DRAFT BASIC ASSESSMENT 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

Applicant:	Environmental Assessment Practitioner:
Eskom: Distribution, Cape Coastal Cluster Eskom Road, Protea Heights, Brackenfell, 7561	**Ufefe Development Consultants (Pty) Ltd** 16 Shaw Avenue, The Reeds, Centurion, 0157

Disclaimer:

This report has been compiled by Ufefe Development Consultants (Pty) Ltd with the skill and care ordinarily exercised by a qualified Environmental Consultant at the time the Services were performed. The Services were performed by Ufefe Development Consultants taking into account the scope of works required by the client (ESKOM: Distribution Cape Coastal Cluster) This report is produced exclusively for the purposes of the client and the competent authority. Ufefe Development Consultants is not aware of any interest of or reliance by any party other than the client in or on the services. Unless expressly provided in writing, Ufefe Development Consultants does not authorise, consent or condone any party other than the client relying upon the services provided. Any reliance on the services or any part of the services by any party other than the client is made wholly at that party's own and sole risk and Ufefe Development Consultants disclaim any liability to such parties.

VERIFICATION PAGE			
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DATE	August 2025	REPORT STATUS	Draft
CARRIED OUT BY	**Ufefe Development Consultants (Pty) Ltd** 16 Shaw Avenue, Reeds Centurion Pretoria 0157 Tel: 082 269 4524		
Author	Mr Mukwevho M.C		

DOCUMENT REVISION NUMBER: 001DEIR		
Details	**Compiler**	**Reviewer**
Name	Mr Caiphus Mukwevho Ms Vigilance Sadiki	Dr Sivile Mgase
Designation	Environmental Assessment Practitioner – Ufefe Development Consultants (Pty)Ltd	Managing Director - Ufefe Development Consultants (Pty)Ltd
Date	August 2025	August 2025

EAP DECLARATION:

I **CAIPHUS MUKWEVHO**; herewith undertake that:

- I act as an independent specialist consultant in the field of Environmental Sciences;
- Do not have and will not have any financial interest in the undertaking of the activity, other than remuneration for work performed in terms of the Environmental Impact Assessment Regulations, 2014;
- Have and will not have any vested interest in the proposed activity proceeding;
- Have no, and will not engage in, conflicting interests in the undertaking of the activity;
- Undertake to disclose, to the competent authority, any material information that have or may have the potential to influence the decision of the competent authority or the objectivity of any report; and
- Will provide the competent authority with access to all information at my disposal regarding the application, whether such information is favourable to the applicant or not.

_____

Signature of EAP:

August 2025

Date:

EXECUTIVE SUMMARY

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.

Eskom: Distribution Cape Coastal Cluster has appointed Ufefe Development Consultant (Pty) Ltd to undertake an Environmental Impact Assessment (EIA) following the requirements of the National Environmental Management Act (NEMA) and the Environmental Impact Assessment (EIA) Regulations, 2014 as amended. As a result, an environmental screening report was created outlining the authorization or permit requirements before the project's construction phase.

In terms of S24C(2)(d)(iii) The minister must be identified as the competent authority (CA) if the activity is undertaken by a statutory body performing an exclusive competence of the national sphere or government. National Department of Forestry, Fisheries and Environment (DFFE) has been identified as the CA for this

application. Details of the Case Officer (CO) will be provided once an application has been submitted and acknowledged.

This report's objective is to provide the findings of the environmental assessment conducted for the proposed project.

- The legal structure that oversees the location;
- The current state of the site's environmental conditions and any relevant environmental studies, licenses, and permits;
- Proposed designs and alternatives;
- Public participation process;
- Impact assessment methodology and impact assessment;

Overall findings to indicate the sensitivity of the site, potential fatal flaws, and issues that require the attention of the Applicant.

This report has been compiled in compliance with Appendix 1 of the Environmental Impact Assessment (EIA) Regulations 2014 and summarises the legal and policy framework; approach to the Basic Assessment and process followed; proposed project activities; key characteristics of the receiving environment; and potential impacts associated with the proposed project.

The Basic Assessment Process for the proposed repairs has been undertaken as per EIA Regulations published in Government Notice 324-327 of 2014 as amended in 2017, in terms of the National Environmental Management Act (NEMA; No107 of 1998). The Basic Assessment Process is aimed at ensuring informed decision-making and environmental accountability, and to assist in achieving environmentally sound and sustainable development. In terms of NEMA (No 107 of 1998), the commitment to sustainable development is evident in the provision that “development must be socially, environmentally and economically sustainable and requires the consideration of all relevant factors”.

NEMA also imposes a duty of care, which places a positive obligation on any person who has caused, is causing, or is likely to cause damage to the environment to take reasonable steps to prevent such damage. In terms of NEMA’s preventative principle, potentially negative impacts on the environment and people’s environmental rights

(in terms of the Constitution of the Republic of South Africa, Act 108 of 1996) should be anticipated and prevented, and where they cannot be altogether prevented, they must be minimised and remedied in terms of “reasonable measures”.

The following key conditions would be required to be included within an authorisation issued for the project:

- Conditions that may be set by DFFE in terms of the EA must be adhered to. If it is found that it will not be possible to adhere to certain conditions, this must be communicated to DFFE ahead of time to prevent a non-compliant situation.
- Should any additional activities listed in terms of the EIA Regulations be planned on the site, the appropriate application(s) for authorisation must be lodged with the relevant authority.
- All mitigation strategies described in this BA Report, must be put into practice.
- A project-specific draft EMPr (legally binding) has been compiled according to (but not limited to) the impacts and mitigation measures included in this assessment.

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ACRONYM	DESCRIPTION
BAR	Basic Assessment Report
BAT	Best Available Technology
BPEO	Best Practicable Environmental Option
BPM	Best Practicable Means
BVM	Breede Valley Municipality
CBA	Critical Biodiversity Area
CK	Central Karoo District Municipality
DEFF	Department of Environmental, Forestry & Fisheries
EIA	Environmental Impact Assessment
EMF	Environmental Management Framework
ESA	Ecological Support Area
GA	General Authorisation
GEMPr	Generic Environmental Management Programme
HIA	Heritage Impact Assessment
IDP	Integrated Development Plan
IEM	Integrated Environmental Management
LLM	Laingsburg Local Municipality
NEM: AQA	National Environmental Management: Air Quality Act
NEMA	National Environmental Management Act
NFEPA	National Freshwater Priority Areas
NHRA	National Heritage Resources Act
NWA	National Water Act
SACNASP	South African Council of National Science Professions
SANBI	South African National Biodiversity Institute

SDF	Spatial Development Framework

1. PROJECT INTRODUCTION AND BACKROUND

1.1 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.

