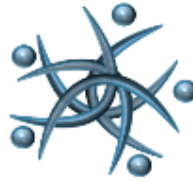


**UFEFE**



*Development Consultants*

**SITE VERIFICATION REPORT FOR THE 132kV D/C BOSKLOOF-LAINSBURG LINE  
REPAIRS, WITHIN BREEDE VALLEY LOCAL MUNICIPALITY OF CAPEWINELANDS  
DISTRICT AND LAINGSBURG LOCAL MUNICIPALITY OF CENTRAL KAROO DISTRICT,  
WESTERN CAPE PROVINCE**



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**VERIFICATION PAGE**

<b>REPORT TITTLE</b>	SITE VERIFICATION REPORT FOR THE 132kV D/C BOSKLOOF-LAINSBURG LINE REPAIRS, WITHIN BREEDE VALLEY LOCAL MUNICIPALITY OF CAPEWINELADS DISTRICT AND LAINGSBURG LOCAL MUNICIPALITY OF CENTRAL KAROO DISTRICT, WESTERN CAPE PROVINCE
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## 1. INTRODUCTION

A fault occurred when 7 suspension lattice towers fell on the section of the 132kV double circuit line between Boskloof and Laingsburg Sub-Stations. The towers collapsed due to a high northern wind that occurred during a major local storm event which took place late in February of 2024. Eskom restored the power by installing temporal wood pole structures. Currently Eskom is planning to normalize the network on the 132kV Boskloof-Laingsburg line by constructing new towers and reconnecting the line.

ESKOM: Distribution proposes to repair 132KV Line between Boskloof and Laingsburg. The project will also include replacement of current Lattice Towers with Monopoles Towers:

- Restore the section of the double circuit 132kV Boskloof-Laingsburg power line Lattice towers by constructing new Monopole towers on the same servitude and line route to normalize the supply.
- Install 10kA OPGW between towers T270 and T278, connect to the newly installed joint boxes.
- Replace the damaged earth peak on T278 (1LAI-TOU 178).
- Decommission and remove existing temporary wood pole structures from the site.

The entire powerline covers a distance of 143.6km in length.

In terms of the EIA regulations of 2014 (as amended), activities associated with the proposed project are listed under Listing Notice 1 (GN R327) which requires a BA process to be undertaken. As such, a BA Process has been followed.

This Site Verification Report is compiled in compliance with Government Notice No. 320, dated 20 March 2020, which includes the requirement for an Initial Site Sensitivity Verification Report to be produced for a development footprint.

The outcome of the Initial Site Verification must be recorded in the form of a report that-



- a) Confirms or disputes the current use of the land and environmental sensitivity as identified by the national web based environmental screening tool;
- b) Contains a motivation and evidence of either the verified or different use of the land and environmental sensitivity;
- c) Is submitted together with the relevant reports prepared in accordance with the requirements of the Environmental Impact Assessment Regulations.

## 2. DFFE Screening tool Results

The following environmental sensitivities were identified for the proposed project, as a result of the Project location and proposed activities and will require specific applications or measures for mitigation to minimise impact. The table below summaries the sensitivity of the project in terms of the DFFE Screening tool

