



SITE SENSITIVITY VERIFICATION REPORT

THE PROPOSED CONSTRUCTION OF A DEDICATED ROAD-OVER-RAIL BRIDGE AND APPROACH ALIGNMENT AT THE MBAZWANA/SODWANA INTERSECTION OF ROUTE 22, HLUHLUWE TOWN, BIG 5 HLABISA LOCAL MUNICIPALITY, WITHIN UMKHANYAKUDE DISTRICT MUNICIPALITY, KWAZULU-NATAL PROVINCE

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SYNOPSIS

Site Sensitivity Verification Report for the proposed construction of the R22 road-over-rail bridge and approach alignment, Hluhluwe, Kwazulu-Natal.

KEY WORDS:

Site Sensitivity Verification Report, DFFE, NEMA, EIA, Listed Activities

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QUALITY VERIFICATION

This report has been prepared under the controls established by a quality management system that meets the requirements of ISO 9001: 2015 which has been independently certified by DEKRA Certification.



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[Appendix F- R22 Railway Bridge SSVR.docx](#)

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1 INTRODUCTION

The National Department of Forestry, Fisheries and the Environment (DFFE) promulgated regulations for the compulsory submission of a report based on the Screening Tool when undertaking and submitting applications for environmental authorisation (GN960 of 2019).

Procedures for the Assessment and Minimum Criteria for Reporting on Identified Environmental Themes in terms of Section 24 (5) (a) and (h) and 44 of the National Environmental Management Act (107 of 1998) have been published. These procedures prescribe the requirements for undertaking a **site sensitivity verification report** as well as describe the requirements for specialist input per environmental theme in the Screening Tool.

According to the abovementioned notice, the site sensitivity verification report must be recorded in the form of a report that:

- a) Confirms or disputes the current use of the land and the environmental sensitivity as identified by the screening tool, such as a new development or infrastructure, the change in vegetation cover or status, etc.
- b) Contain motivation and evidence of either the verified or different use of the land and environmental sensitivity.
- c) Must be submitted together with the relevant assessment report prepared in accordance with the requirements of the Environmental Impact Assessment Regulations (EIA Regulations), 2014 (as amended) promulgated under the National Environmental Management Act, 1998 (No. 107 of 1998; NEMA) for the proposed project.

As per the requirements, this report is the **Site Sensitivity Verification Report** and provides a verification for which environmental themes will be further investigated.

1.1 Site Assessment and Determination of Site Sensitivity

The approach for the site assessment and sensitivity verification included the following:

- A desktop analysis of satellite imagery, the review of available biodiversity and wetland mapping.

An Environmental Authorisation (DFFE Ref #: 14/12/16/3/3/1/1502) was approved for this project in April 2016. See **Appendix I**. The EA had lapsed due to the Project still being in tender evaluation stage with the contractor only expected to be appointed after August 2023. A new EA application (this application) is being applied for, for this project.

Terratest (Pty) Ltd was appointed by the South African National Roads Agency Limited (SANRAL) to undertake the second EA application process, which is, a Scoping Environmental Impact Assessment (Scoping EIA) for the Proposed Construction of a Dedicated Road-Over-Rail Bridge and Approach Alignment at the Mbazwana/Sodwana Intersection of National Route R22, Hluhluwe Town, Big 5 Hlabisa Municipality, KwaZulu-Natal.

1.2 Description of the Proposed Project

The existing National Route 22 (R22) (Mbazwana/Sodwana) intercepts the existing at-grade northern KwaZulu-Natal main railway line on the north-eastern periphery of Hluhluwe Town.

The proposed development will construct a dedicated road-over-rail-bridge whereby vehicular traffic is directed over the existing railway line via a purpose-built bridge, from the R22.

The elimination of the existing at-grade R22 and railway line intersection via a road-over-rail-bridge will provide significant safety benefits to both regional and local traffic. Furthermore, the proposed development is in line with future expansion requirements of the existing railway line, as well as the Authorised Hluhluwe Town Bypass Road which will be referred to as the Western Phase. The proposed development will be referred to as the Eastern Phase.

The Eastern Phase development will include the new 'road-over-rail-bridge' structure, the approach alignment to tie into the future planned Hluhluwe Bypass, as well as a proposed Quarterlink access road into the town of Hluhluwe. The quarterlink that is proposed to the east of the town links the bypass with MR2-7.

It must be highlighted that the drawings and other details presented are based on currently available information and some modifications may be made to these should the need arise at various stages of the project. If the changes trigger additional environmental approvals, these will be applied for accordingly.

The **Approach Alignment** will have the following dimensions:

- Total width of road reserve: 50m.
- Total length of Road: 1.808km (from chainage 3000 to chainage 4808).
- Total width of road excluding road reserve: 13.4m.

An additional 10m will be required outside of the road reserve for movement of plant.

The **Road over Rail Bridge** will have the following dimensions:

- Total Bridge Width: 16.275m
- Bridge Length: 8.1m
- Bridge Lane Width: 3.8m wide in each direction
- Shoulder width: 3m wide in each direction
- Sidewalk: 1.5m wide on the southern side

The bridge structure will be designed to **accommodate future lane widening** should this be required. The bridge openings will be designed to accommodate the anticipated doubling

and electrification of the railway line as well as a future service road. The bridge structure will conform to both the SANRAL requirement as well as the requirements of Transnet.

The Quarterlink Road:

A quarterlink is proposed to the east of the town linking the proposed bypass with MR2-7 (the portion of the R22 running in a north/south direction). The quarterlink enables vehicles from the north, south and the town centre to connect with the bypass. Vehicles from the town centre therefore have a choice to either:

1. travel eastwards along R22, northwards along the R22, turn left onto the quarterlink and right/left onto the bypass, or
2. travel westwards along R22 (MR453) and turn left/right onto the bypass.

The route vehicles would follow depends largely on which direction they wish to travel and their proximity to either route within the town centre.

The alignment of the Quarterlink will be parallel to the Hluhluwe airstrip in a north/south direction and will then curve to the left and tie in with a T-junction on the existing R22. The Quarterlink road will be required to provide an intersection 'Road over Rail' structure at the existing at-grade R22 and railway line. Access to Hluhluwe town will still be maintained from both the East and West approaches. Access will be accommodated by means of at-grade intersections and two short link roads.

2 PROJECT LOCATION

The proposed road-over-rail bridge and approach alignment is located northeast of the town of Hluhluwe, within the Umkhanyakude District Municipality, KwaZulu-Natal (**Figure 2-1**). The site is approximately 1.808km in extent. Access to the site is from the southern side, via the R22. The approximate coordinates of the centre of the site are **28° 0'34.96"S** and **32°17'5.89"E**.

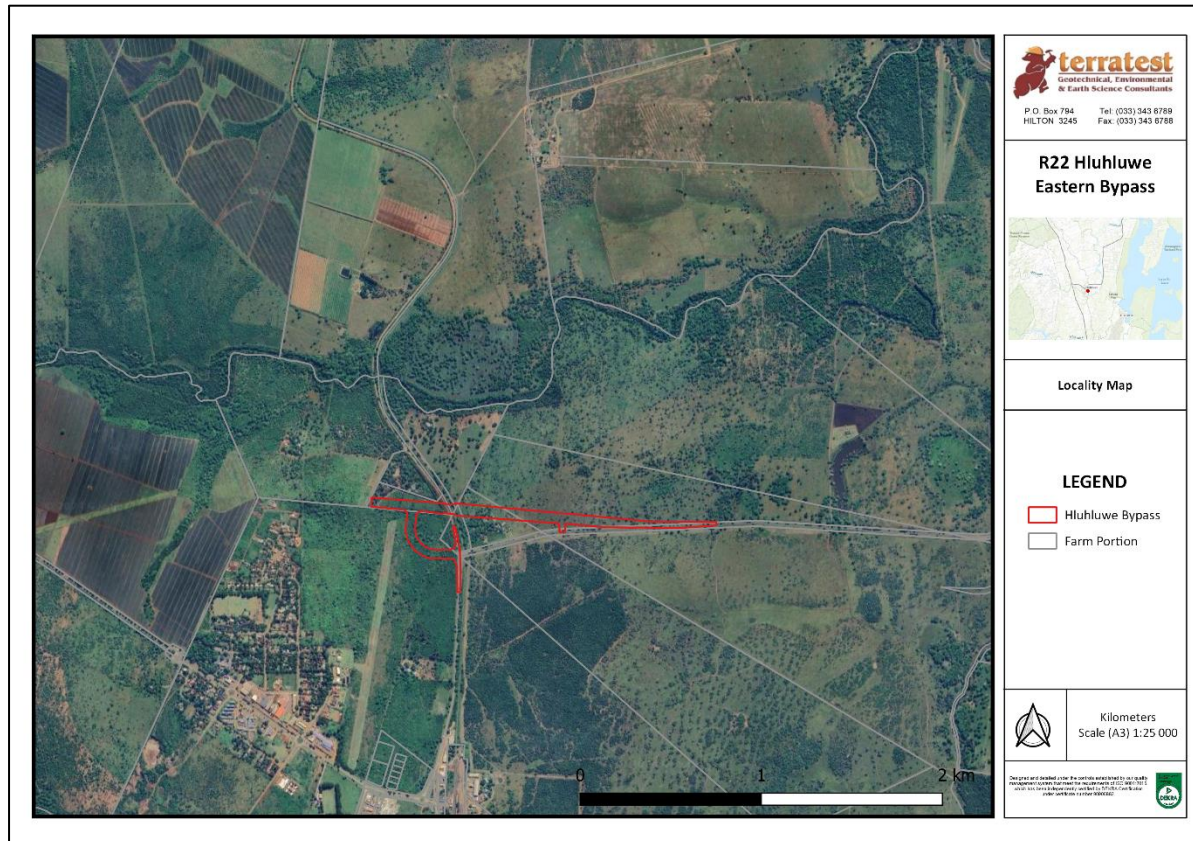


Figure 2-1: Locality map showing the study area for the proposed Eastern Phase development

The proposed bypass route follows the R22 alignment from the east and then rises above the railway line by way of a road over rail bridge. The alignment extends past the north of the town and ties into the R22 west of the town.

3 PHOTOGRAPHS OF THE PROPOSED SITE



Photo 1: R22 – Rural Road, East of Hluhluwe



Photo 2: R22 – Rural Road, West of Hluhluwe



Photo 3: R22 – Urban Road, Hluhluwe



Photo 4: View of the route alignment



Photo 5: The site is bordered to the north by Gazebo Lodge



Photo 6: Vegetation behind Gazebo Lodge

4 BIOPHYSICAL ENVIRONMENT

4.1 Climate

Hluhluwe climate is classified as tropical. The level of precipitation during summers surpasses that of winters. According to the Köppen-Geiger Climate Classification, Hluhluwe has a classification of Aw (**Figure 4-1**). The mean temperature prevailing in the city of Hluhluwe is recorded as 22.0 °C, according to statistical data. The precipitation level on a yearly basis amount to 837 mm as per the meteorological records (Climatedata.org).

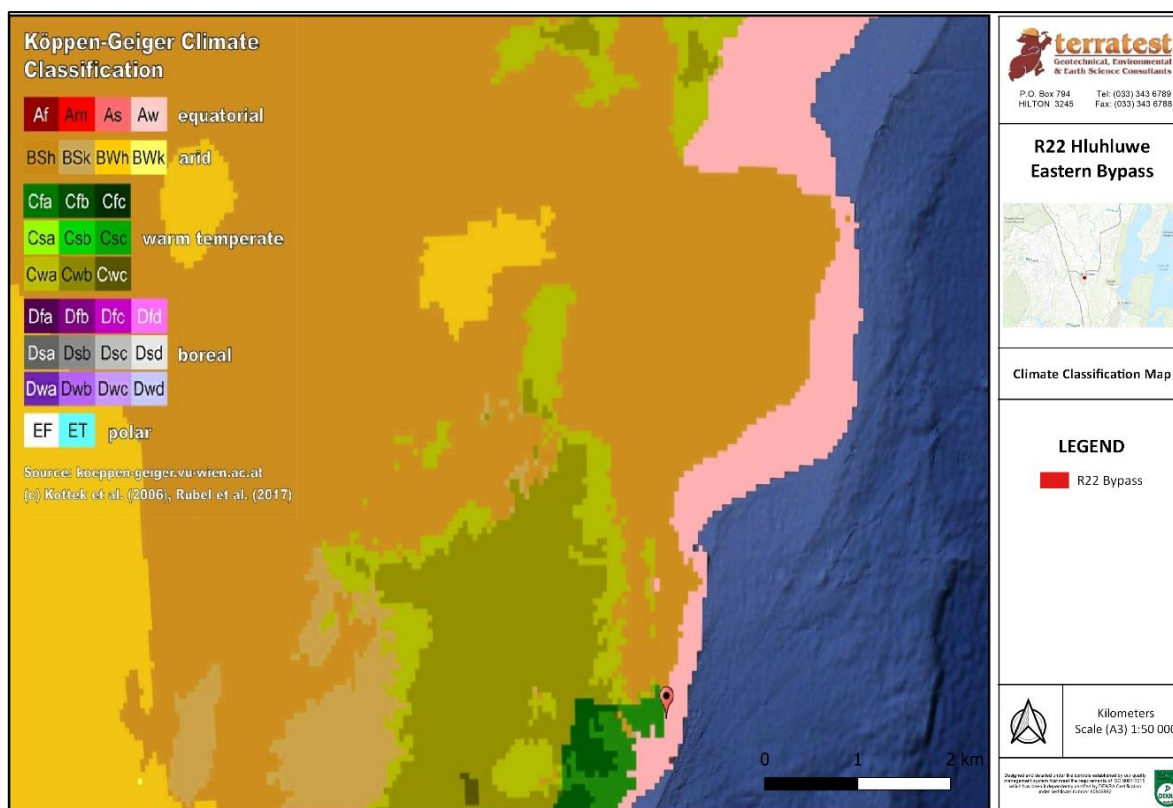


Figure 4-1: Köppen-Geiger Climate Classification.

4.2 Climate Change Predictions for the Area

A Climate Change Vulnerability Assessment was conducted through the Local Government Climate Change Support Programme (LGCCS), an initiative of the DFFE for the District municipality. A Climate Change Response Strategy has been drafted for uMkhanyakude and is in the process of being adopted. Key vulnerabilities for the District include: increased food and water insecurity resulting in human health impacts, increased isolation of rural communities, and increased impact on strategic infrastructure and houses. Other risks include:

- (1) Droughts: The District is at a low to medium risk of drought as a result of climate change. The northern area is mostly vulnerable, with a medium to high level of risk. There is a drought relief programme in place throughout the local municipalities to manage current drought impacts.

- (2) Flooding: A large area of the District is under wetlands and floodplain. Flooding risks associated with changing rainfall patterns and sea level rise is a concern along the low-lying coastal floodplains and settlements near major Rivers.

4.3 Topography

The proposed realignment route traverses relatively flat topography at an elevation of around 65m above mean sea level, with only one area where there are steeper grades descending into a moderate valley line, located at approximately chainage 1950 (**Figure 4-2 and Figure 4-3**).

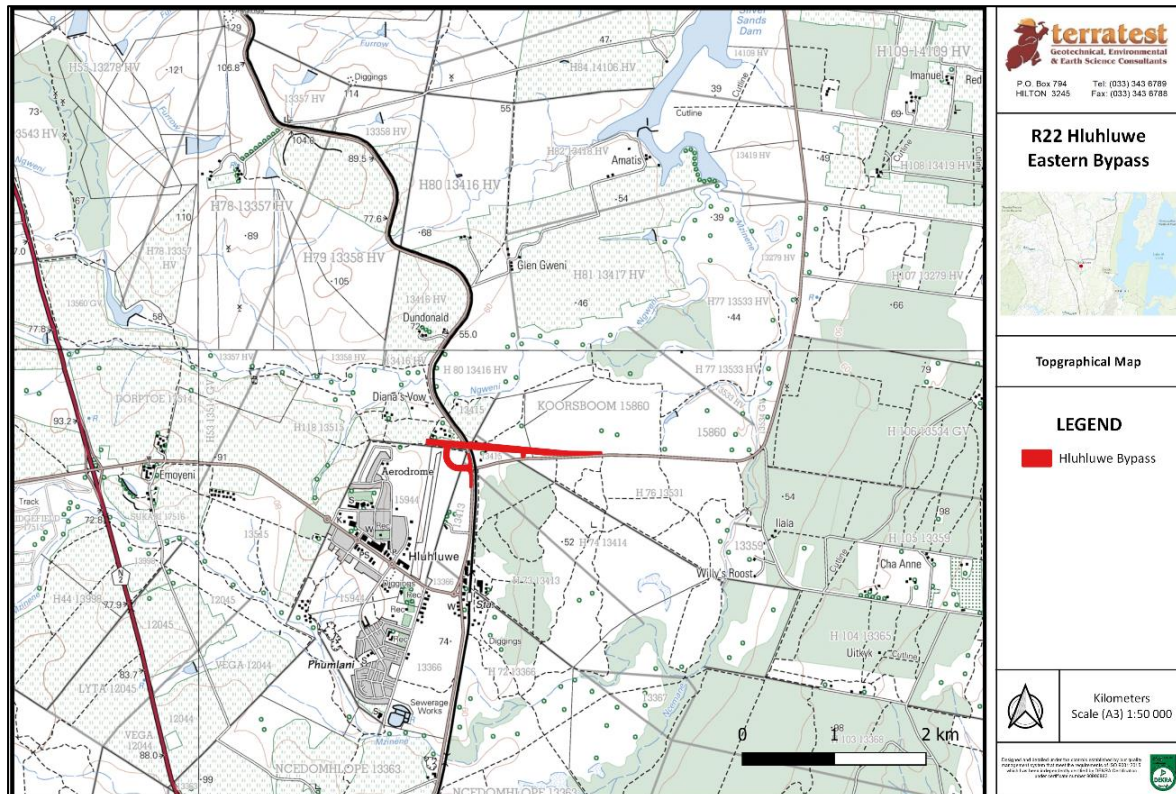


Figure 4-2: Topographical map showing the study site associated.

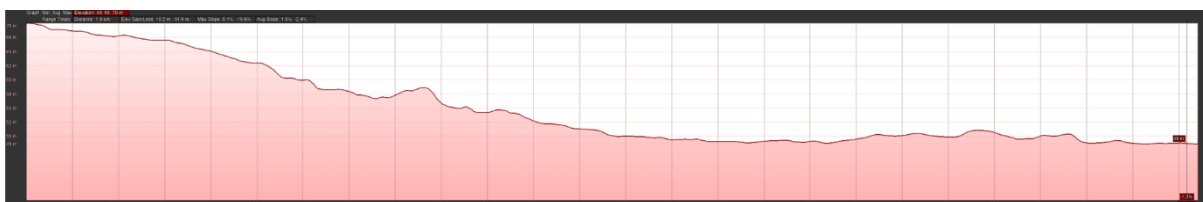


Figure 4-3: Elevation profile of the proposed development (Google Earth, 2024).

4.4 Geology and Soil Conditions

The site is expected to span the geological contact between basalt (west) and Cretaceous age sedimentary bedrock (east)¹. The basalt in this area is known to be deeply weathered and generally very closely jointed (blocky) through its upper weathered zone, while the

¹ HATCH GOBA (PTY) LTD, 2015, *Route Determination Report*, Pg. 12

Cretaceous bedrock is expected to include, in addition to sandstone and siltstone, relatively extensive conglomerate, a rock which comprises hard pebbles and cobbles in a relatively soft, weathered sandy matrix.

