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Our Ref: MOS731/02

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RE: SITE SENSITIVITY VERIFICATION REPORT FOR BASIC ASSESSMENT APPLICATION FOR REPAIR & UPGRADE OF FEROX STORMWATER INFRASTRUCTURE ON ERF 7284 DANABAAL, MOSSEL BAY MUNICIPALITY

On 20 March 2020 the Minister of Forestry, Fisheries and the Environmental published the general requirements for undertaking site sensitivity verification for environmental themes for activities requiring environmental authorisation (Government Gazette No. 43110). In terms of these requirements, prior to commencing with a specialist assessment, the current land use and environmental sensitivity of the site under consideration by the screening tool must be confirmed by undertaking a site sensitivity verification.

The report uses national datasets to identify site sensitivities and potential specialist studies that may be required for any particular development. Since the datasets are not necessarily ground truthed, there may be instances where the required specialist study is in actual fact not necessary.

Prior to commencing with a specialist assessment, the current use of the land and the environmental sensitivity of the site under consideration identified by the screening tool must be confirmed by the undertaking a **site sensitivity verification**. According to the Assessment Protocol for specialist involvement, if any part of the proposed development falls within an area of ‘high’ or ‘very high’ sensitivity, the requirements prescribed for such sensitivity must be followed.

According to the Screening Tool Report that was run on **16 February 2022**, the following summary of the development footprint environmental sensitivities is identified. The footprint environmental sensitivities for the proposed development footprint as identified, are indicative only and must be verified on site by a suitably qualified person before the specialist assessments identified below can be confirmed.

Erf 7284, Danabaal is a municipal erf, **zoned as Public Open Space 1**. This open space erf is designated to maintain a non-perennial watercourse within a developed residential area, as the upper catchment of a mapped NFEPA ‘channelled valley-bottom wetland’ to the south. The watercourse is mapped as a combination of Aquatic Ecological Support Area (ESA) and degraded ESA (aquatic feature).

The existing stormwater gabion weir structures, within this 84m length of non-perennial watercourse, have failed and require urgent upgrade and repair to mitigate the on-going erosion and undercutting of the eastern embankment in-particular. This undercutting poses a directly threat of slope failure and the loss of private property above it. Due to lack of maintenance, the private residents have over the years tried to stabilise this embankment themselves, by means of concrete packed tyres and rubble infill etc., which is also on the verge of failing.

It is proposed that the existing top two (of three) weir structures, as well as tyre / concrete embankment stabilisation, will be removed and an **upgraded stormwater conveyance system and**

bank stabilisation installed to better manage stormwater, as well as protect private property and the environment into the future.

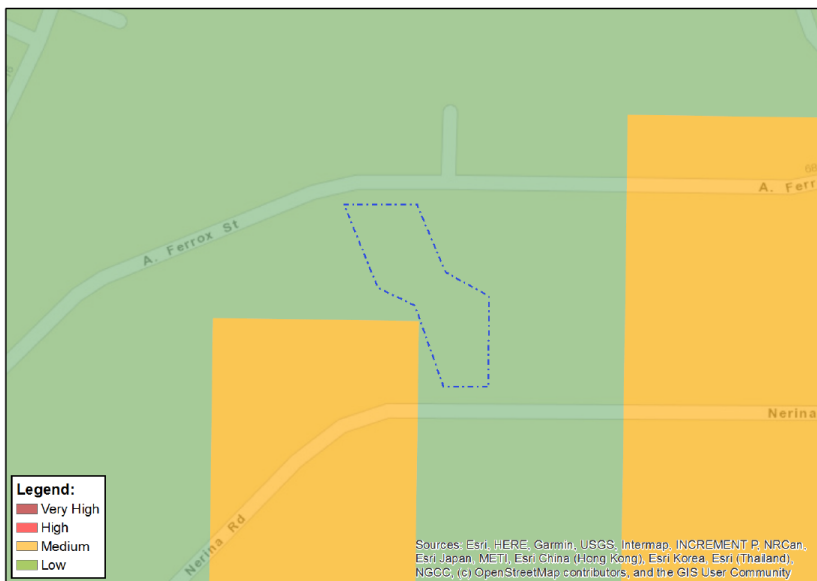
Site visit was conducted by the EAP on 07 February 2022.

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
Paleontology Theme			X	
Plant Species Theme				X
Terrestrial Biodiversity Theme	X			

Below is confirmation of the studies required for the Application based on the sensitivity themes identified above.

Agriculture (Low Sensitivity)

The Screening Tool identifies the agricultural sensitivity theme as “low” due to the development site falling within the estimated ‘very-low’ land capability.



The property is located within an existing residential area, within the urban edge, and has not been utilised for agricultural purposes.

The built-up environment is **not consistent with agricultural activities** i.e. Act 70 of 70 does not apply to this application. The Department of Agriculture will however be approached for confirmation.

No specialist study will be conducted.

The land capability layer as used in the Screening Tool does not take into account any urban delineation and has to take into account **high value agricultural land** that can be preserved for **continued agricultural production** thus ensuring long term national food security. This property does not qualify in this respect.

Layer Information

Title
Land Capability (DAFF 2016)

Description
The Land Capability (2016) represents the distribution of the land capability evaluation values in the country, used as one of the input data layers to determine and demarcate all high value agricultural land for ensuring that these areas, pending availability, are preserved for continued agricultural production, thereby ensuring long-term national food security. The data layer is a seamless data layer and does not exclude permanently transformed areas (built up; waterbodies; mining etc.)

Land capability is defined as the most intensive long-term use of land for purposes of rainfed farming determined by the interaction of climate, soil and terrain. Land capability should not be seen as a substitute for the interpretation designed to show land suitability or agricultural potential.

The approach to the refinement of the 2016 Land capability data layer was based on a spatial modelling exercise and verified through actual in-field verification processes and local level soil assessment data.

The Land capability evaluation 2016 data layer is a refined and updated spatial modelled data layer depicting the land capability evaluation values for the country. The main contributing factors towards land capability in a “natural or unimproved “rainfed (dryland) scenario, were the soil, climate and terrain capabilities with a weighted reference of:

Soil capability = 30%; Climate capability = (40%) and Terrain capability = (30%).

Source

Department of Agriculture, Forestry and Fisheries (DAFF)

Type

Raster Layer

Animal Species (Medium Sensitivity)

The screening tool identified the sensitivity for animal species (fauna) as “medium” for the following species:

Sensitivity	Feature(s)
Medium	Invertebrate-Aneuryphymus montanus
Medium	Sensitive species 7

It must be noted that the property falls within an existing urban environment, with alien plant species and garden escapee invasion decades. Remaining indigenous vegetation is described as fragmented Thicket. *Aneuryphymus montanus* (Yellow-winged Agile Grasshopper) is associated with fynbos vegetation, where it has been collected "amongst partly burnt stands of evergreen Sclerophyll in rocky foothills" (Brown 1960). It prefers south-facing cool slopes (Kinvig 2005). There is no fynbos vegetation on this site.

