EZELSJACHT WIND ENERGY FACILITY

SITE SENSITIVITY VERIFICATION REPORT

PRODUCED FOR SLR CONSULTING (SOUTH AFRICA) PTY LTD ON BELHALF OF

SOUTH AFRICA MAINSTREAM RENEWABLE POWER DEVELOPMENTS

3Foxes Biodiversity Solutions

Simon.Todd@3foxes.co.za

November2022

CONTENTS

1. INTRODUCTION

South Africa Mainstream Renewable Power Developments (Pty) Ltd ("Mainstream") is proposing to develop, own and operate one (1) Wind Energy Facility (WEF), Battery Energy Storage System (BESS), and associated infrastructure with a generation capacity of up to 140 megawatts (MW).

In order to evacuate the energy generated by the WEF to supplement the national grid, Mainstream is also proposing an electrical grid infrastructure (EGI)/grid connection project which will be assessed in a separate Basic Assessment Processes (i.e. EGI for WEF). The proposed WEF site is located approximately 13 km south-east of the town De Doorns, within the Cape Winelands District Municipality of the Western Cape Province. The site proposed for the WEF component falls within both the Breede Valley and the Langeberg Local Municipalities.

Applicant	Project Name	Capacity (MW)	Affected Property
South Africa Mainstream Renewable Power Developments (Pty) Ltd	Ezelsjacht Wind Energy Facility (WEF)	140 MW_{ac}	Portion 1 of Farm De Braak No. 7
			Portion 6 of the Farm Ratelbosch No.149
			Farm Zout Riviers No. 170
			Remainder of Farm Ezelsjacht No. 171

The overall objective of the proposed development is to generate electricity by means of renewable energy technologies capturing wind energy to feed into the national grid.

At this stage it is proposed that the WEF component of the renewable energy facility will consist of up to a maximum of 35 wind turbine generators (WTG), with a hub height and rotor diameter of approximately 200 m respectively. The WEF will also include internal and/or access roads (with a width of up to 12 m during construction), a construction laydown area/camp, Operation & Maintenance (O&M) Building and 33/132kV Independent Power Producer (IPP) portion of the substation, amongst other associated infrastructure which is still to be confirmed. As mentioned, the WEF will have a generation capacity of up to 140 MW. The dimensions of infrastructure are listed in the table below.

The findings of the respective specialist studies will be used to inform the location of the WEF. All identified sensitive and/or no-go areas (including their respective buffers) will be avoided accordingly, as required. However, as part of the proposed application / Scoping & Environmental Impact Assessment (EIA) processes for the WEF project, various site area / location alternatives may be assessed for the associated infrastructure such as the O&M Buildings, IPP Substations and BESS.

The location alternatives for the associated infrastructure such as the O&M Buildings, IPP Substations and BESS, will also need to be assessed against the 'no-go' alternative. The 'no-go' alternative is the option of not constructing the respective projects, where the status quo of the current status and/or activities on the site would prevail.

