Site Sensitivity Verification Report

Aquatic Biodiversity Theme

PROPOSED KOPANYA SOLAR PHOTOVOLTAIC (PV) PROJECT AND ASSOCIATED INFRASTRUCTURE

11/02/2026

Prepared by:

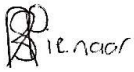
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Project Title	**PROPOSED KOPANYA SOLAR PHOTOVOLTAIC (PV) PROJECT AND ASSOCIATED INFRASTRUCTURE**
Report Name	Site Sensitivity Verification Report
Specialist Theme	Aquatic Biodiversity Theme
Project Reference	SSVR – Kopanya Solar PV and OHL
Date	31 October 2026
Technical Support	Celine Klinkert (SACNASP r*egistry in progress*)[1] 
Responsible Specialist	Rian Pienaar (Pr. Sci. Nat. 135544) 
Declaration	The Biodiversity Company and its associates act as independent consultants in accordance with the requirements of the South African Council for Natural Scientific Professions. We confirm that we have no affiliation with, or vested financial interest in, the proponent, other than remuneration for professional services rendered in terms of the Environmental Impact Assessment Regulations. We have no conflicting interests in the proposed activity or any secondary developments arising from the authorisation of the project, and our work has been undertaken objectively and in accordance with accepted scientific principles.

[1] All work was completed under the supervision of a Professional Registered Scientist (Rian Pienaar - Pr. Sci. Nat. 135544)

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1 Introduction

The Biodiversity Company was appointed to undertake a wetland Site Sensitivity Verification (SSV) report for the proposed Kopanya Solar Photovoltaic (PV) Project and associated infrastructure. The Project is located near the towns Burgersfort and Mashishing, within the Fetakgomo Tubatse Local Municipality, Sekhukhune District Municipality, Limpopo Province, South Africa (Figure 1-1).

