Site Sensitivity Verification Report

Upgrade of the Gwaing River Bridge on N2 Section 7 in George

DATE: 26 March 2016

APPLICANT
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1 INTRODUCTION

1.1 Screening tool and protocols for assessment

The Minister of Environment, Forestry and Fisheries promulgated regulations requiring the compulsory submission of a report generated by the national web-based environmental screening tool when submitting applications for environmental authorisation (GN 960 of 2019) in July 2019. The screening tool generates a report based on the mapping of environmental sensitivities and on the proximity to other important features, including 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.

1.2 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 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 by an appointed Environmental Assessment Practitioners, Anathi Skweyiya and Tarryn Solomon of Infinity Environmental.

1.3 Methodology

This Site Sensitivity Verification Report has been prepared to support the continuation of construction of the Gwaing River Bridge and the associated road alignment along the N2 Section 7 in George. The development was originally authorised in 2017 by the Department of Environmental Affairs, prior to the publication of the Protocols for the Assessment and Minimum Criteria for Reporting on Identified Environmental Themes. As part of the amendment application process, the Competent Authority requested that a site sensitivity verification report be completed to confirm the current state of the site and to identify any new assessments or guidelines that may now apply to the authorised development but were not considered during the initial environmental assessment.

The methodology applied in the preparation of this report is outlined as follows:

- A site inspection was undertaken by EAPs from Infinity Environmental on 10 February 2026.
- A desktop review of satellite imageries (including historical) using Google Earth Pro.
- Vegetation Impact Assessment Report by P.J du Preez completed in 2017 for an application for Environmental Authorisation.
- A freshwater habitat impact assessment was undertaken by Colin Holmes in 2016 for an application for Environmental Authorisation.
- A Notification of Intent to Develop was done by Jayson David John Orton an Archaeologist and Heritage Consultant in 2016.

As part of the current amendment application process, the following specialists review were completed:

- A freshwater review statement was done by Dr. Jackie Dabrowski an aquatic ecologist.
- A botanical statement was undertaken by Juan Swanepoel a botanical specialist.

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

2 FINDINGS

2.1 Site information

The project for the upgrade of the Gwaing River Bridge received an environmental authorisation to undertake listed activities in terms of the National Environmental Management Act 107 of 1998 and the EIA Regulations, 2014. Construction commenced on site in January 2018 during which the listed activities were carried out until 2021, when the project was suspended.

Ground-truthing of the biophysical features was undertaken during the EIA phase by a freshwater ecologist and a botanist.

The freshwater habitat assessment for the upgrade of N2 Gwaing Bridge upgrade identified two unchannelled valley-bottom wetlands and the Gwaing River riparian area. All systems were found to be heavily degraded as a result of agricultural activities, dam construction, erosion, and the construction of N2 infrastructure, with Present Ecological State (PES) scores ranging from largely to critically modified. Ecosystem services provided by the wetlands are very limited, however each system was assessed as having moderate ecological importance and sensitivity, primarily due to their occurrence within endangered vegetation types and CBA/ESA areas.

Among the alternatives assessed, the Preferred Alternative (new upstream bridge) and Alternative 2 (widening of the existing bridge) were expected to result in similar and manageable impacts, provided that mitigation measures were fully implemented. Alternative 3 presented the highest ecological risk because and would require extensive infilling of wetland areas and the removal of several dams that currently act as buffers for agricultural runoff. Mitigation, targeted rehabilitation and continued ecological monitoring was expected to reduce impacts to minimal and localised levels for all alternatives, Alternative 3 would require the most intensive intervention.

The vegetation impact assessment reported that the project area falls within critically endangered Garden Route Granite Fynbos and Cape Lowland Alluvial Vegetation, both of which had already

been heavily transformed by agriculture, road construction and invasive alien species. The report indicated that although 74 Red List or protected plant species occurred within the broader region, only a small number were present on site. Among the three alternatives assessed, Alternative 1 (widening the existing bridge) was identified as the preferred option because Alternatives 2 and 3 would have resulted in greater ecological disturbance, particularly to a sensitive seasonal stream south of the N2. The assessment further stated that the most significant impacts would have included loss of vegetation, increased erosion risk and the proliferation of alien invasive plants. However, with appropriate mitigation measures such as strict site demarcation, minimal vegetation clearing, pre-construction search-and-rescue of bulbous and succulent species, and rigorous alien plant control, these impacts could have been reduced to acceptable levels during previous construction phase. The study concluded that the development remained feasible from a vegetation perspective, with low ecological sensitivity and limited cumulative impacts, with the implementation of all recommended mitigation measures.