At the time of this report the centre line materials investigation results were unavailable.

During the field investigations the following was observed:

- Phase 1 - Eastern Portion: Predominantly highly consolidated clay horizons approximately 2m deep throughout the bulk of the eastern portion overlaying weathered bed rock. DCP testing suggests underlying stiff material at a depth of approximately 3m. One of the test pits indicated that bed rock may be close to the surface at approximately 400mm depth.

4.5 Current Land Use of the Site

The predominant land use surrounding the existing at-grade railway crossing and R22 intersection is agriculture. In the west, the agricultural activities are centred on pineapple farming. To the north of the municipal boundary, the farming activities consist of mainly game farms and grazing lands with a mango orchard bordering on the existing P2-7 provincial gravel road. To the east, the land use is a combination of grazing lands, game farms and Thanda Game Reserve. To the south-west of the proposed development site is Bonamanzi Game Reserve.

The properties through which the approach alignment/road-over-rail traverses are zoned as agricultural land. It is to be noted that the alignments predominantly fall within disturbed/developed land such as the existing R22 (to the east) as well as an existing farm road (to the west). The zoning of agriculture does not preclude the development of a road infrastructure on the land. In addition, only a small portion of the agriculturally zoned land is going to be bisected by the R22 approach alignment/road-over-rail-bridge and thus cannot be considered a significant loss of land.

4.5.1 Low density residential

The Alternative 1 Layout (Preferred Alternative), **Figure 4-4**, will pass through Gazebo lodge, which is considered a low-density residential site. If Alternative 1 is Authorised, then it will require the acquisition of the land, and the razing of the house. However, if Alternative 2 is Authorised, then Gazebo lodge will remain as it is. Access will also be required off the realigned portion of the R22 for the Gazebo Lodge property once the redundant portion of the R22 is permanently closed. This access type will be a gated type 1 Farm Access.

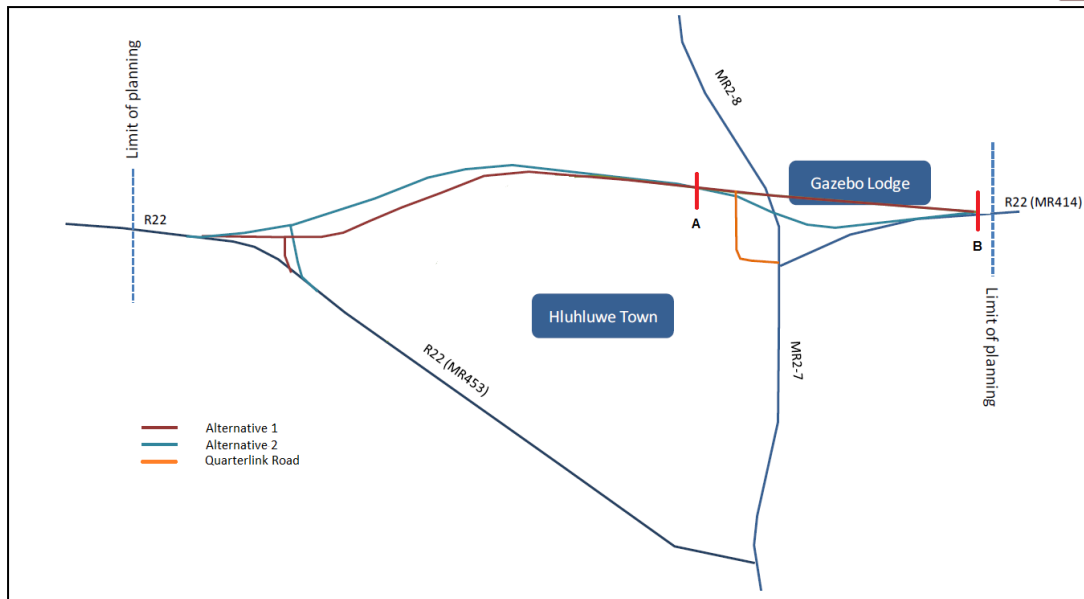


Figure 4-4: Alternatives for the proposed construction.

4.5.2 Railway line

At present, the R22 passes directly over the railway line at an at-grade crossing. This poses safety concerns to road users, as the crossing is governed purely by a stop-sign and road user's awareness of oncoming trains. The proposed road-over-rail-bridge will replace the existing at-grade crossing via a bridge structure, thus ensuring a free flow of traffic over the railway line, and a safe crossing for all road users. The impact on the railway line during the construction period is proposed to be mitigated through the following: Staging (scaffolding) will be erected alongside and over the railway line, at a height which will not impact on the trains using the railway line. Pre-cast structures will then be erected to provide the body of the bridge structure. It is not anticipated that railway traffic will be impeded or halted at any point of the construction phase.

4.5.3 Airport

The Hluhluwe Airfield is found to the south-west of the proposed site. The engineering layout designs have taken all of the South Africa Civil Aviation Authority Regulations into consideration with regards to line of sight, height restrictions etc. As such it is not anticipated that the proposed development will have any negative impact on the Hluhluwe Airfield.

4.5.4 Agriculture

Agricultural land is scattered around the proposed development site but will not be impacted on by the road over rail bridge.

4.6 Catchment Characteristics

The area lies within the 27 Drainage Flood Basin². The most significant watercourse in close proximity to Hluhluwe town include the Ngweni River to the north. The Ngweni River and its tributaries eventually flow into the Mzinene River. The Mzinene River meanders in excess of

² HATCH GOBA (PTY) LTD, 2015, *Route Determination Report*, Pg. 13

15km before it eventually becomes the headwaters for the north-western shores of Lake St Lucia.

The proposed R22 road-over-rail bridge and approach alignment is not found, in, along or within close proximity of a wetland system.

4.7 Vegetation

The original indigenous at the site is classified by the South African National Biodiversity Institute's Database, National Vegetation Types (2018), as being Zululand Lowveld (Type SVI 23). This savanna type is described as bushveld units ranging from dense thickets of *Dichrostachys cinerea* and *Acacia* species, through park-like savanna with flat-topped *A. tortilis* to tree dominated woodland with broadleaved open bushveld with *Sclerocarya birrea* subsp. *caffra* and *A. nigrescens*. Tall grassveld types with sparsely scattered solitary trees and shrubs form a mosaic with the typical savanna thornveld, bushveld and thicket patches

Grassland consisting of *Eragrostis capensis* (Heart-seed Lovegrass), *Eragrostis curvula* (Weeping Love-grass) and *Heteropogon contortus* (Spear Grass) is also evident.

The eastern portion of the new road route consists of slightly transformed typical Zululand Lowveld vegetation but most of the study area has been severely transformed for the establishment of pineapple plantations (refer to **Figure 4-5**).

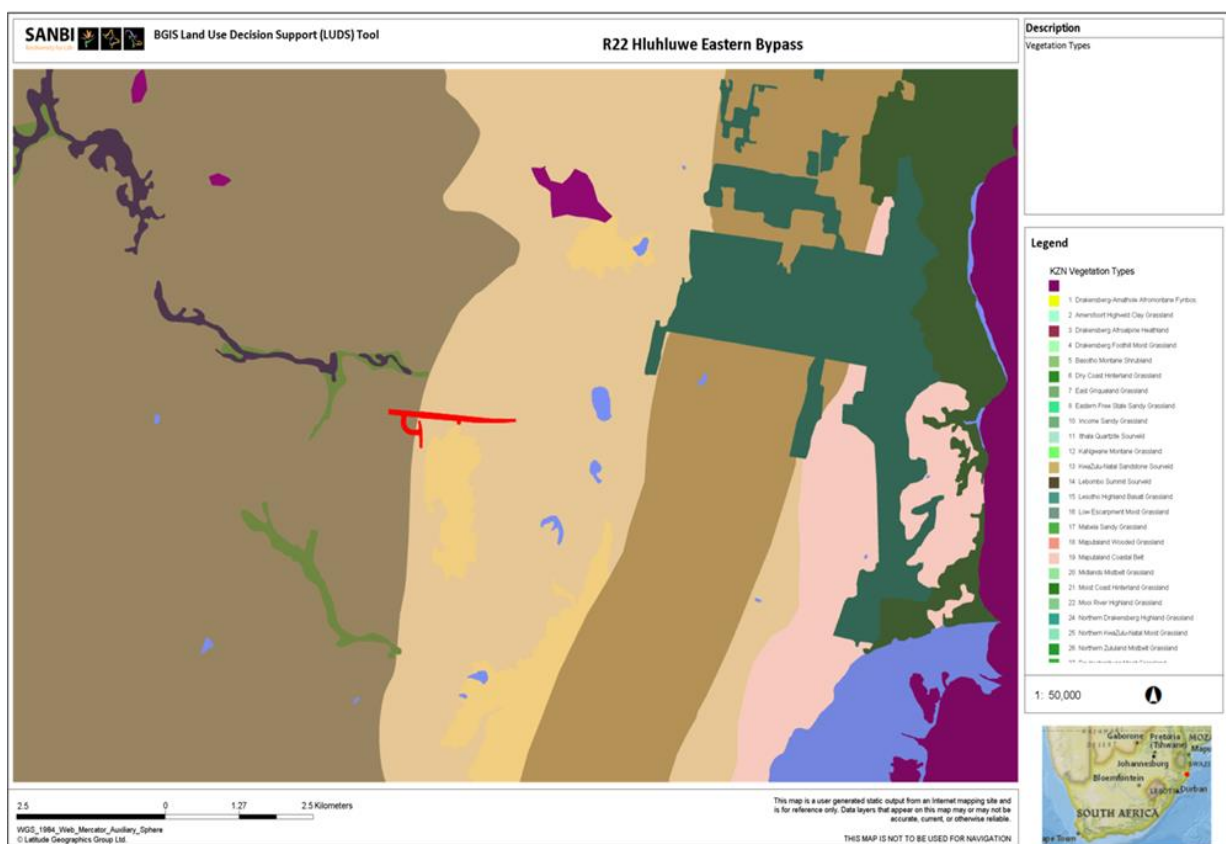


Figure 4-5: Vegetation Map of the proposed project site

4.8 Terrestrial Biodiversity and Fauna

4.8.1 Terrestrial Biodiversity

The terrestrial biodiversity in the area which will be covered by the eastern portion of the R22 Hluhluwe town bypass is varied in terms of its condition. At the end of the road section to the west of Roads R22 and P2-8 the route passes through an area which is so highly transformed from its natural state the virtually no traces of the local veld type (Zululand Lowveld, Type SVI 23) can be found. The area was used for agricultural purposes in the past and a part of it remains under fruit tree orchards up to the present time. Elsewhere the vegetation which is adjacent to the Hluhluwe Airport consists of a dense scrub dominated by *Dichrostachys cinerea* and *Chromolaena odorata*. A link road from the new R22 section to the junction of the old R22 and the P2-8 passes through this area.

To the east of Roads R22 and P2-8 conditions change considerably. The vegetation type is Western Maputaland Clay Bushveld (SVI 20) and, although had been totally destroyed for agriculture in the past, is now recovering well. The first 250 m passes through the Gazebo Lodge complex but the road then enters an area of open savanna. The area around the lodge includes gardens with indigenous plants and is shaded by Fever Trees but thereafter the road route is through open vegetation for the final 1.25 km.

4.8.2 Fauna

The birds located within the study area are Passerines and are common species such as Fork-tailed Drongo *Dicrurus adsimilis*, Dark-capped Bulbul *Pycnonotus tricolor*, Paradise Flycatcher *Terpsiphone viridis*, Southern Fiscal *Lanius collaris*, and Kurrichane Thrush *Turdus libonyana*.

4.9 Sensitive Areas

The proposed project does not cross any sensitive areas, including drainage lines or wetland areas. An analysis of the Ezemvelo KZN Wildlife transformation land cover, as seen below (refer to **Figure 4-6**), indicates that the greater site is largely transformed. The alignment passes through a small area which has been designated as an irreplaceable critical biodiversity area. However, it is to be noted that ground truthing of this area found that the site is transformed, and that the alignment passes along an existing farm road. As such, the approval of this application will not compromise the integrity of the existing environmental management priorities for the area.

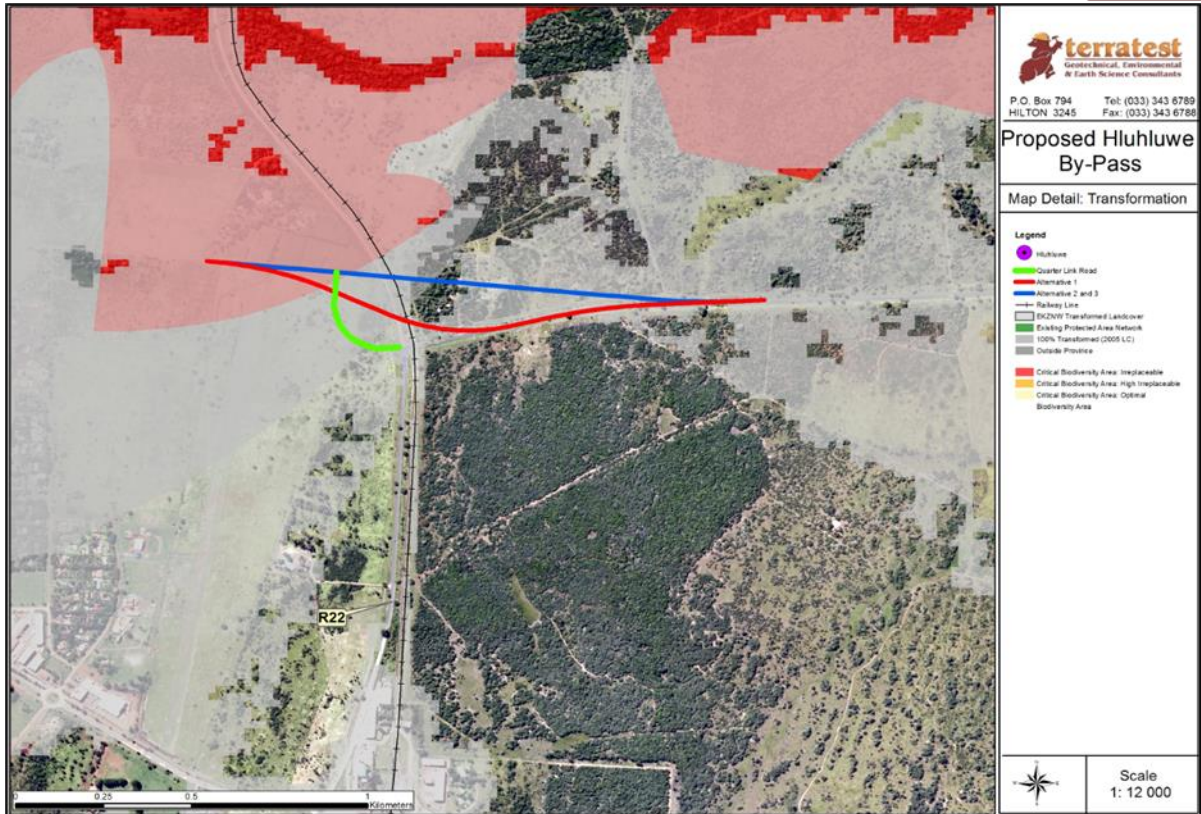


Figure 4-6: Map depicting Ezemvelo KZN Wildlife transformation land cover

4.10 Critical Biodiversity Areas

As per **Figure 4-7** below, CBA Irreplaceable Areas are located towards the upper northwestern and eastern area and CBA Optimal Areas are located towards the lower south eastern area of the proposed project site.

The proposed development does not intersect with any CBA irreplaceable or optimal areas.

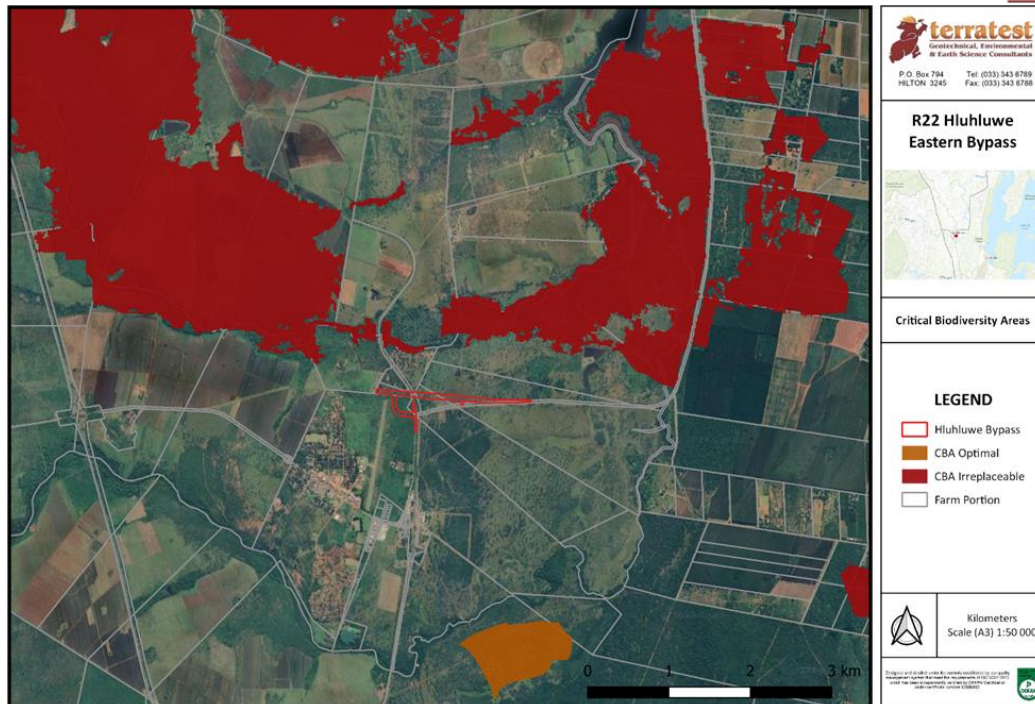


Figure 4-7: Map showing the Critical Biodiversity Areas of the proposed development site

4.11 Watercourse and Wetlands

As indicated in **Figure 4-8** overleaf, the proposed development does not cross any sensitive areas, including drainage lines or wetland areas. The site did fall within 500m of an NFEPA Wetland. However, there are no water uses for this phase of the project and therefore will not constitute water uses as defined in the National Water Act. The development does not fall within the 32m Regulated Area of a watercourse or 1:100 flood-plain and therefore will not trigger any listed activities according to the NEMA EIA Regulations (as amended).