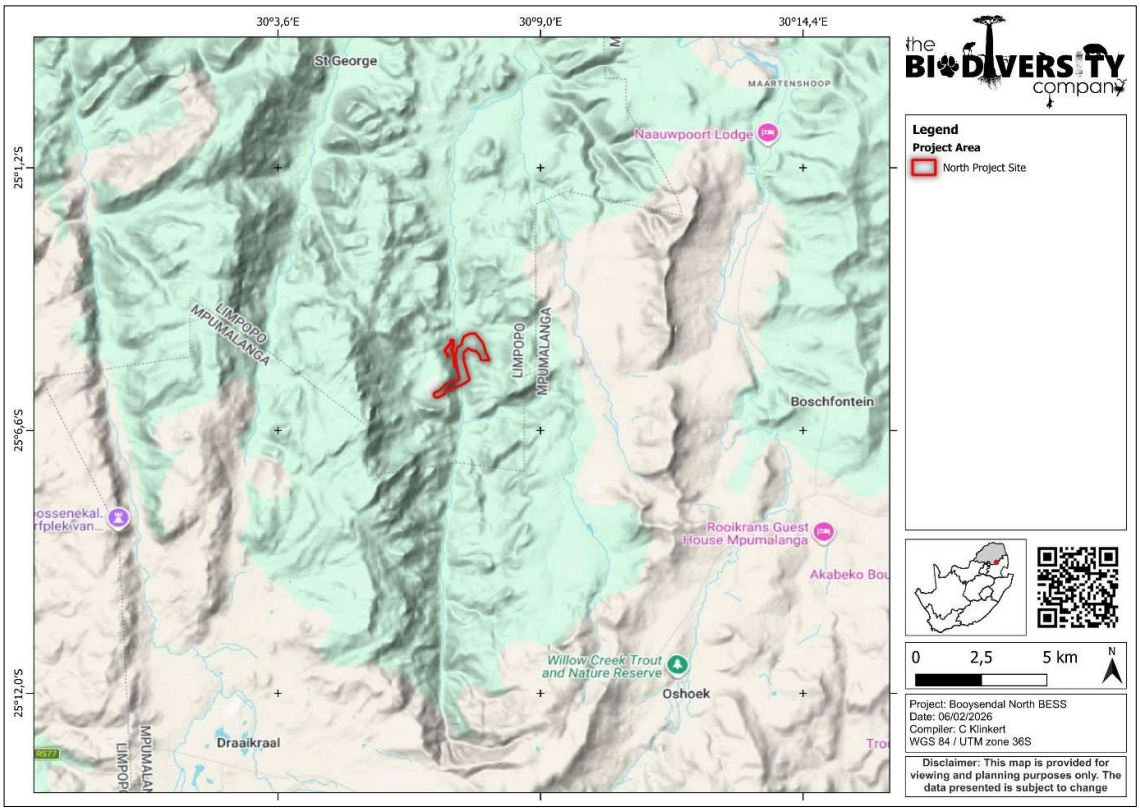


Figure 1-1 Proposed location of the Project Site in relation to the nearby towns

1.1 Legal Framework

This assessment was conducted in accordance with the amendments to the Environmental Impact Assessment Regulations. 2014 (GNR 326, 7 April 2017) of the National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA), Department of Forestry, Fisheries and the Environment Environmental Screening tool (2025). The approach has taken cognisance of the published Government Notices (GN) 320 in terms of NEMA, dated 20 March 2020: "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, when applying for Environmental Authorisation" (Reporting Criteria).

The SSV must be undertaken:

- For the footprint on which the proposed activities are proposed to take place;
- By specialists, registered in the field for which they are undertaking the SSV and where relevant, with demonstrated experience in the taxonomic group of the species being considered;

- Within the season which would be most relevant to identify the specific species or vegetation of interest; and

- For a period of time as necessitated by the sensitivity of the proposed site and size of the proposed facility.

1.2 Scope of Work

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 the NEMA, 1998, when applying for Environmental Authorisation the current use of the land and the environmental sensitivity of the site under consideration as identified by the National Web-Based Environmental Screening Tool, must be confirmed by undertaking a SSV.

The outcome of this SSV is to:

- Confirm or dispute the current use of the land and the environmental sensitivity as identified by the screening tool; and

- Motivate and provide evidence of either the verified or different use of the land and environmental sensitivity of the site.

1.3 Project Description

The following information was provided by GCS Environment South Africa (Pty) Ltd and pertains to the proposed Kopanya Solar Photovoltaic (PV) Project:

The proposed solar PV facility will occupy an approximate footprint of 49 hectares and will be located on the Remaining Extent (Portion 0) of the Farm Booysendal No. 43 JT. Associated grid connection infrastructure, including overhead power lines, will traverse Portion 2 of the Farm Der Brochen No. 7 JT, situated near the town of Mashishing. The proposed Project area falls within the jurisdiction of the Fetakgomo Tubatse Local Municipality, which forms part of the Sekhukhune District Municipality. Access to the site will be via the existing R577.

The proposed Project is intended to primarily supply electricity to the Booysendal Mine through self-generation and demand-side management, thereby reducing reliance on grid-supplied electricity in the context of ongoing load reductions and increasing energy tariffs. Any surplus electricity generated by the PV facility will be exported to the national electricity grid.

The proposed development is a 25 megawatt peak (MWp) solar photovoltaic (PV) facility and associated infrastructure. The additional supporting infrastructure will include water supply and sanitation systems (utilising conservancy tanks), internal and access roads, security and access control infrastructure, perimeter fencing, and telecommunications systems necessary for the operation and monitoring of the facility.

The proposed Project Site of the Project layout is indicated in Figure 1-2 below.