Sensitive species 7 requires indigenous forest habitat. There is no indigenous forest habitat on this site.

The photographs below show the level of Kikuyu grass invasion and lack of diverse habitat as is associated with many residential areas.



These habitat requirements are not met by the habitat conditions found on site. It is therefore highly unlikely that any of these species would be found on site or would depend on habitat on the site for survival.

A Biodiversity specialist will provide verification in this regard.

Aquatic Biodiversity (Very-High Sensitivity)

The screening tool identified the aquatic biodiversity theme as “very high”, due to the non-perennial watercourse traversing the property, as the upper catchment of a mapped NFEPA ‘channelled valley-bottom wetland’ to the south.

Sensitivity	Feature(s)
Very High	Freshwater ecosystem priority area quinary catchments

An Aquatic study and General Authorisation to be undertaken to inform maintenance & management of activity.

Archaeological & Cultural Heritage (Low Sensitivity)

The screening tool identified this theme as being “low”. An Applicability of Section 38 of NHRA (need for NID), as well as Paleontological & Archaeological studies to be confirmed by Heritage Practitioner.

Civil Aviation (High Sensitivity)

According to the screening tool, the development is located within 8km of a civil aviation aerodrome. The airfield in question is the Still Bay Airfield which is a small municipal airfield located approximately 4.16kms to the north. The airfield is a registered parachute dropzone.

Stormwater infrastructure upgrades / activities within a watercourse, inside the urban edge, will not trigger the obstacle collision / potential hazard requirements as set out by the CAA, i.e.

- Buildings or other objects which will constitute an obstruction or potential hazard to aircraft moving in the navigable air space in the vicinity of an aerodrome, or navigation aid, or which will adversely affect the performance of the radio navigation or instrument landing systems,
- There are no buildings or objects higher than 45 metres above the mean level of the landing area;
- No building, structure or object which projects above a slope of 1 in 20 and which is within 3000 metres measured from the nearest point on the boundary of an aerodrome;
- No building, structure or other object which will project above the approach, transitional or horizontal surfaces of an aerodrome.

As such it is not necessary to request approval in terms of the Civil Aviation Act for obstacles, however comment will be requested from the Civil Aviation Authority.

Defence (Low Sensitivity)

The screening tool identified this theme as being “low”. The property is located inside the urban edge of Danabaai, there are no defence installations in the vicinity.

Palaeontology (Medium Sensitivity)

The screening tool identified this theme as being “medium” with no specific reason provided. The probability of encountering archaeological and/or palaeontological occurrences within the study area is very low, given the resultant erosion from concentrated volumes and velocity of surface water run-off draining through this urban catchment area. The Applicability of Section 38 of NHRA (need for NID), and Paleontological studies to be confirmed by Heritage Practitioner.

Plant Species (Low Sensitivity)

The screening tool identified this theme as being “Low”. A Botanical and Terrestrial Biodiversity Compliance statement is being drafted for this application.

SANBI BGIS maps the vegetation type as **Hartenbos Dune Thicket**, which according to the biodiversity threat assessment (2018) has an ecological status of **Least Concern**. The vegetation within the watercourse is **dominated by alien invasive Kikuyu Grass**, with remnant patches of sedges including Basket Grass (*Cyperus textilis*) downstream. The vegetation on the banks includes Thicket species: Milkwood (*Sideroxylon inerme*), Taaibos (*Seasia lucida & crenata*), Wild Olive (*Olea exasperata*), Spike-thorn (*Gymnosporia buxifolia*), Bitou (*Chrysanthemoides monilifera*), Krantz Aloe (*Aloe arborescens*), *Protasparagus sp.* etc., interspersed with pioneer Fynbos species: Blombos (*Metalasia sp.*), Silver-bush (*Helichrysum petiolare*) etc. Several alien invasive plant species and garden escapees are noted: *Yukka*, Manatoka, Goose-berry, *Lantana*, Brazilian Pepper, Sword-fern, *Plectranthus sp.* etc. A Milkwood tree is growing in the lower reaches of the stream (to be avoided), while Wild Plum (*Harpephyllum caffrum*) and Yellowwood trees (*Afrocarpus latifolius & falcatus*) were noted on the property boundaries bordering private property (to be avoided).