The preferred alternative (Alternative 1) which was the construction of a new bridge was authorised.

Part 1 amendment application process

The EA Holder intends to continue with construction activities and has submitted an application to amend the Environmental Authorisation (EA). Given that several years have passed since the original specialist studies were undertaken, the competent authority requested that these assessments be reviewed to confirm whether their findings remain valid. Accordingly, aquatic and botanical specialists were appointed to review the existing reports and provide updated confirmation of the relevance of the previous assessments.

The botanical specialist site verification was undertaken on 12 March 2026, while the freshwater (aquatic) specialist site verification was undertaken on 19 March 2026. These inspections focused on identifying any changes in vegetation composition, habitat condition, invasive species proliferation, and riverine system stability since the suspension of construction activities in 2021.

The validity of the original impact assessment for the Gwaing River Bridge project remains unchanged and is applicable for the purposes of this amendment application (extension of EA validity). The assessment was based on a combination of specialist studies, site verification, and engineering inputs, which continue to accurately represent the receiving environment and proposed construction activities.

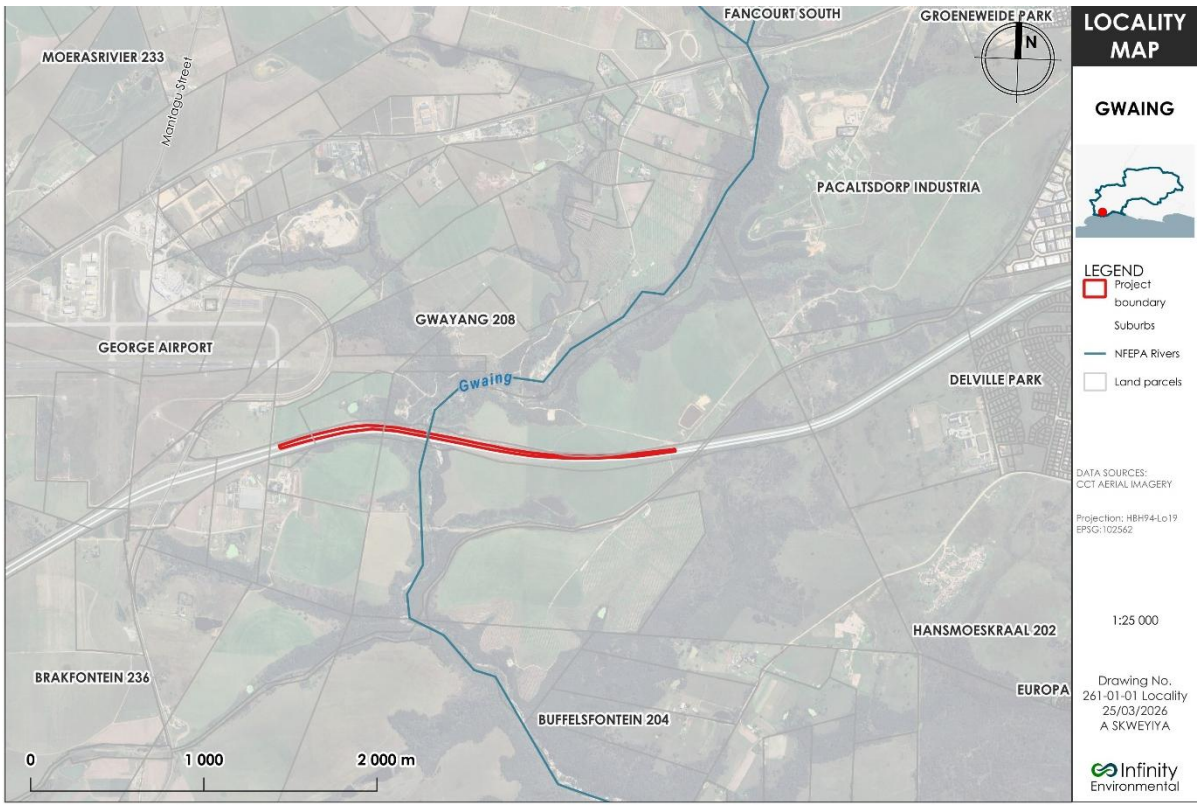

Figure 1: Locality map

3 COMMENTS ON SENSITIVITIES MAPPED IN SCREENING REPORT

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:

Theme	Sensitivity			
	Low	Medium	High	Very High
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			

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 assessment
- Aquatic biodiversity assessment
- Hydrology assessment
- Socio-economic assessment
- Plant species assessment
- Animal species assessment

In terms of the Protocols, the themes above require a site sensitivity verification followed by specialist assessments of confirmed sensitivities. The sections below provide an overview of the verified site sensitivity.

4 SENSITIVITY THEME COMMENTS

4.1 Agriculture theme

The site is mapped as very high sensitivity for the agricultural theme due agricultural potential to support Non-pivot Irrigated Annual Crop Cultivation or Planted Pastures.

The development is situated within the road reserve of the National Route (N2). No agricultural land will be lost due to the completion of the upgrade and no agricultural activities on surrounding farms will be impacted. The agricultural sensitivity rating is disputed. A specialist study is not required.

4.2 Animal species theme

The site is mapped as high sensitivity for animal species due to its distribution of high sensitivity bird species and medium sensitivity invertebrate species. The species noted in the screening tool report is listed below:

Type of animal	Species name	Species status	Explanation
Bird	*Bradypterus sylvaticus*	Vulnerable	*Bradypterus sylvaticus* occursin four narrow zones in the coastal vegetation of the Eastern and Western Cape. These areas are predominantly made up of dense, moist coastal thicket.
Bird	*Circus ranivorus*	Endangered	*Circus ranivorus* requires healthy, expansive wetland systems with reedbeds, sedges, and adjacent grasslands. It is highly sensitive to wetland loss and degradation, thriving only in moist, high-rainfall landscapes where hydrology and vegetation remain intact.
Bird	*Neotis denhami*	Vulnerable	*Neotis denhami* occupies grasslands, savanna landscapes, floodplains and dried marshlands.

Type of animal	Species name	Species status	Explanation
			It also occurs in agricultural lands, including croplands and cultivated pastures where natural and modified vegetation form mosaics. This species is highly sensitive to habitat quality and fragmentation.
Bird	*Stephanoaetus coronatus*	Vulnerable	*Stephanoaetus coronatus* is a forest-specialist apex predator, dependent on tall, mature forests especially riparian, escarpment, and coastal forests. While adaptable enough to use plantations and leafy suburban areas, it remains vulnerable to forest fragmentation, loss of large trees, and declines in prey availability.
Amphibian	*Afrixalus knysnae*		*Afrixalus knysnae* depends on clean, shallow, vegetated freshwater systems embedded in a fynbos–forest coastal mosaic at low altitudes. The species require high water quality for successful breeding.
Invertebrate	*Aneuryphymus montanus*		*Aneuryphymus montanus* is strongly associated with fynbos vegetation and occupies rocky foothill habitats.
8 unnamed sensitive species			Because of the fragmentation and disturbance of habitat occurring within the site. It is unlikely that sensitive species can thrive.

The site does not provide conducive habitat conditions for the species identified by the screening tool. This is due to the existing fragmentation of habitat in the area and the absence of the specific ecological features required to support breeding. The sensitive rating by the screening tool is disputed and no further studies are required.

4.3 Aquatic biodiversity

The site is mapped as very high sensitivity for aquatic biodiversity theme due to presence of a river classified as a critical biodiversity area, the presence of a channelled valley-bottom wetland and falling within a strategic water source area.

The freshwater habitat assessment for the upgrade of N2 Gwaing Bridge upgrade identified three watercourses within the study area: two unchannelled valley-bottom wetlands and the Gwaing River riparian area. All systems were found to be heavily degraded as a result of agricultural activities, dam construction, erosion, and existing N2 infrastructure, with Present Ecological State (PES) scores ranging from largely to critically modified.

Although most of the major works have been completed within the river corridor, temporary access, as well as the installation of scaffolding and formwork beneath the remaining spans, will still be required to complete the outstanding construction activities.