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- 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.

1.2 Details of Proponent

The Applicant for this project is Eskom Distribution, Cape Coastal Cluster. Eskom has been powering our nation since 1923 when the Electricity Supply Commission was established. The Details of the applicant are provided in the table below:

Table 1: Details of Proponent

Details of Applicant	
Applicant	Eskom: Distribution, Cape Coastal Cluster
Contact Person	Mr Aseza Mpokopi
Physical Address	Eskom Road, Protea Heights, Brackenfell, 7561
Postal Address	PO Box 222, Brackenfell, 7561
Tel No	021 915 2801
e-mail address	mpokop@eskom.co.za

1.3 Details of EAP and Expertise

Ufefe Development Consultants (Pty) Ltd has been appointed by Eskom Distribution, Cape Coastal Cluster as the independent EAP for the proposed project and meets the general requirements as stipulated in regulations 13(3) of the NEMA EIA 2014 Regulations as amended.

Ufefe does not have any interests in secondary developments that may arise out of the authorisation of this project. Neither the EAP nor any specialist are subsidiaries or are affiliated to the proponent. Table 2 below provide details and expertise of the EAP in carrying out the EIA process.

The Lead Environmental Assessment Practitioner for this project is Mr Caiphus Mukwevho:

Mr. Caiphus Mukwevho is a Senior Environmental Assessment, and he holds a Bachelor of Environmental Sciences and an Honours of Environmental Sciences in the field of Ecology both at the University of Venda. His honours dissertation was aimed at “assessing the environmental compliance of a landfill site” the study was conducted at Makhado Vondeling landfill site.

Mr Mukwevho has attended various training courses to enhance his knowledge and understanding in the Environmental Field, the courses includes; Geographic Information System (GIS), Environmental Management Systems (ISO 14001:2004), Environmental Law & Compliance. He is a registered Environmental Assessment Practitioner under the Environmental Assessment Practitioners Association of South

Africa (EAPASA), and he has applied as Professional Natural Scientist under the South African Council of Natural Science Professions (SACNASP), he is a member of the International Association of Impact Assessment South Africa (IAIASA).

Below are the details of the EAP, for the expertise of the EAP, please refer to Appendix H for a CV.

Table 2: Details of EAP

Details of EAP	
Name of Company	Ufefe Development Consultants (Pty) Ltd
Lead EAP	Mr Caiphus Mukwevho
Contact Number	0822694524
E-mail Address	caiphusm@ufefe.co.za
Office Address	16 Shaw Avenue, The Reeds, Centurion, 0157
Qualifications	- B. Environmental Sciences - B. Honours Ecology and Resources Management
Professional Registration and Registration number	EAPASA (Registered EAP- 2019/618) | SACNASP (124149) | IAIASA (7146)
Years of Experience	8 Years

1.4 Details of Specialist Appointed for the BA Process

Based on the Environmental Screening undertaken, the EAP has recommended appointment of the following specialist (listed in the table below). The specialist reports are attached as appendix D of this EIA Report.

Table 3: List of Specialist

No	Specialist Field	Specialist Name
1	Aquatic Biodiversity Impact Assessment	KC PHYTO ENTERPRISES CC Mr Earl L Herdien
2	Terrestrial Biodiversity Impact Assessment	Ntumbuluko Consulting (Pty) Ltd Mr Tshuxekani Maluleke
3	Palaeontological Impact Assessment	Prof Marion Bamford

1.5 Purpose of this Report

In accordance with the National Environmental Management Act, No. 107 of 1998 (Act No. 107 of 1998) (NEMA) and the EIA Regulations of 4 December 2014 (Government Notice Regulation (GN R.982) (as amended), the issuing of an EA requires the undertaking of a BA process, with the associated Public Participation Process (PPP) and required Specialist Studies. This will enable the Competent Authority (CA) to decide whether or not, to issue an EA for the proposed development.

The EIA Regulations of 2014 (as amended) allows for a BA process to be undertaken for activities with environmental impacts as listed in Listing Notice 1 (GN R.327) and Listing Notice 3 (GN R324).

A Basic Assessment (BA) process is the environmental assessment level used for activities outlined in Listing Notices 1. This assessment applies to activities deemed less likely to cause significant environmental impacts and, therefore, typically do not require a comprehensive Environmental Impact Assessment (EIA). The Basic Assessment Report (BAR) provides a more streamlined analysis of the environmental impacts of the proposed activity or development compared to a Scoping and EIA Report. The BAR is designed to accomplish the following objectives:

- Determine the policy and legislative context within which the proposed activity is undertaken and how the activity complies with and responds to the policy and legislative context;
- Describe the need and desirability of the proposed project;
- Identify the alternatives considered, including the activity, location, and technology alternatives;
- Undertake an impact and risk assessment process inclusive of cumulative impacts (where applicable).

The primary focus is on assessing the geographical, physical, biological, social, economic, heritage, and cultural sensitivity of the project, as well as evaluating the potential risk of the proposed activity's impact on these factors. This assessment aims to determine the nature, significance, consequences, extent, duration, and

likelihood of these impacts occurring, along with the degree to which they might affect the environment and surrounding areas:

- Can be reversed;
- May cause irreplaceable loss of resources; and
- Can be avoided, managed or mitigated.

This BAR has been compiled as per the stipulated requirements in Appendix 1 of GNR 982 of the EIA Regulations 2014 (as amended in 2017), which outlines the legislative BA process and requirements for assessment of outcomes, impacts and residual risks of the proposed development.

An Environmental Management Programme (EMPr) has been compiled according to Appendix 4 of GNR the EIA Regulations 2014 (as amended in 2017) for the construction and operational phases of the project. The EMPr has been compiled as a stand-alone document from the BAR and will be submitted to the DFFE along with the BAR. The EMPr provides the actions for the management of identified environmental impacts emanating from the project and a detailed outline of the implementation programme to minimise and/or eliminate any anticipated negative environmental impacts and to enhance positive impacts. The EMPr provides strategies to be used to address the roles and responsibilities of environmental management personnel on site, and a framework for environmental compliance and monitoring.

1.6 Pre-Application Consultation

A pre-application meeting was not held with the Department of Forestry, Fisheries and Environment (DFFE), details of pre-application are as follows:

Reference Number: 2025-05-0006

Competent Authority Decision: Dear Caiphus

Given the agenda points, the Department is of the opinion that a pre-application will not be required. The onus is on the EAP to determine whether the project form part of the Standard as per GNR 2313, to determine the applicable listed activities and to determine the applicable specialist assessment to be conducted.