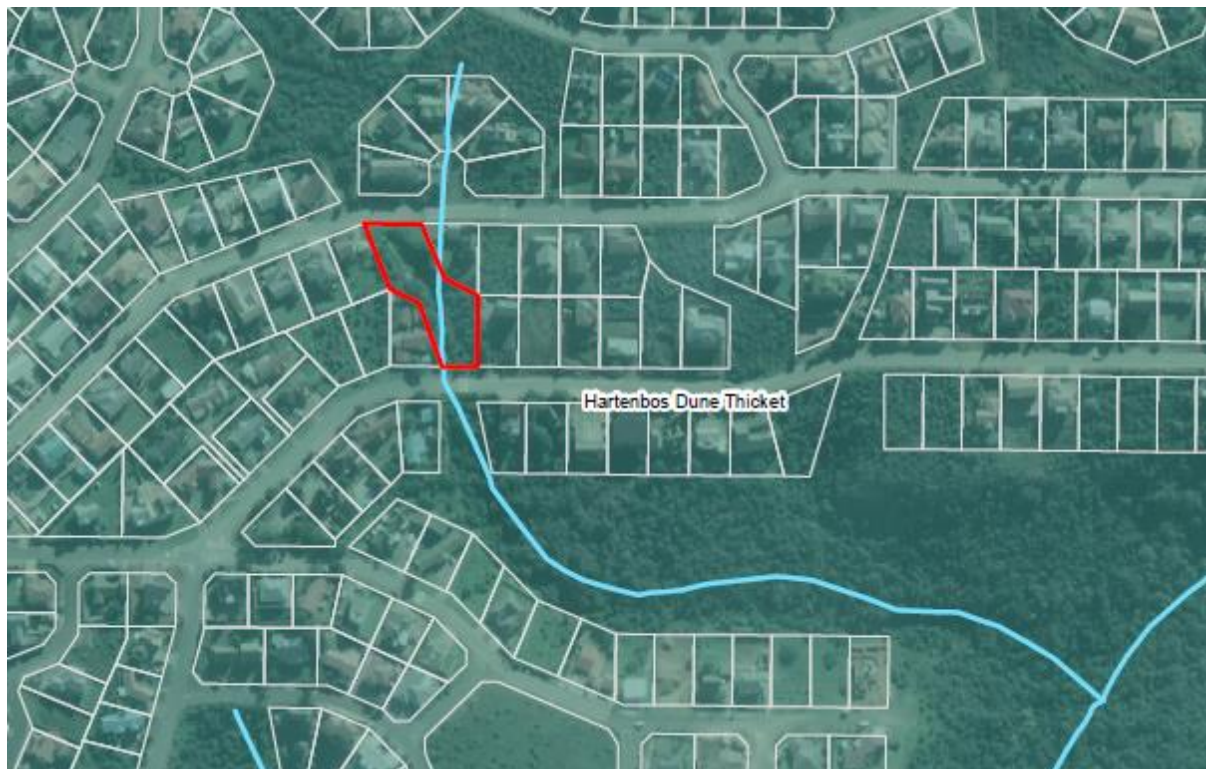


Figure 1: Vegetation Type of the property as per SANBI 2020

Terrestrial Biodiversity (Very High Sensitivity)

The screening tool identified this them as being “very high”, notably for being mapped within an Ecological Support Area (ESA2) and in proximity to a National Freshwater Priority Area (NFEPa).

Sensitivity	Feature(s)
Very High	Ecological support area 2
Very High	FEPA Subcatchments

A Terrestrial Biodiversity Compliance statement has been for this application. The property has been invaded by alien invasive plant species, which coupled with poor stormwater management and maintenance, diminished the terrestrial biodiversity of this site.

Specialist Assessments

Based on the site sensitivities identified, the screening tool identified 10 possible specialist assessments for the development. These are as follows:

1. Landscape/Visual Impact Assessment
This assessment will not be undertaken, given the development to be the repair and upgrade of existing stormwater infrastructure within the current built environment of Danabaai.
2. Archaeological and Cultural Heritage Impact Assessment
The proposed works do not trigger any of the development activities listed in terms of Sections 34(1) and 38(1) of the National Heritage Resources Act, 1999 (Act 25 of 1999) ("NHRA"). The Applicability of Section 38 of NHRA (need for NID), Archaeological and Paleontological studies to be confirmed by Heritage Practitioner..
3. Palaeontology Impact Assessment
The proposed works do not trigger any of the development activities listed in terms of Sections 34(1) and 38(1) of the National Heritage Resources Act, 1999 (Act 25 of 1999) ("NHRA"). The Applicability of Section 38 of NHRA (need for NID), Archaeological and Paleontological studies to be confirmed by Heritage Practitioner.
4. Terrestrial Biodiversity Impact Assessment
A Terrestrial Biodiversity Compliance Statement will be conducted.
5. Aquatic Biodiversity Impact Assessment
Aquatic study and General Authorisation to be undertaken to inform maintenance & management of activity.
6. Hydrological Assessment
The design of the upgraded stormwater infrastructure has been informed on a hydrological (20-year return) and hydraulic analysis conducted by the project Engineers. No additional Hydrological assessment is deemed necessary.
7. Socio-Economic Assessment
No such assessment will be undertaken as the repair & upgrade works are for replacement of existing stormwater infrastructure, within an already built-up residential area, inside the urban edge.
8. Plant Species Assessment
To be included in Terrestrial Biodiversity Compliance study.
9. Animal Species Assessment
To be included in Terrestrial Biodiversity Compliance study.

The site verification per theme as provided above motivates that only the following assessments will be undertaken:

1. Heritage Impact Statement (which will confirm applicability of Section 38 of NHRA and Archeological and Palaeontological themes);
2. Terrestrial Biodiversity (including Plant & Animal themes) Compliance Statement; and
3. Aquatic Compliance Statement and General Authorisation.

It is the opinion of the author that the development and future maintenance of the proposed upgraded Ferox Stormwater intervention can be suitably guided via the authorisation of a detailed **Environmental Management & Maintenance Programme (EMMP)**, instead of via a Basic Assessment process.

Please feel free to contact this office should you require any further information.

Kind regards,



Mrs Siân Holder
Environmental Consultant

**SCREENING REPORT FOR AN ENVIRONMENTAL AUTHORIZATION AS
REQUIRED BY THE 2014 EIA REGULATIONS – PROPOSED SITE
ENVIRONMENTAL SENSITIVITY**

EIA Reference number: tbc

Project name: Ferox Stormwater Repair

Project title: Ferox Stormwater Repair

Date screening report generated: 16/02/2022 08:52:36

Applicant: Mossel Bay Municipality

Compiler: CAPE EAPrac

Compiler signature:
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Application Category: Any activities within or close to a watercourse