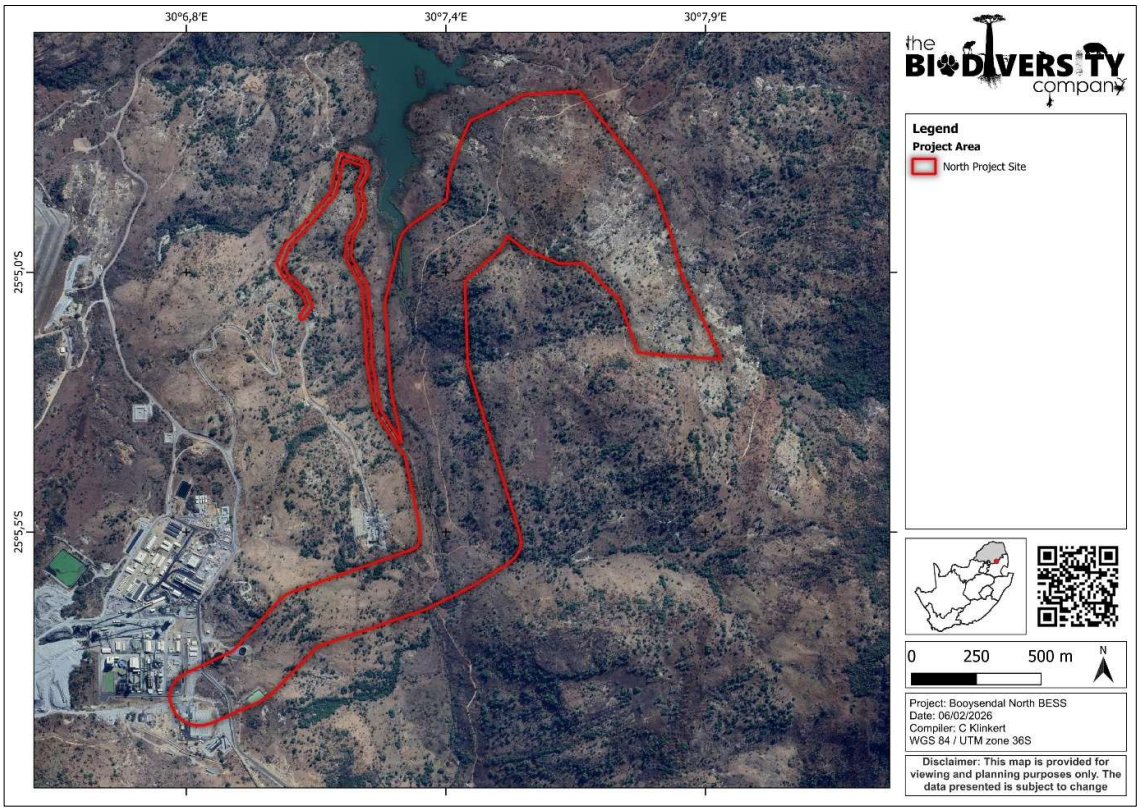


Figure 1-2 Project layout of the proposed Kopanya Solar PV Project

2 Approach

A field survey for the area was undertaken from the 26th – 30th of January 2026, constituting a wet-season survey, to determine the presence of surface aquatic features (wetlands). Specialist declarations and a Curriculum Vitae (CV) including the SACNASP registration numbers are provided in Appendix A and Appendix B, respectively. A verification report has been prepared in accordance with the Specialist Assessment and Minimum Report Content Requirements for Environmental Impacts on Aquatic Biodiversity (Government Notice 320, dated 20 March 2020).