1.7 Structure of BA Report

A Basic Assessment Report (BAR) must contain the information that is necessary for the competent authority to consider and come to a decision on the application, and must include: a table below which provides the requirements for a Basic Assessment report in terms of the NEMA EIA Regulations (Appendix 1) with reference to the relevant sections of this report where these requirements are addressed.

Table 4: Structure of this BA Report in accordance with Appendix 1 of (GN R326) EIA Regulations

Section	Content	Reference in the report
3 (1) (a)	details of- (i) the EAP who prepared the report; and (ii) the expertise of the EAP, including a curriculum vitae;	**Section 1 and Appendix H**
3 (1) (b)	the location of the activity, including: (i) the 21-digit Surveyor General code of each. cadastral land parcel; (ii) where available, the physical address and farm name; (iii) where the required information in items (i) and (ii) is not available, the coordinates of the boundary of the property or properties;	**Section 2**
3 (1) (c)	a plan which locates the proposed activity or activities applied for as well as associated structures and infrastructure at an appropriate scale; or, if it is- (i) a linear activity, a description and coordinates of the corridor in which the proposed activity or activities is to be undertaken; or (ii) on land where the property has not been defined, the coordinates within which the activity is to be undertaken;	**Section 2**
3 (1) (d)	a description of the scope of the proposed activity, including (i) all listed and specified activities triggered and being applied for; and (ii) a description of the activities to be undertaken including associated structures and infrastructure	**Section 1**
3 (1) (e)	a description of the policy and legislative context within which the development is proposed including-	**Section 2**

	(i) an identification of all legislation, policies, plans, guidelines, spatial tools, municipal development planning frameworks, and instruments that are applicable to this activity and have been considered in the preparation of the report; and (ii) how the proposed activity complies with and responds to the legislation and policy context, plans, guidelines, tools frameworks, and instruments	
3 (1) (f)	a motivation for the need and desirability for the proposed development including the need and desirability of the activity in the context of the preferred location	**Section 1**
3 (1) (g)	a motivation for the preferred site, activity and technology alternative	**Section 3**
3 (1) (h)	a full description of the process followed to reach the proposed preferred alternative within the site, including: (i) details of all the alternatives considered; (ii) details of the public participation process undertaken in terms of regulation 41 of the Regulations, including copies of the supporting documents and inputs; (iii) a summary of the issues raised by interested and affected parties, and an indication of the manner in which the issues were incorporated, or the reasons for not including them; (iv) the environmental attributes associated with the alternatives focusing on the geographical, physical, biological, social, economic, heritage and cultural aspects; (v) the impacts and risks identified for each alternative, including the nature, significance, consequence, extent, duration and probability of the impacts, including the degree to which these impacts- (aa) can be reversed; (bb) may cause irreplaceable loss of resources; and (cc) can be avoided, managed or mitigated.	**Section 3**

	(vi) the methodology used in determining and ranking the nature, significance, consequences, extent, duration and probability of potential environmental impacts and risks associated with the alternatives; (vii) positive and negative impacts that the proposed activity and alternatives will have on the environment and on the community that may be affected focusing on the geographical, physical, biological, social, economic, heritage and cultural aspects; (viii) the possible mitigation measures that could be applied and level of residual risk; (ix) the outcome of the site selection matrix; (x) if no alternatives, including alternative locations for the activity were investigated, the motivation for not considering such; and (xi) a concluding statement indicating the preferred alternatives, including preferred location of the activity	
3 (1) (i)	(i) a full description of the process undertaken to identify, assess and rank the impacts the activity will impose on the preferred location through the life of the activity, including- (i) a description of all environmental issues and risks that were identified during the environmental impact assessment process; and (ii) an assessment of the significance of each issue and risk and an indication of the extent to which the issue and risk could be avoided or addressed by the adoption of mitigation measures	**Section 9**
3 (1) (j)	(j) an assessment of each identified potentially significant impact and risk, including-	**Section 8**
	(i) cumulative impacts; (ii) the nature, significance and consequences of the impact and risk; (iii) the extent and duration of the impact and risk; (iv) the probability of the impact and risk occurring;	**Section 8**

	(v) the degree to which the impact and risk can be reversed; (vi) the degree to which the impact and risk may cause irreplaceable loss of resources; and (vii) the degree to which the impact and risk can be avoided, managed or mitigated	
3 (1) (k)	where applicable, a summary of the findings and impact management measures identified in any specialist report complying with Appendix 6 to these Regulations and an indication as to how these findings and recommendations have been included in the final report	**Section 9**
3 (1) (l)	an environmental impact statement which contains- (i) a summary of the key findings of the environmental impact assessment; (ii) a map at an appropriate scale which superimposes the proposed activity and its associated structures and infrastructure on the environmental sensitivities of the preferred site indicating any areas that should be avoided, including buffers; and (iii) a summary of the positive and negative impacts and risks of the proposed activity and identified alternatives.	**Section 8**
3 (1) (m)	based on the assessment, and where applicable, impact management measures from specialist reports, the recording of the proposed impact management objectives, and the impact management outcomes for the development for inclusion in the EMPr	**Appendix E**
3 (1) (n)	any aspects which were conditional to the findings of the assessment either by the EAP or specialist which are to be included as conditions of authorisation	**Section 9**
3 (1) (o)	a description of any assumptions, uncertainties, and gaps in knowledge which relate to the assessment and mitigation measures proposed	**Section 8**
3 (1) (p)	a reasoned opinion as to whether the proposed activity should or should not be authorised, and if the opinion is that it should be authorised, any conditions that should be made in respect of that authorisation	**Section 9**

3 (1) (q)	where the proposed activity does not include operational aspects, the period for which the environmental authorisation is required, the date on which the activity will be concluded, and the post construction monitoring requirements finalised	**Section 9**
3 (1) (r)	an undertaking under oath or affirmation by the EAP in relation to: the correctness of the information provided in the reports; (ii) the inclusion of comments and inputs from stakeholders and l&APs; (iii) the inclusion of inputs and recommendations from the specialist reports where relevant; and (iv) any information provided by the EAP to interested and affected parties and any responses by the EAP to comments or inputs made by interested and affected parties.	**Page iii**
3 (1) (s)	where applicable, details of any financial provisions for the rehabilitation, closure, and ongoing post decommissioning management of negative environmental impacts	**Not applicable**
3 (1) (t)	any specific information that may be required by the competent authority	**-**
3 (1) (u)	any other matters required in terms of section 24(4)(a) and (b) of the Act	**-**

2. PROJECT LOCATION AND DESSCRIPTION

2.1 Project Location

Table 5 below provides the details of the location on which the Boskloof to Laingsburg 132kv Line traverses Refer to figure for the locality map showing the 132kv Line and substations.