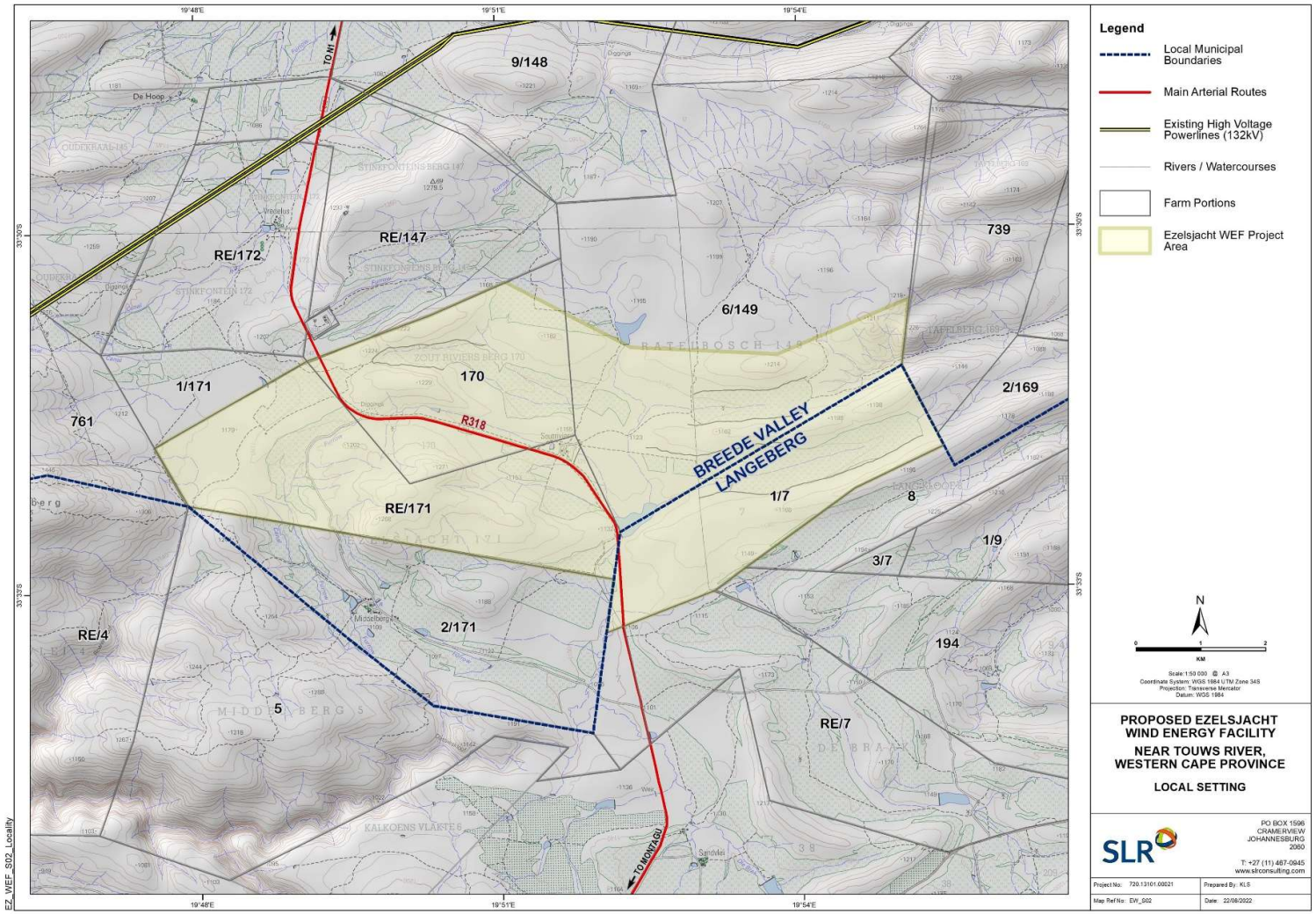


Figure 1-1: Locality Map of the Ezelsjacht WEF

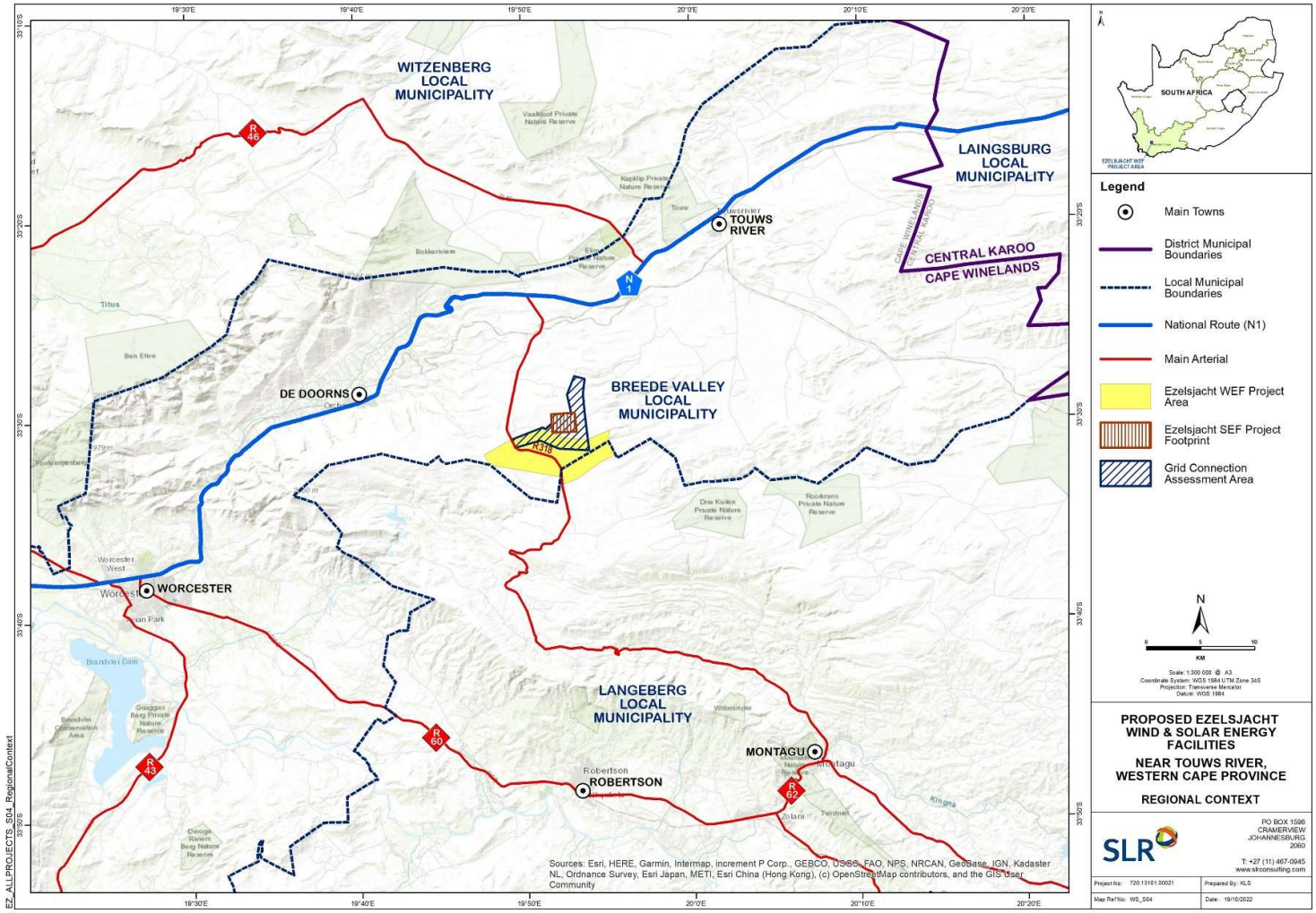


Figure 2-2: Regional Context of the Ezelsjacht WEF in relation to other Renewable Energy Projects

2. TECHNICAL DETAILS FOR THE PROPOSED DEVELOPMENT

Technical Component	Approximate Dimensions
Ezelsjacht WEF infrastructure	
Location of the site (centre point)	33°31'41.39"S 19°52'4.52"E
Access Roads	Access to the site will be off the R318 and existing access roads will be utilised as far as possible. The width of the access roads will be up to 12m wide.
Project area	+/- 3,594 hectares
Affected Farm Portions	Portion 1 of Farm De Braak No. 7 Portion 6 of the Farm Ratelbosch No.149 Farm Zout Riviers No. 170 Remainder of Farm Ezelsjacht No. 171
SG Codes	C05000000000000700001 C08500000000014900006 C08500000000017000000 C08500000000017100000
Number of wind turbines and generation capacity	Up to a maximum of 35 turbines with an export capacity of 140 MW
Wind turbine specifications	• Rotor diameter: up to approximately 200m • Hub height: up to approximately 200m • Each turbine will have a circular foundation of up to 20m in diameter, and up to 5m in depth • Turbine Crane pads/hard stand areas up to 0,7 hectares per turbine • Electrical transformers (11/33kV) located adjacent to each wind turbine (approx. 2m x 2m)

Technical Component	Approximate Dimensions