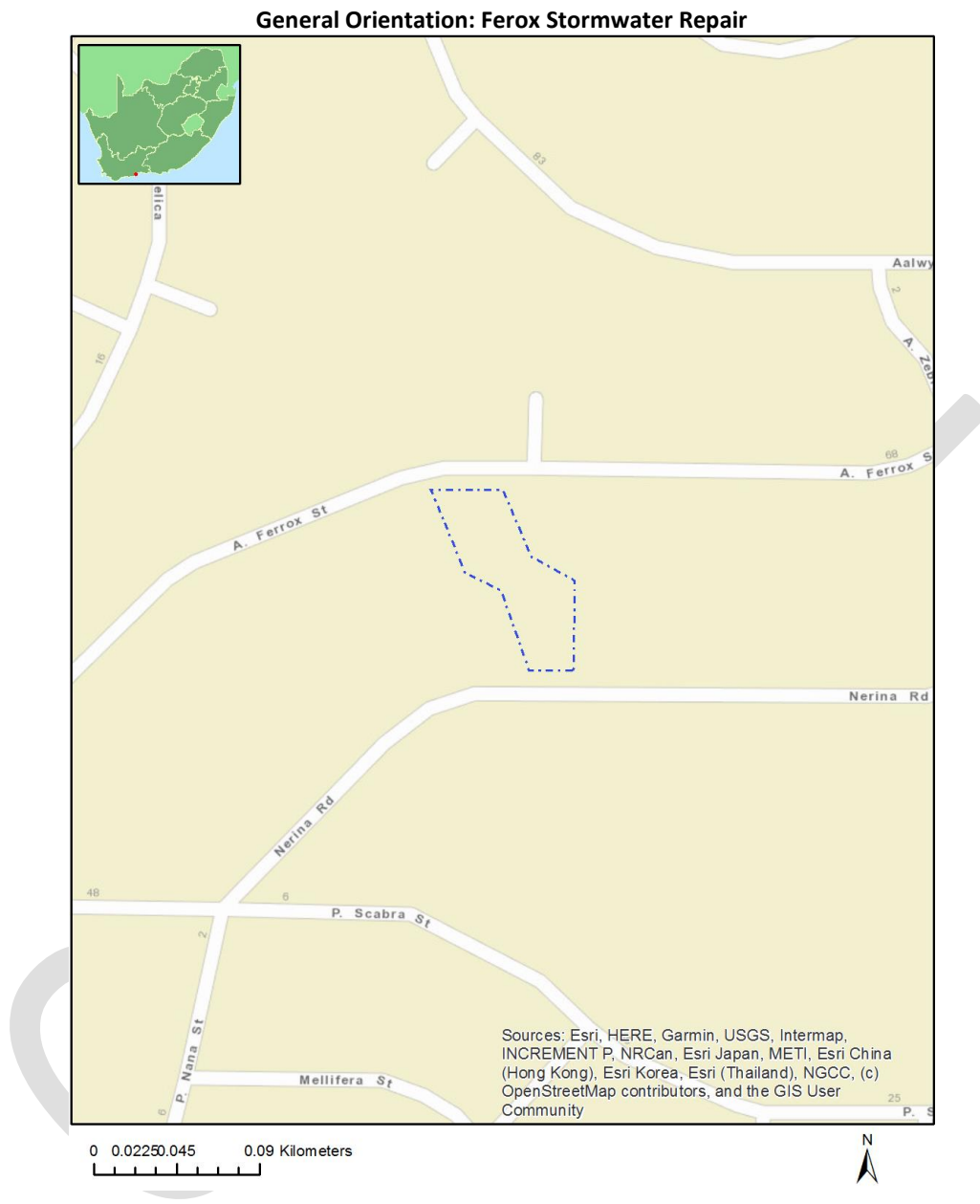


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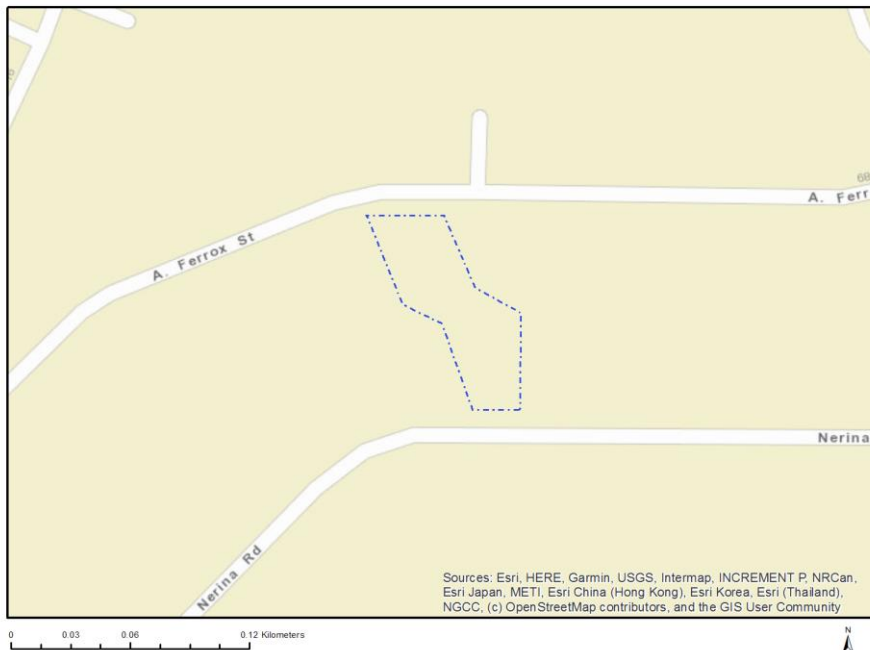
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Proposed Project Location

Orientation map 1: General location



Map of proposed site and relevant area(s)



Cadastral details of the proposed site

Property details:

No	Farm Name	Farm/ Erf No	Portion	Latitude	Longitude	Property Type
1	MOSEL BAY	7284	0	34°11'51.87S	22°2'33.45E	Public Place

Development footprint¹ vertices:
No development footprint(s) specified.

Wind and Solar developments with an approved Environmental Authorisation or applications under consideration within 30 km of the proposed area

No nearby wind or solar developments found.

Environmental Management Frameworks relevant to the application

No intersections with EMF areas found.

¹ "development footprint", means the area within the site on which the development will take place and includes all ancillary developments for example roads, power lines, boundary walls, paving etc. which require vegetation clearance or which will be disturbed and for which the application has been submitted.

Environmental screening results and assessment outcomes

The following sections contain a summary of any development incentives, restrictions, exclusions or prohibitions that apply to the proposed development site as well as the most environmental sensitive features on the site based on the site sensitivity screening results for the application classification that was selected. The application classification selected for this report is:

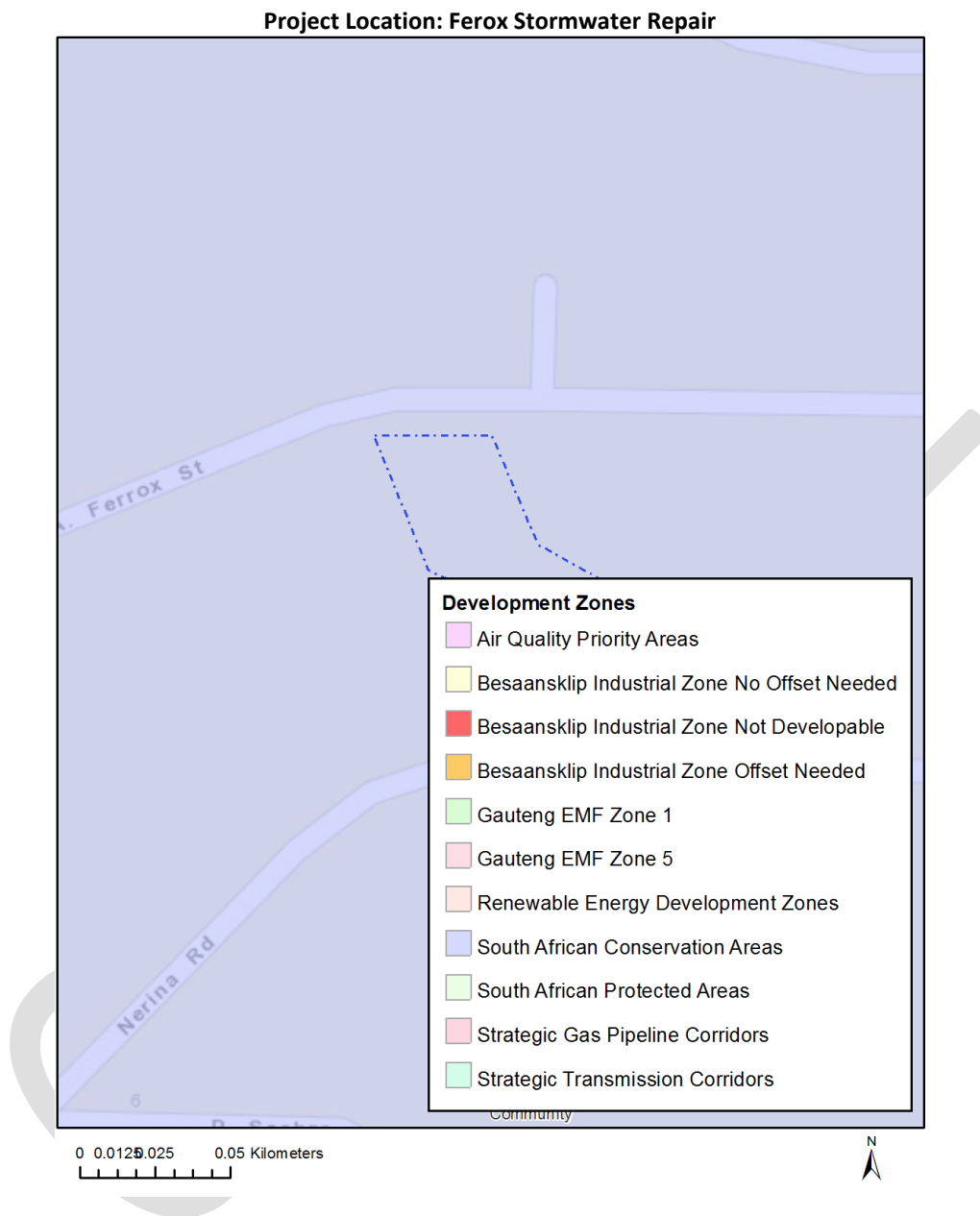
Any activities within or close to a watercourse.

Relevant development incentives, restrictions, exclusions or prohibitions

The following development incentives, restrictions, exclusions or prohibitions and their implications that apply to this site are indicated below.

Incentive, restriction or prohibition	Implication
Strategic Gas Pipeline Corridors -Phase 2: Mossel Bay to Coega	https://screening.environment.gov.za/ScreeningDownloads/DevelopmentZones/Combined_GAS.pdf
South African Conservation Areas	https://screening.environment.gov.za/ScreeningDownloads/DevelopmentZones/SACAD_OR_2021_Q3_Metadata.pdf

Map indicating proposed development footprint within applicable development incentive, restriction, exclusion or prohibition zones



Proposed Development Area Environmental Sensitivity

The following summary of the development site environmental sensitivities is identified. Only the highest environmental sensitivity is indicated. The footprint environmental sensitivities for the proposed development footprint as identified, are indicative only and must be verified on site by a suitably qualified person before the specialist assessments identified below can be confirmed.

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
Paleontology Theme			X	
Plant Species Theme				X
Terrestrial Biodiversity Theme	X			

Specialist assessments identified

Based on the selected classification, and the environmental sensitivities of the proposed development footprint, the following list of specialist assessments have been identified for inclusion in the assessment report. It is the responsibility of the EAP to confirm this list and to motivate in the assessment report, the reason for not including any of the identified specialist study including the provision of photographic evidence of the site situation.

N o	Specialist assessment	Assessment Protocol
1	Landscape/Visual Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
2	Archaeological and Cultural Heritage Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
3	Palaeontology Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
4	Terrestrial Biodiversity Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Terrestrial_Biodiversity_Assessment_Protocols.pdf
5	Aquatic Biodiversity Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Aquatic_Biodiversity_Assessment_Protocols.pdf
6	Hydrology Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
7	Socio-Economic	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf

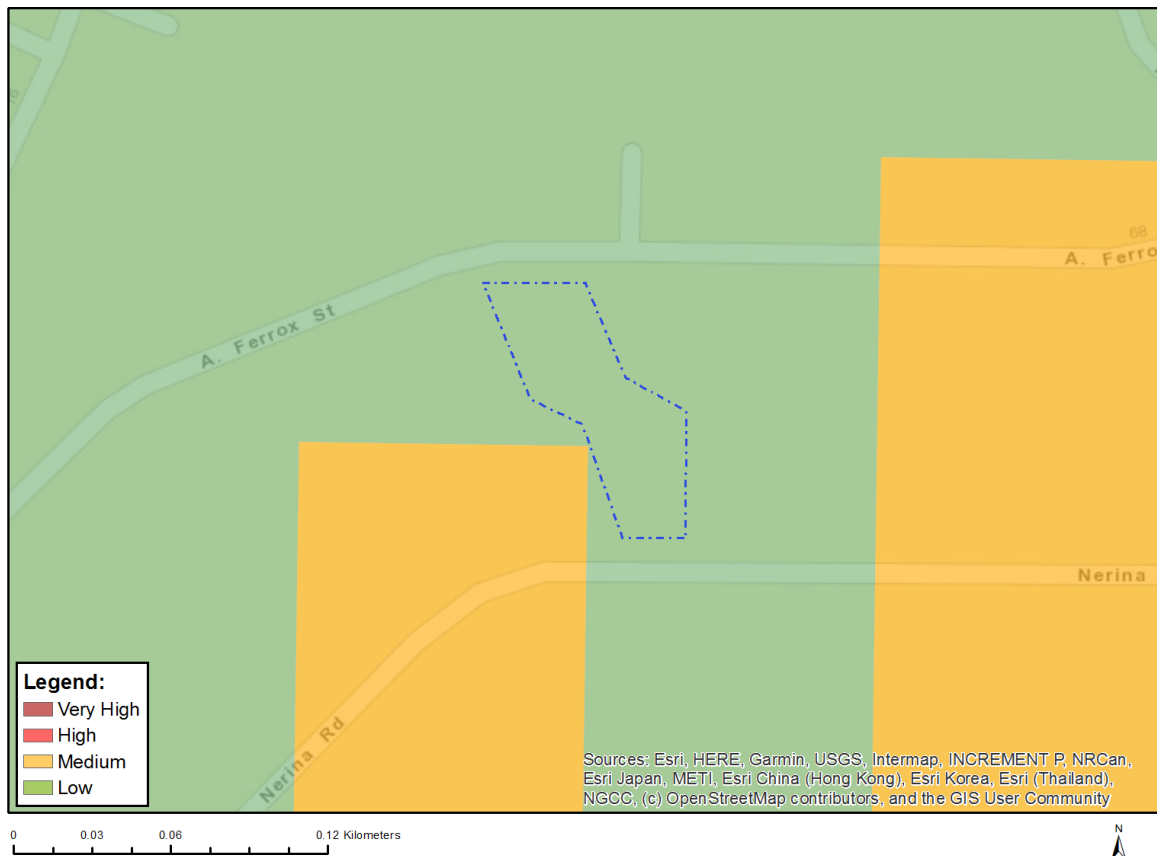
	Assessment	
8	Plant Species Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Plant_Species_Assessment_Protocols.pdf
9	Animal Species Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Animal_Species_Assessment_Protocols.pdf

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Results of the environmental sensitivity of the proposed area.