Table 5: Details of project location

Farm Name	Portion No	SG 21 Code
Oude Wagendrift 362	0	C08500000000036200000
	6	C08500000000036200000
Bernheim 899	RE	C08500000000089900000
	2	C08500000000089900002
De nonna 341	1	C08500000000034100001
	4	C08500000000034100004
	6	C08500000000034100006
Patrys Kloof 330	0	C08500000000033000000
Keeroms 1	RE	C05000000000000100000
	1	C05000000000000100001
Witkwaters Kloof 3	0	C05000000000000300000
Witvlakte 175	RE	C08500000000017500000
Farm 761	RE	C08500000000001740000
	2	C08500000000001740002
Stinkfontein 172	RE	C08500000000017200000
Stinkfonteins Berg 140	RE	C08500000000014700000
Helpmekaar 148	9	C08500000000014800009
Ratelbosch 149	1	C08500000000014900001
Skulpiesklip 151	RE	C08500000000015100000
Nouwgat 157	2	C08500000000015700002
Farm 740	0	C08500000000074000000
Vredefort 34	RE	C08500000000003400000
Zeekoe Gat 32	RE	C08500000000003200000

Slang Rivier 21	1	C08500000000002100001
Farm 262	0	C08500030000026200000
Farm 771	0	C08500000000077100000
Quaree Kloof 12	RE	C08500000000001200000
Quarrie Kloof 155	0	C04300000000015500000
Farm 156	0	C04300000000015600000
Farm 157	0	C04300000000015700000
Tweeside 151	RE	C04300000000015100000
Besten Weg 150	RE	C04300000000015000000
	1	C04300000000015000001
Matjesfontein 148	8	C04300000000014800008
Grootwater 270	RE	C04300000000027000000
Farm 282	RE	C04300000000028200000
Paarde fontein 44	3	C04300000000014400003
Baviaans Krants 104	6	C04300000000029000006
Farm 1115	0	C04300010000111500000

Table 6 below providing the coordinates of location of the substation from the starting point (Boskloof to end point Laingsburg Substation).

Table 6: Activity geographic coordinates of substation

Substation	**Central Coordinates**	
	Longitude	Latitude
Boskloof Substation	19°33'7.21"E	33°37'49.53"S
Quarry Traction Substation	20°11'19.37"E	33°15'58.67"S
Pietermeinties Traction Substation	20°25'19.24"E	33°15'2.87"S
Laingsburg Substation	20°52'14.78"E	33°11'35.66"S

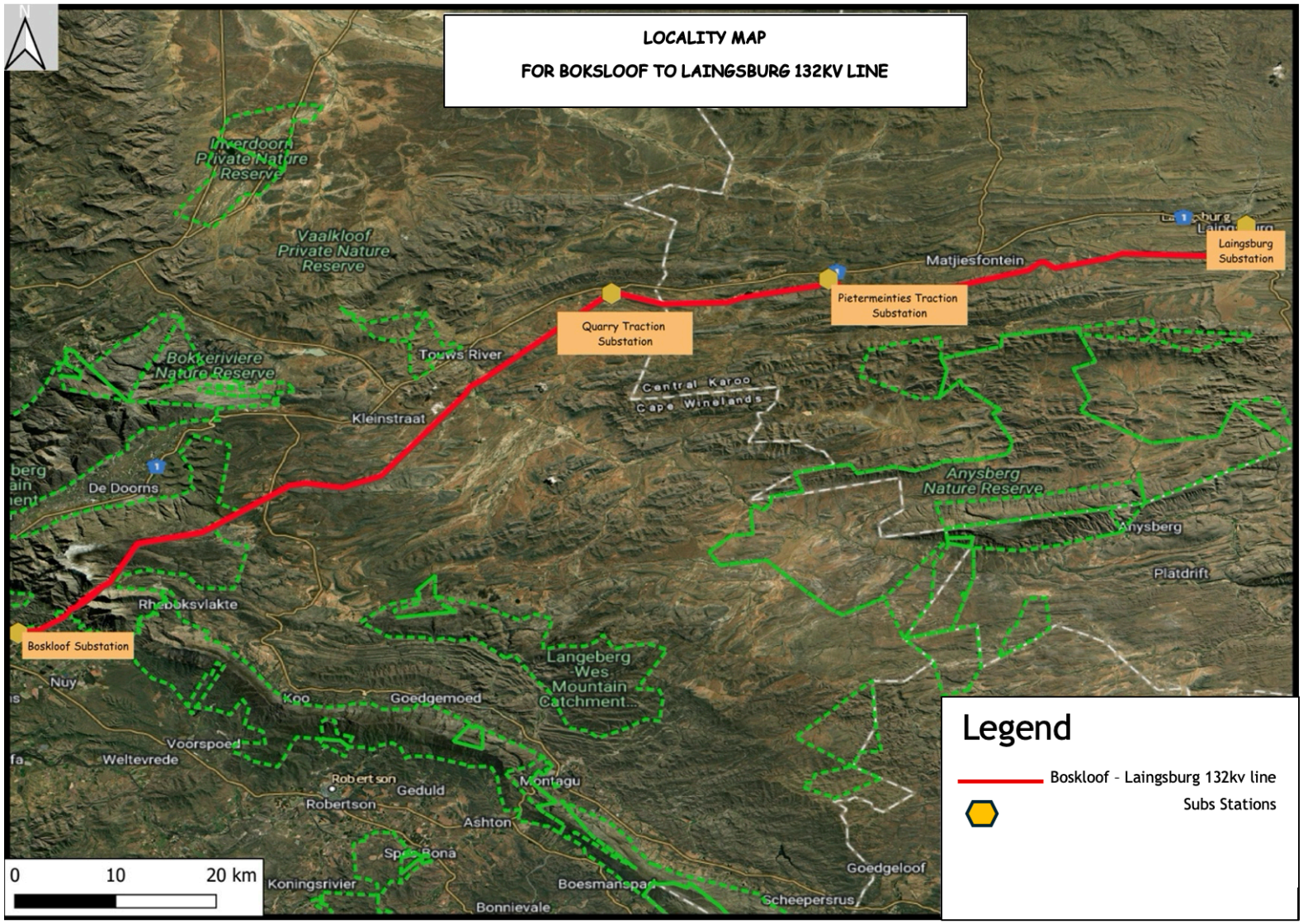

Figure 1: Locality Map

2.2 Project Description

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.

The picture below shows the temporary structures (wooden structure) currently used at the disturbed area. Eskom Distribution intends to repair this line and replace the wooden structures with the Monopoles for permanent distribution of electricity.