*Table 1: Proposed Development Area Environmental Sensitivity*

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			

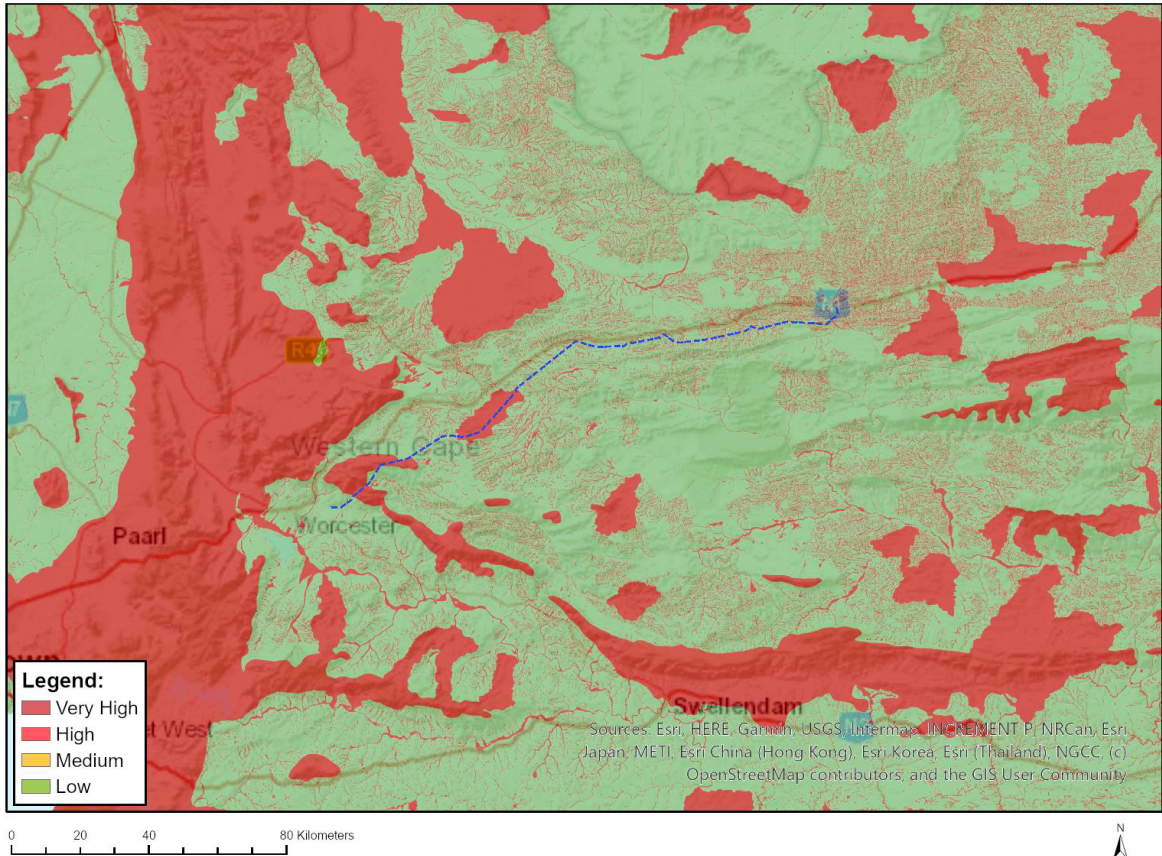
### 1.1.1 Aquatic Biodiversity

The Boskloof to Laingsburg 132kv line traverse areas that are underlined by the following sensitive aspects Aquatic Biodiversity:

- Aquatic Biodiversity: Critical Biodiversity Area 1 and Ecological Support Area 1
- FEPA Subcatchment

- Rivers\_AB
- Rivers\_C
- Rivers\_D
- Rivers\_Z
- SWSA (SW)\_Groot Winterhoek
- Wetlands\_(River)
- Wetlands\_Southern Fynbos Bioregion (Seep)
- Wetlands\_Western Fynbos-Renosterveld Bioregion (valley-bottom)

As shown the Map below (generated from DFFE Web based screening tool) the proposed project is situated within **Very High** and **Low** sensitive theme. The 132kv line does not have towers situated within the aquatic sensitivity and the repair will ensure that towers are positioned within the same footprint this will greatly reduce the potential overall impact and risk to aquatic resources. The overall and cumulative impacts, as assessed, are linked to instances where complete avoidance was not possible, or the nature of the activities involve a potential risk to aquatic resources even at great distance.



*Figure 1: Aquatic biodiversity theme, DFFE screening tool*

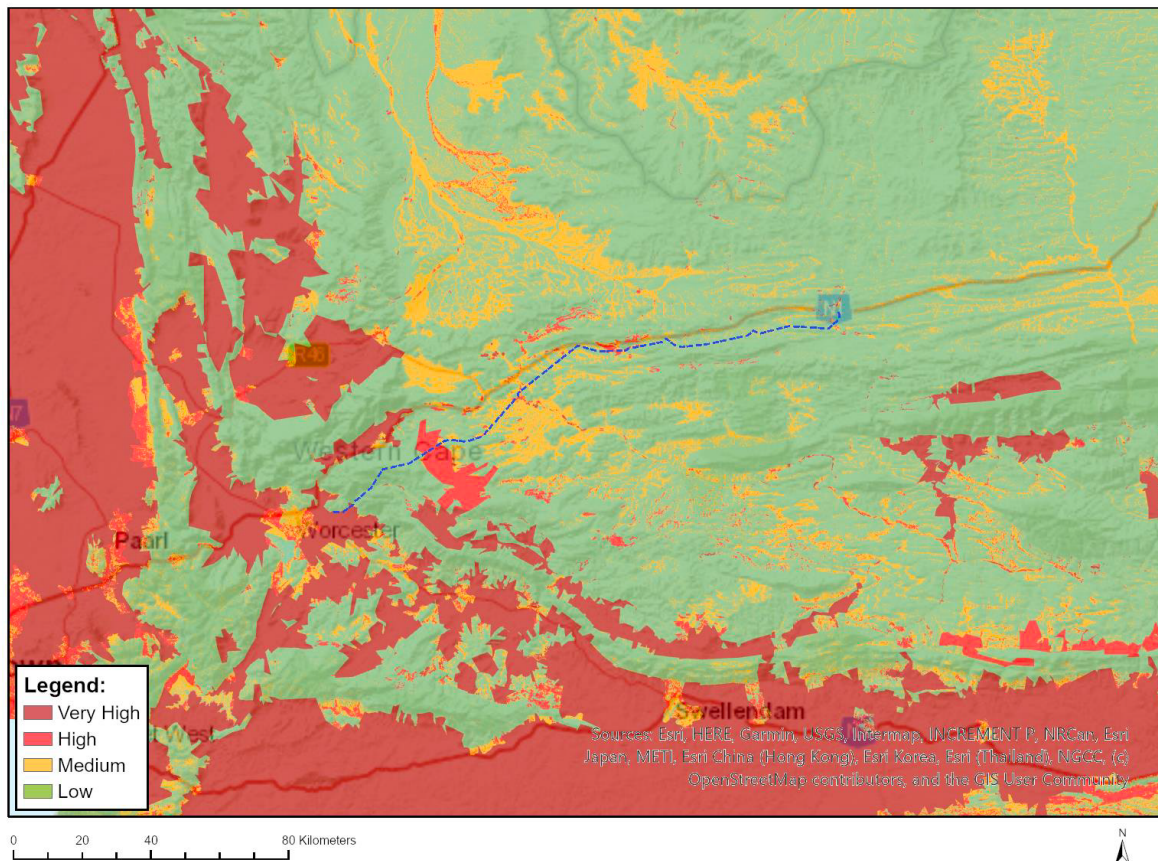
Overall, it is expected that the impact on the aquatic environment would be Low - Medium. Furthermore, noteworthy areas, that have been avoided, include the Very High Sensitivity areas.

