	
Name of Company	Parivision
Date	4 December 2025