Figure 2: Wooden Structures

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

Figure 3: 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.

3. LEGISLATIVE FRAMEWORKS

This section provides a general overview of the policy and legal framework governing the proposed repairs of 132kv D/C Boskloof to Laingsburg. It outlines the environmental laws and regulations relevant to this activity that must be considered during the assessment process. These laws and regulations may also influence or affect the proposed project.

3.1 The Constitution of South Africa (Act No. 108 of 1996)

Section 24 of the Constitution of South Africa No. 108 of 1996 states that "…everyone has the right (a) to an environment that is not harmful to their health or well-being; and (b) to have the environment protected, for the benefit of present and future

generations through reasonable legislative and other measures that (c) secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development." This protection encompasses preventing pollution and promoting conservation and environmentally sustainable development.

3.2 National Environmental Management Act (Act 107 of 1998)

The National Environmental Management Act, 1998 (No. 107 of 1998) (NEMA), as amended, and its Chapter 5 allow for the control of specific listed activities, which are regulated by the EIA Regulations 2014 (as amended). Until written authorization is received from the appropriate authority—in this case, the national DEFF—such activities are not allowed to begin. A Basic Assessment procedure is required for DEFF to evaluate the application for Environmental Authorization in light of the Boskloof to Laingsburg 132kv Line.

With that said the present document encompasses all legal provisions and the legal context for the proposed development. It also includes a review of laws, rules, policies, and guidelines that are pertinent to or have an impact on the proposed repairs When drafting the report for the proposed development, the following national, provincial, and local government laws were taken into consideration:

- Constitution of the Republic of South Africa, 1996 (Act No 108 of 1996);
- National Environmental Management Act, 1998 (Act 107 of 1998);
- NEMA EIA Regulations 2014 (as amended);
- National Environmental Management Waste Act, 2008 (Act 59 of 2008);
- National Environmental Management Biodiversity Act, 2004 (Act 10 of 2004);
- National Heritage Resources Act, 1999 (Act 25 of 1999);
- National Environmental Management Protected Areas Act, 2003 (Act 57 of 2003);
- The South African National Roads Agency Limited and National Roads Act, 1998 (Act 7 of 1998);
- Central Karoo District Spatial Development Framework;

- Western Cape Environmental Management Act, 2003 (Act No. 7 Of 2003)
- The Western Cape Biodiversity Spatial Plan (WCBSP)

3.3 Listed and specified activities for the proposed 132 KV D/C Boskloof Laingsburg powerline repairs

In terms of section 24(2) of NEMA, the Minister and or any MEC in concurrence with the Minister may identify activities that require authorisation as these activities may negatively affect the environment. Environmental Impact Assessment (EIA) Regulations were promulgated in December 2014 (as amended) in terms of Section 24(5) and Section 44 of the National Environmental Management Act (NEMA), Act 107 of 1998. In terms of the 2014, EIA Regulations the triggered listed activities fall under Listing Notices 1, 2 and 3 which are further discussed as follows:

- *Listing Notice 1 (Regulation 983) define activities which will trigger the need for a **Basic Assessment process;***
- *Listing Notice 2 (Regulation 984) define activities which trigger a **Scoping and Environmental Impact Assessment (EIA) process**.*
- *Listing Notice 3 (Regulations 985) refers to certain listed activities located in specifically defined geographical areas for which a **Basic Assessment process** would be required.*

The Eskom: Distribution is applying for an Environmental Authorisation for the proposed repairs, firstly to legalise the line and secondly to continue with maintenance activities specified in the Maintenance Management Plan. The application for Environmental Authorisation will be lodged to the DFFE. The repairs will require a Basic Assessment (BA) process in terms the National Environmental Management Act (NEMA No.107 of 1998) and EIA Regulations of 2014 (as amended).

The listed activities below will be triggered for the repairs, hence a Basic Assessment process was necessary to be undertaken:

Table 7: Triggered activity listed under GNR.327

Government Notice No:	Activity No (s) (relevant notice): e.g. Listing notices 1, 2 or 3	Describe each listed activity as per the wording in the listing notices:	Describe the portion of the proposed project to which the applicable listed activity relates. Ensure to include thresholds/area/footprint applicable.
GNR 327	LN1; Activity 11	The development of facilities or infrastructure for the transmission and distribution of electricity— _(i) outside urban areas or industrial complexes with a capacity of more than 33 but less than 275 kilovolts; or (ii) inside urban areas or industrial complexes with a capacity of 275 kilovolts or more; excluding the development of bypass infrastructure for the transmission and distribution of electricity where such bypass infrastructure is — _(a) temporarily required to allow for maintenance of existing infrastructure; (b) 2 kilometers or shorter in length; (c) within an existing transmission line servitude; and (d) will be removed within 18 months of the commencement of development.	Eskom Distribution proposes to repair 132kv line between Boskloof and Laingsburg. The power line was constructed approximately 60 years ago prior to the promulgation of the National Environmental Management Act: Act No. 107 of 1998 and the associated regulations. According to our understanding Listing Notice 1, Activity 11 would have been triggered if this was a construction of a new power line and or development. For the purpose of the proposed repairs the project will trigger activity 11 of LN 1 (GN R327)
GNR 327	LN 1; Activity 12	The development of— (i)dams or weirs, where the dam or weir, including infrastructure and water surface area, exceeds 100 square metres; or	The proposed powerline repairs will involve excavations for the foundation of the towers that are situated within the watercourse,

		(ii) infrastructure or structures with a physical footprint of 100 square metres or more; where such development occurs— (a) within a watercourse; (b) in front of a development setback; or (c) if no development setback exists, within 32 metres of a watercourse, measured from the edge of a watercourse; — excluding— (aa) the development of infrastructure or structures within existing ports or harbours that will not increase the development footprint of the port or harbour; (bb) where such development activities are related to the development of a port or harbour, in which case activity 26 in Listing Notice 2 of 2014 applies; (cc) activities listed in activity 14 in Listing Notice 2 of 2014 or activity 14 in Listing Notice 3 of 2014, in which case that activity applies; (dd) where such development occurs within an urban area; [or] (ee) where such development occurs within existing roads, [or] road reserves or railway line reserves; or	the total footprint of the towers that are within the watercourse is above 100m^2 in extent.

		(ff) the development of temporary infrastructure or structures where such infrastructure or structures will be removed within 6 weeks of the commencement of development and where indigenous vegetation will not be cleared.	