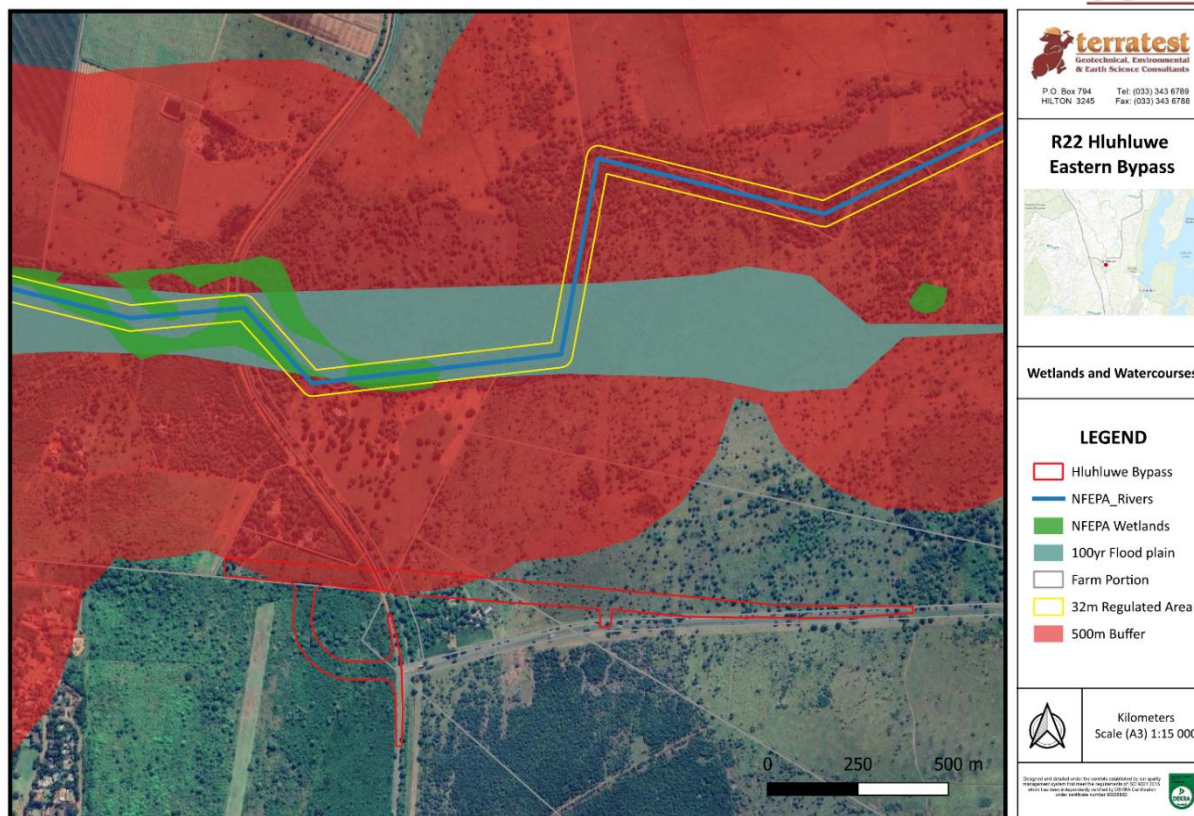


Figure 4-8: Map indicating NFEPA rivers and wetlands in relation to the proposed development site

5 SENSITIVITY VERIFICATION

5.1 Themes and Environmental Sensitivity Identified by the Screening Tool

A Screening Tool Report was generated for the proposed development site using the national web-based Environmental Screening Tool, as required by the NEMA: EIA Regulations 2014 (as amended) and is attached as **Appendix IV**.

Table 5-1 indicates the level of sensitivity of each of the environmental themes identified within the National Web-based Screening Tool Report.

Table 5-1: Summary of the Screening Tool report outcome

Aspect	Sensitivity			
	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
Palaeontology Theme	X			
Plant Species Theme			X	
Terrestrial Biodiversity Theme	X			

5.2 Response and Motivation in terms of identified environmental theme sensitivities

An assessment by the relevant specialists for each of the identified environmental sensitivities was performed for the project site. The findings from the specialists were analysed by the EAP. The motivation for either agreeing or disputing the theme sensitivities is presented in **Table 5-2** in the form of the EAPs professional opinion.

Table 5-2: Specialist Studies identified by the DFFE Screening Tool and EAP's discussion

Specialist assessment	Sensitivity rating in Screening Tool Report	Study to be undertaken	EAP's motivation on way-forward for study
Agricultural Impact Assessment	High Sensitivity	YES	The predominant land use surrounding the existing at-grade railway crossing and R22 intersection is agriculture. In the west, the agricultural activities are centred on pineapple farming. To the north of the municipal boundary, the farming activities consist of mainly game farms and grazing lands with a mango orchard bordering on the existing P2-7 provincial gravel road. To the east, the land use is a combination of grazing lands, game farms and Thanda Game Reserve. To the south-west of the proposed development site is Bonamanzi Game Reserve. <u>It is the opinion of the Environment Assessment Practitioner (EAP) that an Agricultural Impact Assessment is therefore required.</u>
Animal Species Theme	High Sensitivity	YES	The Department of Forestry, Fisheries and Environment's online Screening Tool has indicated that the animal species theme is considered to be of "high sensitivity" with the plant species theme, being of "medium sensitivity". The protocol requires the completion of a Site Sensitivity Verification before conducting a specialist assessment <u>and thus a Terrestrial Biodiversity Assessment will be undertaken, which will assess the animal species theme in relation to the proposed development.</u>
Aquatic Biodiversity Theme	Low Sensitivity	YES	The proposed project does not cross any sensitive areas, including drainage lines or wetland areas. However, the site does fall within 500m of an NFEPA Wetland according to the desktop study. <u>It is therefore the opinion of the Environment Assessment Practitioner (EAP) that an Aquatic Specialist be appointed to complete an assessment to confirm if there are any wetlands or watercourses in the area.</u>
Archaeological and Cultural Heritage Theme	Low Sensitivity	YES	In terms of Section 38 of the Heritage Resources Act (Act 25, 1999), a Heritage Impact Assessment has to be undertaken for the following developments: • <u>The construction of a road, wall, power line, pipeline, canal or other similar form of linear development or barrier exceeding 300 m in length.</u> • <u>The construction of a bridge or similar structure exceeding 50 m in length.</u> • <u>Any development or other activity which will change the character of a site.</u> ○ <u>Exceeding 5 000 m² in extent; or</u> ○ <u>Involving three or more existing erven or subdivisions thereof; or</u>

			○ Involving three or more erven or divisions thereof which have been consolidated within the past five years; or ○ The costs of which will exceed a sum set in terms of regulations by SAHRA or a provincial heritage resource authority; • The re-zoning of a site exceeding 10 000 m² in extent; or • Any other category of development provided for in regulations by SAHRA or a provincial heritage resources authority, must at the very earliest stages of initiating such a development, notify the responsible heritage resources authority and furnish it with details regarding the location, nature and extent of the proposed development. <u>Therefore, a Heritage Impact Assessment is not required, but has been undertaken as part of the previous EA application.</u>
Civil Aviation Theme	High Sensitivity	YES	The Hluhluwe Airfield is found to the south-west of the proposed site. The engineering layout designs have taken all of the South Africa Civil Aviation Authority Regulations into consideration with regards to line of sight, height restrictions etc. As such it is anticipated that the proposed development will not have any negative impacts on the Hluhluwe Airfield. <u>However, the EAP is of the opinion that the Civil Aviation Authority be consulted and discuss the process to be undertaken.</u>
Defence Theme	Low Sensitivity	NO	It is highly unlikely that the development will have any impact on Defence, given that the planned development is proposed to the north-east of Hluhluwe, which is a small town that is located in northern KwaZulu–Natal and within the Big 5 False Bay Municipality and Umkhanyakude District Municipality. The predominant land use surrounding the existing at-grade railway crossing and R22 intersection is agriculture. In the west, the agricultural activities are centred on pineapple farming. To the north of the municipal boundary, the farming activities consist of mainly game farms and grazing lands with a mango orchard bordering on the existing P2-7 provincial gravel road. To the east, the land use is a combination of grazing lands, game farms and Thanda Game Reserve. To the south-west of the proposed development site is Bonamanzi Game Reserve and <u>thus a Defence Assessment is not deemed necessary.</u>
Palaeontology Theme	Very High Sensitivity	NO	Umlando was contracted to undertake the HIA for the proposed project under the previous application and the following was noted in his HIA Report:

			<i>"the palaeontological sensitivity map indicates that the eastern half of the proposed route is in a high to very highly sensitive area, i.e. from the railway eastwards. A palaeontological impact assessment will be required. This can begin with a desktop study and then a field trip, or a combination at the same time). Given that a bridge will be built in this area, there will probably be a need for on-site monitoring by a palaeontologist."</i> <u>Therefore, a full Palaeontological Impact Assessment is not required, but rather a desktop study.</u>
Plant Species Theme	Medium Sensitivity	YES	The Department of Forestry, Fisheries and Environment's online Screening Tool has indicated that the plant species theme, being of "medium sensitivity". The protocol requires the completion of a Site Sensitivity Verification before conducting a specialist assessment, <u>therefore a Terrestrial Biodiversity Assessment will be undertaken, which will assess the Plant Species Theme in relation to the proposed development.</u>
Terrestrial Biodiversity Theme	Very High Sensitivity	YES	The Department of Forestry, Fisheries and Environment's online Screening Tool has indicated that the Terrestrial Biodiversity Theme is considered to be of "Very High Sensitivity". The protocol requires the completion of a Site Sensitivity Verification before conducting a specialist assessment. The original indigenous vegetation at the site is classified by the South African National Biodiversity Institute's (SANBI) Database, National Vegetation Types (2018), as being Zululand Lowveld (Type SVI 23). This savanna type is described (Scott-Shaw and Escott, 2011) as bushveld units ranging from dense thickets of <i>Dichrostachys cinerea</i> and <i>Acacia</i> species, through park-like savanna with flat-topped <i>A. tortilis</i> to tree dominated woodland with broadleaved open bushveld with <i>Sclerocarya birrea</i> subsp. <i>caffra</i> and <i>A. nigrescens</i>. Tall grassveld types with sparsely scattered solitary trees and shrubs form a mosaic with the typical savanna thornveld, bushveld and thicket patches. Grassland consisting of <i>Eragrostis capensis</i> (Heart-seed Love-grass), <i>Eragrostis curvula</i> (Weeping Love-grass) and <i>Heteropogon contortus</i> (Spear Grass) is also evident. Most of the study area has been severely transformed due to the pineapple plantations. <u>A Terrestrial Biodiversity Specialist has been appointed to complete an assessment to confirm the above status and level of sensitivity.</u>

Geotechnical Assessment	NOT RATED	YES	The Route Determination Report conducted by Hatch Goba in 2015 has assessed the Geology and Soils for the proposed development and states the following: - The site is expected to span the geological contact between basalt (west) and Cretaceous age sedimentary bedrock (east). The basalt in this area is known to be deeply weathered and generally very closely jointed (blocky) through its upper weathered zone, while the Cretaceous bedrock is expected to include, in addition to sandstone and siltstone, relatively extensive conglomerate, a rock which comprises hard pebbles and cobbles in a relatively soft, weathered sandy matrix. At the time of this report the centre line materials investigation results were unavailable. During the field investigations the following was observed: - Phase 1 - Eastern Portion: Predominantly highly consolidated clay horizons approximately 2m deep throughout the bulk of the eastern portion overlaying weathered bed rock. DCP testing suggests underlying stiff material at a depth of approximately 3m. One of the test pits indicated that bed rock may be close to the surface at approximately 400mm depth. <u>The EAP is of the opinion that a verification letter to be included by the Engineers to confirm the validity of the existing Route Determination Report.</u>
Landscape/Visual Impact Assessment	NOT RATED	NO	The proposed road-over-rail bridge and approach alignment is located northeast of the town of Hluhluwe, within the Umkhanyakude District Municipality, KwaZulu-Natal. The predominant land use surrounding the existing at-grade railway crossing and R22 intersection is agriculture. In the west, the agricultural activities are centred on pineapple farming. To the north of the municipal boundary, the farming activities consist of mainly game farms and grazing lands with a mango orchard bordering on the existing P2-7 provincial gravel road. To the east, the land use is a combination of grazing lands, game farms and Thanda Game Reserve. To the south-west of the proposed development site is Bonamanzi Game Reserve. The visual impacts arising from the proposed development do not justify the need for a visual impact assessment and thus a <u>Landscape / Visual Impact Assessment is not deemed necessary.</u>
Noise Assessment	NOT RATED	NO	The predominant land use surrounding the existing at-grade railway crossing and R22 intersection is agriculture. In the west, the agricultural activities are centred on pineapple farming. To the north of

			the municipal boundary, the farming activities consist of mainly game farms and grazing lands with a mango orchard bordering on the existing P2-7 provincial gravel road. To the east, the land use is a combination of grazing lands, game farms and Thanda Game Reserve. To the south-west of the proposed development site is Bonamanzi Game Reserve. <u>The EAP is of the opinion that the noise anticipated during the construction phases of the activity does not warrant a need for a Noise Impact Assessment to be undertaken.</u>
Traffic Impact Assessment	NOT RATED	YES	Hatch Goba (Pty) Ltd was appointed by SANRAL to undertake a traffic study of vehicle movements in and around the town of Hluhluwe located in northern KwaZulu Natal (KZN). The traffic study assessed the traffic impacts of proposed bypass alternatives (options), to the north of Hluhluwe town centre, aimed towards eliminating an existing at-grade railway crossing. <u>The EAP is of the opinion that a verification letter to be included by the Engineers to confirm the validity of the existing Traffic Impact Assessment will suffice.</u>
Socio-Economic Impact Assessment	NOT RATED	NO	The proposed project is located on National Road R22, Section 1 on the eastern outskirts of Hluhluwe town, at km 5.5. The project falls within the Umkhanyakude District Municipality in the Province of KwaZulu Natal. The predominant land use surrounding the existing at-grade railway crossing and R22 intersection is agriculture. In the west, the agricultural activities are centred on pineapple farming. To the north of the municipal boundary, the farming activities consist of mainly game farms and grazing lands with a mango orchard bordering on the existing P2-7 provincial gravel road. To the east, the land use is a combination of grazing lands, game farms and Thanda Game Reserve. To the south-west of the proposed development site is Bonamanzi Game Reserve. During the construction and operational phase, the proposed development will contribute towards local job creation. <u>The EAP is of the opinion that the proposed project does not warrant a need for a socio-economic impact assessment to be undertaken.</u>
Ambient Air Quality Impact Assessment	NOT RATED	NO	The proposed project is located on National Road R22, Section 1 on the eastern outskirts of Hluhluwe town, at km 5.5. The project falls within the Umkhanyakude District Municipality in the Province of KwaZulu Natal.

		The predominant land use surrounding the existing at-grade railway crossing and R22 intersection is agriculture. In the west, the agricultural activities are centred on pineapple farming. To the north of the municipal boundary, the farming activities consist of mainly game farms and grazing lands with a mango orchard bordering on the existing P2-7 provincial gravel road. To the east, the land use is a combination of grazing lands, game farms and Thanda Game Reserve. To the south-west of the proposed development site is Bonamanzi Game Reserve. <u>The EAP is of the opinion that there will be minimal impacts to air quality anticipated during the construction phases of the activity, therefore it does not warrant a need for a an ambient air quality impact assessment to be undertaken.</u>
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6 REVIEW OF APPLICABLE LEGISLATION

6.1 Applicable Listed Activities in terms of NEMA, 1998 (as amended)

The Proposed Construction of a Dedicated Road-Over-Rail Bridge and Approach Alignment at the Mbazwana/Sodwana Intersection of National Route R22, Hluhluwe Town, Big 5 Hlabisa Municipality, KwaZulu-Natal triggers listed activities in terms of the Environmental Impact Assessment (EIA) Regulations (2014) (as amended), Government Regulations (GNR) 324, 326 and 327 of 07 April 2017 in Government Gazette Number 38282 read in conjunction with GN R. 982 and 983 of 04 December 2014 promulgated under the National Environmental Management Act (NEMA) (Act no 107 of 1998).

Table 6-1 provides a summary of the Listed Activities in terms of the EIA Regulations 2014 that are triggered by the proposed development

Table 6-1: Summary of Listed Activities which may be applicable to the proposed development

ACTIVITY AND NOTICE NUMBER	LISTED ACTIVITY	DISCUSSION IN TERMS OF APPLICABILITY
Listing Notice 2 of GNR. 983, 2014 (as amended)		
Activity 27 Listing Notice 2 of GNR. 983, 2014 (as amended)	The development of a road- (iii) with a reserve wider than 30 metres; or	The total width of the road reserve is 50m. An additional 10m is required outside of the road reserve for movement of plant. Total length of Road: 1.808km <u>Therefore, this activity will be triggered.</u>
Listing Notice 3 of GNR. 985, 2014 (as amended)		
Activity 12 Listing Notice 3 of GNR. 985, 2014 (as amended)	The clearance of an area of 300 square metres or more of indigenous vegetation except where such clearance of indigenous vegetation is required for maintenance purposes undertaken in accordance with a maintenance management plan. <u>(b) In KwaZulu-Natal:</u> ii. Community Conservation Areas; iv. Within any critically endangered or endangered ecosystem listed in terms of section 52 of the NEMBA or prior to the publication of such a list, within an area that has been identified as critically endangered in the National Spatial Biodiversity Assessment 2004;	The approach alignment for Alternative 1 and 2 pass through vegetation types which, according to Rutherford & Mucina are classified as Vulnerable. The vegetation types are the Zululand Lowveld and Western Maputaland Clay Bushveld. <u>Therefore, this activity will be triggered.</u>

	viii. A protected area identified in terms of NEMPAA, excluding conservancies; ix. World Heritage Sites; xii. Sensitive areas as identified in an environmental management framework as contemplated in chapter 5 of the Act and as adopted by the competent authority.	
Activity 18 Listing Notice 3 of GNR. 985, 2014 (as amended)	The widening of a road by more than 4 metres, or the lengthening of a road by more than 1 kilometre <u>(d) In KwaZulu-Natal:</u> xii. Outside urban areas: (aa) Areas within 10 kilometres from national parks or world heritage sites or 5 kilometres from any other protected area identified in terms of NEMPAA or from the core areas of a biosphere reserve	Part of the existing R22 on the eastern portion will be decommissioned, the remainder will be lengthened to join the western phase of the project which is currently under construction. The total length of the Road to be extended is 1.808km (chainage 4500 to chainage 3000). The proposed road-over-rail-bridge and the approach alignment is situated within 10 kilometres and to the west of the Isimangaliso Wetland Park, a World Heritage Site. In addition, Bonamanzi Game Park is situated on the periphery of the development, to the south-east, and Thanda Game Reserve is situated to the East of the development. <u>Therefore, this activity will be triggered.</u>
Activity 23 Listing Notice 3 of GNR. 985, 2014 (as amended)	The expansion of- (xii) infrastructure or structures where the physical footprint is expanded by 10 square metres or more; <u>(e) In KwaZulu-Natal:</u> x. Outside urban areas: (aa) Areas within 10 kilometres from national parks or world heritage sites or 5 kilometres from any other protected area identified in terms of NEMPAA or from the core area of a biosphere reserve;	The existing Road MR2-8 will be widened by 5,6m to tie into the quarterlink road and road-over-rail bridge. The footprint of the MR2-8 and the new quarterlink has a footprint of more than 10 square metres. The proposed road-over-rail-bridge and the approach alignment is situated within 10 kilometres and to the west of the Isimangaliso Wetland Park, a World Heritage Site. In addition, Bonamanzi Game Park is situated on the periphery of the development, to the south-east, and Thanda Game Reserve is situated to the East of the development. <u>Therefore, this activity will be triggered.</u>

The above evaluation of the NEMA: EIA Regulations (2014, as amended) reveals that the Proposed development triggers Listed Activities from Listing Notices 2 and 3, thus requiring Environmental Authorisation from the DFFE subject to a full Scoping and Environmental Impact Assessment (S&EIA) process.