The following section represents the results of the screening for environmental sensitivity of the proposed site for relevant environmental themes associated with the project classification. It is the duty of the EAP to ensure that the environmental themes provided by the screening tool are comprehensive and complete for the project. Refer to the disclaimer.

MAP OF RELATIVE AGRICULTURE THEME SENSITIVITY

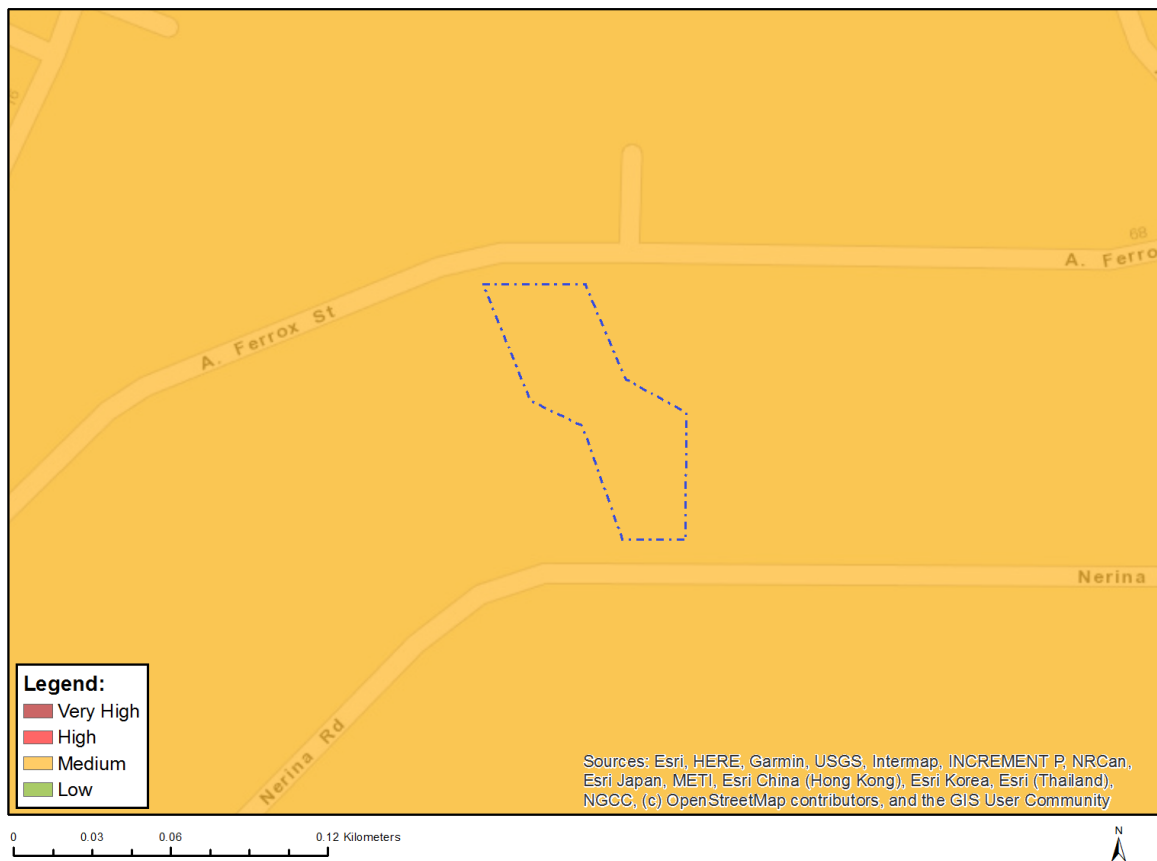


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
			X

Sensitivity Features:

Sensitivity	Feature(s)
Low	Land capability;01. Very low/02. Very low/03. Low-Very low/04. Low-Very low/05. Low

MAP OF RELATIVE ANIMAL SPECIES THEME SENSITIVITY



Where only a sensitive plant unique number or sensitive animal unique number is provided in the screening report and an assessment is required, the environmental assessment practitioner (EAP) or specialist is required to email SANBI at eiadatarequests@sanbi.org.za listing all sensitive species with their unique identifiers for which information is required. The name has been withheld as the species may be prone to illegal harvesting and must be protected. SANBI will release the actual species name after the details of the EAP or specialist have been documented.

Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
		X	

Sensitivity Features:

Sensitivity	Feature(s)
Medium	Invertebrate-Aneuryphymus montanus
Medium	Sensitive species 7