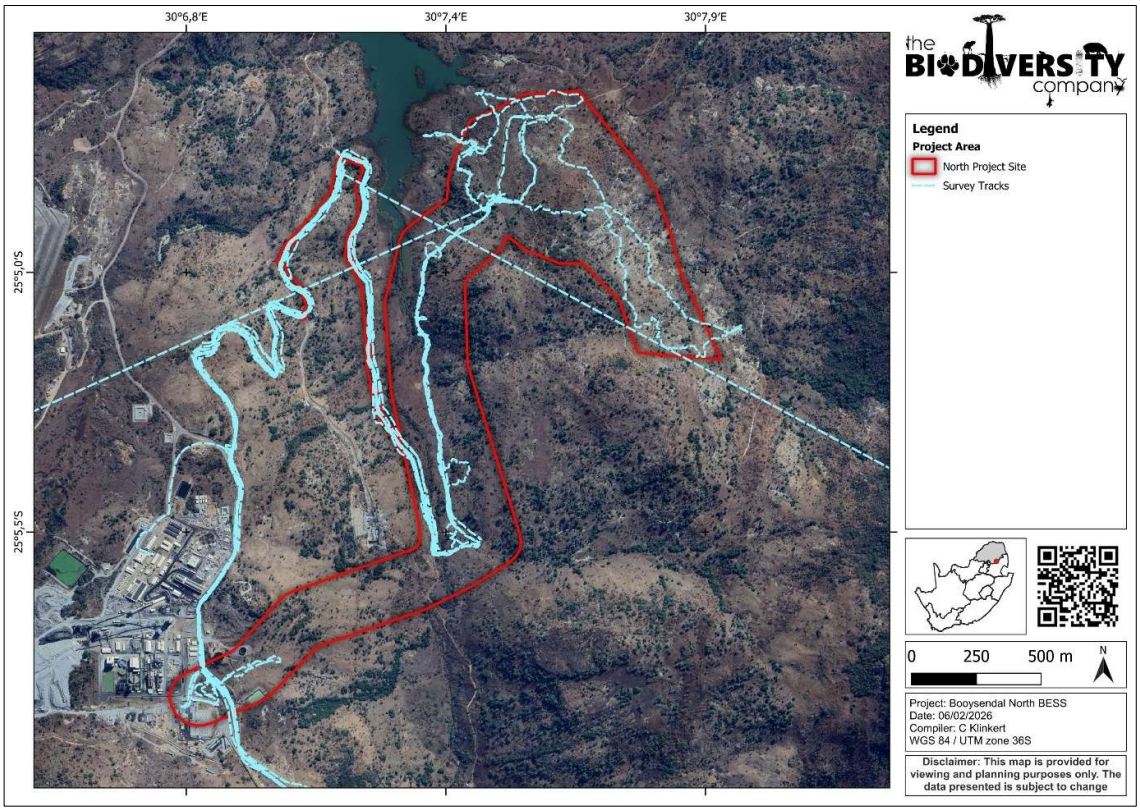


Figure 2-1 Coverage of the Project Site during the field survey

2.1 Assumptions and Limitations

The following is applicable:

- The seasonality of the survey is not considered to be a limiting factor with regard to identifying and delineating wetland features;
- Representative sampling within the assessment area was conducted and by its nature would result in some areas of the assessment area not being covered on foot. However, the results derived were sufficient to derive a meaningful baseline of the freshwater ecosystems identified;
- No ecological assessments and impact assessments were conducted for the delineated wetlands as the intent of the SSV is to identify the presence of aquatic features (wetlands); and
- The Global Positioning System (GPS) used for delineations is accurate to within five metres. Therefore, the delineation plotted digitally may be offset by at least five metres to either side.

3 Results & Discussion

3.1 Survey Results

The following sections discuss the results from the field survey that was conducted to verify the aquatic biodiversity theme sensitivity of the site. A delineation map with the identified watercourses within the Project Site is presented in Figure 3-1 and representative sample points are described in Table 3-1.

During the site visit several natural watercourse features were identified across the Project Site, namely the perennial Groot Dwars River (HGM 1), and drainage features classified as non-perennial drainage lines, and a drainage area. Additionally, artificial wet areas and artificial channels were identified across the Project Site, relating to the operation of the platinum mine.

An initial 32 m precautionary buffer zone, corresponding with the NEMA regulated area of a watercourse, has been prescribed for the natural watercourse features identified within and surrounding the Project Site.