3.4 Environmental Management Principle

It is crucial for effective environmental management that the Applicant understands and incorporates the fundamental principles of sound environmental practices in all aspects of the powerline repairs. NEMA provides a general framework for environmental law, including national environmental management principles that must be considered when making decisions with potentially significant environmental impacts. A brief overview of these principles is provided in the following sections.

3.5 Holistic principle

The holistic principle in environmental management emphasizes the interconnectedness of all environmental components, recognizing that actions impacting one part of the environment can have wide-reaching effects on others. This principle advocates for a comprehensive approach that considers the entire ecosystem, including the interrelationships between air, water, land, flora, fauna, and human activities. By adopting a holistic perspective, environmental management seeks to maintain ecological balance, promote sustainability, and ensure that all environmental, social, and economic factors are integrated into decision-making processes.

The Holistic principle, as defined by NEMA (Section 2(4)(b) requires that environmental management must be integrated, acknowledging that all elements of the environment are linked and inter-related and it must take into account the effect of decisions on all aspects of the environment and all people in the environment by pursuing the selection of the best practicable environmental option (defined below). Holistic evaluation does not mean that a project must be looked at as a whole. It rather means that it must be accepted that there is a whole into which a project is introduced. If the indications are that the project could have major adverse effects, the project must be reconsidered and where appropriate replanned or relocated to avoid an adverse impact or to ensure a beneficial impact.

3.5.1 Best practicable environmental option

When undertaking any action with environmental impacts, it is essential to identify and define the different options available for consideration. The Best Practicable Environmental Option (BPEO) is described in NEMA as "the option that offers the most benefit or causes the least harm to the environment overall, at a cost that is acceptable to society in both the long term and short term." Additionally, other guidelines commonly used for environmental management under various legislation include BPM, which stands for Best Practicable Means, and BAT, which refers to Best Available Technology.

3.5.2 Preventative principles

The precautionary principle is crucial to sustainable development, requiring that disruptions to ecosystems, as well as pollution, environmental degradation, and other negative impacts, be avoided. If complete avoidance is not possible, these impacts should be minimized and addressed.

3.5.3 The precautionary principles

The precautionary principle dictates that when there is uncertainty about whether an impact could be harmful to the environment, it is assumed to be harmful as a precaution until proven otherwise. This principle requires that decisions made by the private sector, governments, institutions, and individuals take into account and recognize conditions of uncertainty, especially regarding potential environmental consequences. In South Africa, the Department of Water and Sanitation (DWA, previously DWAF, now DWS) adopted the Best Practicable Environmental Option (BPEO) guideline for water quality management in 1991 and included it in the 1994 Minimum Requirements document for waste management.

According to the 1994 DWAF Minimum Requirements for the Handling and Disposal of Hazardous Waste, the precautionary principle is defined as "assuming the worst-case scenario when a risk is unknown and making provisions for such a situation." In this context, the precautionary principle presumes that a waste or an identified contaminant is "highly hazardous and toxic until proven otherwise."

Within the EIA process in South Africa, the precautionary principle entails the need to supply sound, scientifically based information that enables the decision-making authority to reasonably understand the potential environmental impacts, their scope, and how they might be mitigated. If the information provided is insufficient for this purpose, the authority cannot be satisfactorily informed and should then require the collection and submission of additional information.

3.5.4 Duty of care and cradle to grave principle

According to Section 28 of NEMA, "Any person who causes, has caused, or may cause significant pollution or environmental degradation must take reasonable steps to prevent such pollution or degradation from occurring, continuing, or recurring. If such harm to the environment is legally authorized or cannot be reasonably avoided or stopped, they must minimize and rectify the pollution or degradation."

For example, the "duty of care" principle in waste management underscores the responsibility to ensure that waste is properly stored and transported throughout the entire custody chain to its final disposal point. This means that waste must always be stored securely, and the company responsible for removing and disposing of it must hold the necessary licenses and ensure that the waste is transported with the required documentation. The "Cradle to Grave" concept refers to a company's responsibility for the entire life cycle of a product, service, or program, from design to disposal.

According to the 1994 DWAF Minimum Requirements for the Handling and Disposal of Hazardous Waste, "any person who generates, transports, treats, or disposes of waste must ensure that no unauthorized transfer or escape of waste occurs under their control. Such a person must retain documentation describing the waste and any related transactions." This places the responsibility for waste on the generator, following the "Cradle to Grave" principle, where a "manifest" must accompany each load of hazardous waste until it is legally and responsibly disposed of. This manifest is passed from one transporter to the next, if multiple transporters are involved, and once the waste is properly disposed of at a suitable, permitted facility, a copy of the manifest must be returned to the point of origin. The "duty of care" provides a strategy for implementing sustainable development.

3.5.5 Polluter pays principle

The "polluter pays principle" asserts that the individual or organization responsible for causing pollution is accountable for the costs of cleaning it up or rehabilitating the environment. However, the polluter is not always necessarily the waste generator, as the responsibility for the safe handling, treatment, or disposal of waste can be transferred from one competent party to another. Therefore, the polluter could be a disposal site operator or a transporter. Nevertheless, under the "duty of care" principle, the generator remains one of the parties held accountable for any pollution caused by the waste. As such, the generator must be able to demonstrate that the transfer of waste management was done responsibly. According to NEMA, the polluter pays principle dictates that "the cost of remedying pollution, environmental degradation, and any resulting adverse effects, as well as the cost of preventing, controlling, or minimizing further pollution, environmental damage, or adverse health effects, must be borne by those responsible for harming the environment."

3.5.6 Sustainable Development

The principle of Sustainable Development is enshrined in the Constitution of the Republic of South Africa (Act No. 108 of 1996) and is implemented through NEMA. According to Section 1(29) of NEMA, sustainable development involves integrating social, economic, and environmental factors into the planning, implementation, and decision-making processes to ensure that development benefits both present and future generations. Therefore, Sustainable Development requires that:

- Pollution and environmental degradation should be prevented, or if not entirely avoidable, minimized and addressed.
- Disruption to landscapes and sites of cultural heritage should be avoided, or if unavoidable, minimized and addressed.
- Waste generation should be avoided, or if not entirely avoidable, minimized, reused, or recycled where possible, and otherwise disposed of responsibly.
- Disturbance to ecosystems and loss of biological diversity should be avoided, or if not entirely avoidable, minimized and addressed.

3.5.7 Climate Change Consideration

The proposed project will incorporate energy-efficient technologies and adhere to international best practices in construction methods and resource management. Given the uncertainties and extreme weather conditions associated with climate change, ensuring the provision of essential human needs, such as a reliable fresh water supply, is considered crucial.