MAP OF RELATIVE AQUATIC BIODIVERSITY THEME SENSITIVITY

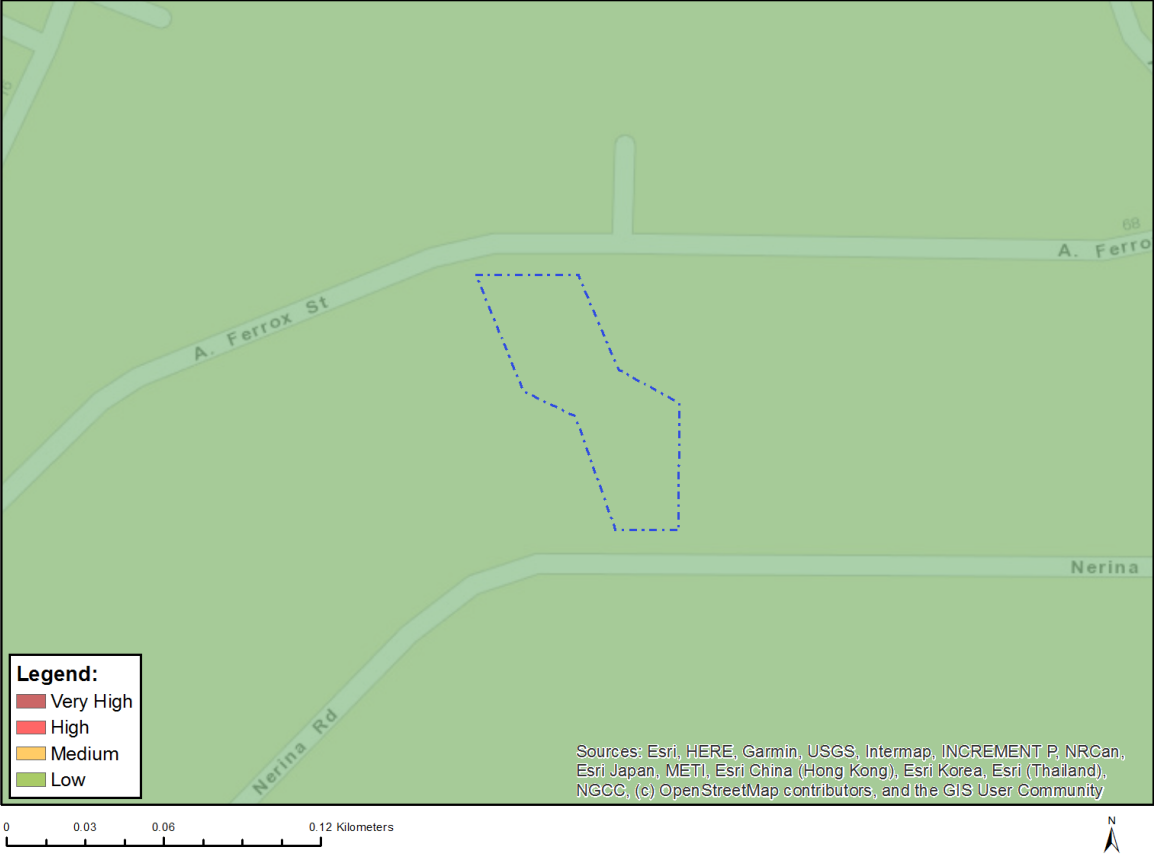


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
X			

Sensitivity Features:

Sensitivity	Feature(s)
Very High	Freshwater ecosystem priority area quinary catchments

MAP OF RELATIVE ARCHAEOLOGICAL AND CULTURAL HERITAGE THEME SENSITIVITY

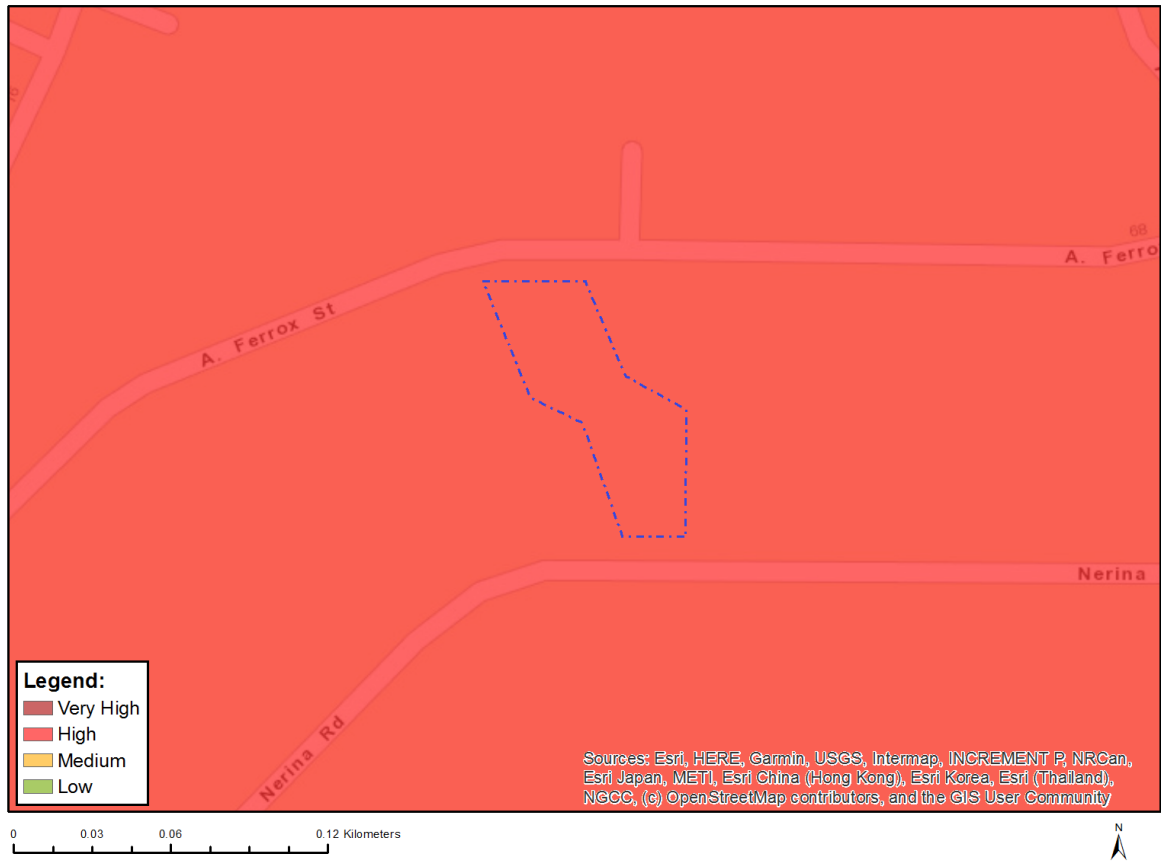


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
			X

Sensitivity Features:

Sensitivity	Feature(s)
Low	Low sensitivity

MAP OF RELATIVE CIVIL AVIATION THEME SENSITIVITY



Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
	X		

Sensitivity Features:

Sensitivity	Feature(s)
High	Within 8 km of other civil aviation aerodrome

MAP OF RELATIVE DEFENCE THEME SENSITIVITY

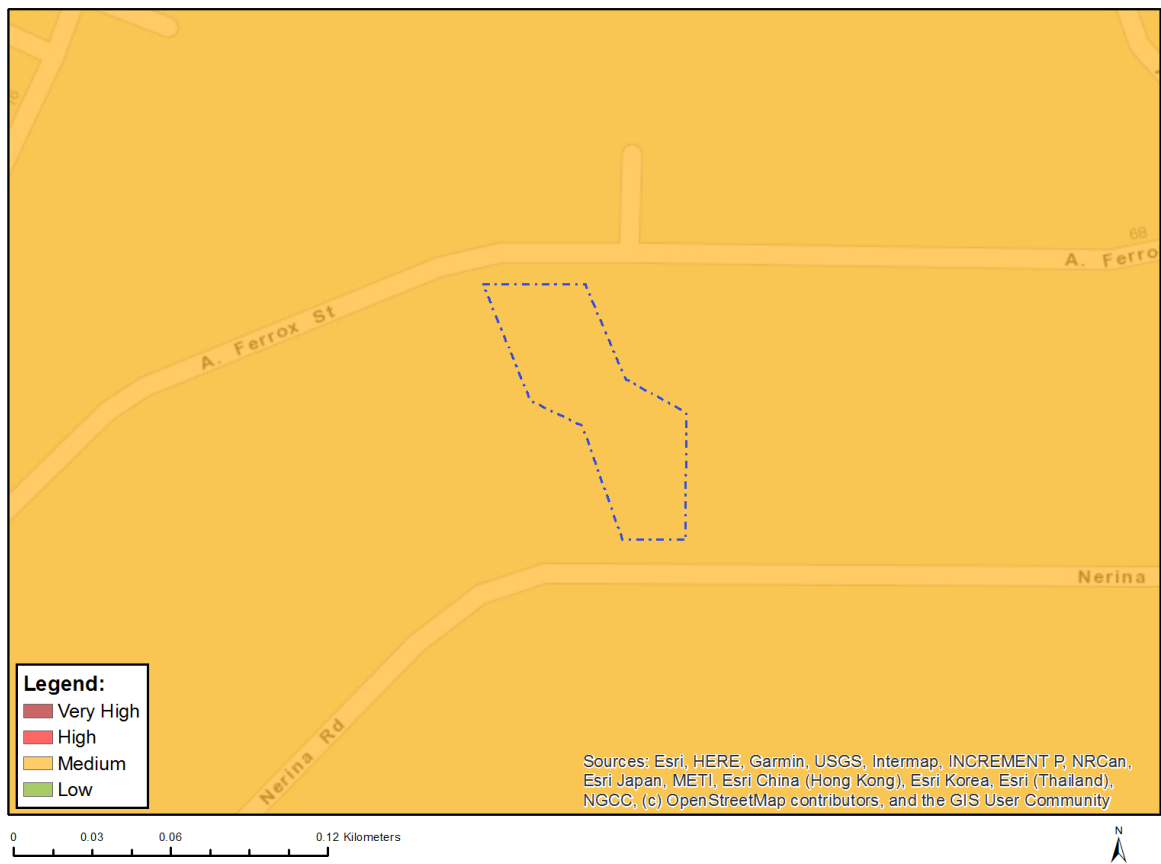


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
			X

Sensitivity Features:

Sensitivity	Feature(s)
Low	Low Sensitivity

MAP OF RELATIVE PALEONTOLOGY THEME SENSITIVITY

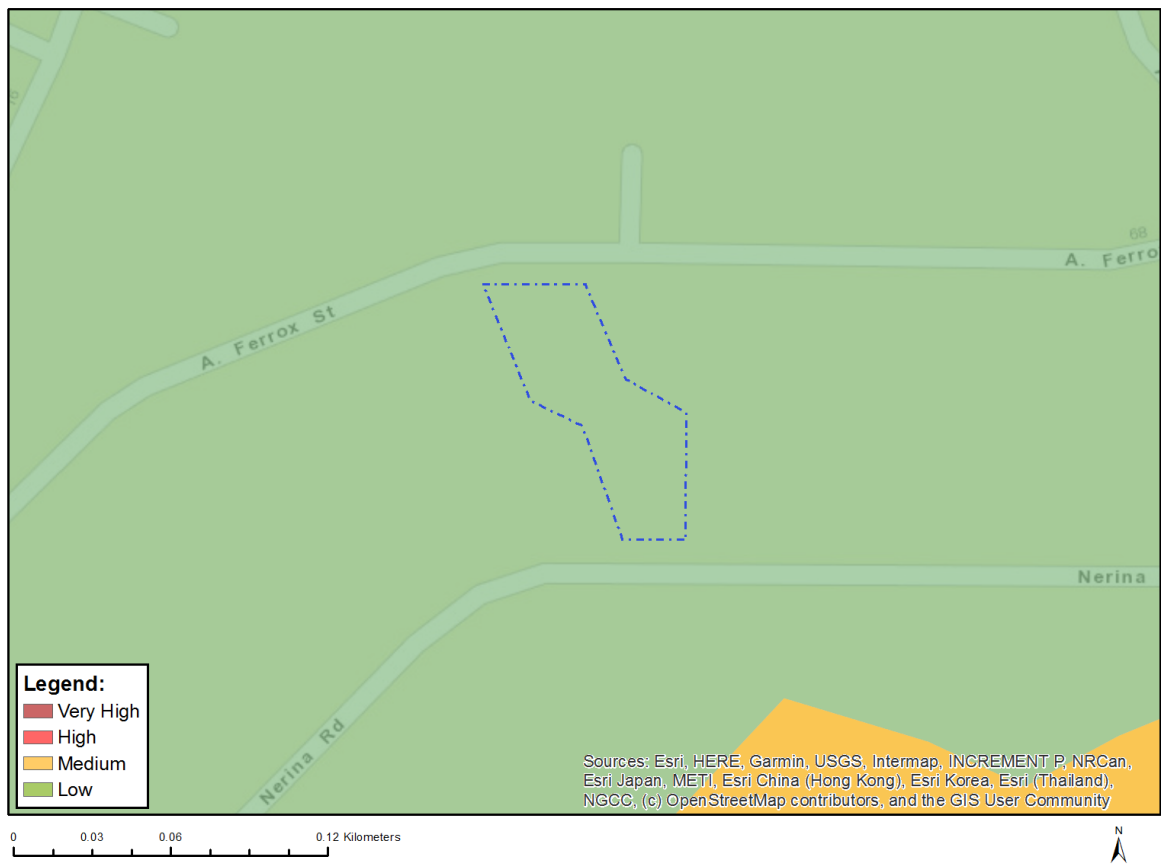


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
		X	

Sensitivity Features:

Sensitivity	Feature(s)
Medium	Features with a Medium paleontological sensitivity

MAP OF RELATIVE PLANT SPECIES THEME SENSITIVITY



Where only a sensitive plant unique number or sensitive animal unique number is provided in the screening report and an assessment is required, the environmental assessment practitioner (EAP) or specialist is required to email SANBI at eiadatarequests@sanbi.org.za listing all sensitive species with their unique identifiers for which information is required. The name has been withheld as the species may be prone to illegal harvesting and must be protected. SANBI will release the actual species name after the details of the EAP or specialist have been documented.

Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
			X

Sensitivity Features:

Sensitivity	Feature(s)
Low	Low Sensitivity

MAP OF RELATIVE TERRESTRIAL BIODIVERSITY THEME SENSITIVITY



Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
X			

Sensitivity Features:

Sensitivity	Feature(s)
Very High	Ecological support area 2
Very High	FEPA Subcatchments