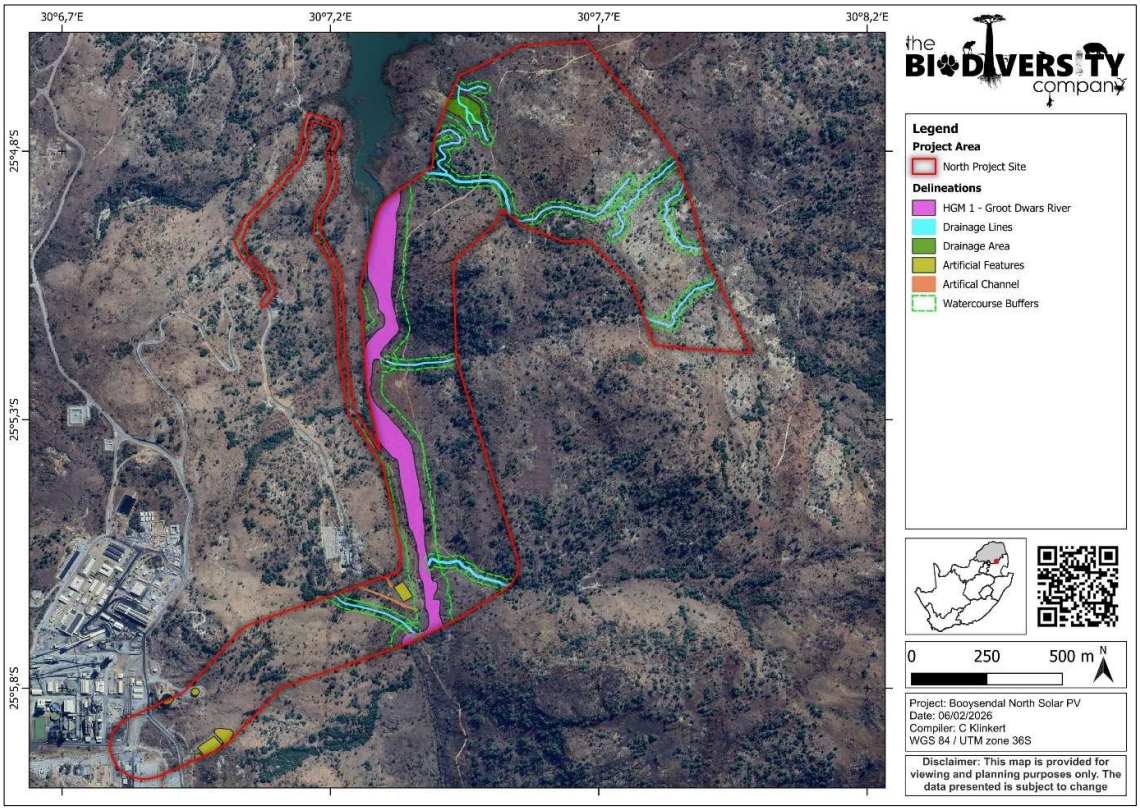


Figure 3-1 Identified watercourses and recommended buffer zones within and surrounding the Project Site

Table 3-1 Spatially Representative survey sites

Survey Point	Description	Photographs
Site GPS Reference: Photo 1 Date: 27/01/2026 GPS Coordinates: 25° 5'30.24"S 30° 7'20.99"E	Watercourse – Groot Dwars River	
Site GPS Reference: Photo 2 Date: 27/01/2026 GPS Coordinates: 25° 4'36.19"S 30° 7'27.59"E	Watercourse – Groot Dwars River	
Site GPS Reference: Photo 3 Date: 27/01/2026 GPS Coordinates: 25° 5'33.99"S 30° 7'22.48"E	Watercourse – Existing river crossing over the Groot Dwars River	
Site GPS Reference: Photo 4 Date: 27/01/2026 GPS Coordinates: 25° 4'51.07"S 30° 7'27.35"E	Watercourse – Non-perennial Drainage Line	