### 1.1.2 Agriculture

The Boskloof to Laingsburg 132kv line traverse areas that are underlined by the following sensitive aspects in terms of Agriculture:

- Old\_Fieldd
- Reinfed Annual Crop Cultivation/Planted pastures
- Rooigtepas PAA
- Non-Pivot Irrigated Annual Crop Cultivation/Planted Pastures
- Pivot Irrigation
- Viticulture
- Worcester PAA

As shown the Map below (generated from DFFE Web based screening tool) the proposed project is situated within **Very High**, **High**, **Medium** and **Low** sensitive theme.



*Figure 2: Agricultural theme, DFFE Screening tool*

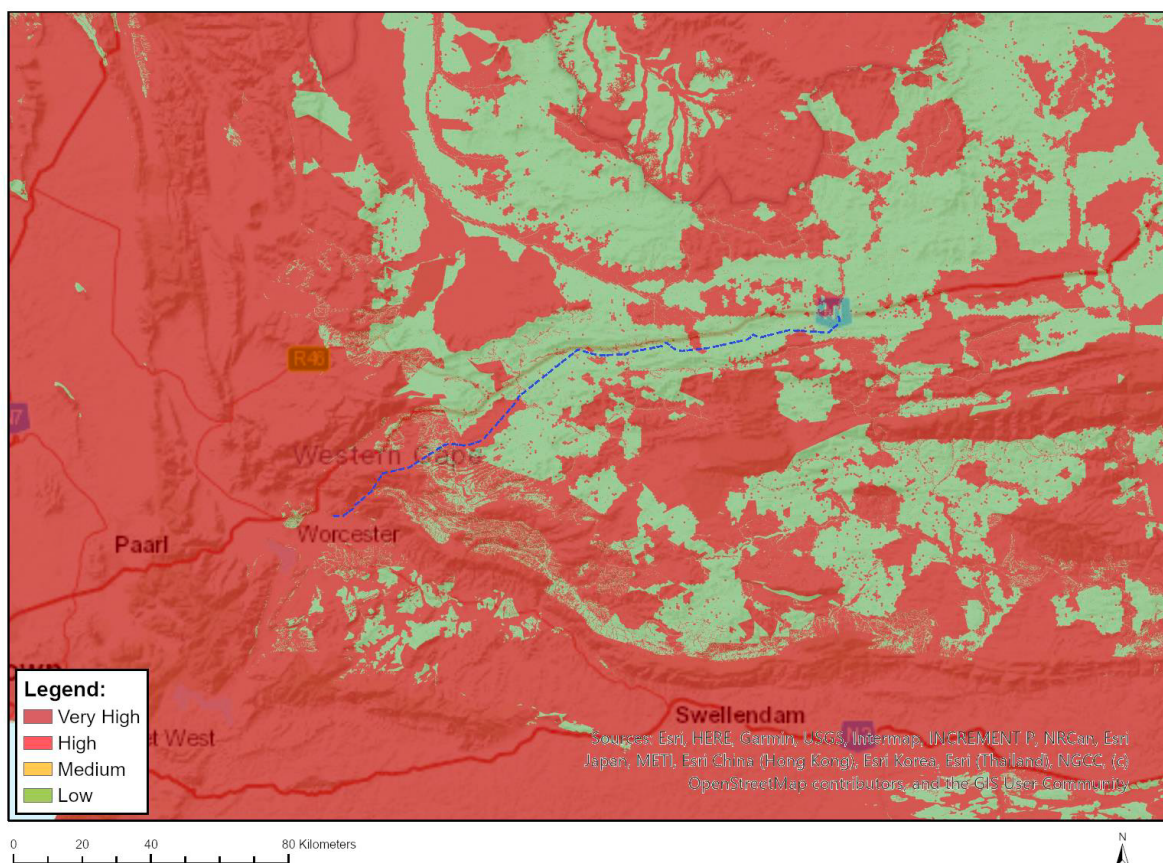
Although the screening tool (as shown on figure above) that the proposed project traverse over **Very High** agriculture theme, the field investigation has found that the study area is largely within a Low sensitivity theme, the Line is an existing infrastructure within the agriculture areas and a servitudes within all the agricultural areas is kept, the proposed repairs will not deviate from the servitude making the impacts associated with agriculture Low.

It is important to recognise that the agricultural sensitivity of land, in terms of a particular development, is not only a function of the screening tool sensitivity, but is also a function of the severity of the impact which that development poses to agriculture.

### 1.1.3 Terrestrial Biodiversity

The Boskloof to Laingsburg 132kv line traverse areas that are underlined by the following sensitive Terrestrial Biodiversity aspects:

- Matroosberg Mountain Catchment Area
- ESA2: Restore from other Land use
- ESA1
- Terrestrial Biodiversity: CBA 1
- FEPA Sub Catchment
- SWSWA\_(SW)\_Groot Winterhoek
- EN\_Breede Alluvium Renosterveld
- EN\_Breede Shale Renosterveld



*Figure 3: Terrestrial Biodiversity theme, DFEE Screening tool*

As shown the Map below (generated from DFEE Web based screening tool) the proposed project is situated within **Very High** sensitive theme of Terrestrial

Biodiversity. The natural state within the line is in moderate to poor condition, primarily due to heavy overgrazing. There are significant areas of low grass cover and bare areas, and plant species composition has been degraded by grazing effects. The sensitivity of the area from a terrestrial biodiversity perspective is therefore not very high as indicated by the screening tool as the proposed repairs will not deviate from the servitude making the impacts on Terrestrial Biodiversity Low-Medium.

#### 1.1.4 Archaeology and Cultural Heritage

The Boskloof to Laingsburg 132kv line traverse areas that are underlined by the following sensitive Archaeological and cultural heritage aspects:

- Within 2km from a Grade II Heritage Site

As shown the Map below (generated from DFFE Web based screening tool) the proposed project is situated within **Very High** and **Low** Archaeology and cultural heritage sensitive theme.