4. PROJECT MOTIVATION, NEED AND DESIRABILITY

In February 2024, the Boskloof - Laingsburg 132 kV breakers tripped. The preceding fault was caused by the collapse of 7 suspension lattice towers between the PieterMeintjies Traction and Quarry Traction section of the 132 kV double circuit line between Boskloof and Laingsburg Substations. The towers collapsed due to a high Northern wind that occurred during a major local storm event.

The need and desirability to maintain this distribution powerline, is to ensure the long time power distribution and uninterrupted distribution during natural hazards such as the strong winds of 2024 that occurred on the Central Karoo. The distribution system plays a vital role in the delivery of a reliable, high quality electricity supply throughout the region and the country at large, by delivering electricity in bulk to load centres wherein the distribution networks owned by Eskom and municipalities deliver electricity to end-users. The distribution line needs to be well-maintained to deliver a reliable supply of electricity, and it also needs to be strengthened to meet changing customer needs.

The proposed project is beneficial as it will allow for load growth, mitigate short term network reliability, and create additional capacity for forecasted load in the Boskloof, Touws River, Matjiensfontein and Laingsburg area and the region as a whole.

The maintenance will indirectly benefit communities as reliable electricity will result in uninterrupted production and, therefore, growth in industry, which could potentially yield additional jobs. The overarching impact will be positive economic spinoffs, which benefit the community, the region and country at large.

Electrification has significant positive benefits from a socio-economic and ecological perspective. The provision of electricity leads to a number of social benefits for organs of state, individuals, industries, and communities including the following:

- Enables economic and human social development; and
- Encourages small and medium enterprise development, and as a result, contributes to a possible increase in disposable income.

At the local level, the benefits of the project would centre on ensuring improved reliability of supply as well as entrench the reach of electricity into communities. It is envisaged that the proposed project would ensure that marginal communities in the region are supplied with electricity. This will indirectly have an added benefit as it may reduce the community's reliance on other means of energy when the region experience other natural events, thus allowing for sustainable livelihoods. For organs of state it allows for the following:

- Electrification of educational and training facilities (schools and the like).
- Electrification of health facilities (clinics, hospitals, and the like).
- Electrification of security facilities (police stations, court houses and the like).
- Electrification for the provision of essential services (water supply pumps and the like).
- Electrification of religious and cultural facilities.
- Enables rural development.
- Enables the provision of lighting, thereby vastly improving the safety and security of communities.

For individuals and communities:

- Electrification of homes (for cooking, heating, and lighting of homes which improves the lives of the individuals within the home).
- Encourages small and medium enterprise development, and as a result, contributes to a rise in disposable income.

From an ecological perspective, the availability of electricity can lead to a decrease in the harvesting of firewood with resultant biodiversity benefits. This also leads to a decrease in respiratory disease due to a reduction of biomass burning. The relative efficiency of using electricity will reduce overall air emissions and can lead to an improved quality of life

In terms of the NEMA EIA Regulations (2014, as amended), when considering an application, the competent authority must consider several aspects including "the need and desirability of the activity". In terms of the *Department of Environmental Affairs' Integrated Environmental Management Guideline: Guideline on Need and Desirability (2017*), the need and desirability for a project must be addressed by taking into account the "questions to be engaged with when considering need and desirability" included in the abovementioned guideline. These questions, together with answers relating to the proposed project, are provided in the table below.

Table 8: Integrated Environmental Management Guideline: Guideline on Need and Desirability (2017),

NO	QUESTIONS	ANSWERS
Securing ecological sustainable development and use of natural resources		
1	How will this development (and its separate elements/ aspects) impact on the ecological integrity of the area?	Identified impacts associated with the proposed development have been assessed and are summarised in Section 8 of the BAR.
1.1	How were the following ecological integrity considerations taken into account: Threatened Ecosystems; Sensitive, vulnerable, highly dynamic or stressed ecosystems, such as coastal shores, estuaries, wetlands, and similar systems require specific attention in management and planning procedures, especially where they are subject to significant human resource usage and development pressure; Critical Biodiversity Areas ("CBAs") and Ecological Support Areas ("ESAs"); Conservation Targets; Ecological drivers of the ecosystem; Environmental Management Framework; Spatial Development Framework; and Global and international responsibilities relating to the environment (e.g. RAMSAR sites, Climate Change, etc.).	The relevant ecological integrity considerations were considered by the specialists in their respective specialist studies. The potential impacts of the proposed development on environmental sensitivities have been considered.
1.2	How will this development disturb or enhance ecosystems and/or result in the loss or protection of biological diversity?	The potential impacts of the proposed powerline repairs on terrestrial vegetation and freshwater systems have

	What measures were explored to firstly avoid these negative impacts, and where these negative impacts could not be avoided altogether, what measures were explored to minimise and remedy (including offsetting) the impacts? What measures were explored to enhance positive impacts?	been considered. The impact assessment tables, which summarized the proposed mitigation measures, are discussed in Section 8 of the Draft BAR. The application of the mitigation hierarchy is described in more detail in Section 8.2 of the BAR.
1.3	How will this development pollute and/or degrade the biophysical environment? What measures were explored to firstly avoid these impacts, and where impacts could not be avoided altogether, what measures were explored to minimise and remedy (including offsetting) the impacts? What measures were explored to enhance positive impacts?	The proposed development is not expected to cause significant pollution or degradation of the biophysical environment, provided that the recommended mitigation and monitoring measures are implemented. Localized degradation may occur during construction, as areas are cleared and leveled for 132kv powerline distribution infrastructure installation.
1.4	What waste will be generated by this development? What measures were explored to firstly avoid waste, and where waste could not be avoided altogether, what measures were explored to minimise, reuse and/or recycle the waste? What measures have been explored to safely treat and/or dispose of unavoidable waste?	During the construction phase, construction rubble and small quantities of hazardous waste, such as used oil, are expected to be produced. General non-hazardous waste from the proposed tower repairs will be managed within the municipal waste system. Hazardous waste must be handled by a private contractor for appropriate disposal or recycling. Recyclable materials should be sorted at the source and either integrated into the municipal recycling program or collected by a private contractor for safe

		disposal. Green waste should be composted on-site for reuse within the affected areas of the powerline repairs.
1.5	How will this development disturb or enhance landscapes and/or sites that constitute the nation's cultural heritage? What measures were explored to firstly avoid these impacts, and where impacts could not be avoided altogether, what measures were explored to minimize and remedy (including offsetting) the impacts? What measures were explored to enhance positive impacts?	The power repairs may disturb landscapes or sites of cultural heritage significance. To avoid such impacts, the project explored alternative alignments and construction methods, while areas of unavoidable impact will be subject to mitigation measures, such as documentation and relocation of heritage resources. Additionally, opportunities to enhance positive impacts include preserving and integrating cultural heritage elements into the upgraded infrastructure, where feasible.
1.6	How will this development use and/or impact on non-renewable natural resources? What measures were explored to ensure responsible and equitable use of the resources? How have the consequences of the depletion of the nonrenewable natural resources been considered? What measures were explored to firstly avoid these impacts, and where impacts could not be avoided altogether, what measures were explored to minimise and remedy (including offsetting) the impacts? What measures were explored to enhance positive impacts?	Non-renewable resources will be used during the construction phase (e.g. sand for concrete and steel, precast material), but such raw materials will be sourced from licensed facilities. The impact assessment tables, which summarises the impacts and proposed mitigation measures, are attached in Section 7.3 of the BAR.