33kV/132kV IPP portion of onsite substation	• The 33kV/132kV IPP portion of the onsite substation will be located adjacent to the 132kV Eskom portion of the substation (EGI for WEF EA Application) within the 25ha Infrastructure Area that has been assessed. • 33kV/132kV IPP portion of the onsite substation will cover an area of approx. 120m x 120m
Battery Energy Storage System (BESS)	• BESS storage of up to 500 MWh will be located within the 25ha Infrastructure Area that has been assessed and will cover an area of approx. 5 ha. • A Battery Energy Storage System (BESS) will be located next to the IPP portion / yard of the shared onsite 33/132kV substation and will cover an area of 5 ha. The storage capacity will be approx. 500MWh and the technology will be assessed during the EIA phase, either solid state or redox flow.
Roads	• Internal roads will be constructed between turbines, existing roads will be utilized as far as possible. The width of the internal roads will be up to 12m wide

In terms of the National Environmental Management Act (Act 107 of 1998, as amended) (NEMA) Environmental Impact Assessment (EIA) Regulations [4 December 2014, Government Notice (GN) R982, R983, R984 and R985, as amended], various aspects of the proposed development may have an impact on the environment and are considered to be listed activities. These activities require environmental authorisation (EA) from the National Competent Authority (CA), namely the Department of Forestry, Fisheries and the Environment (DFFE), prior to the commencement thereof. One (1) application for EA for the proposed development will be submitted to the DFFE, in the form of a Scoping & EIA process in terms of the NEMA EIA Regulations of 2014 (as amended).