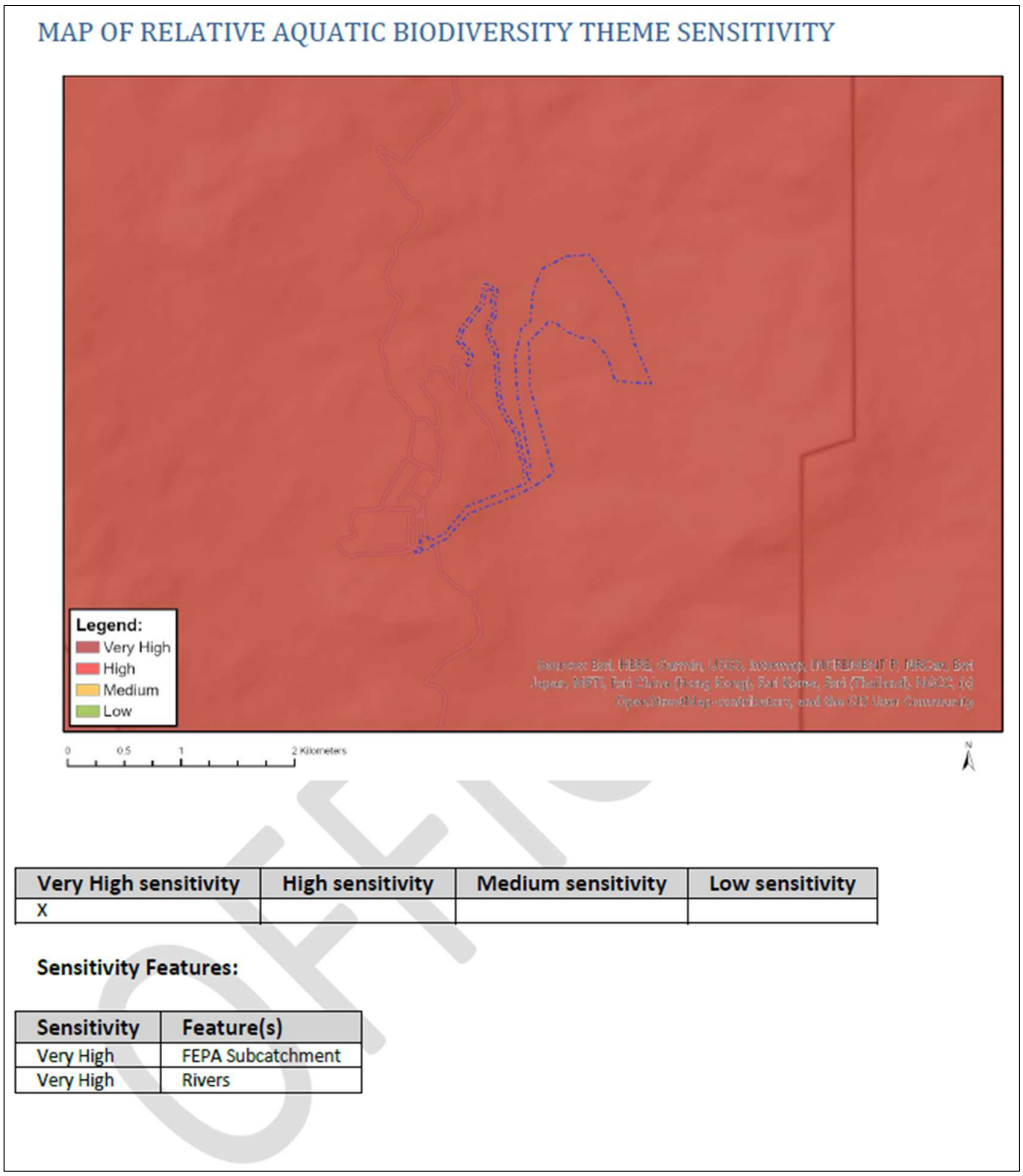
Site GPS Reference: Photo 5 Date: 27/01/2026 GPS Coordinates: 25° 4'54.11"S 30° 7'43.70"E	Watercourse – Non-perennial Drainage Line	
Site GPS Reference: Photo 6 Date: 27/01/2026 GPS Coordinates: 25° 4'54.11"S 30° 7'43.70"E	Watercourse – Non-perennial Drainage Area	
Site GPS Reference: Photo 7 Date: 27/01/2026 GPS Coordinates: 25° 4'51.07"S 30° 7'27.35"E	Artificial Wet Area	
Site GPS Reference: Photo 8 Date: 27/01/2026 GPS Coordinates: 25° 5'13.78"S 30° 7'20.52"E	General Landscape – Terrestrial Environment	

Site GPS Reference: Photo 9 Date: 27/01/2026 GPS Coordinates: 25° 5'48.21"S 30° 6'58.67"E	General Landscape – Terrestrial Environment	

3.1.1 Desktop Ecological Senstivity

The following is deduced from the National Web-based Environmental Screening Tool Regulation 16(1)(v) of the Environmental Impact Assessment Regulations 2014, as amended:

- Aquatic Biodiversity Theme Sensitivity as “Very High” for the entire Project Site, attributed to the presence of:
    - FEPA Subcatchment; and
    - Rivers (Figure 3-2).



Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
X			

Sensitivity Features:

Sensitivity	Feature(s)
Very High	FEPA Subcatchment
Very High	Rivers

Figure 3-2 Aquatic Biodiversity Theme Sensitivity for the Project Site

3.1.2 Screening Tool Comparison

The allocated sensitivities for each of the relevant themes are either disputed or validated for the assessed areas in Table 3-2 below. A summative explanation for each result is provided as relevant. The specialist-assigned sensitivity ratings are based largely on the presence or absence of wetlands and is presented in Figure 3-3.