A freshwater impact assessment was undertaken during the EIA process and has been reviewed to confirm that its findings and conclusions remain valid. The sensitivity rating generated by the national environmental screening tool is confirmed and remains applicable to the project.

4.4 Archaeological and Cultural Heritage Theme

The site is mapped as low sensitivity for Archaeological and Cultural Heritage Theme

A Notification of Intent to Develop (NID) was submitted to Heritage Western Cape in 2016, and it was confirmed that the proposed development was not expected to impact any heritage resources. The continuation of the project does not alter the scope of works originally provided to HWC as part of the NID submission.

The sensitivity rating of low sensitivity is confirmed. A specialist study is not required.

4.5 Civil aviation theme

The site is mapped very high sensitivity for the civil aviation theme due to being within 8 km of a major civil aviation aerodrome, 15km of a civil aviation radar and being and within 5 km of an air traffic control or navigation site.

The development does not exceed the limits and restrictions set out by the South African Civil Aviation Authority as it will not exceed height of 45m above ground level and occurs at the same level as the existing road.

For these reasons, the project site has no civil aviation related sensitivities. A specialist study is not required.

4.6 Defence theme

The site is mapped as low sensitivity for the Defence theme. No defence operations and bases are situated near the site. Therefore, the low sensitivity rating is confirmed, and a specialist study is not required.

4.7 Plant species theme

The site is mapped as medium sensitivity for plant species due to presence of medium sensitive vegetation.

A botanical assessment was undertaken in 2017 during the EIA process. A total of 53 species including 11 protected species were confirmed as occurring within the project footprint. The search and rescue was completed prior to clearing of vegetation.

The reviewing specialist noted that following vegetation clearing, an additional nine plant species were confirmed as occurring within the project footprint.

The sensitivity rating by the screening tool is confirmed. A botanical assessment was completed during the EIA process and was reviewed for validity during this period.

4.8 Terrestrial biodiversity theme

The site is mapped as very high sensitivity due to presence of Garden Route Granite Fynbos (Critically endangered) and Cape Lowland Alluvial Vegetation (Endangered) and because of its classification as a CBA.

A botanical assessment was undertaken in 2017 as part of the EIA process. The ecosystem type identified by the national environmental screening tool was confirmed by the botanical specialists. However, the area has since become degraded due to the proliferation of invasive alien plant species.

The botanical assessment was completed during the EIA process and was reviewed for validity during this period.

5 OTHER STUDIES IDENTIFIED IN THE SCREENING TOOL REPORT

Other specialist studies unrelated to the identified themes but listed in the screening tool report, included:

5.1 Landscape/visual impact assessment

A landscape or visual assessment is not required, as the proposed development is not expected to significantly alter the character of the N2 or the surrounding landscape. The anticipated visual impacts are limited to construction-related activities, which are temporary in nature and will be mitigated through the measures outlined in the Environmental Management Programme.

5.2 Palaeontology Impact Assessment

The site is not expected to contain any fossil resources, and all deep subsurface excavations associated with the project have already been completed. Should any fossils be discovered during the remaining construction activities, work in the affected area will be halted immediately and the findings will be reported to Heritage Western Cape. A palaeontology impact assessment is not required.

5.3 Socio-economic assessment

The development is expected to deliver positive socio-economic benefits, including short-term employment opportunities for local labour during the construction phase, as well as longer-term benefits associated with the completion of this strategic section of the National Route.

A socio-economic study was not undertaken during the previous phase of the EIA, and no new or material socio-economic impacts have been identified that would warrant a separate assessment as part of this amendment application.

5.4 Hydrology assessment

Engineering reports completed during the EIA period consist of a design for stormwater infrastructure which will control the stormwater within the site. No further studies will be completed.

6 CONCLUSION

The site sensitivity verification is intended to confirm or refute the need to appoint and undertake specialist assessments as identified in the screening report.

Based on the findings of the site sensitivity verification for the construction of the Gwaing Bridge, it is confirmed that the site has the following sensitivities:

- Aquatic biodiversity
- Plant Species
- Terrestrial Biodiversity

Specialist studies were therefore conducted as required for these aspects and reviewed for validity.