In accordance with GN 320 and GN 1150 (20 March 2020)[1] of the NEMA EIA Regulations of 2014 (as amended), prior to commencing with a specialist assessment, a site sensitivity verification must be

[1] GN 320 (20 March 2020): Procedures for The Assessment and Minimum Criteria for Reporting on Identified Environmental Themes in terms of Sections 24(5)(A) and (H) and 44 of the National Environmental Management Act, 1998, when applying for Environmental Authorisation

undertaken to confirm the current land use and environmental sensitivity of the proposed project area as identified by the National Web-Based Environmental Screening Tool (i.e., Screening Tool). 3Foxes Biodiversity Solutions have been commissioned to verify the terrestrial ecological sensitivity of the Ezelsjacht WEF site under these specialist protocols.

3. SITE SENSITIVITY VERIFICATION METHODOLOGY

Site Visit

The site was visited over two full days for the current Site Verification, on the 1st and 2nd of October 2022. During the field assessment, the full site was investigated and the primary aim was to survey the ecological features of the broader site in order to inform a sensitivity map of the whole farm property which can be used to guide the final development footprint for the WEF and associated infrastructure. Walked surveys were conducted at points of interest across the site which included rocky outcrops, drainage features, wetlands and any areas of quartz pebbles or gravel that may be home to SCC plant species. Specific attention was paid to the presence of plant SCC, sensitive faunal or botanical habitats and direct or indirect signs of fauna.

Since Riverine Rabbits are a potential concern at the site, camera traps were also put out across the site during the field assessment and will be used to confirm the presence of Riverine Rabbits and other fauna of concern at the site for the EIA Phase of the project.

Given the extent of the site and the relatively favourable conditions at the time of the site visit, there are few limitations and assumptions required with regards to the vegetation of the site. In terms of fauna, the habitats present within the site were well investigated and it is unlikely that there are any features of concern present that have not been observed.

4. OUTCOME OF SITE SENSITIVITY VERIFICATION

The outputs of the Department of Forestry, Fisheries and the Environment (DFFE) Screening Tool Report are illustrated and briefly discussed below for each theme as relevant to the current study and related to the results of the field assessment and associated site verification.

Animal Species Theme

The animal species theme sensitivity map is illustrated below in Figure 3 and shows that the majority of the site is classified as **High** sensitivity, with lesser areas of Medium sensitivity. However, Table 1 indicates that this is due to the presence of several bird species of concern and that in terms of terrestrial fauna, it is only the Riverine Rabbit (Mammalia-*Bunolagus monticularis*) and the butterfly *Aloeides caledoni* that are listed as of concern, with Medium sensitivity. There are observations from the broader area of Riverine Rabbits and the landowner confirmed that this species has been observed on the property. Camera traps have been placed at the site to confirm the presence of this species. But based on the habitat within the site (**Figure 4**) and the general habitat within the broader area, there is a high probability that this species is present within the WEF area. *Aloeides caledoni*, the Caledon Copper is associated with summits and slopes of rocky mountains from Caledon in the east to Nieu-Bethesda in the west. Although this species is classified as rare its' conservation status is Least Concern. It is possible that this species is present on the high-lying ground south of the R318, but unlikely to be present north of the R318. Apart from the above species, the only other fauna SCC that is likely present within the site is the Grey Rhebok which is confirmed present and appears to be relatively common on the site (**Figure 5**). Based on the results of the site verification, the site is

confirmed High sensitivity for the Riverine Rabbit and the Grey Rhebok and Medium sensitivity for the Caledon Copper.

Table 1. Animal Species Theme features for the Ezelsjacht WEF project area.

