Phone: +27 (0)73 595 7808
Email: panbiodiversity@gmail.com
103 Reservoir Street
Brackenfell
Cape Town
7560

BOTANICAL STATEMENT ADDRESSING THE VALIDITY OF THE EIGHT YEAR OLD VEGETATION IMPACT STATEMENT

Project: Continuation of Construction for the doubling of the Gwaing River Bridge on the N2/7, George, Western Cape Province

Date: 16 March 2026

1. INTRODUCTION

The doubling of the Gwaing River Bridge on the N2/7 near George in the Western Cape Province received Environmental Authorisation (EA) in 2017, and the South African National Roads Agency SOC Ltd (SANRAL) commenced construction on 29 January 2018. However, several unexpected delays were encountered during construction, including changes in contractors and a significant flooding event, resulting in the project remaining incomplete. Condition 7 of the EA stipulates that construction must be completed within five years of commencement, i.e., by January 2023. As this timeframe has elapsed, SANRAL appointed Infinity Environmental (Pty) Ltd to provide regulatory guidance on the way forward. During consultation with the Department of Forestry, Fisheries and the Environment (DFFE), it was advised that the findings and conclusions of the previous environmental studies should be reassessed, as these studies are now more than five years old. Infinity Environmental (Pty) Ltd subsequently appointed PAN Biodiversity Consulting to review the findings of the original Vegetation Impact Assessment[1] and to confirm whether the conclusions of that assessment remain valid, considering the time elapsed since the report was prepared.

2. ASSESSMENT

To verify whether the findings of the original Vegetation Impact Assessment Report remain valid, PAN Biodiversity Consulting conducted a site inspection of the project footprint on 12 March 2026. It should be noted that, at the time the project was paused, vegetation clearing had already been undertaken, presumably in accordance with the valid EA. As a result, much of the vegetation previously assessed has since been replaced by roads in various stages of completion. The current site conditions and recommendations were therefore compared with those described in the original report, and the findings summarised in Table 1.

[1] Du Preez, J. (2017). Vegetation Impact Assessment Report: Proposed upgrading of the bridge on the N2 over the Gwaing River, George, Western Cape.

Phone: +27 (0)73 595 7808
Email: panbiodiversity@gmail.com
103 Reservoir Street
Brackenfell
Cape Town
7560

Table 1: Validity assessment of the original vegetation impact assessment for the construction for the doubling of the Gwaing River Bridge on the N2/7, George, Western Cape Province.

Original Assessment (2017)	Current Site Assessment (2026)
Ecosystem type: The project footprint intersects with the Garden Granite Fynbos (FFg 5) and Cape Lowland Alluvial (Aza 2)[2] – both of which are Critically Endangered in terms of the National Environmental Management: Biodiversity Act (NEM:BA) List of Ecosystems that are Threatened and in need of Protection (2022)[3]. The report notes that the site has been significantly transformed by agriculture, forestry and invasion of alien vegetation.	**Ecosystem type:** These findings remain valid, while additional transformation has occurred during the construction of roads and a bridge within the authorised limits.
Plant Diversity: Desktop assessment notes 112 distinct species in the quarter degree square (3422AB, approximately 670 km^2) as derived from the South African National Biodiversity Institute's (SANBI) Plants of Southern Africa (POSA) database. Of these 11 are red-listed (including data deficient species) and 63 are protected under the Western Cape Nature Conservation Ordinance (1974)[4]. A total of 53, including 11 protected species confirmed present in the project footprint prior to vegetation clearing.	**Plant Diversity:** Eight years have passed since the original assessment and subsequently the scope of online databases have increased. Current desktop assessment of the greater project area (±40 km^2) from the SANBI POSA and the Global Biodiversity Information Facility (GBIF) identify 356 distinct species, of which 24 are red listed (including data deficient species), and 71 are protected under the Western Cape Nature Conservation Ordinance (1974). An additional nine distinct species, to a total of 22 species were confirmed present in the project footprint following vegetation clearing. No protected species were recorded in the footprint.
Alien and Exotic Species: The site is significantly impacted by alien species, including *Acacia mearnsii*, *A. cyclops*, *Eucalyptus* spp., and *Salvinia molesta*.	**Alien and Exotic Species:** Developed areas and areas beyond where vegetation clearing has been conducted remain significantly impacted by alien invasive and exotic species, including *A. cyclops*, *A. mearnsii*, *Cortaderia selloana*, *Eucalyptus* spp., *Pinus*

[2] Mucina, L. and Rutherford, M.C. (2006). The vegetation of South Africa, Lesotho and Swaziland. Strelitzia 19. South African Biodiversity Institute, Pretoria, South Africa.
[3] Department of Forestry, Fisheries and the Environment (DFFE). (2022). National Environmental Management: Biodiversity Act (Act 10 of 2004): Revised National List of Ecosystems that are Threatened and in need of Protection. Government Gazette No. 47526, Notice 2747, 18 November 2022.
[4] Nature Conservation Ordinance, 1974 (Ordinance 19 of 1974), as amended, which remains in force in the Western Cape Province in terms of the transitional provisions of the Western Cape Biodiversity Act, 2021 (Act 6 of 2021).