6.2 National Water Act, 1998

Section 21 of the National Water Act (Act No. 36 of 1998) (NWA) provides the list of water use activities that will require an authorisation or registration in accordance with the Act. The proposed project does not cross any sensitive areas, and neither will any water uses be explored as defined in Section 21 of the NWA, but for the purpose of this assessment the following was taken into consideration:

- The site does fall within 500m of an NFEPA Wetland according to the desktop study.

The proposed construction of the dedicated road over rail bridge, approach alignment at the Mbazwana/Sodwana intersection of the Route 22 (R22) Hluhluwe and quarterlink access road, does fall within 500m of an NFEPA Wetland, however no water uses will be explored for this phase of the project.

7 CONCLUSIONS

In line with this site sensitivity verification assessment, the EAP confirms that the following Specialist Studies were identified. The detailed assessment against these sensitivities can be found in **Section 5.2, Table 5-2**.

Specialist Studies Identified	EAPs Comment
Agricultural Impact Assessment	The predominant land use surrounding the existing at-grade railway crossing and R22 intersection is agriculture. In the west, the agricultural activities are centred on pineapple farming. To the north of the municipal boundary, the farming activities consist of mainly game farms and grazing lands with a mango orchard bordering on the existing P2-7 provincial gravel road. To the east, the land use is a combination of grazing lands, game farms and Thanda Game Reserve. To the south-west of the proposed development site is Bonamanzi Game Reserve. <u>It is the opinion of the Environmental Assessment Practitioner (EAP) that an Agricultural Impact Assessment is required.</u>
Animal Species Assessment	The Department of Forestry, Fisheries and Environment's online Screening Tool has indicated that the animal species theme is considered to be of "high sensitivity" with the plant species theme, being of "medium sensitivity". The protocol requires the completion of a Site Sensitivity Verification before conducting a specialist assessment <u>and thus a Terrestrial Biodiversity Assessment will be undertaken, which will assess the animal species theme in relation to the proposed development.</u>
Aquatic Biodiversity Assessment	The proposed project does not cross any sensitive areas, including drainage lines or wetland areas. However, the site does fall within 500m of an NFEPA Wetland according to the desktop study. <u>It is therefore the opinion of the Environmental Assessment Practitioner (EAP) that an Aquatic Specialist be appointed to complete an assessment to confirm if there are any wetlands or watercourses in the area.</u>
Heritage Impact Assessment	In terms of Section 38 of the Heritage Resources Act (Act 25, 1999), a Heritage Impact Assessment has to be undertaken for the following developments:

	• <u>The construction of a road, wall, power line, pipeline, canal or other similar form of linear development or barrier exceeding 300 m in length.</u> • The construction of a bridge or similar structure exceeding 50 m in length. • <u>Any development or other activity which will change the character of a site.</u> ○ <u>Exceeding 5 000 m² in extent; or</u> ○ Involving three or more existing erven or subdivisions thereof; or ○ Involving three or more erven or divisions thereof which have been consolidated within the past five years; or ○ The costs of which will exceed a sum set in terms of regulations by SAHRA or a provincial heritage resource authority; • The re-zoning of a site exceeding 10 000 m² in extent; or • Any other category of development provided for in regulations by SAHRA or a provincial heritage resources authority, must at the very earliest stages of initiating such a development, notify the responsible heritage resources authority and furnish it with details regarding the location, nature and extent of the proposed development. <u>Therefore, a Heritage Impact Assessment is not required, but has been undertaken as part of the previous EA application.</u>
Civil Aviation Assessment	The Hluhluwe Airfield is found to the south-west of the proposed site. The engineering layout designs have taken all of the South Africa Civil Aviation Authority Regulations into consideration with regards to line of sight, height restrictions etc. As such it is anticipated that the proposed development will not have any negative impacts on the Hluhluwe Airfield. <u>However, the EAP is of the opinion that the Civil Aviation Authority be consulted and discuss the process to be undertaken.</u>
Paleontological Assessment	The eastern side of the proposed route occurs in an area of high palaeontological sensitivity. This area will require a minimum of a desktop palaeontological impact assessment. <u>The following comment has been provided by KZNARI and noted:</u> <u>“A PIA wasn’t necessary, but that a palaeontologist will need to be on site during the earth moving stages of the construction phase.”</u>

	<u>Therefore, a Paleontological Impact Assessment is not required, but rather a desktop study.</u>
Plant Species Assessment	The Department of Forestry, Fisheries and Environment's online Screening Tool has indicated that the plant species theme, being of "medium sensitivity". The protocol requires the completion of a Site Sensitivity Verification before conducting a specialist assessment, <u>therefore a Terrestrial Biodiversity Assessment is required, which will assess the Plant Species Theme in relation to the proposed development.</u>
Terrestrial Biodiversity Assessment	The Department of Forestry, Fisheries and Environment's online Screening Tool has indicated that the Terrestrial Biodiversity Theme is considered to be of "Very High Sensitivity". The protocol requires the completion of a Site Sensitivity Verification before conducting a specialist assessment. The original indigenous vegetation at the site is classified by the South African National Biodiversity Institute's (SANBI) Database, National Vegetation Types (2018), as being Zululand Lowveld (Type SVI 23). This savanna type is described (Scott-Shaw and Escott, 2011) as bushveld units ranging from dense thickets of <i>Dichrostachys cinerea</i> and <i>Acacia</i> species, through park-like savanna with flat-topped <i>A. tortilis</i> to tree dominated woodland with broadleaved open bushveld with <i>Sclerocarya birrea</i> subsp. <i>caffra</i> and <i>A. nigrescens</i>. Tall grassveld types with sparsely scattered solitary trees and shrubs form a mosaic with the typical savanna thornveld, bushveld and thicket patches. Grassland consisting of <i>Eragrostis capensis</i> (Heart-seed Love-grass), <i>Eragrostis curvula</i> (Weeping Love-grass) and <i>Heteropogon contortus</i> (Spear Grass) is also evident. Most of the study area has been severely transformed due to the pineapple plantations. <u>A Terrestrial Biodiversity Specialist has been appointed to complete an assessment to confirm the above status and level of sensitivity.</u>
Geotechnical Assessment	The Route Determination Report conducted by Hatch Goba in 2015 has assessed the Geology and Soils for the proposed development and states the following:

	- The site is expected to span the geological contact between basalt (west) and Cretaceous age sedimentary bedrock (east). The basalt in this area is known to be deeply weathered and generally very closely jointed (blocky) through its upper weathered zone, while the Cretaceous bedrock is expected to include, in addition to sandstone and siltstone, relatively extensive conglomerate, a rock which comprises hard pebbles and cobbles in a relatively soft, weathered sandy matrix. At the time of this report the centre line materials investigation results were unavailable. During the field investigations the following was observed: - Phase 1 - Eastern Portion: Predominantly highly consolidated clay horizons approximately 2m deep throughout the bulk of the eastern portion overlaying weathered bed rock. DCP testing suggests underlying stiff material at a depth of approximately 3m. One of the test pits indicated that bed rock may be close to the surface at approximately 400mm depth. <u>The EAP is of the opinion that a verification letter to be included by the Engineers to confirm the validity of the existing Route Determination Report.</u>
Traffic Impact Assessment	Hatch Goba (Pty) Ltd was appointed by SANRAL to undertake a traffic study of vehicle movements in and around the town of Hluhluwe located in northern KwaZulu Natal (KZN). The traffic study assessed the traffic impacts of proposed bypass alternatives (options), to the north of Hluhluwe town centre, aimed towards eliminating an existing at-grade railway crossing. <u>The EAP is of the opinion that a verification letter to be included by the Engineers to confirm the validity of the existing Traffic Impact Assessment will suffice.</u>

In conclusion, it is the opinion of the EAP, that the Proposed Construction of a Dedicated Road-Over-Rail Bridge and Approach Alignment at the Mbazwana/Sodwana Intersection of National Route R22, Hluhluwe Town, Big 5 False Local Municipality, Kwazulu-Natal will trigger an Environmental Authorisation application, **that is subject to a Scoping/EIA Process.**

Appendix I:Lapsed EA Issued April 2016 DFFE Ref: 14/12/16/3/3/1/1502



environmental affairs

Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

Private Bag X 447· PRETORIA · 0001· Environment House 473 Steve Biko Road, Arcadia, Pretoria
Tel (+ 27 12) 399 9372

DEA Reference: 14/12/16/3/3/1/1502

Enquiries: Ms Makhosi Yeni

Telephone: (012) 399 9400 **E-mail:** MYeni@environment.gov.za

Logashri Sewnarain
South African National Roads Agency SOC Ltd (SANRAL)
P.O. Box 100410
SCOTTSVILLE
3209

Tel no: (033) 392 8100
Email: sewnarainl@nra.co.za

PER EMAIL / MAIL

Dear Sir/Madam

ENVIRONMENTAL AUTHORISATION IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998: GNR. 982/983: THE PROPOSED CONSTRUCTION OF A DEDICATED ROAD-OVER-RAIL BRIDGE AND APPROACH ALIGNMENT AT THE MBAZWANA/ SODWANA INTERSECTION OF NATIONAL ROUTE R22, SECTION 1 AT KM 5.5 IN HLUHLUWE WITHIN BIG 5 FALSE BAY LOCAL MUNICIPALITY OF UMKHANYAKUDE DISTRICT IN KWAZULU NATAL

With reference to the above application, please be advised that the Department has decided to grant authorisation. The environmental authorisation (EA) and reasons for the decision are attached herewith.

In terms of regulation 4(2) of the Environmental Impact Assessment Regulations, 2014 (the Regulations), you are instructed to notify all registered interested and affected parties, in writing and within 14 (fourteen) days of the date of the EA, of the Department's decision in respect of your application as well as the provisions regarding the submission of appeals that are contained in the Regulations.

Your attention is drawn to Chapter 2 of Government Notice No. R.993, which prescribes the appeal procedure to be followed. An appellant must submit an appeal to the appeal administrator, and a copy of the appeal to the applicant, any registered interested and affected party and any organ of state with interest in the matter within 20 days from the date that the notification of the decision was sent to the registered interested and affected parties by the applicant.

By post: Private Bag X447,
Pretoria, 0001; or

By hand: Environment House
473 Steve Biko,
Arcadia,
Pretoria, 0083

MS.

If the applicant wishes to lodge an appeal, it must also serve a copy of the notice of intention to appeal on all registered interested and affected parties as well as a notice indicating where, and for what period, the appeal submission will be available for inspection, should you intend to submit an appeal.

Appeals must be submitted in writing to:

Mr Z Hassam, Director: Appeals and Legal Review, of this Department at the above mentioned addresses. Mr Hassam can also be contacted at:

Tel: (012) 399 9356

Email: Appealsdirector@environment.gov.za

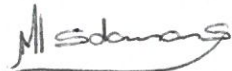
Please note that in terms of section 43(7) of the National Environmental Management Act, 1998, an appeal under section 43 of that Act will suspend the environmental authorisation or any provision or condition attached thereto. In the instance where an appeal is lodged, you may not commence with the activity until such time that the appeal is finalised.

For guidance on appeals submitted to the Minister in terms of NEMA and the SEMAs, please find a copy of the guideline on the administration of appeals on the Department's website:

(https://www.environment.gov.za/documents/forms#legal_authorisations).

Kindly include a copy of this document with the letter of notification to interested and affected parties.

Yours faithfully



Ms Millicent Solomons

Acting Chief Director: Integrated Environmental Authorisations

Department of Environmental Affairs

Date: 18/04/2016.

CC:	Ms Imke Summers	Terratest (Pty) Ltd	Tel: 033 343 6789	Email: summersi@terratest.co.za
	Mr Dayalin Naidoo	KZN DEDTEA- uMkhanyakude	Cell: 0794968002	Email: naidoo.dayalin78@gmail.com



environmental affairs

Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

Environmental Authorisation

In terms of regulation 25 of the Environmental Impact Assessment Regulations, 2014

**CONSTRUCTION OF A DEDICATED ROAD-OVER-RAIL BRIDGE AND APPROACH ALIGNMENT
AT THE MBAZWANA/ SODWANA INTERSECTION OF NATIONAL ROUTE R 22, SECTION 1 AT
KM 5.5 IN HLUHLUWE IN KWAZULU NATAL PROVINCE**

UMkhanyakude District Municipality

Authorisation register number:	<i>14/12/16/3/3/1/1502</i>
Last amended:	<i>First issue</i>
Holder of authorisation:	<i>South African National Roads Agency SOC Ltd</i>
Location of activity:	<i>KWAZULU-NATAL PROVINCES: Within Big 5 False Bay Local Municipality</i>

This environmental authorisation does not negate the holder of the authorisation's responsibility to comply with any other statutory requirements that may be applicable to the undertaking of the activity.

MS.

Decision

The Department is satisfied, on the basis of information available to it and subject to compliance with the conditions of this environmental authorisation, that the applicant should be authorised to undertake the activities specified below.

Non-compliance with a condition of this environmental authorisation may result in criminal prosecution or other actions provided for in the National Environmental Management Act, 1998 and the EIA regulations.

Details regarding the basis on which the Department reached this decision are set out in Annexure 1.

Activities authorised

By virtue of the powers conferred on it by the National Environmental Management Act, 1998 (Act No.107 of 1998) and the Environmental Impact Assessment Regulations, 2014 the Department hereby authorises

–

South African National Roads Agency SOC Ltd (SANRAL)

(hereafter referred to as the **holder of the authorisation**)

with the following contact details –

Logashri Sewnarain

SANRAL

P.O. Box 100410

SCOTTSVILLE

3209

Tel: (033) 392 8100

Fax: (033) 386 3365

Email: sewnarainl@nra.co.za

to undertake the following activities (hereafter referred to as "the activity") indicated in Listing Notice 1 (GN R. 983):

Listed activities	Activity/Project description
<u>GN R 983 Activity 24:</u> <i>"The development of-</i> <i>(ii) a road with a reserve wider than 13.5 metres, or where no reserve exists where the road is wider than 8 metres."</i>	The width of the road-over-rail bridge lanes and the approach alignment will be in excess of 8 metres
<u>GN R. 985 Activity 4:</u> <i>"The development of a road wider than 4 metres with a reserve less than 13.5 metres.</i> <i>(d) In KwaZulu Natal,</i> <i>(xii) Outside urban areas:</i> <i>(aa) Areas within 10 kilometres from national parks or world heritage sites or 5kilometres from any other protected area identified in terms of NEMPAA or from the core areas of a biosphere reserve".</i>	The proposed bridge interchange is situated 10 km to the west of the Isimangaliso Wetland Park. In addition, Bonamanzi Game Reserve is situated south- east. The road width exceeds 4 metres, hence the trigger.
<u>GN R. 985 Activity 14:</u> <i>"The development of-</i> <i>(xii) infrastructure or structure with a physical footprint of 10m² or more;</i> <i>(d) In KwaZulu Natal,</i> <i>(ii) Outside urban areas:</i> <i>(aa) Areas within 10 kilometres from national parks or world heritage sites or 5 kilometres from any other protected area identified in terms of NEMPAA or from the core areas of a biosphere reserve".</i>	The proposed bridge interchange is situated 10 km to the west of the Isimangaliso Wetland Park. In addition, Bonamanzi Game Reserve is situated south- east and the road footprint exceeds 10m².

as described in the Basic Assessment Report (BAR) dated 03 December 2015 at:

KwaZulu Natal Province

Farm Name: Lot H120 13535

Farm Name: Lot H74, RE/13414

Farm Name: Erf 323, Portion 0 (Remaining extent)

Farm Name: Lot H75, Portion 0 (Remaining extent)

Farm Name: Lot 118 13515, Portion 5

Farm Name: Lot H75, Portion 2

Farm Name: Koorsboom, Portion 0 (Remaining extent)

Farm Name: Remainder Portion 19 of 1 of the Farm Lot H72 No. 13366

Farm Name: Portion 3 of Erf 323

Farm Name: Lot H119, Portion 0

21 Digit SG code:

N	0	G	V	0	0	0	0	0	0	0	1	3	5	3	5	0	0	0	0
N	0	G	V	0	0	0	0	0	0	0	1	3	4	1	4	0	0	0	0
N	0	G	V	0	1	4	4	0	0	0	0	0	3	2	3	0	0	0	0
N	0	G	V	0	0	0	0	0	0	0	1	3	5	3	1	0	0	0	0
N	0	G	V	0	0	0	0	0	0	0	1	3	5	1	5	0	0	0	5
N	0	G	V	0	0	0	0	0	0	0	1	3	5	3	1	0	0	0	2
N	0	G	V	0	0	0	0	0	0	0	1	5	8	6	0	0	0	0	0
N	0	G	V	0	1	4	4	0	0	0	1	0	0	0	0	0	0	0	0
N	0	G	V	0	0	0	0	0	0	0	1	3	4	1	5	0	0	0	0

R 22 road-over-rail-bridge	Latitude	Longitude
Starting point of activity of the activity	28°00'33.62"	32°16'31.09"
Middle point of activity/ Additional point of activity	28°00'35.57"	32°16'53.96"
Middle point of activity/ Additional point of activity	28°00'36.01"	32°16'57.78"
End point of activity of activity	28°00'37.24"	32°17'22.28"

Quarter link road	Latitude	Longitude
Starting point of activity of the activity	28°00'41.77"	32°16'48.59"
Middle point of activity/ Additional point of activity	28°00'39.76"	32°16'43.28"
End point of activity of activity	28°00'34.72"	32°16'42.92"

- for the construction of a dedicated road-over-rail bridge and approach alignment at the Mbazwana/ Sodwana intersection of National Route R22, Section 1 at km 5.5 which is located in Hluhluwe within Big 5 False Bay Local Municipality of UMkhanyakude District in KwaZulu Natal Province, hereafter referred to as "the property".

The infrastructure associated with this facility includes:

- Storm water infrastructure: Including, but not limited to, drainage spines, drainage channels, multiple apron outlets, detention areas and kinetic energy dissipaters.

Conditions of this Environmental Authorisation

Scope of authorisation

1. The preferred route Alternative 1, for the proposed construction of a dedicated road-over-rail bridge and approach alignment at the Mbazwana/ Sodwana intersection of National Route R22, Section 1 at km 5.5 which is located in Hluhluwe within Big 5 False Bay Local Municipality of UMkhanyakude District in KwaZulu Natal Province, with the above coordinates is approved.
2. Authorisation of the activity is subject to the conditions contained in this environmental authorisation, which form part of the environmental authorisation and are binding on the holder of the authorisation.
3. The holder of the authorisation is responsible for ensuring compliance with the conditions contained in this environmental authorisation. This includes any person acting on the holder's behalf, including but not limited to, an agent, servant, contractor, sub-contractor, employee, consultant or person rendering a service to the holder of the authorisation.
4. The activities authorised may only be carried out at the property as described above.
5. Any changes to, or deviations from, the project description set out in this environmental authorisation must be approved, in writing, by the Department before such changes or deviations may be effected.

In assessing whether to grant such approval or not, the Department may request such information as it deems necessary to evaluate the significance and impacts of such changes or deviations and it may be necessary for the holder of the authorisation to apply for further environmental authorisation in terms of the regulations.