Sensitivity	Feature(s)
High	Aves-*Circus maurus*
High	Aves-*Afrotis afra*
High	Aves-*Aquila verreauxii*
Low	Subject to confirmation
Medium	Aves-*Aquila verreauxii*
Medium	Aves-*Afrotis afra*
Medium	**Insecta-*Aloeides caledoni***
Medium	**Mammalia-*Bunolagus monticularis***

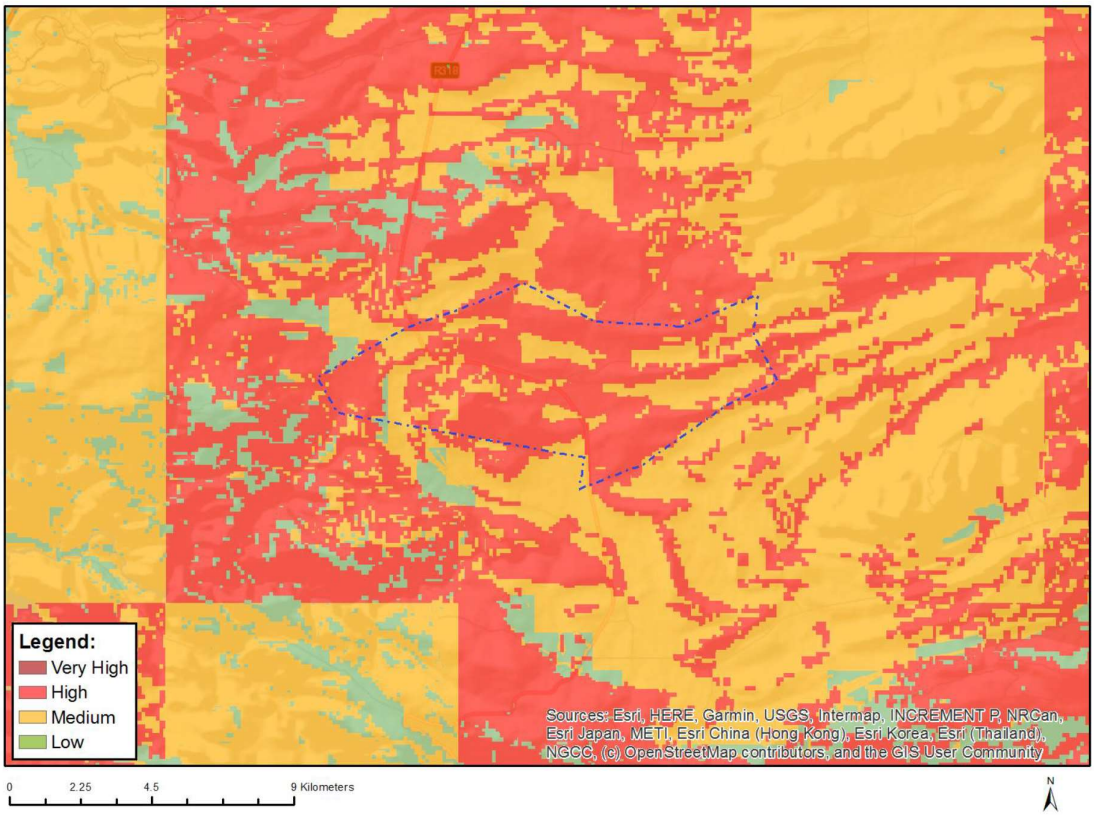


Figure 3. Animal Species Theme sensitivity map for the Ezelsjacht WEF project area.

Figure 4. There are parts of the Ezelsjacht WEF project area that contain suitable habitat for the Riverine Rabbit and there is a high probability that this species is present on the site.

Figure 5. The Grey Rhebok is confirmed present on the Ezelsjacht WEF site.

Plant Species Theme

The plant species theme sensitivity map is illustrated below in Figure 6 and shows that the majority of the site is classified as Medium sensitivity with a small extent of **High** sensitivity habitat in the far south of the site. The theme features table indicates the possible presence of numerous plant species of concern. Of these at least two, *Amphithalea spinosa* (VU) and *Acmadenia* matroosbergensis (Rare)

can be confirmed present at the site (**Figure 7**). While it is possible that additional SCC are present within the site, no other SCC were observed during the field assessment. Additional plant surveys in the WEF area will be conducted to ascertain the abundance and distribution of the observed plant SCC within the WEF area as well as the abundance and presence of any other plant SCC that are observed. Based on the site verification, the **medium** sensitivity of the WEF can be confirmed and if any additional SCC are located within the WEF footprint, the sensitivity is likely to be elevated to High.