Phone: +27 (0)73 595 7808
Email: panbiodiversity@gmail.com
103 Reservoir Street
Brackenfell
Cape Town
7560

Original Assessment (2017)	Current Site Assessment (2026)
	spp. *Solanum mauritianum*, and *Verbena bonariensis*.
Mitigation: 1) Preconstruction search-and-rescue involving the appropriate specialist, specifically for bulbous and succulent protected species; 2) Limiting extent of vegetation clearing; 3) Alien and weed control within disturbed areas; 4) Clear demarcation of construction and no-go areas; 5) Rehabilitation of riparian vegetation in the river corridor following construction; 6) Erosion protection.	**Mitigation:** It is assumed that all prescribed mitigations prior to- and during vegetation clearing were observed in compliance with the EA, until the project was paused. Alien and weed control have subsequently not continued and the presence and spread of such species in disturbed areas has persisted/increased. It is imperative that alien and weed control resume, and post construction rehabilitation of riparian vegetation in the river corridor and erosion protection adhered to.

3. CONCLUSION AND RECOMMENDATIONS

The botanical diversity and habitat conditions within the footprint for the doubling of the Gwaing River Bridge on the N2/7, near George in the Western Cape, have undergone significant transformation as a result of vegetation clearing, which was been carried out in accordance with the provisions of the existing EA. Given the elapsed period since the original vegetation impact assessment (approximately 8-9 years), the findings and recommendations of that assessment were reviewed and evaluated for their continued validity.

Based on a review of the original report and EA, site inspection and assessment, it is the professional opinion of the appointed independent specialist that the original findings and recommendations remain robust and applicable. Consequently, it is advised that the EA for the continuation of the bridge doubling project be extended, and that construction activities proceed in strict compliance with the botanical mitigation measures as originally prescribed. This approach will ensure the continued management and conservation of vegetation and habitat within the project footprint.

4. DECLARATION

I, Juan Swanepoel, declare that the above statement is a true and professional assessment based on current information available.

Juan Swanepoel (Pr. Sci. Nat. 139466)

Director and Principal Ecologist

PAN Biodiversity Consulting

16 March 2026

Phone: +27 (0)73 595 7808
Email: *panbiodiversity@gmail.com*
103 Reservoir Street
Brackenfell
Cape Town
7560

SPECIALIST CURRICULUM VITAE

Personal Details

- Name; Juan Swanepoel
- Address: Brackenfell, Cape Town, Western Cape, 7560
- Cell: +27 (0)73 595 7808
- Email: panbiodiversity@gmail.com
- Date of Birth: 21 July 1988
- Website: https://www.panbiodiversity.co.za/

Qualifications

- PhD in Conservation Biology at the University of Cape Town
- MSc in Botany with focus on Ecophysiology at the University of the Free State
- BSc Hons in Botany with focus on Ecology at the University of the Free State
- BSc in Botany and Zoology at the University of South Africa
- Certifications:
    - Basic First Aid, from Skills Resources Group (2025 – 2027)
    - Introduction to Environmental Impact Assessment in South Africa, from Advocate Kuben Samie
    - Environmental Legal Risk and Liability Training, from Warburton Attorneys
    - Basic Project Management, from Acutech
    - Predator Management on Livestock Farms, Wildlife Management, and Medically important Spiders of South Africa, from WildlifeCampus

Employment History

- Current: Director and Principal Ecologist at PAN Biodiversity Consulting
- Previous: Environmental Project Manager at AGV Renewable Energy
- Previous: Senior Associate Consultant (Botanical and Terrestrial Biodiversity Specialist) at ERM
- Previous: Research Assistant at the South African National Biodiversity Institute (SANBI)
- Previous: Animal Care Intern at Ashia Cheetah Conservation
- Previous: Ecological Research Intern at the South African Environmental Observation Network (SAEON)

Project Experience

The following experience reflects work undertaken while employed by, or subcontracted to, other environmental consultancies. Specific project details, client names, and proprietary information are confidential and cannot be disclosed due to non-disclosure agreements:

- Faunal Compliance Statement for linear infrastructure in the Western Cape Province (ERM)
- Floral Compliance Statement for a wind energy facility in the Western Cape Province (ERM)
- Floral and Terrestrial Biodiversity Impact Assessment for a wind energy facility in the Western Cape Province (ERM)
- Floral Impact and Critical Habitat Assessment for linear infrastructure in Mahenge, Tanzania (ERM)
- Floral and Terrestrial Biodiversity Impact Assessment for a wind energy facility in the Northern Cape Province (ERM)
- Bat acoustic data collection and analysis for two operational wind energy facilities in the Eastern Cape Province (ERM)
- Carcass persistence trials at two operational wind energy facilities in the Eastern Cape Province (ERM)
- Carcass persistence trials at an operational wind energy facility in the Northern Cape Province (ERM)
- Botanical audit of an operational wind energy facility in the Western Cape Province (ERM)

Phone: +27 (0)73 595 7808
Email: panbiodiversity@gmail.com
103 Reservoir Street
Brackenfell
Cape Town
7560

- Floral and Terrestrial Biodiversity Impact Assessment for a photovoltaic solar energy facility in the Western Cape Province (ERM)
- Management of basic assessment process of a battery energy storage system in the Free State (AGV)
- Broad (inclusive of several DFFE screening tool themes) environmental screening of potential renewable energy development in the Eastern Cape, Free State, KwaZulu-Natal, Limpopo, Mpumalanga, Northern Cape, North West, and Western Cape Provinces (AGV).

Publications and Conferences Presentations

- Swanepoel, J. (2011). Vegetation Classification of the Vredefort Dome Iron Age stone kraals. BSc Honours Dissertation, University of the Free State.
- Swanepoel, J., Saaiman, J., Westcott, M. and Gryzenhout, M. (2014). Karee (*Searsia lancea*) malformations represent a habitat rich in biodiversity. 10th International Mycological Congress, Queen Sirikit National Conservation Centre (QSNCC), Bangkok, Thailand, 3–8 August 2014.
- Swanepoel, J., Saaiman, J., Westcott, M. and Gryzenhout, M. (2014). Karee (*Searsia lancea*) malformations represent a habitat rich in biodiversity. 20th Annual Conference of the Association for the Taxonomic Study of the Flora of the Tropical Africa, University of Stellenbosch, South Africa, 13–17 January 2014.
- Swanepoel, J., Westcott, M. and Gryzenhout, M. (2015). *Fusarium* spp. associated with common karee (*Searsia lancea*) malformations. 49th Congress of the Southern African Society for Plant Pathology, Bains Game Lodge, Bloemfontein, South Africa, 18–21 January 2015.
- Swanepoel, J., Milton-Dean, S.J. and Henschel, J. (2015). Heuweltjies: significance of long term observation and multidisciplinary collaboration. Arid Zone Ecology Forum, Goegap Nature Reserve, Springbok, South Africa, 4–8 October 2015.
- Gryzenhout, M., Swanepoel, J., Cloete, I., Mabunda, B.D.X., Swart, V.R., Westcott, M., Reeksting, S., Viljoen, R. and Pietersen, G. (2016). Deformations of plant tissues: A fascinating and poorly studied niche. South African Journal of Botany, 103, 316.
- Mabunda, B.D.X., Swanepoel, J., Swart, V.R. and Gryzenhout, M. (2016). Insects associated with malformation symptoms of common karee in the Free State, South Africa. South African Journal of Botany, 103, 322–323.
- Swanepoel, J. (2016). Investigation of malformation symptoms in *Searsia lancea*. MSc Thesis, University of the Free State.
- Swanepoel, J., Picker, M.D., Henschel, J. and Milton, S.J. (2016). The influence of heuweltjie density and dispersion on ecological processes in Succulent Karoo ecosystems. Arid Zone Ecology Forum, Prince Albert, Western Cape, South Africa, 3–6 October 2016.
- Swanepoel, J., Picker, M.D., Henschel, J. and Milton, S.J. (2016). The influence of heuweltjie density and dispersion on ecological processes in Succulent Karoo ecosystems. International Long Term Environmental Research Open Science Meeting, Skukuza, Kruger National Park, 9–13 October 2016.
- Swanepoel, J., Picker, M.D., Henschel, J. and Milton, S.J. (2016). The influence of heuweltjie density and dispersion on ecological processes in Succulent Karoo ecosystems. Kimberley Biodiversity Research Symposium, Kimberley, Northern Cape, South Africa, 22 October 2016.
- Swanepoel, J., Westcott, M. and Gryzenhout, M. (2018). First report of a new malformation disease of common karee (*Searsia lancea*) in South Africa. South African Journal of Botany, 119, 307–317.
- Swanepoel, J. (2021). The influence of *Microhodotermes viator* nest density and dispersion on ecological processes. PhD Thesis, University of Cape Town.