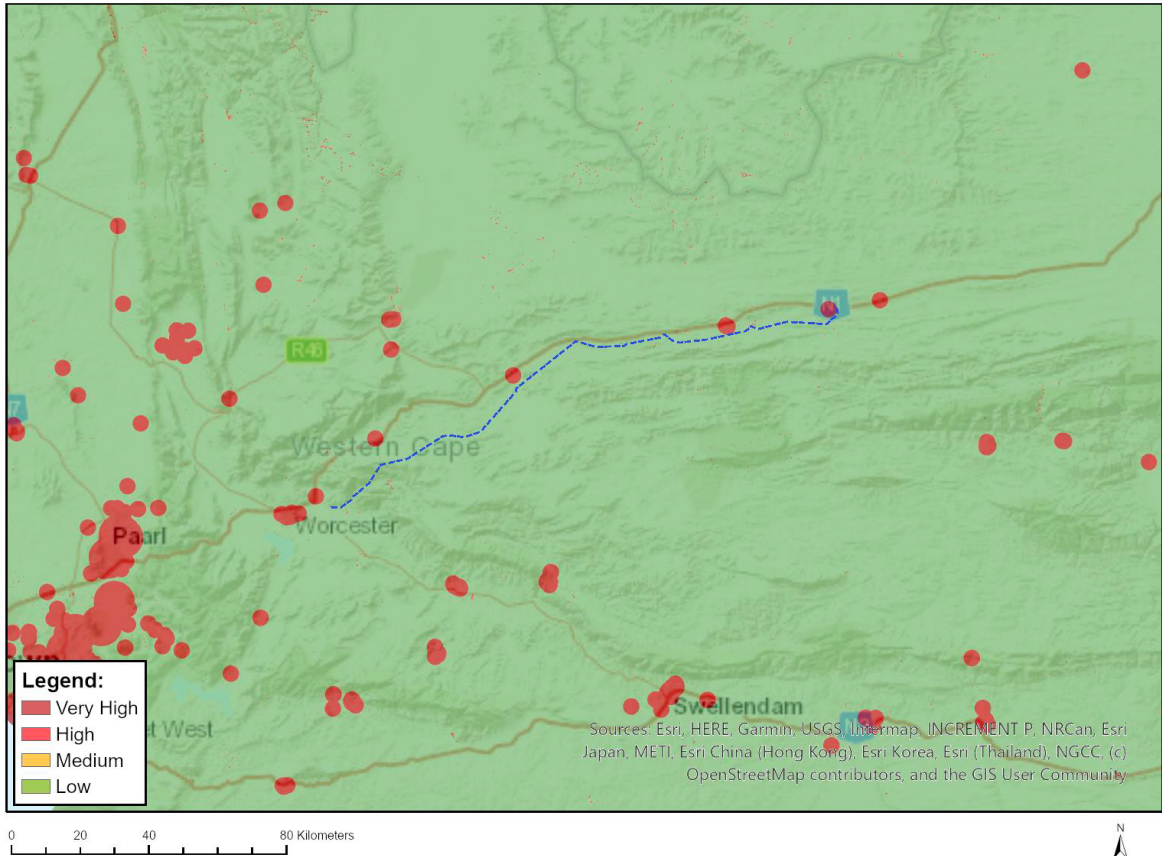


Figure 4: Archaeology and Cultural Heritage theme, DFFE Screening tool

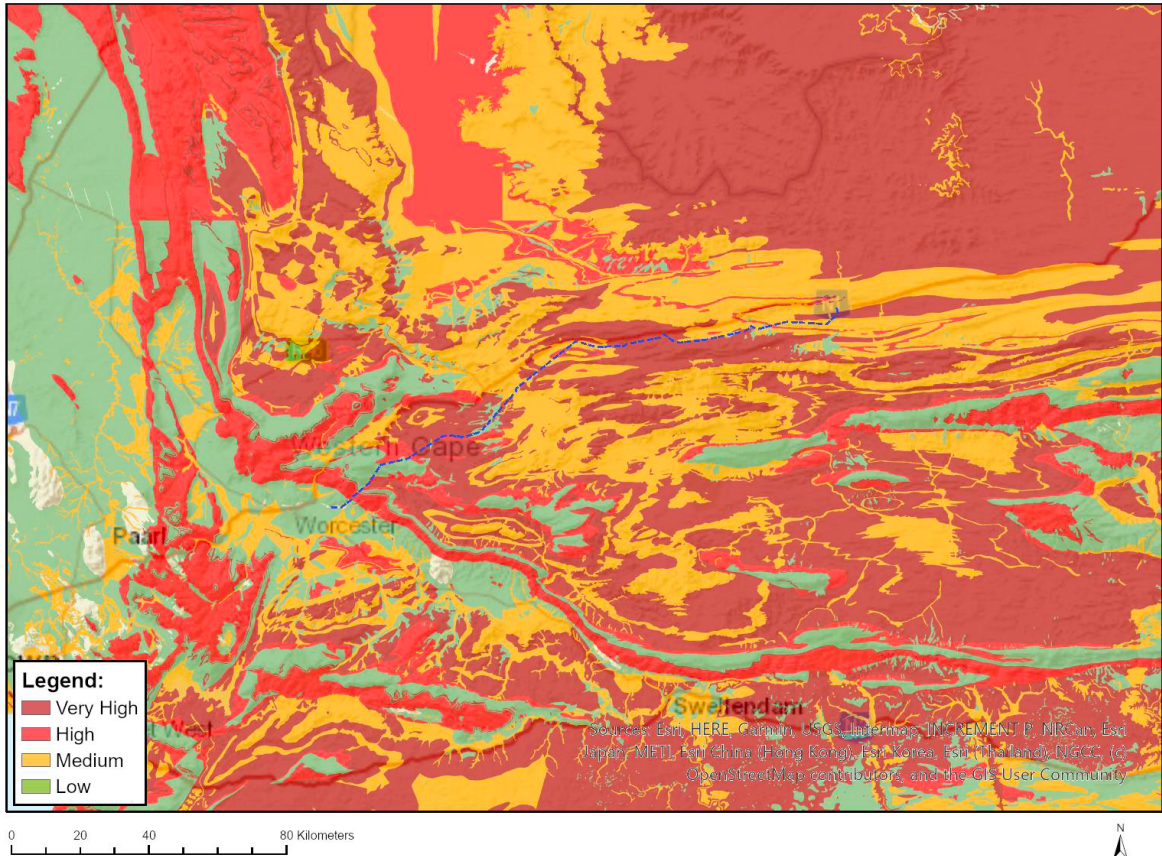
The line is within a **Low** the proposed repairs will not impact on the heritage and archaeological aspect of the study area.