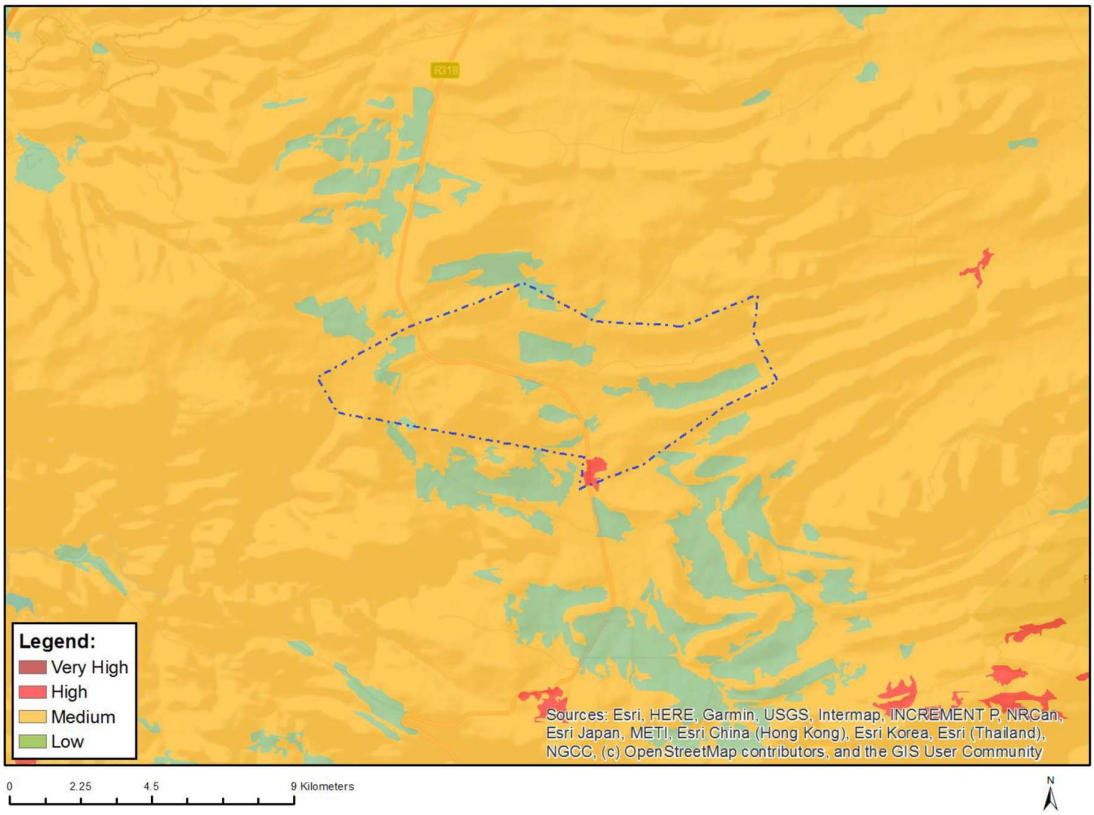


Figure 6. Plant Species Theme sensitivity map for the Ezelsjacht WEF project area.

Table 2. Plant Species Theme features for the Ezelsjacht WEF project area.

Sensitivity	***Feature(s)***
High	*Drosanthemum giffenii*
Low	Low Sensitivity
Medium	*Esterhuysenia inclaudens*
Medium	*Antimima condensa*
Medium	*Drosanthemum tuberculiferum*
Medium	*Amphithalea spinosa*
Medium	*Aspalathus rostrata*
Medium	*Aspalathus shawii subsp. longispica*
Medium	*Lotononis argentea*
Medium	*Lotononis gracilifolia*
Medium	*Nenax velutina*
Medium	*Ixia parva*
Medium	*Ixia fucata*