6. The holder of an environmental authorisation must apply for an amendment of the environmental authorisation with the competent authority for any alienation, transfer or change of ownership rights in the property on which the activity is to take place.
7. This activity must commence within a period of five (05) years from the date of issue of this environmental authorisation. If commencement of the activity does not occur within that period, the authorisation lapses and a new application for environmental authorisation must be made in order for the activity to be undertaken.
8. Construction must be completed within 5 years of the commencement of the activity on site.
9. Commencement with one activity listed in terms of this environmental authorisation constitutes commencement of all authorised activities.

Notification of authorisation and right to appeal

10. The holder of the authorisation must notify every registered interested and affected party, in writing and within 14 (fourteen) calendar days of the date of this environmental authorisation, of the decision to authorise the activity.
11. The notification referred to must –
 - 11.1. specify the date on which the authorisation was issued;
 - 11.2. inform the interested and affected party of the appeal procedure provided for in the National Appeal Regulations, 2014;
 - 11.3. advise the interested and affected party that a copy of the authorisation will be furnished on request; and
 - 11.4. give the reasons of the competent authority for the decision.
12. The holder of the authorisation must publish a notice –
 - 12.1. informing interested and affected parties of the decision;
 - 12.2. informing interested and affected parties where the decision can be accessed; and
 - 12.3. drawing the attention of interested and affected parties to the fact that an appeal may be lodged against this decision in terms of the National Appeal Regulations, 2014.

Commencement of the activity

13. The authorised activity shall not commence within twenty (20) days of the date of signature of the authorisation.
14. In terms of section 43(7), an appeal under section 43 of the National Environmental Management Act, 1998 will suspend the environmental authorisation or any provision or condition attached thereto. In the instance where an appeal is lodged you may not commence with the activity/ies until such time that the appeal has been finalised

Management of the activity

15. The Environmental Management Programme (EMPr), submitted as part of the Application for EA is hereby approved. This EMPr must be implemented and adhered to.

Frequency and process of updating the EMPr

16. The EMPr must be updated where the findings of the environmental audit reports, contemplated in Condition 23 below, indicate insufficient mitigation of environmental impacts associated with the undertaking of the activity, or insufficient levels of compliance with the environmental authorisation or EMPr.
17. The updated EMPr must contain recommendations to rectify the shortcomings identified in the environmental audit report.
18. The updated EMPr must be submitted to the Department for approval together with the environmental audit report, as per Regulation 34 of GN R. 982. The updated EMPr must be subjected to a public participation process, which process has been agreed to by the Department, prior to submission of the updated EMPr to the Department for approval.
19. In assessing whether to grant approval of an EMPr which has been updated as a result of an audit, the Department will consider the processes prescribed in Regulation 35 of GN R.982. Prior to approving an amended EMPr, the Department may request such amendments to the EMPr as it deems appropriate to ensure that the EMPr sufficiently provides for avoidance, management and mitigation of environmental impacts associated with the undertaking of the activity.

20. The holder of the authorisation may apply for an amendment of an EMPr, if such amendment is required before an audit is required. The holder must notify the Department of its intention to amend the EMPr at least 60 days prior to submitting such amendments to the EMPr to the Department for approval. In assessing whether to grant such approval or not, the Department will consider the processes and requirements prescribed in Regulation 37 of GN R. 982.

Monitoring

21. The holder of the authorisation must appoint an experienced independent Environmental Control Officer (ECO) for the construction phase of the development that will have the responsibility to ensure that the mitigation/rehabilitation measures and recommendations referred to in this environmental authorisation are implemented and to ensure compliance with the provisions of the approved EMPr.
- 21.1. The ECO must be appointed before commencement of any authorised activities.
- 21.2. Once appointed, the name and contact details of the ECO must be submitted to the Director: Compliance Monitoring of the Department.
- 21.3. The ECO must keep record of all activities on site, problems identified, transgressions noted and a task schedule of tasks undertaken by the ECO.
- 21.4. The ECO must remain employed until all rehabilitation measures, as required for implementation due to construction damage, are completed and the site is ready for operation.

Recording and reporting to the Department

22. All documentation e.g. audit/monitoring/compliance reports and notifications, required to be submitted to the Department in terms of this environmental authorisation, must be submitted to the Director: Compliance Monitoring of the Department.
23. The holder of the environmental authorisation must, for the period during which the environmental authorisation and EMPr remain valid, ensure that project compliance with the conditions of the environmental authorisation and the EMPr are audited, and that the audit reports are submitted to the Director: Compliance Monitoring of the Department.
24. The frequency of auditing and of submission of the environmental audit reports must be as per the frequency indicated in the EMPr, taking into account the processes for such auditing as prescribed in Regulation 34 of GN R. 982.

25. The holder of the authorisation must, in addition, submit an environmental audit reports to the Department within 30 days of completion of the construction phase (i.e. within 30 days of site handover) and a final environmental audit report within 30 days of completion of rehabilitation activities.
26. The environmental audit reports must be compiled in accordance with appendix 7 of the EIA Regulations, 2014 and must indicate the date of the audit, the name of the auditor and the outcome of the audit in terms of compliance with the environmental authorisation conditions as well as the requirements of the approved EMPr.
27. Records relating to monitoring and auditing must be kept on site and made available for inspection to any relevant and competent authority in respect of this development.

Notification to authorities

28. A written notification of commencement must be given to the Department no later than fourteen (14) days prior to the commencement of the activity. Commencement for the purposes of this condition includes site preparation. The notice must include a date on which it is anticipated that the activity will commence, as well as a reference number.

Operation of the activity

29. A written notification of operation must be given to the Department no later than fourteen (14) days prior to the commencement of the activity operational phase.

Site closure and decommissioning

30. Should the activity ever cease or become redundant, the holder of the authorisation must undertake the required actions as prescribed by legislation at the time and comply with all relevant legal requirements administered by any relevant and competent authority at that time.

Specific conditions

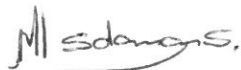
31. Storm water/ surface water management plan must be put in place before construction commences and maintained throughout the lifetime of the development.
32. The construction must be limited to its development footprint and be demarcated to avoid disturbance of potentially sensitive flora and fauna on-site.
33. Riparian plants and all protected species identified within the development footprint must not be disturbed or removed prior to a relevant permit being granted by DAFF and Ezemvelo KZN Wildlife.
34. Wind screening must be used to prevent soil loss.
35. All bare soil must be covered by planting of indigenous vegetation to prevent degradation and erosion.
36. All areas disturbed must be rehabilitated and re-seeded with indigenous plants and trees must be re-planted within the corridor at the end of the construction phase.
37. If any human remains (or any other concentrations of heritage material) are exposed during construction, all work must cease and it must be reported immediately to the Amafa KZN Heritage Resources, so that a systematic and professional investigation can be undertaken. Sufficient time should be allowed to investigate and to remove/collect such material.
38. Any solid waste must be disposed of at a landfill licensed in terms of section 20 (b) of the National Environment Management Waste Act, 2008 (Act No.59 of 2008).

General

39. A copy of this environmental authorisation, the audit and compliance monitoring reports, and the approved EMP, must be made available for inspection and copying-
 - 39.1. at the site of the authorised activity;
 - 39.2. to anyone on request; and
 - 39.3. where the holder of the environmental authorisation has a website, on such publicly accessible website.

40. National government, provincial government, local authorities or committees appointed in terms of the conditions of this authorisation or any other public authority shall not be held responsible for any damages or losses suffered by the holder of the authorisation or his/her successor in title in any instance where construction or operation subsequent to construction be temporarily or permanently stopped for reasons of non-compliance by the holder of the authorisation with the conditions of authorisation as set out in this document or any other subsequent document emanating from these conditions of authorisation.

Date of environmental authorisation: 18/04/2016



Ms Milicent Solomons

Acting Chief Director: Integrated Environmental Authorisations
Department of Environmental Affairs

Annexure 1: Reasons for Decision

1. Information considered in making the decision

In reaching its decision, the Department took, *inter alia*, the following into consideration -

- a) The information contained in the BAR dated 03 December 2015;
- b) Mitigation measures as proposed in the BAR dated 03 December 2015 and the EMPr;
- c) The information contained in the specialist study contained within Appendix D of the BAR; and
- d) The objectives and requirements of relevant legislation, policies and guidelines, including section 2 of the National Environmental Management Act, 1998 (Act No.107 of 1998).

2. Key factors considered in making the decision

All information presented to the Department was taken into account in the Department's consideration of the application. A summary of the issues which, in the Department's view, were of the most significance is set out below.

- a) The findings of the specialist study conducted and its recommended mitigation measures.
- b) The need for the proposed project aims to eliminate this at-grade crossing in order to provide safe access for road users travelling between the N2 via Hluhluwe to the northern KZN coast.
- c) The BAR dated 03 December 2015 identified all legislation and guidelines that have been considered in the preparation of the BAR.
- d) The methodology used in assessing the potential impacts identified in the BAR dated 03 December 2015 and the specialist study have been adequately indicated.
- e) A sufficient public participation process was undertaken and the applicant has satisfied the minimum requirements as prescribed in the EIA Regulations, 2014 for public involvement.

3. Findings

After consideration of the information and factors listed above, the Department made the following findings-

- a) The identification and assessment of impacts are detailed in the BAR dated 03 December 2015 and sufficient assessment of the key identified issues and impacts have been completed.
- b) The procedure followed for impact assessment is adequate for the decision-making process.
- c) The proposed mitigation of impacts identified and assessed adequately curtails the identified impacts.
- d) The information contained in the BAR dated 03 December 2015 is accurate and credible.
- e) EMPr proposed mitigation measures for the pre-construction, construction and rehabilitation phases of the development and were included in the BAR. The EMPr will be implemented to manage the identified environmental impacts during the construction phase.

In view of the above, the Department is satisfied that, subject to compliance with the conditions contained in the environmental authorisation, the authorised activities will not conflict with the general objectives of integrated environmental management laid down in Chapter 5 of the National Environmental Management Act, 1998 and that any potentially detrimental environmental impacts resulting from the authorised activities can be mitigated to acceptable levels. The environmental authorisation is accordingly granted.



environmental affairs

Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

Private Bag X447 PRETORIA 0001 Environment House - 473 Steve Biko Road, Arcadia- PRETORIA
Tel(+ 27 12) 399 9372
Enquiries: Mr Ishaam Abader Telephone: 012 399 9330 E-mail: iabader@environment.gov.za

Mrs. Milicent Solomons
Director: Strategic Infrastructure Development

Dear Mrs. Solomons

APPOINTMENT AS ACTING CHIEF DIRECTOR: INTEGRATED ENVIRONMENTAL AUTHORISATIONS FOR THE PERIOD 14 APRIL 2016 UNTIL 18 APRIL 2016

I hereby inform you that I have decided to appoint you as the Acting Chief Director: integrated environmental authorisations for the period 14 April 2016 until 18 April 2016 while Mr. Sabelo Malaza is on Annual Leave.

All the correspondence and other documents that are usually signed by the Chief Director: integrated environmental authorisations must be signed under Acting Chief Director: integrated environmental authorisations during the above-mentioned period.

Your appointment in the above acting position remains subject to the provisions of the Public Service Act, 1994 (Proclamation No. 103 of 1994), as amended, the Government Employees Pension Fund Act, 1996 (Proclamation No. 21 of 1996), the regulations promulgated under these Acts and relevant circulars.

In the execution of your duties and the exercising of the powers delegated to you, you will furthermore be subjected to the provisions of the Public Finance Management Act, compliance with the Promotion of Access to Information Act, Promotion of Administrative Justice Act, the Minimum Information Security Standard, Departmental Policies and other applicable legislations with the Republic of South Africa. You are therefore advised to make yourself familiar with the provisions of this legislations and policies and the amendments thereof. (Copies of Departmental policies can be obtained from the Human Resource Office).

Please accept my heartfelt gratitude for all your assistance on behalf of the department.

Yours sincerely

Mr. Ishaam Abader

DDG: LACE

Date:

11/4/2016

ACKNOWLEDGEMENT

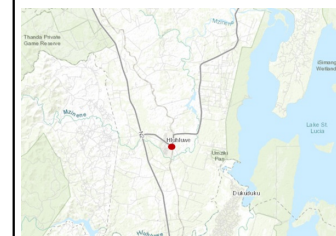
I ACCEPT / ~~DO NOT ACCEPT~~ appointment
as Acting Chief Director: integrated
environmental authorisations

Signed: M. Solomons

Date: 12/04/2016

Appendix II: Locality Maps

R22 Hluhluwe Eastern Bypass



Topographical Map

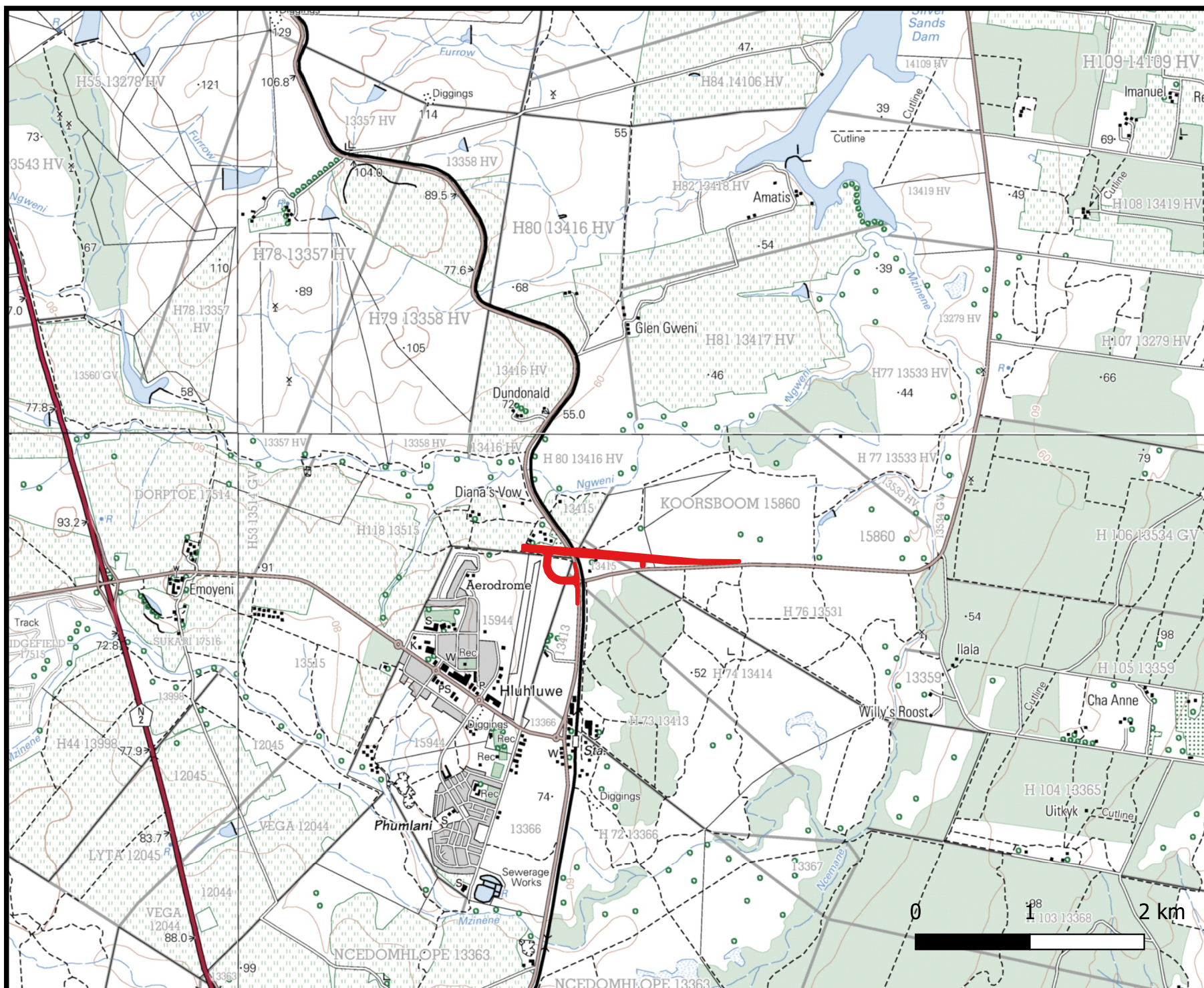
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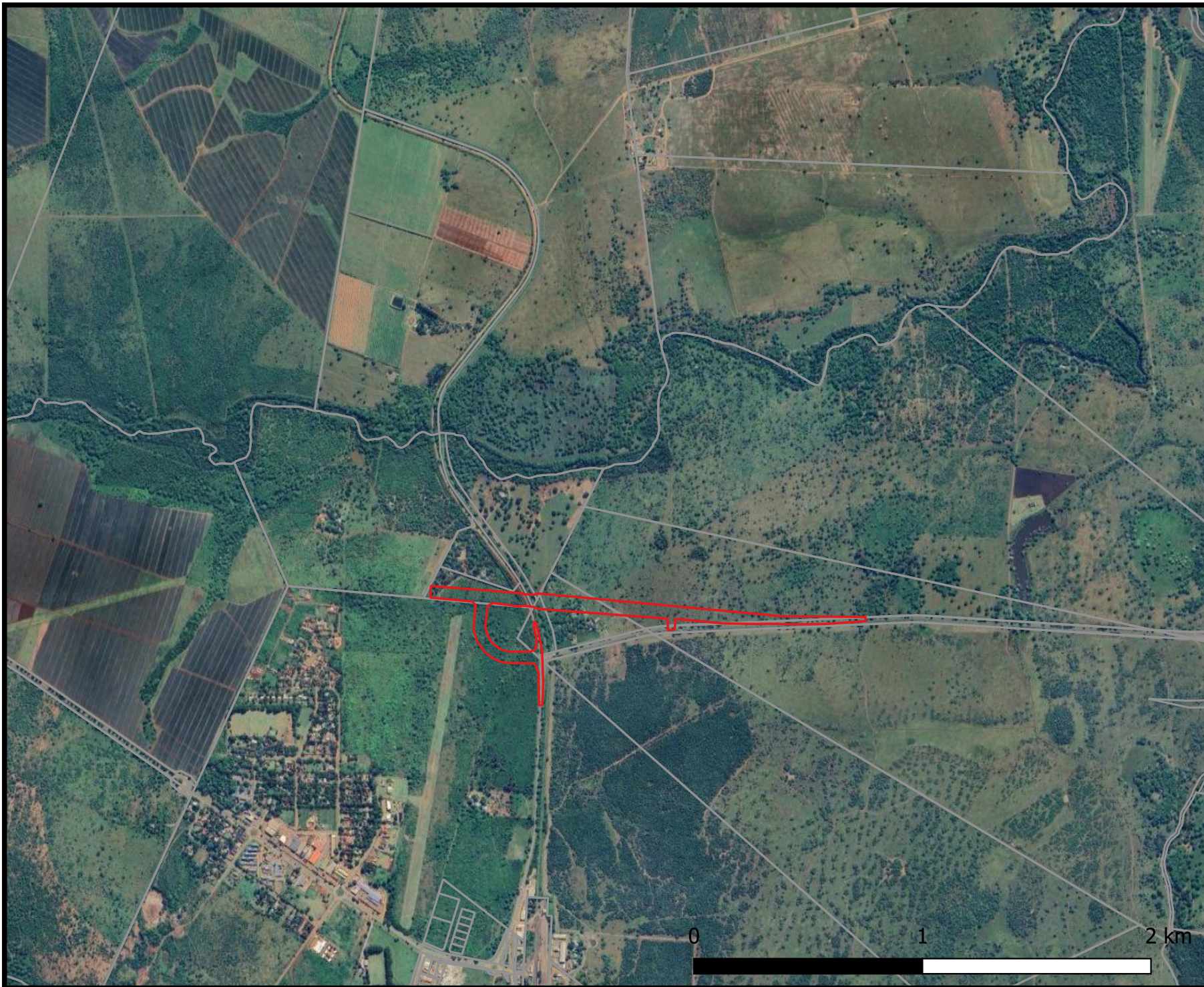
Hluhluwe Bypass



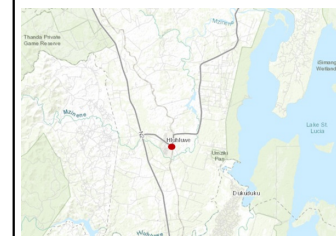
Kilometers
Scale (A3) 1:50 000

Designed and detailed under the controls established by our quality management system that meet the requirements of ISO 9001:2015 which has been independently certified by DEKRA Certification under certificate number 90006862.