Table 3-2 Summary of the screening tool vs specialist-assigned sensitivities

Aspect	Screening Tool Theme	Screening Tool	Specialist Finding	Tool Validated or Disputed by Specialist - Reasoning
Groot Dwars River (HGM 1)	Aquatic Biodiversity Theme	**Very High**	**Very High**	Validated – This perennial river system areas represent natural wetlands and river systems, which significantly contribute to the overall ecological value and hydrological regime of the landscape by providing habitat and corridors due to connectivity in the broader landscape setting.

Drainage Features	**Very High**	**Medium**	Disputed – Whilst the expansive drainage systems do convey water movement across the landscape, these systems do not support significant ecological functioning with reference to the hydrological regime of the area.
Freshwater Buffers	**Very High**	**Medium**	Disputed – Whilst the buffer areas do not necessarily represent freshwater features, their conservation is imperative to limiting impact to the wetlands as they form the periphery of the wetlands thereby having spatial connectivity to the wetlands. The sensitivity of the buffers is therefore determined by the landscape and the sensitivity of the features they encompass
Remaining Area	**Very High**	**Low**	Validated – These areas lack typical wetland indicators and are therefore not representative of natural wetlands or related aquatic environments.

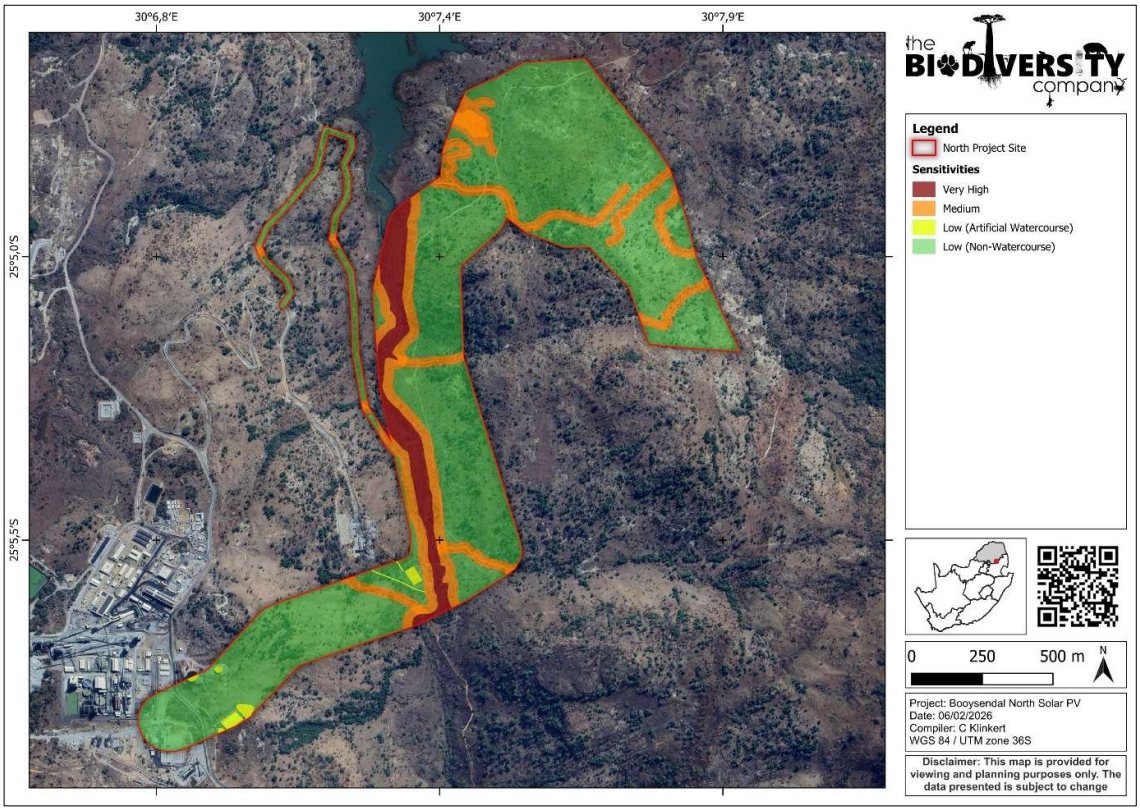


Figure 3-3 Sensitivity map for the Project Site

4 Conclusion

The aquatic biodiversity theme sensitivity for the project sites is characterised by:

- Areas of “Very High” sensitivity attributed to the presence of the perennial Groot Dwars River system;
- Areas of “Medium” sensitivity attributed to the presence of natural drainage lines, and a drainage area; and
- Areas of “Low” sensitivity attributed to the presence of artificial wet features, and the absence of natural freshwater ecosystems.