### 11.1.5 Palaeontology

The Boskloof to Laingsburg 132kv line traverse areas that are underlined by the following sensitive Paleontological aspects:

- Features with a Low paleontological sensitivity
- Features with a High paleontological sensitivity
- Features with a Medium paleontological sensitivity
- Features with a Very High paleontological sensitivity

The Map below (generated from DFFE Web based screening tool) shows that the proposed project is situated within **Very High, High** and **Medium** and **Low** Palaeontological sensitive theme.



*Figure 5: Palaeontology theme, DFFE Screening tool*

The large part of the study area it is disturbed and covered with soils and medium height grasses, the disturbance is mostly a result of cultivation, plantation and overgrazing within the project area.

Based on the nature of the project, surface activities may impact upon the fossil heritage if preserved in the development footprint. The geological structures suggest that the rocks are either much too old to contain fossils or the wrong kind.

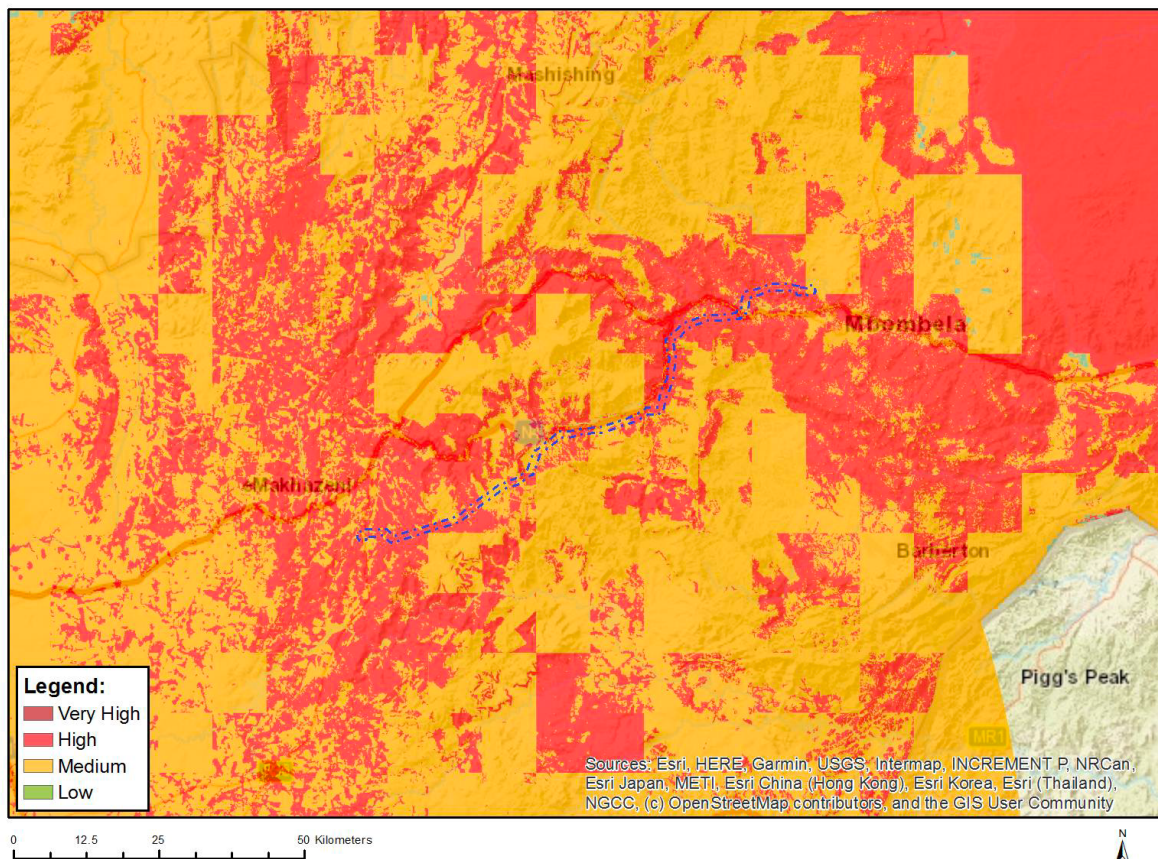
#### 1.1.6 Animal Theme

The Boskloof to Laingsburg 132kv line traverse areas that is home to the following Animal Species:

- Aves-Aquila verreauxii
- Aves-Neotis ludwigii
- Aves-Afrotis afra
- Aves-Falco biarmicus

- Aves-Circus maurus
- Insecta-Lepidochrysops bacchus
- Insecta-Aloeides lutescens
- Mammalia-Bunolagus monticularis
- Reptilia-Chersobius boulengeri

The site is within a **high**, however the site has been modified and disturbed by the current land uses.