R22 Hluhluwe Eastern Bypass



Locality Map

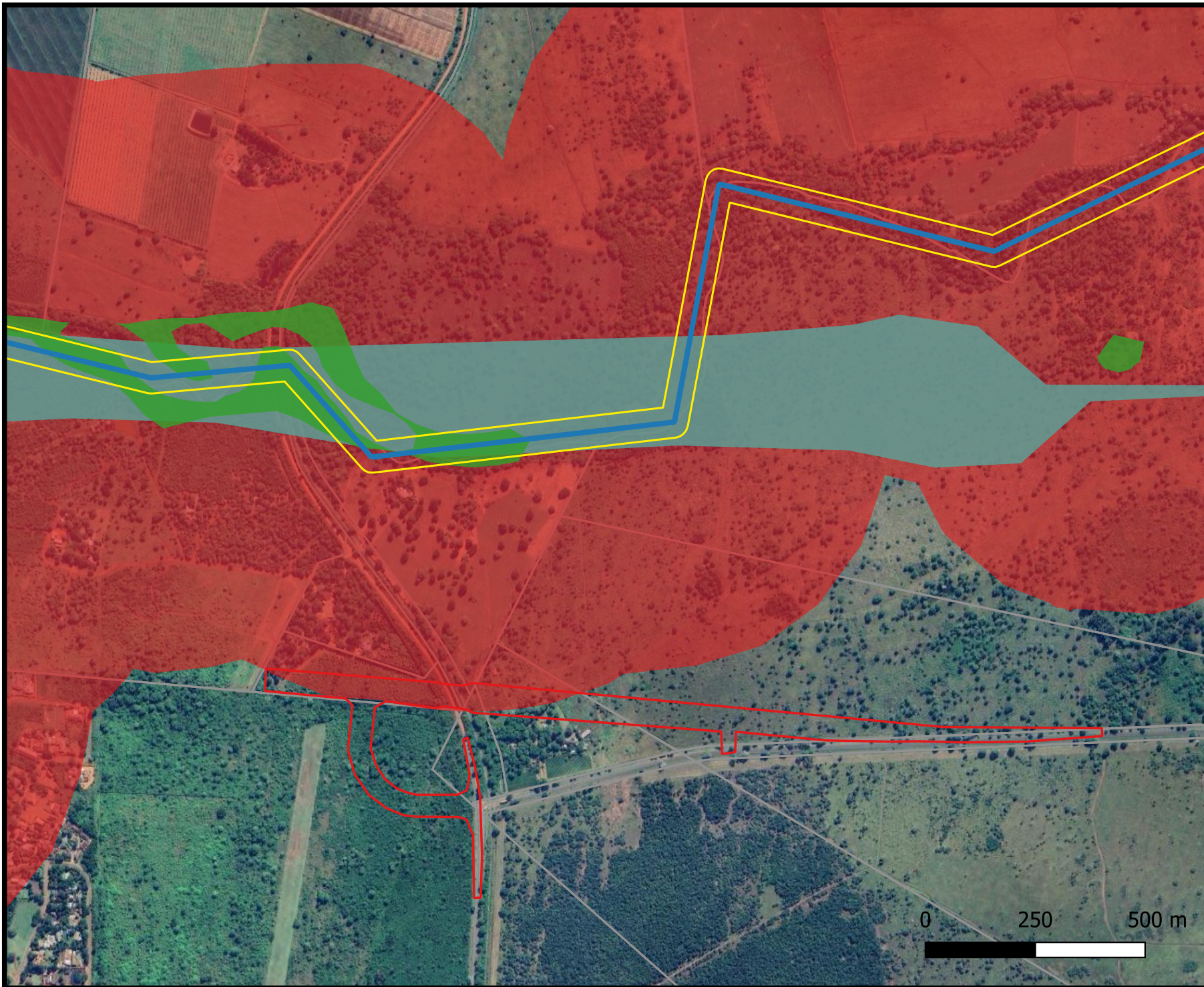
LEGEND

-  Hluhluwe Bypass
-  Farm Portion

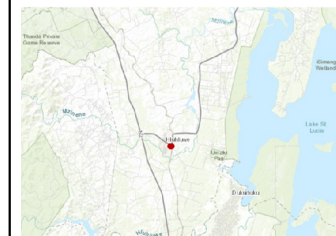


Kilometers
Scale (A3) 1:25 000

Appendix III: Environmental Sensitivity Maps



R22 Hluhluwe Eastern Bypass



Wetlands and Watercourses

LEGEND

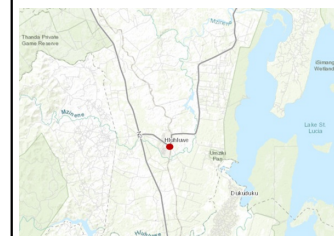
- Hluhluwe Bypass
- NFEPA_Rivers
- NFEPA Wetlands
- 100yr Flood plain
- Farm Portion
- 32m Regulated Area
- 500m Buffer



Kilometers
Scale (A3) 1:15 000

0 250 500 m

R22 Hluhluwe Eastern Bypass



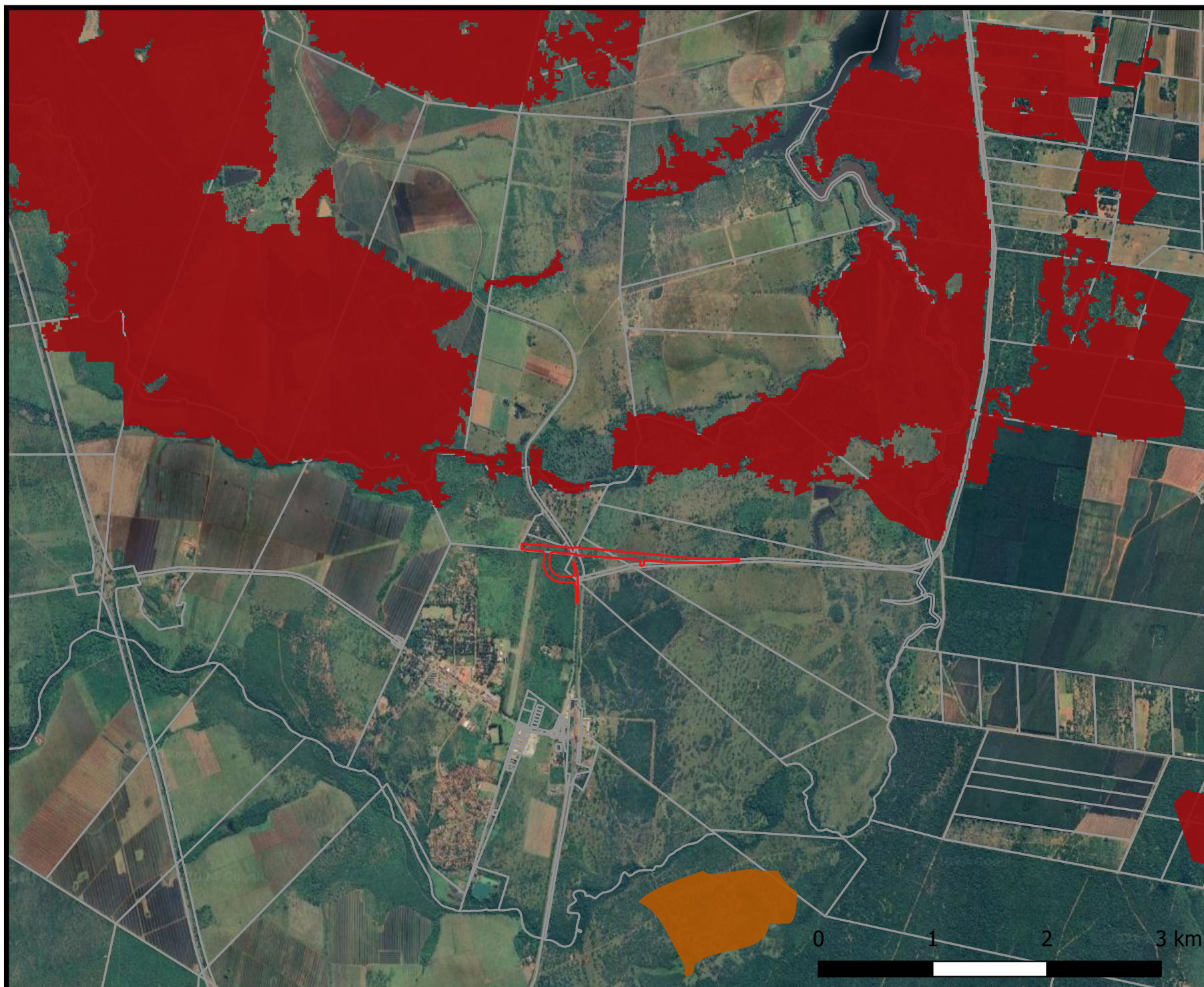
Critical Biodiversity Areas

LEGEND

-  Hluhluwe Bypass
-  CBA Optimal
-  CBA Irreplaceable
-  Farm Portion



Kilometers
Scale (A3) 1:50 000





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**Proposed Hluhluwe Road
Over Rail Bridge and
Eastern Phase Alignment**

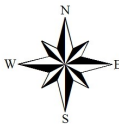
Map Detail: Fossil Sensitivity

Legend

-  Hluhluwe
-  Quarter Link Road
-  Preferred Alignment
-  Alternative Alignment

Fossil Sensitivity

-  Red: Very High Sensitivity
-  Green: Moderate Sensitivity
-  Blue: Low Sensitivity



Scale
1: 15 000

R22 Hluhluwe Eastern Bypass

Description

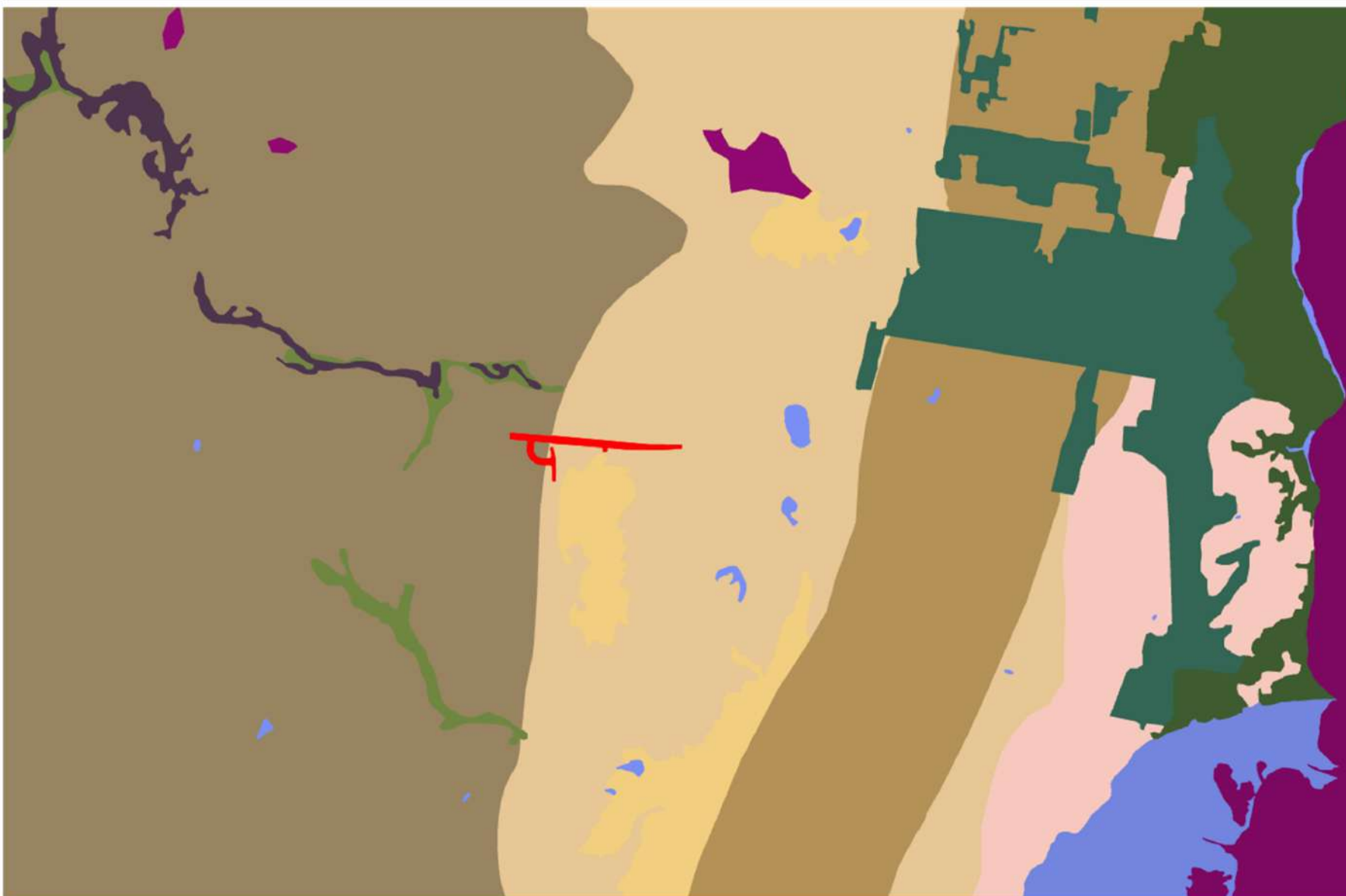
Vegetation Types

Legend

KZN Vegetation Types

-  1 Drakensberg-Amathole Afromontane Fynbos
-  2 Amersfoort Highveld Clay Grassland
-  3 Drakensberg Afroalpine Heathland
-  4 Drakensberg Foothill Moist Grassland
-  5 Basotho Montane Shrubland
-  6 Dry Coast Hinterland Grassland
-  7 East Griqualand Grassland
-  8 Eastern Free State Sandy Grassland
-  10 Incombe Sandy Grassland
-  11 Ithala Quartzite Sourveld
-  12 Kalkrivier Montane Grassland
-  13 KwaZulu-Natal Sandstone Sourveld
-  14 Lebombo Summit Sourveld
-  15 Lesotho Highland Basat Grassland
-  16 Low Escarpment Moist Grassland
-  17 Mabele Sandy Grassland
-  18 Maputaland Wooded Grassland
-  19 Maputaland Coastal Belt
-  20 Midlands Mistbelt Grassland
-  21 Moist Coast Hinterland Grassland
-  22 Mooi River Highland Grassland
-  24 Northern Drakensberg Highland Grassland
-  25 Northern KwaZulu-Natal Moist Grassland
-  26 Northern Zululand Mistbelt Grassland
-  27 Pekaia Sandstone Forest Grassland

1: 50,000



2.5 0 1.27 2.5 Kilometers

WGS_1984_Web_Mercator_Auxiliary_Sphere
© Latitude Geographics Group Ltd.

This map is a user generated static output from an Internet mapping site and is for reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable.

THIS MAP IS NOT TO BE USED FOR NAVIGATION

Appendix IV: DFFE Screening Tool Report

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

EIA Reference number: 14/12/16/3/3/2/2664

Project name: Dedicated Road-Over-Rail Bridge and Approach Alignment R22 Near Hluhluwe

Project title: PROPOSED CONSTRUCTION OF A DEDICATED ROAD-OVER-RAIL BRIDGE AND APPROACH ALIGNMENT AT THE MBAZWANA/SODWANA INTERSECTION OF NATIONAL ROUTE R22, HLUHLUWE TOWN, BIG 5 FALSE LOCAL MUNICIPALITY, KWAZULU-NATAL.