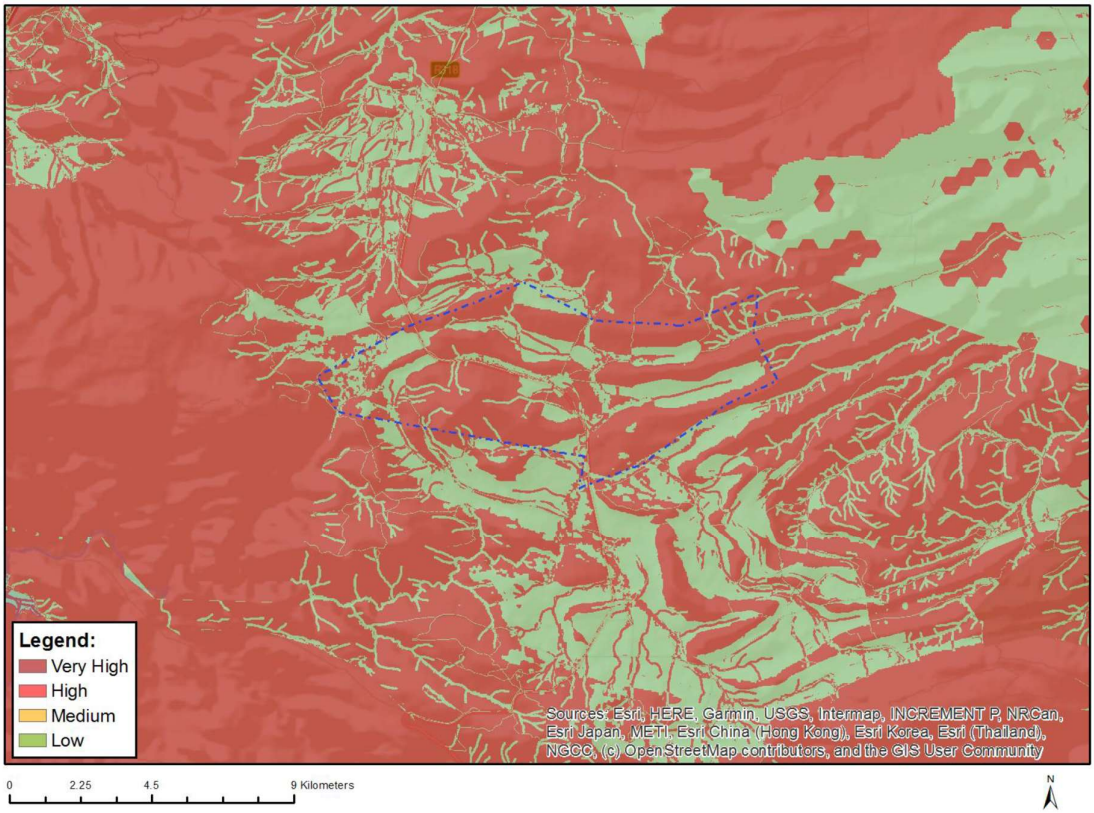
Medium	*Romulea malaniae*
Medium	*Erica constantia*
Medium	*Athanasia hirsuta*
Medium	*Acmadenia matroosbergensis*
Medium	Sensitive species 207
Medium	Sensitive species 871
Medium	*Phylica comptonii*
Medium	*Anderbergia elsiae*
Medium	*Drosanthemum giffenii*
Medium	*Asparagus mollis*
Medium	*Leucadendron cordatum*
Medium	*Protea rupicola*
Medium	Sensitive species 1209
Medium	*Erica glandulipila*
Medium	*Erica setulosa*
Medium	Sensitive species 142
Medium	*Restio aridus*
Medium	Sensitive species 654
Medium	*Pachites bodkinii*
Medium	*Heliophila elata*

Figure 7. The plant SCC *Amphithalea spinosa*, left and *Acmadenia matroosbergensis* right can be confirmed present at the site.

Terrestrial Biodiversity Theme

The terrestrial biodiversity theme is illustrated below in **Figure 8** and illustrates that large parts of the site are classified as **Very High** sensitivity for the Terrestrial Biodiversity Theme. This is due to the presence of areas of CBA 1, ESA1, ESA 2 and the Matroosberg Mountain Catchment Area within the project area. Although some parts of the WEF site are considered to be degraded as a result of previous cropping and excessive livestock grazing, the majority of the site can still be considered to be

in a near-natural condition. As such, the CBA and ESA status of the site is **upheld** and cannot be contested. As such a full terrestrial biodiversity assessment of the development will be conducted in the EIA phase.



- **Figure 8.** Terrestrial Biodiversity Theme sensitivity map for the Ezelsjacht WEF project area.

- **Table 3.** Terrestrial Biodiversity Theme features for the Ezelsjacht WEF project area.