*Figure 6: Animal theme, DFFE Screening tool*

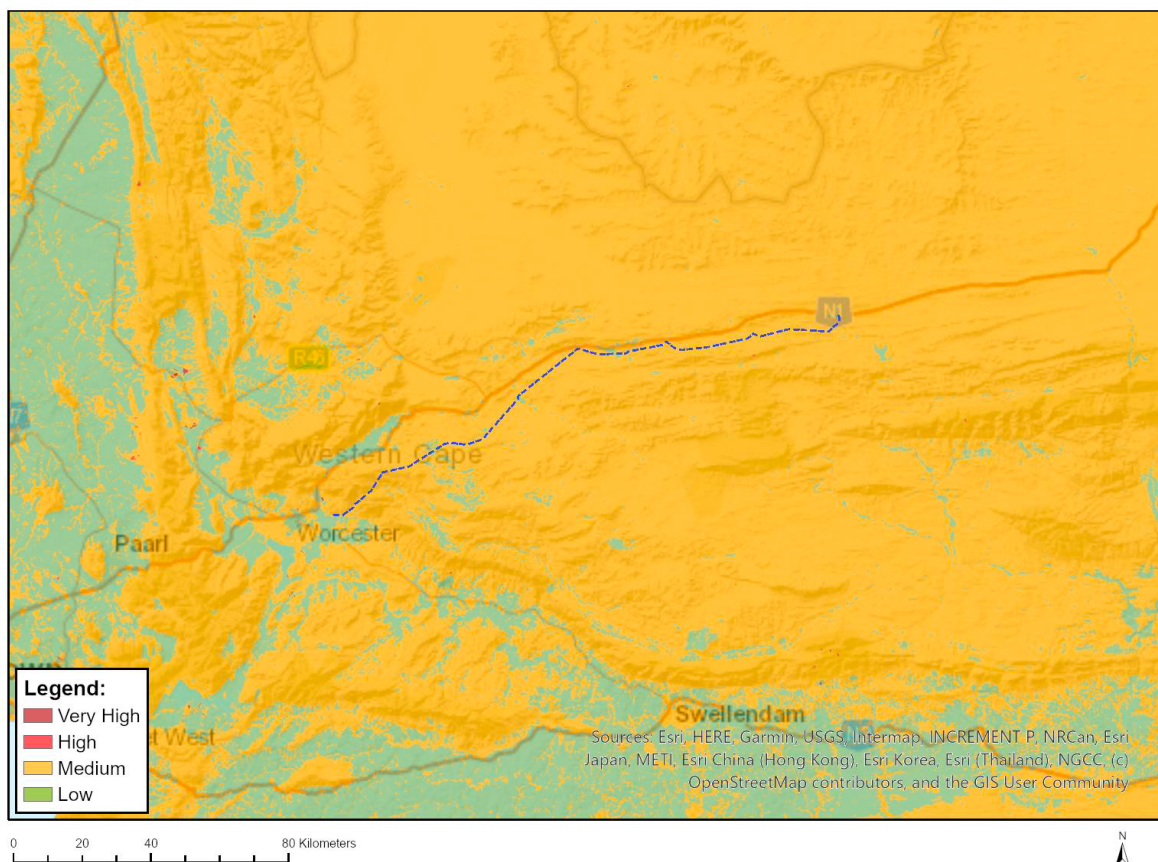
The map above shows that the area is under both medium and high sensitivity animal theme. Although some of the animal species that are identified by the screening tool were not confirmed by the field investigation, it was determined by the EAP that the line repair activities will have impacts on the habitat of the animal species. The sensitivity rating is therefore confirmed.

### 1.1.7 Plant Theme

The Boskloof to Laingsburg 132kv line traverse areas that is home to the following Plant Species with Very High Sensitivity:

- *Anderbergia ustulata*

The screening tool shows that the study area is within a **High** plant theme. As such the area can be classified without plant species of conversation concern.