Date screening report generated: 25/10/2024 14:28:30

Applicant: SANRAL

Compiler: T Chetty

Compiler signature:



Application Category: Infrastructure | Transport Services | Roads | Public

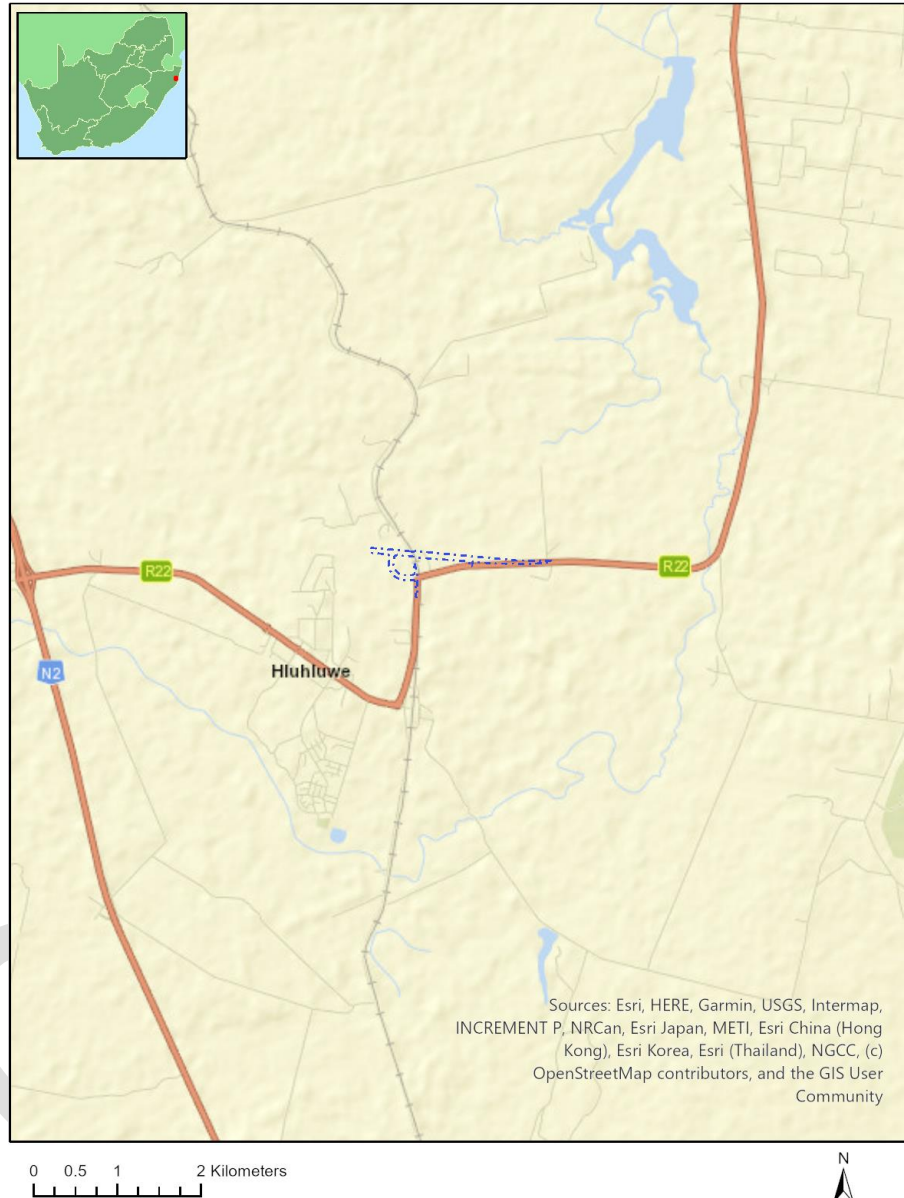
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MAP OF RELATIVE CIVIL AVIATION THEME SENSITIVITY	12
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MAP OF RELATIVE PALEONTOLOGY THEME SENSITIVITY	14
MAP OF RELATIVE PLANT SPECIES THEME SENSITIVITY	15
MAP OF RELATIVE TERRESTRIAL BIODIVERSITY THEME SENSITIVITY	16

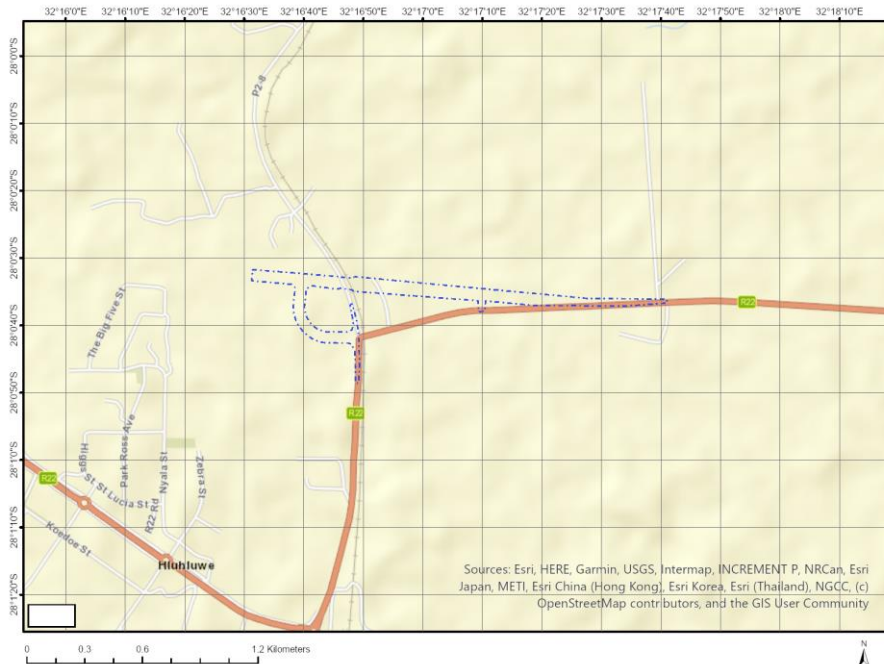
Proposed Project Location

Orientation map 1: General location

General Orientation: Dedicated Road-Over-Rail Bridge and Approach Alignment R22 Near Hluhluwe



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	HLUHLUWE	323	3	28°1'1.68S	32°16'42.61E	Erven
2	HLUHLUWE	323	5	28°1'0.67S	32°16'48.37E	Erven
3	WESTVILLE	323	6	28°1'0.8S	32°16'48.34E	Erven
4	HLUHLUWE	323	5	28°1'1.09S	32°16'48.34E	Erven
5	HLUHLUWE	10000	0	28°0'49.82S	32°16'31.24E	Erven
6	HLUHLUWE	10000	0	28°0'55.59S	32°16'27.44E	Erven
7	LOT H 119	13415	0	28°0'21.78S	32°16'46.57E	Farm
8	KOORSBOOM	15860	0	28°0'18.98S	32°17'46.02E	Farm
9		15944	0	28°1'2.63S	32°16'27.19E	Farm
10	LOT H118	13515	0	28°0'21.35S	32°16'21.16E	Farm
11	LOT H75	13531	0	28°0'50.22S	32°18'4.42E	Farm
12	LOT H120	13535	0	28°0'36.25S	32°16'55.21E	Farm
13	LOT H74	13414	0	28°1'6.17S	32°17'38.78E	Farm
14	LOT H74	13414	3	28°0'40.08S	32°16'57.62E	Farm Portion
15	LOT H74	13414	0	28°0'38.42S	32°16'48.49E	Farm Portion
16	LOT H 119	13415	0	28°0'22.36S	32°16'46.73E	Farm Portion
17	LOT H118	13515	5	28°0'32.77S	32°16'39.21E	Farm Portion
18	LOT H75	13531	1	28°0'31.76S	32°17'25.36E	Farm Portion
19	LOT H75	13531	2	28°0'36.34S	32°17'49.15E	Farm Portion
20	LOT H120	13535	0	28°0'36.84S	32°16'55.19E	Farm Portion
21	KOORSBOOM	15860	0	28°0'19.69S	32°17'46.03E	Farm Portion
22		15944	0	28°1'1.19S	32°16'25.19E	Farm Portion

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	EIA Reference No	Classification	Status of application	Distance from proposed area (km)
1	12/12/20/2091/1	Solar PV	Approved	19.1
2	12/12/20/2091/2/AM1	Wind	Approved	19.1
3	12/12/20/2091/1/AM3	Solar PV	Approved	19.1
4	12/12/20/2091/2/A1	Wind	Approved	19.1
5	12/12/20/2091/2	Wind	Approved	19.1

Environmental Management Frameworks relevant to the application

No intersections with EMF areas found.

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:

Infrastructure|Transport Services|Roads|Public.

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 Transmission Corridor-Expanded Eastern Corridor	https://screening.environment.gov.za/ScreeningDownloads/DevelopmentZones/Combined_EGI.pdf
Strategic Gas Pipeline Corridors-Phase 7: Coega to Richards Bay	https://screening.environment.gov.za/ScreeningDownloads/DevelopmentZones/Combined_GAS.pdf

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.

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 known impacts associated with the proposed development, 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.

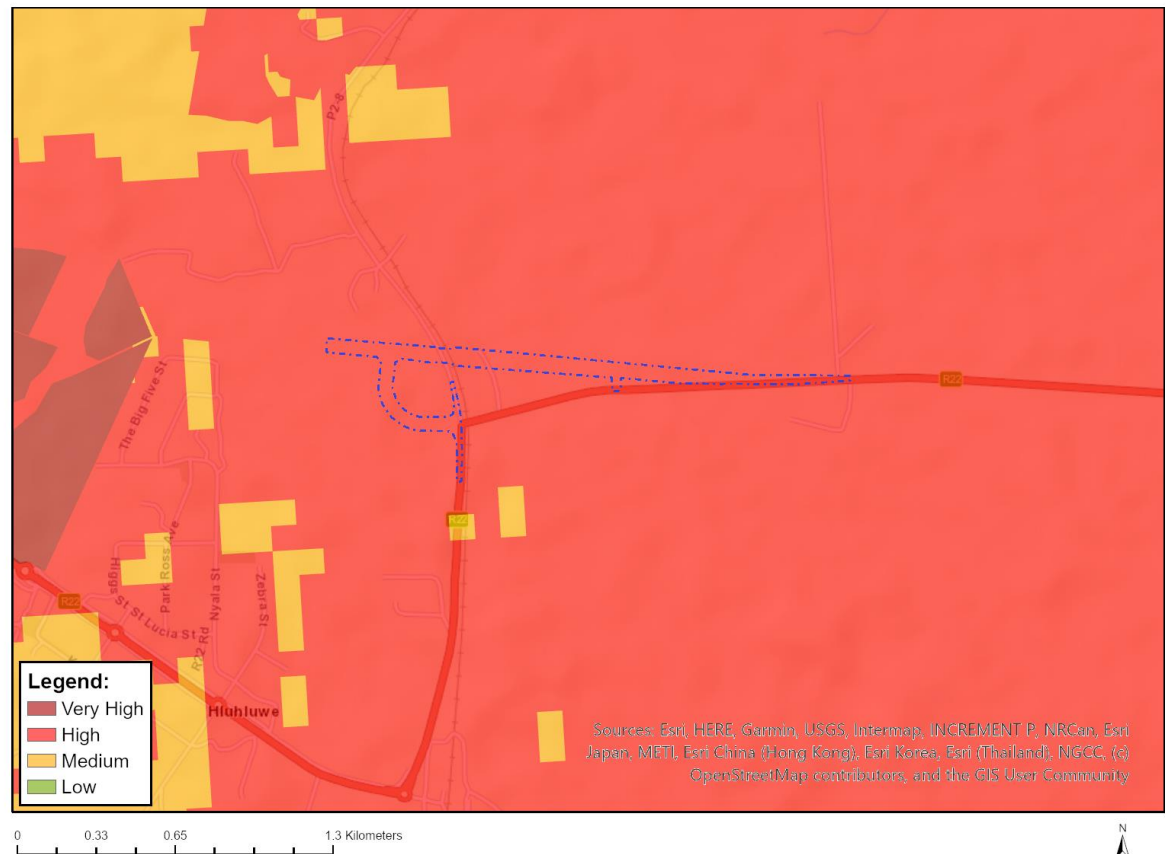
No	Specialist assessment	Assessment Protocol
1	Agricultural Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Agriculture_Assessment_Protocols.pdf
2	Landscape/Visual Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
3	Archaeological and Cultural Heritage Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
4	Palaeontology Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
5	Terrestrial Biodiversity Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Terrestrial_Biodiversity_Assessment_Protocols.pdf
6	Aquatic Biodiversity Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Aquatic_Biodiversity_Assessment_Protocols.pdf
7	Noise Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Noise_Impacts_Assessment_Protocol.pdf
8	Traffic Impact	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Traffic_Impact_Assessment_Protocol.pdf

	Assessment	ssmentProtocols/Gazetted General Requirement Assessment Protocols.pdf
9	Geotechnical Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted General Requirement Assessment Protocols.pdf
10	Socio-Economic Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted General Requirement Assessment Protocols.pdf
11	Ambient Air Quality Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted General Requirement Assessment Protocols.pdf
12	Plant Species Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted Plant Species Assessment Protocols.pdf
13	Animal Species Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted Animal Species Assessment Protocols.pdf

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

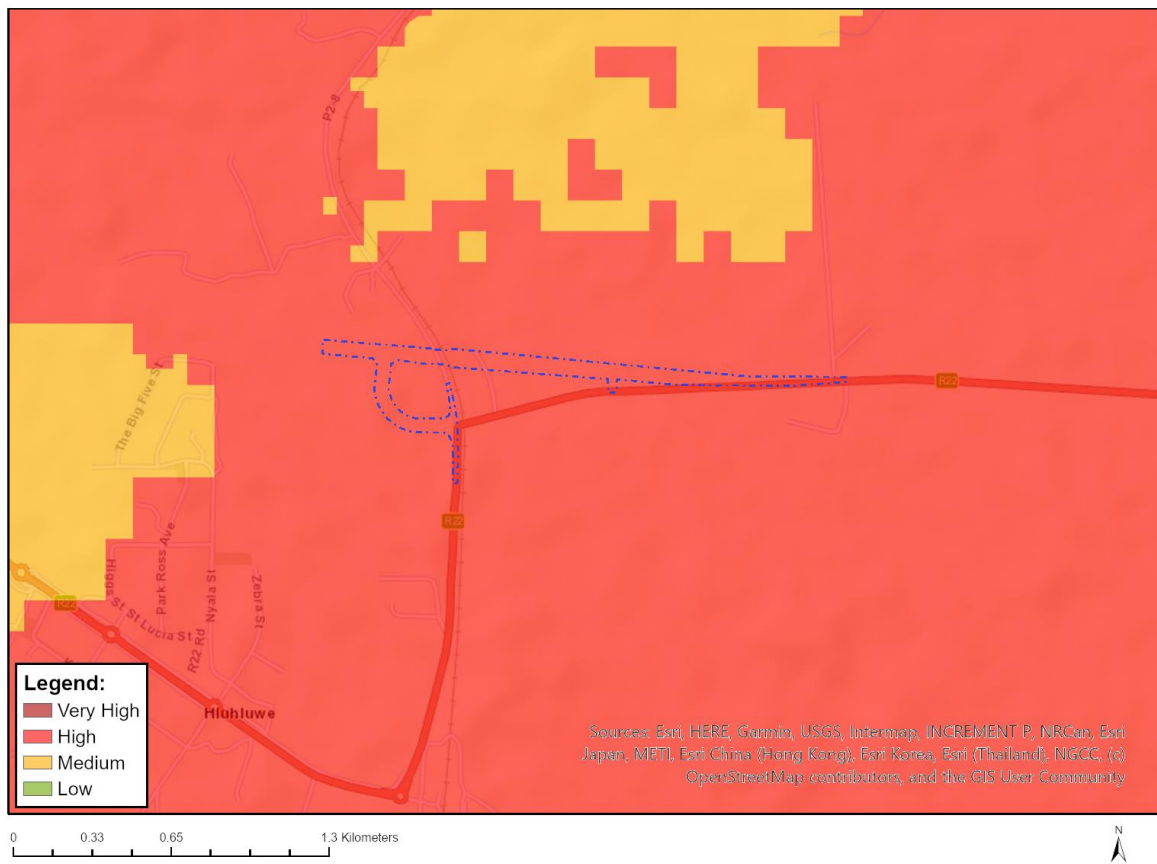


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
	X		

Sensitivity Features:

Sensitivity	Feature(s)
High	Land capability;09. Moderate-High/10. Moderate-High
High	Old Fields;Land capability;09. Moderate-High/10. Moderate-High
High	Annual Crop Cultivation / Planted Pastures Rotation;Land capability;09. Moderate-High/10. Moderate-High

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.

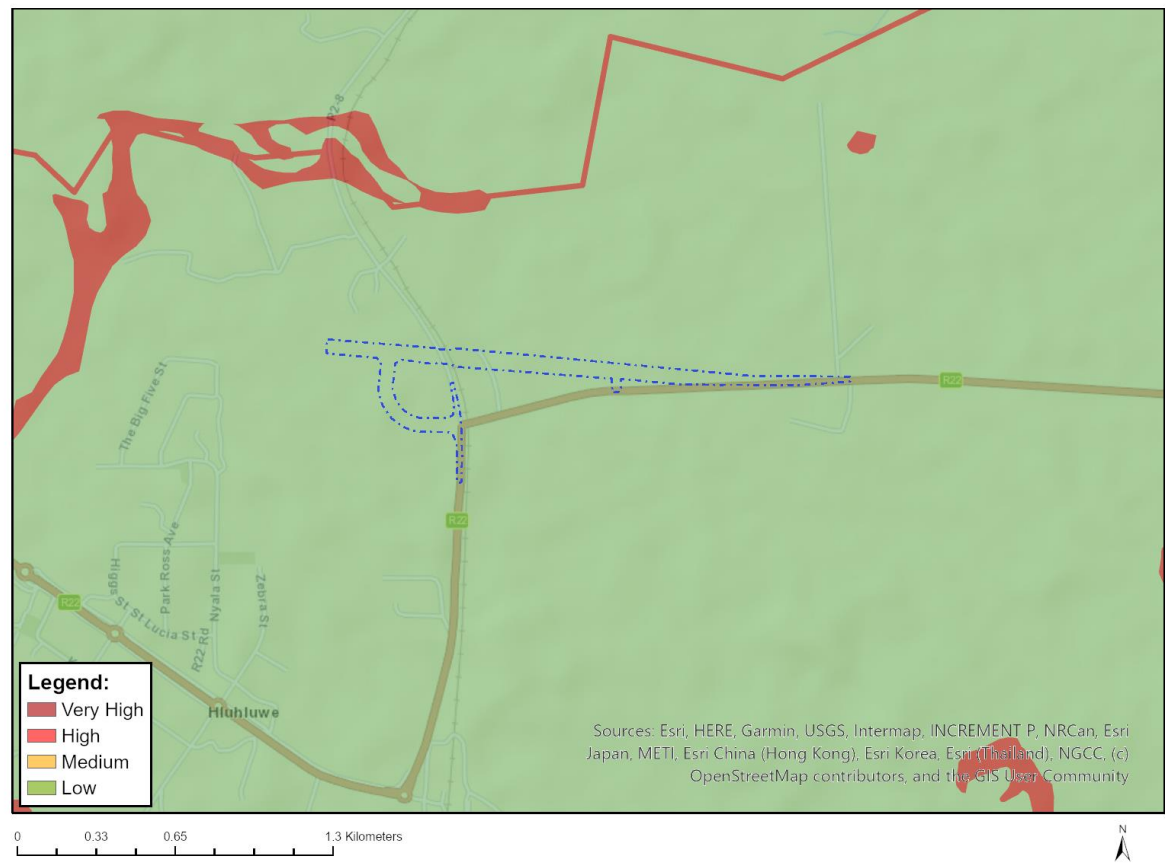
Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
	X		

Sensitivity Features:

Sensitivity	Feature(s)
High	Aves-Torgos tracheliotos
High	Aves-Aquila rapax
High	Aves-Stephanoaetus coronatus
High	Aves-Smithornis capensis
High	Aves-Circus ranivorus
High	Aves-Terathopius ecaudatus
High	Aves-Polemaetus bellicosus
High	Aves-Caprimulgus natalensis
High	Aves-Gyps africanus
Medium	Insecta-Deloneura millari millari
Medium	Sensitive species 5
Medium	Mammalia-Lycan pictus
Medium	Mammalia-Nesotragus moschatus zuluensis

Medium	Mammalia-Ourebia ourebi ourebi
Medium	Sensitive species 8
Medium	Reptilia-Kinixys natalensis
Medium	Reptilia-Pelusios rhodesianus
Medium	Invertebrate-Arytropteris basalıs