Areas of “Low” sensitivity are favourable for development. However, a Functional Wetland and Impact Assessment Report will be required in addition to the SSV, in order to provide appropriate buffer zones for the identified watercourses, and suggest mitigation measures to reduce potential impacts.

It is the opinion of the specialist that the Project can be favourably considered, given that the layout is informed by the sensitivities presented herein.

5 References

National Environmental Screening Tool. 2025. National Environmental Screening Tool, 2026. Available from the Department of Forestry, Fisheries and the Environmental website: https://screening.environment.gov.za/screeningtool/#/pages/welcome.

6 Appendix Items

6.1 Appendix A – Specialist Declaration of Independence

Declaration

I, Rian Pienaar, declare that:

- I act as the independent specialist in this application;
- I will perform the work relating to the application in an objective manner, even if this results in views and findings that are not favourable to the applicant;
- I declare that there are no circumstances that may compromise my objectivity in performing such work;
- I have expertise in conducting the specialist report relevant to this application, 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 have no, and will not engage in, conflicting interests in the undertaking of the activity;
- I undertake to disclose to the applicant and the competent authority 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 application by the competent authority; and the objectivity of any report, plan or document to be prepared by myself for submission to the competent authority;
- All the particulars furnished by me in this form are true and correct; and
- I realise that a false declaration is an offence in terms of Regulation 71 and is punishable in terms of Section 24F of the Act.



Rian Pienaar

Ecologist

The Biodiversity Company

February 2026

6.2 Appendix B – Specialist CV

Rian Pienaar



Pr Sci Nat 135544 | +27 78 505 0201 | rian@thebiodiversitycompany.com

PROFILE SUMMARY

Environmental scientist and Pri Sci Nat (SACNASP 135544) with ~5+ years' specialist consulting experience across Southern Africa. Specialist expertise in wetland delineation and ecological assessments, wetland offset strategy design, rehabilitation and monitoring plans, as well as soil classification and agricultural potential assessments. Experienced in delivering high-quality field surveys and technical reporting aligned with in-country legislative requirements and international lender standards, and currently manages the operations at TBC.

PERSONAL INFO

Nationality: South African

Date of birth: 23 May 1994

EXPERIENCE

Environmental Impact Assessments (EIA)

Environmental Management Programmes (EMP)

Project Management

Logistics

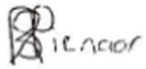
SKILLS

- ✓ Wetland functional assessments
- ✓ Ecology
- ✓ Rehabilitation
- ✓ Monitoring & Management Plans

LANGUAGES

English – Proficient

Afrikaans – Proficient



Signed: Rian Pienaar

ACADEMIC QUALIFICATIONS

North-West University (2020): MASTER OF SCIENCE (MSc) – Environmental Sciences (Cum Lauda):
Title: The use *Clarias gariepinus* and associated helminthic parasites as bio-indicators of metal pollution in a subtropical ecosystem.

North-West University (2018): BACHELOR OF SCIENCE HONOURS IN ENVIRONMENTAL SCIENCE – Aquatic Ecosystem Health

North-West University (2018): BACHELOR OF SCIENCE IN ENVIRONMENTAL AND BIOLOGICAL SCIENCES – Zoology and Microbiology

PROFESSIONAL EXPERIENCE

Sept 2020 – Present: **The Biodiversity Company** – Wetland Ecology

Jan 2018 – Dec 2018: **National Aquatic Bioassay Facility (NABF)** – Intern

INTERNATIONAL EXPERIENCE

South Africa, Mozambique, Botswana



SACNASP
South African Council for Natural Scientific Professions

herewith certifies that

Rian Stephanus Pienaar

Registration Number: 135544

is a registered scientist

in terms of section 20(3) of the Natural Scientific Professions Act, 2003
(Act 27 of 2003)
in the following field(s) of practice (Schedule 1 of the Act)

Environmental Science (Professional Natural Scientist)

Effective **3 March 2021** Expires **31 March 2026**

Chairperson

Chief Executive Officer

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