*Figure 7: Plant theme, DFFE Screening tool*

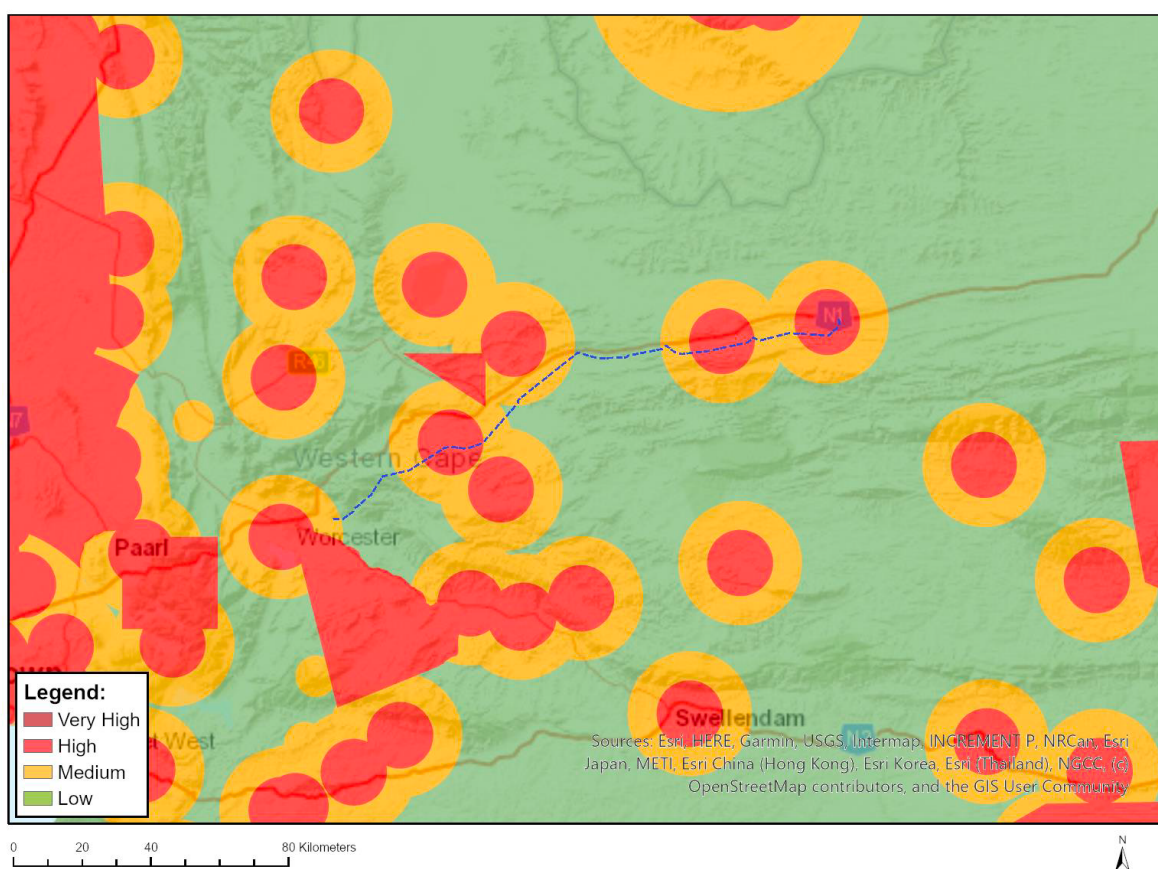
As shown on the map above the site is within both Medium and Low sensitive theme. The DFFE Screening tool has however score the site as it is under Very High Sensitivity Theme, it is understood that it is due to the Plant: *Anderbergia ustulate*, the field investigation did not find this plant species within the line and it will be recommended that during repair and any activities within the line the plant if identified must not be disturbed. The impact on plant species and the rating for this line is confirmed as **Medium** and **Low**.

### 1.1.8 Civil Aviation Theme

The Boskloof to Laingsburg 132kv line traverse areas that are underlined by the following sensitive Civil Aviation aspects:

- Within 8 km of other civil aviation aerodrome

The Screening tool has therefore rated the line as it is within a **High** Sensitivity theme in terms of the Civil Aviation theme. However the site is largely within a **Low** sensitivity theme.



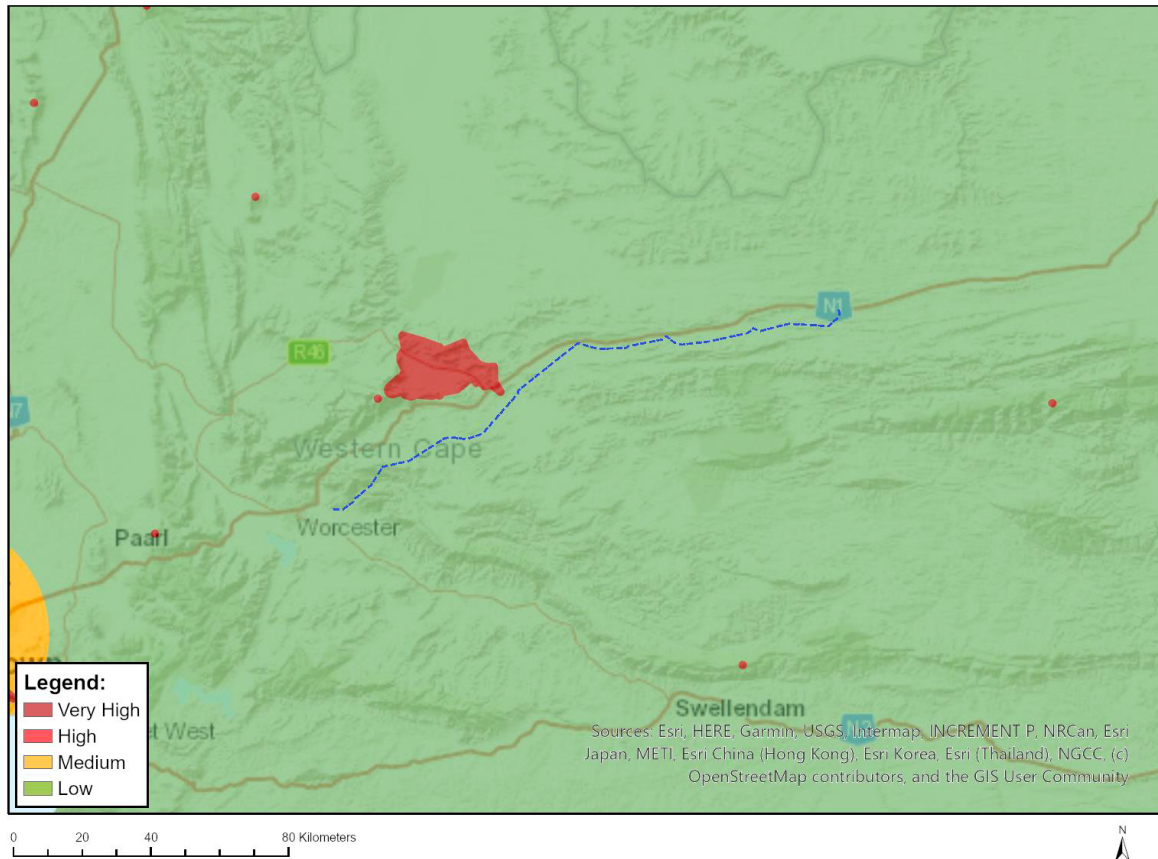
*Figure 8: Civil Aviation theme, DFFE Screening tool*

The site verification does not dispute the rating of the site, as it can be confirmed that the line has sections which are within 8 km of other civil aviation aerodrome areas. As such comments from the Civil Aviation will be requested.