MAP OF RELATIVE AQUATIC BIODIVERSITY THEME SENSITIVITY

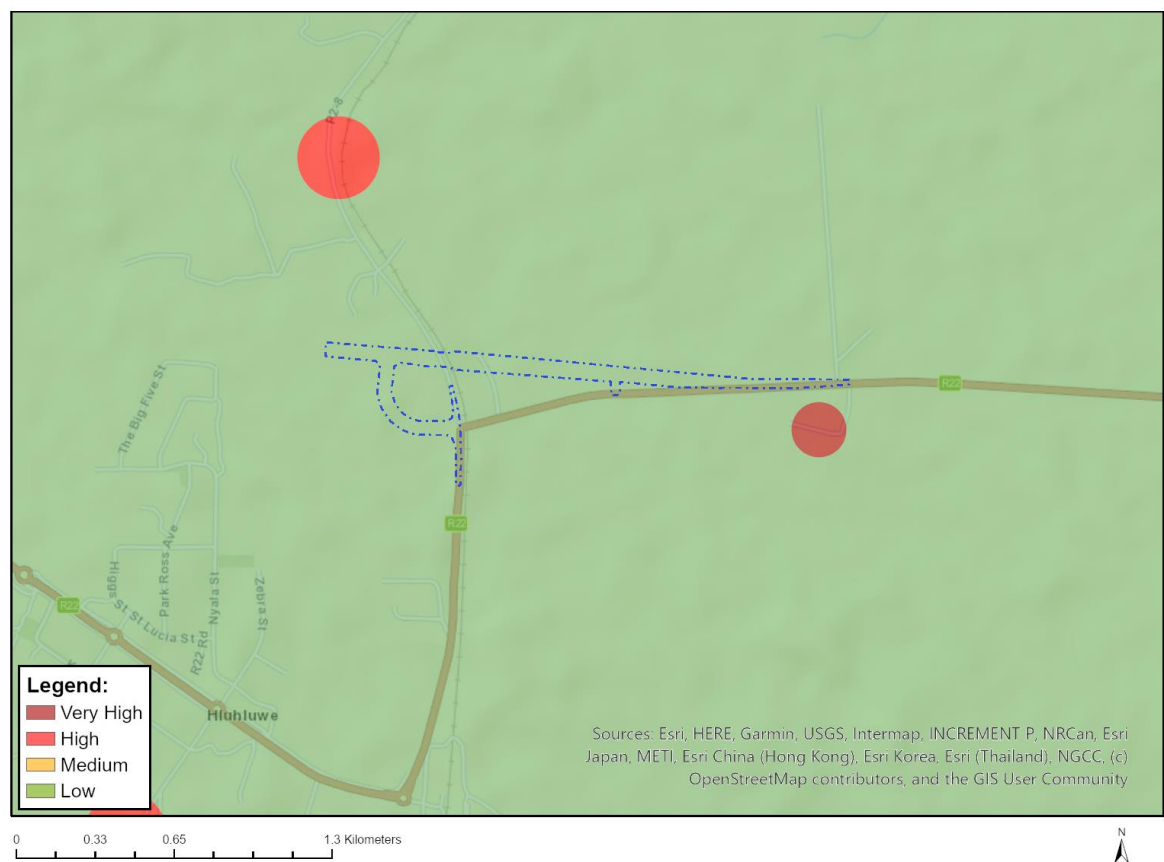


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
			X

Sensitivity Features:

Sensitivity	Feature(s)
Low	Low sensitivity

MAP OF RELATIVE ARCHAEOLOGICAL AND CULTURAL HERITAGE THEME SENSITIVITY

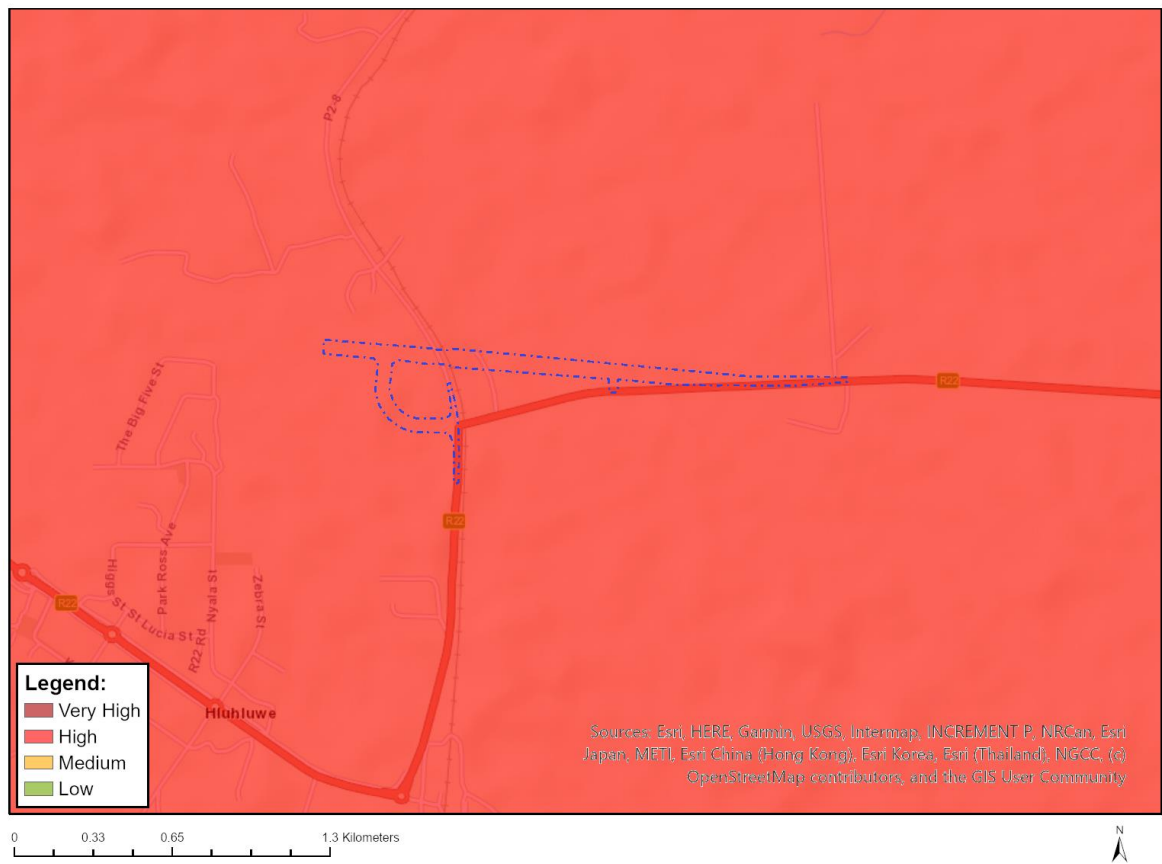


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
			X

Sensitivity Features:

Sensitivity	Feature(s)
Low	Low sensitivity

MAP OF RELATIVE CIVIL AVIATION THEME SENSITIVITY

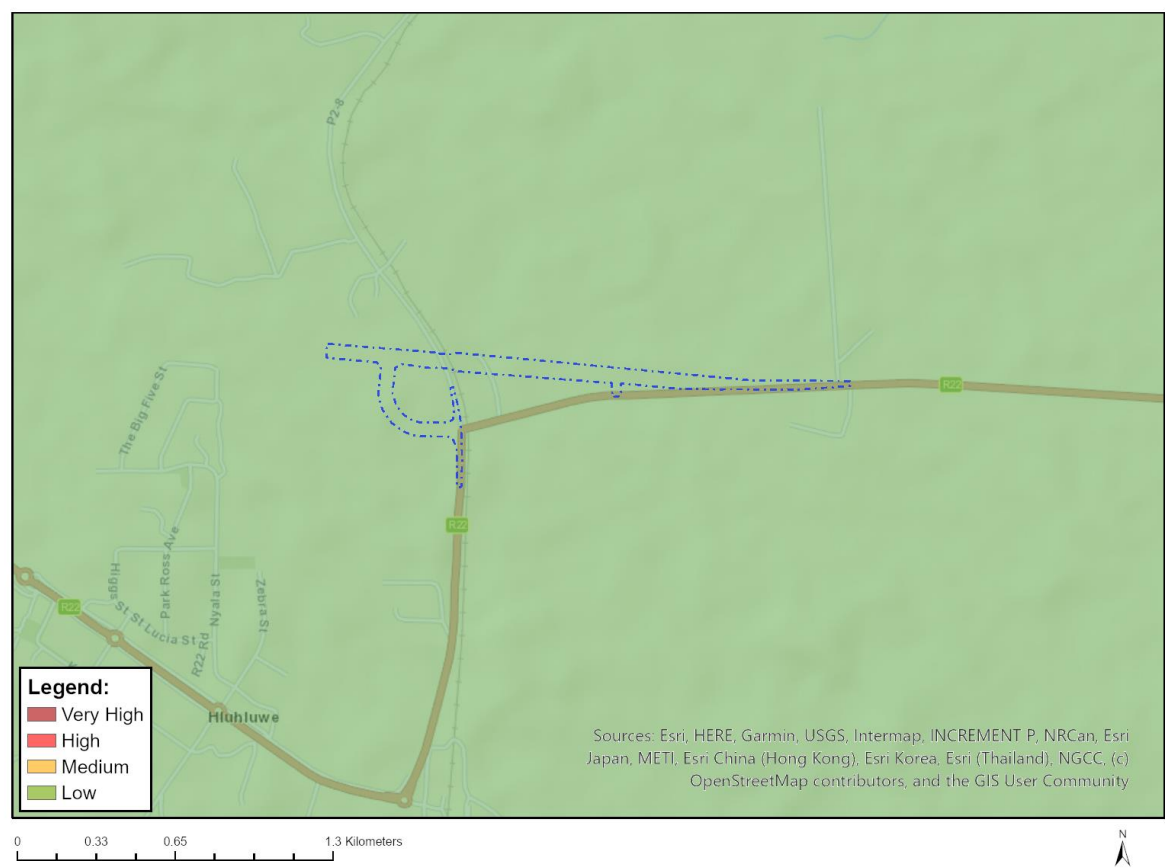


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
	X		

Sensitivity Features:

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

MAP OF RELATIVE DEFENCE THEME SENSITIVITY

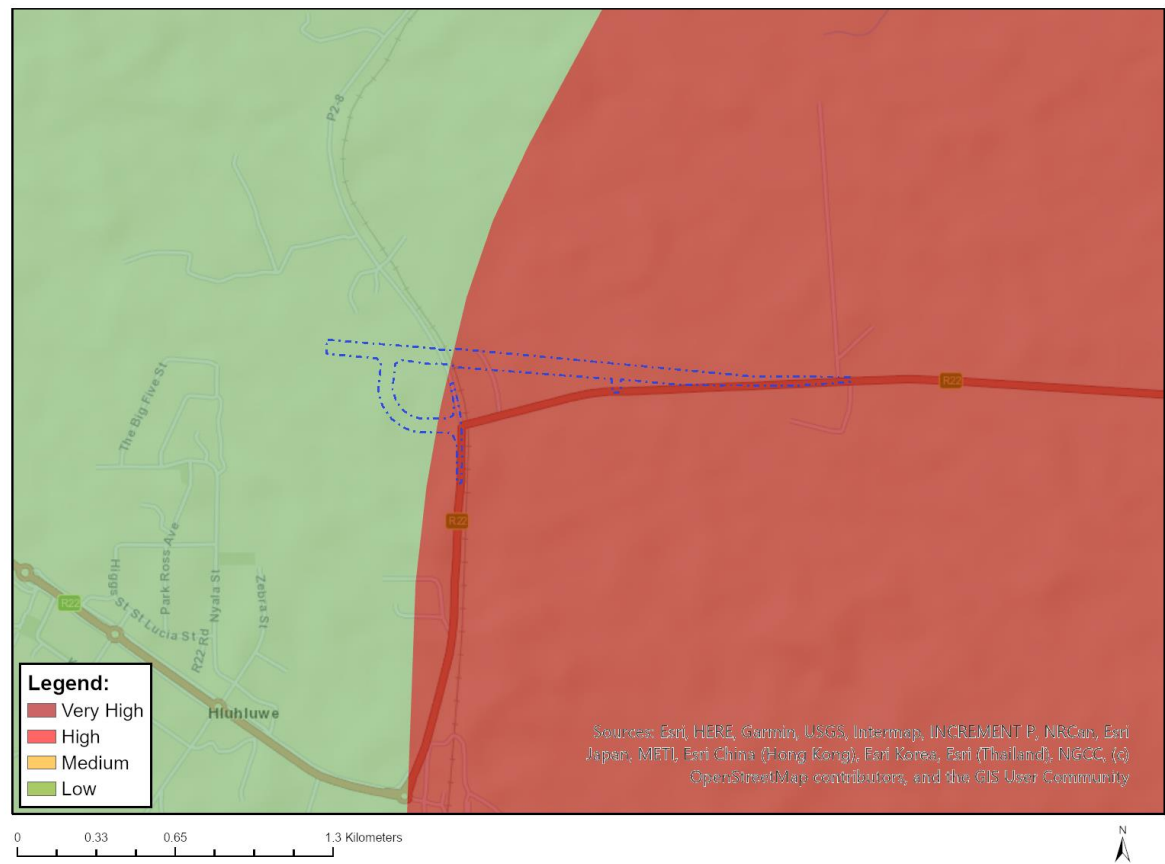


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
			X

Sensitivity Features:

Sensitivity	Feature(s)
Low	Low Sensitivity

MAP OF RELATIVE PALEONTOLOGY THEME SENSITIVITY

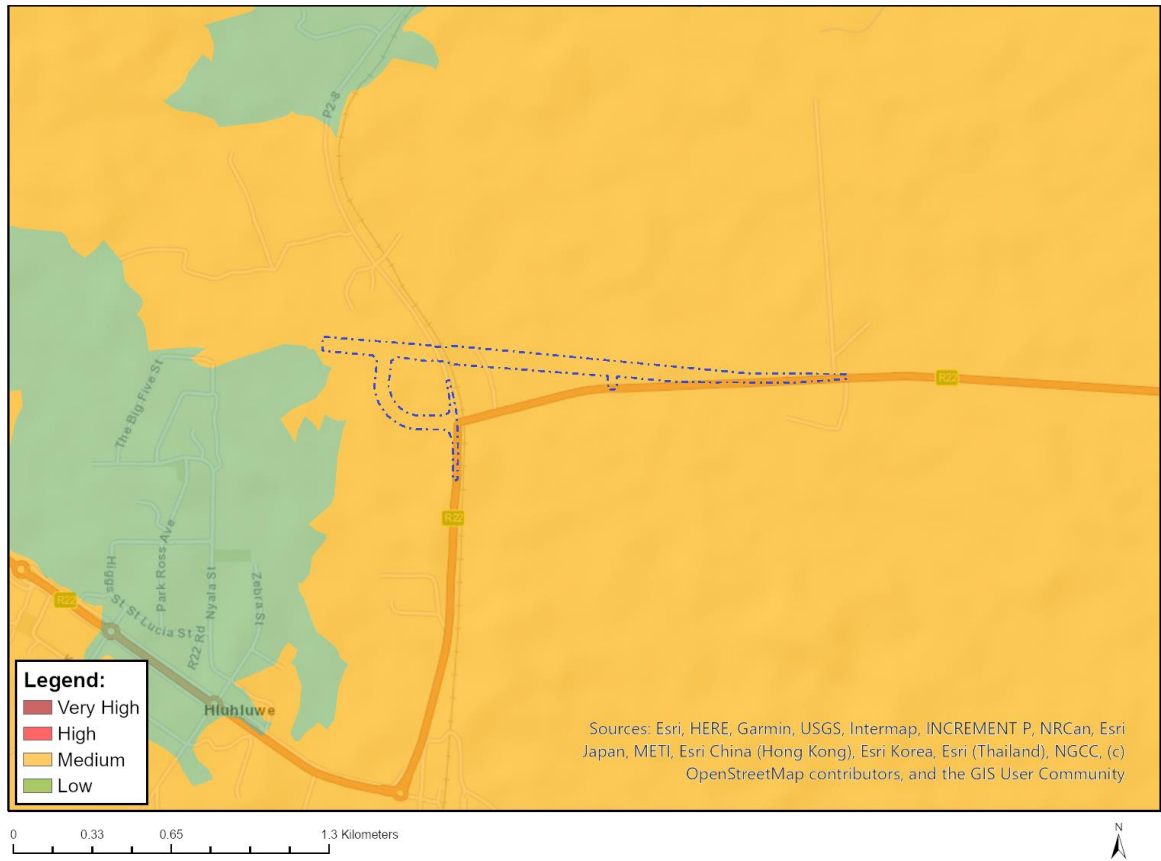


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
X			

Sensitivity Features:

Sensitivity	Feature(s)
Low	Features with a Low paleontological sensitivity
Very High	Features with a Very High paleontological sensitivity

MAP OF RELATIVE PLANT SPECIES THEME SENSITIVITY



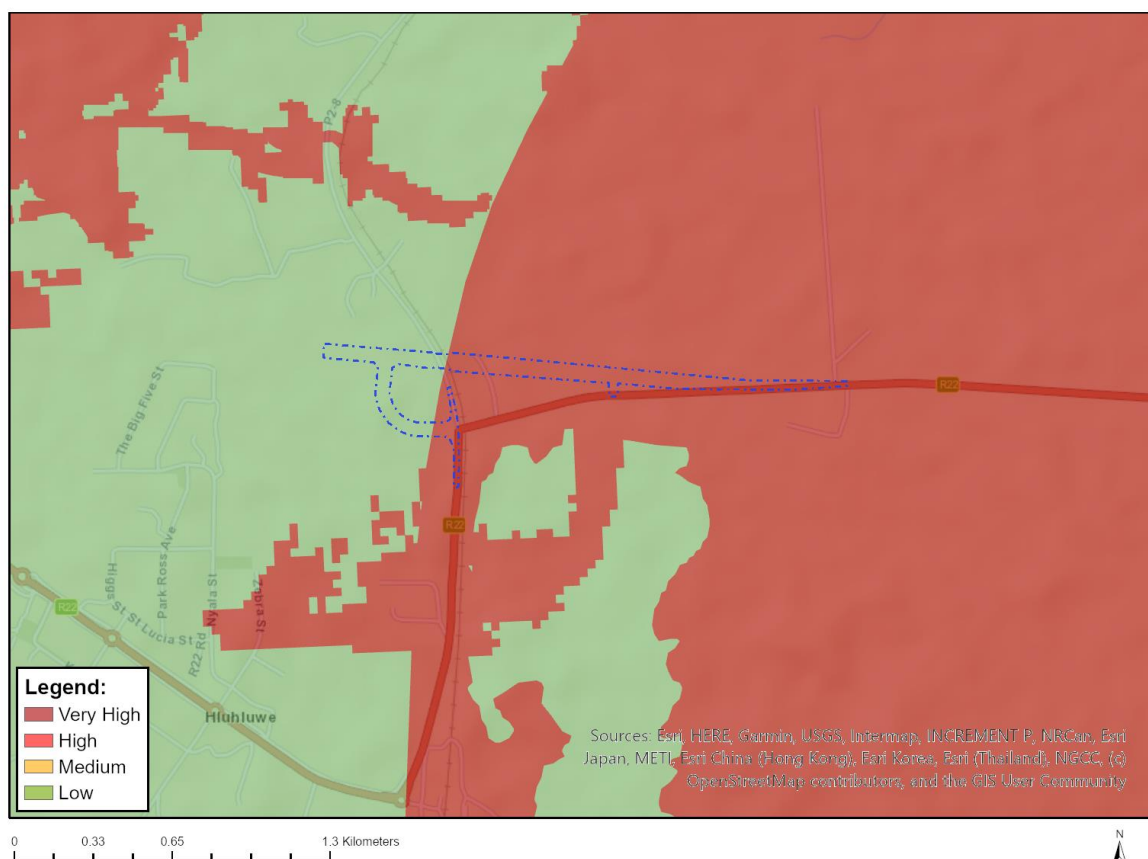
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Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
		X	

Sensitivity Features:

Sensitivity	Feature(s)
Medium	Sensitive species 1252
Medium	Salpinctium natalense
Medium	Pristimera delagoensis var. delagoensis
Medium	Sensitive species 1076
Medium	Sensitive species 738
Medium	Oxygonum dregeanum subsp. streyi

MAP OF RELATIVE TERRESTRIAL BIODIVERSITY THEME SENSITIVITY



Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
X			

Sensitivity Features:

Sensitivity	Feature(s)
Low	Low Sensitivity
Very High	National Protected Area Expansion Strategy (NPAES)
Very High	EN Western Maputaland Clay Bushveld