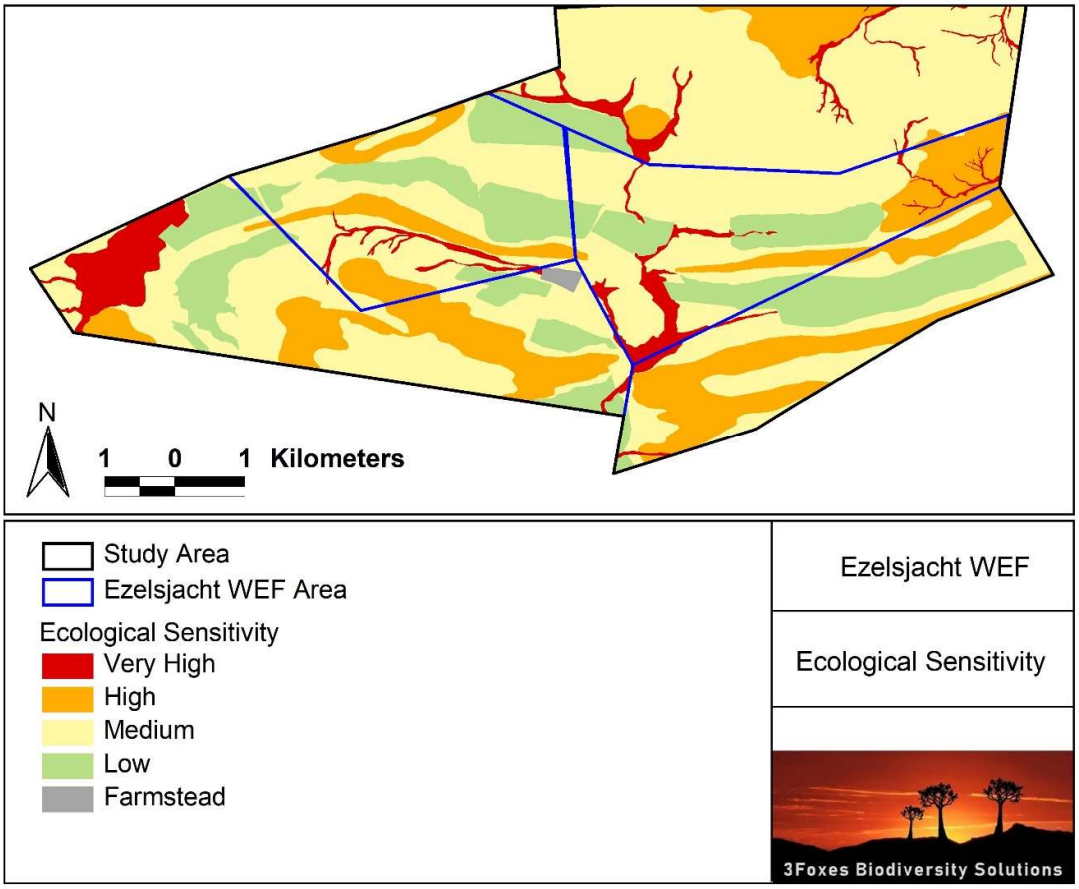
Sensitivity	Feature(s)
Low	Low Sensitivity
Very High	Critical biodiversity area 1
Very High	Ecological Support Area 1
Very High	Ecological Support Area 2
Very High	Matroosberg Mountain Catchment Area

5. CONCLUSION

The Ezelsjacht WEF project area consists largely of Matjiesfontein Shale Renosterveld on open plains with shallow and gravelly soils as well as some areas of Matjiesfontein Quartzite Fynbos on the hills of the site. There is also a small extent of North Langeberg Sandstone Fynbos in the far south west of the site. Two plant SCC are confirmed present within the site and three fauna SCC are either confirmed present or may occur at the site. Based on the results of the site verification, an ecological sensitivity map of the site has been produced and which is depicted below in Figure 9. This map should be used

to inform the layout of the WEF and to reduce the overall impact of the development on the important ecological features of the site. Based on these results of the site verification, the following studies are considered appropriate for the EIA phase of the assessment for the Ezelsjacht WEF:

- Faunal Species Assessment for the Riverine Rabbit
- Fauna Species Assessment for the Grey Rhebok
- Fauna Species Assessment for the Caledon Copper
- Plant Species Assessment for *Amphithalea spinosa*, *Acmadenia matroosbergensis* as well as any other plant SCC that are detected within the final development footprint.
- Terrestrial Biodiversity Assessment



- **Figure 9.** Terrestrial Biodiversity Theme sensitivity map for the Ezelsjacht WEF project area.