The proposed repairs will not change the height of the towers and or the line, therefore the current impacts on aviation will not change.

### 1.1.8 Defence Theme

The Boskloof to Laingsburg 132kv line is within a Low Sensitive theme in terms of Defence. As shown on the map below.



*Figure 9: Defence theme, DFFE Screening tool*

The site verification does confirm that the line is within a Low sensitive theme in terms of defence.

### 3. SITE PICTURES

This section provides photographs of site presenting conditions of the site as identified by the EAP.



*Figure 10: Wooden Structures*

The Picture below shows the Lattice structures that have been constructed and in use since the commencement of the powerline.



*Figure 11: Lattice Tower Structure*

Eskom Distribution intends to repair the damaged section of the line between Quarry Traction Substation and Pietermeinties Traction Substation i.e., replace the distribution line Lattice Towers with Monopoles.

Please refer to appendix A for more site photographs.

#### **4. ASSESSMENT OF SPECIALIST STUDIES**

##### **4.1 Specialist Studies recommended by screening tool**

The DFFE Screening Tool Report identified the following specialist assessment to be included in the assessment:

1. Agricultural Impact Assessment
2. Landscape/Visual Impact Assessment
3. Archaeological and Cultural Heritage Impact Assessment
4. Paleontology Impact Assessment
5. Terrestrial Biodiversity Impact Assessment
6. Aquatic Biodiversity Impact Assessment
7. Avian Impact Assessment
8. Civil Aviation Assessment
9. RFI Assessment
10. Geotechnical Assessment
11. Plant Species Assessment
12. Animal Species Assessment

##### **4.2 Recommended Specialist by the EAP**

From the list of specialist identified and recommended by the screening tool we have identified and appointed the following specialist:

- Aquatic Biodiversity Specialist
- Terrestrial Biodiversity Specialist
- Palaeontological Specialist

### 4.3 Excluded specialist studies and motivation

The following specialist studies have been excluded and the motivation is also provided:

*Table 2: List of Excluded specialist studies identified by the Screening tool report*

Study	Motivation for Exclusion
Agricultural Impact Assessment	The proposed line repairs of an existing 132kv line will not introduce new impacts on the agricultural land use, no loss or disturbance on agriculture will be introduced by the proposed repair, based on the site verification the large part of the line is situated within a Low sensitivity. Sections where the line traverse High and Very High sensitivity are areas where the line repair will not deviate from the current servitude and no change of tower position will be introduced. The impacts are assessed by the EAP in the BAR.
Landscape/Visual Impact Assessment	The proposed line repairs will not change the current visual aspect of the area, regionally and locally. The proposed repair will not include deviations and or change of tower positions, the current impacts on landscape and visual aspect will remain. The impacts are assessed by the EAP in the BAR.
Archaeological and Cultural Heritage Impact Assessment	The impacts on archaeology and heritage have been investigated on the Palaeontological impact assessment study, this is due to that the archaeology and heritage theme is Low.
Avian Impact Assessment	Impact on Avian were assessed in the Terrestrial Biodiversity study. As the project is mainly a line repair.
Civil Aviation Assessment	Based on the activities associated the proposed project, we do not see the need for further specialist assessment on the civil aviation, however consultation with relevant authorities will be done.
RFI Assessment	The project is mainly for line repair and no changes on the location of the towers. The 132kv line is an existing line and

	no new impacts associated with project will impact on RFI of the local and regional area.
Geotechnical Assessment	The line and foundation for the proposed line repair and change of tower structures is planned within the existing footprint, the geotechnical investigation is not necessary for the line repair as it is proposed within the existing line footprint.
Plant Species Assessment	Impacts on the plant species have been recommended for assessment on the Terrestrial Biodiversity Study.
Animal Species Assessment	Impacts on the animal species have been recommended for assessment on the Terrestrial Biodiversity Study.

## 5. CONCLUSION

The DFFE Screening Tool Report identified twelve (12) specialists' studies to be conducted, which includes Agricultural Impact Assessment, Landscape/Visual Impact Assessment, Archaeological and Cultural Heritage Impact Assessment, Palaeontology Impact Assessment, Terrestrial Biodiversity Impact Assessment, Aquatic Biodiversity Impact Assessment, Avian Impact Assessment, Civil Aviation Assessment, RFI Assessment, Geotechnical Assessment, Plant Species Assessment and Animal Species Assessment. All sensitivities for the identified themes have been considered in this report and the EAP has recommended only three (3) studies to be conducted in support of the application for Environmental Authorisation, and the studies recommended include; Aquatic Biodiversity, Terrestrial Biodiversity and Palaeontological Study.

## APPENDIX A SITE PHOTOGRAPHS

### BOSKLOOF - LAINGSBURG 132KV LINE

#### Sub Station Photographs



View of Boskloof Sub Station



View of Laingsburg Sub station



View of Pietermenties Traction Sub station



View of Quarry Traction Sub station

Photographs of the distribution line