1.7	How will this development use and/or impact on renewable resources and the ecosystem of which they are part? Will the use of the resources and/or impact on the ecosystem jeopardise the integrity of the resource and/or system taking into account carrying capacity restrictions, limits of acceptable change, and thresholds? What measures were explored to firstly avoid the use of resources, or if avoidance is not possible, to minimize the use of resources? What measures were taken to ensure responsible and equitable use of the resources?	The proposed powerline repairs may have impacts on the environment in which it is located. To avoid or minimise the impacts on the biophysical environment, specialist assessments have been undertaken to investigate and assess these impacts and recommend mitigation measures to avoid or minimise the impacts of the activity. The EMPr for the project includes measures that should be taken to protect and limit the use of resources, such as potable water, and measures to protect the natural resources on the site.
	What measures were explored to enhance positive impacts? (1) Does the proposed development exacerbate the increased dependency on increased use of resources to maintain economic growth or does it reduce resource dependency (i.e. de-materialised growth)? (2) Does the proposed use of natural resources constitute the best use thereof? Is the use justifiable when considering intra- and intergenerational equity, and are there more important priorities for which the resources should be used (i.e. what are the opportunity costs of using these resources?) (3) Do the proposed location, type and scale of development promote a reduced dependency on resources?	Section 8 of the BAR provides a summary of potential impacts identified to date as well as proposed mitigation measures.

1.8	How were risk-averse and cautious approach applied in terms of ecological impacts? What are the limits of current knowledge (note: the gaps, uncertainties and assumptions must be clearly stated)? What is the level of risk associated with the limits of current knowledge? Based on the limits of knowledge and the level of risk, how and to what extent was a risk-averse and cautious approach applied to the development.	The precautionary approach (in which the absence of adequate scientific information should not be used as a reason for postponing or failing to take conservation and management measures) was applied. When considering impacts, EAP and the specialist practitioners had to consider the limits of current knowledge about the consequence of decisions and actions. Gaps in knowledge, limitations, assumptions and uncertainties are outlined in Section 8 of the BAR, as well as the respective Specialist Studies (Appendix C).
1.9	How will the ecological impacts be resulting from this development impact on people's environmental right in terms of the following: (1) Negative impacts: e.g. access to resources, opportunity costs, loss of amenity (e.g. open space), air and water quality impacts, nuisance (noise, odour, etc.), health impacts, visual impacts, etc. What measures were taken to firstly avoid negative impacts, but if avoidance is not possible, to minimise, manage and remedy negative impacts? (2) Positive impacts: e.g. improved access to resources, improved amenity, improved air or water quality, etc. What measures were taken to enhance positive impacts?	The proposed powerline repairs are situated on an existing servitude, so no loss of access to resources or amenities is expected. The powerline repairs are unlikely to significantly affect people's environmental rights due to its nature and location, with any potential nuisance impacts, such as noise or dust, expected to be temporary and localized. For further details on potential negative and positive impacts, please refer to Section 8 of the BAR.

1.10	Describe the linkages and dependencies between human well-being, livelihoods and ecosystem services applicable to the area in question and how the development's ecological impacts will result in socio-economic impacts (e.g. on livelihoods, loss of heritage site, opportunity costs, etc.)?	The powerline repairs will be undertaken on the existing Eskom servitude and as such making little direct contribution to livelihoods at present. It is not anticipated that the proposed repairs will impact adversely on the environment and the benefits that will accrue to the local community as a result of the repairs are summarised in Section 9 of the BAR. i. Various type of skills required related to Powerline construction Contractor will finalise e.g. Concrete work, Stone pitching, Gabions ii 30% work will be outsourced to local construction companies ii 10% work will be performed by local labourers iii By-laws are not applicable to this project
1.11	Based on all of the above, how will this development positively or negatively impact on ecological integrity objectives/ targets/ considerations of the area?	The baseline data indicate that the project area has been altered both historically and currently, mainly due to extensive agriculture, secondary roads, and the proximity of an existing anthropogenic environment with associated human activities such as rubble dumping, general littering, and encroachment into natural areas via footpaths and roads. Despite these alterations, the semi-

		natural terrestrial areas still maintain ecological integrity and provide various beneficial services, particularly the maintenance of biodiversity. These systems are crucial as they offer refuges, food, and corridors for species dispersal in and through the surrounding area. Preserving these systems is the most critical consideration for the proposed repairs. Based on the findings of the studies, no fatal flaws were identified for the project. If the recommended avoidance and mitigation measures are implemented, the significance of the impacts is expected to be low. Therefore, specialists believe the project can proceed, provided that the suggested mitigation measures and recommendations are followed.
1.12	Considering the need to secure ecological integrity and a healthy biophysical environment, describe how the alternatives identified (in terms of all the different elements of the development and all the different impacts being proposed), resulted in the selection of the "best practicable environmental option" in terms of ecological considerations?	Alternatives are detailed in Section 4 of the BAR. Following input from the engineering team, a preferred layout has been developed for the site.
1.13	Describe the positive and negative cumulative ecological/ biophysical impacts bearing in mind the size, scale, scope and	Positive: The current distribution line traverse over CBAs and protected areas including nature reserves as such

	nature of the project in relation to its location and existing and other planned developments in the area?	Eskom keeps the vegetation within the servitude/distribution line intact and avoid disturbance of the vegetation. Negative: The proposed maintenance and replacement of towers activities will involve of vegetation as such there will be loss of vegetation within the distribution line.
Promoting justifiable economic and social development		
2.1	What is the socio-economic context of the area, based on, amongst other considerations, the following considerations: (1) The IDP; (2) Spatial priorities and desired spatial patterns; (3) Spatial characteristics; and (4) Municipal Economic Development Strategy?	The socio-economic context of the area is summarised in Section 5.9 of the BAR. Section 2 of the BAR provides a description of applicable planning documents considered for this application, including the IDP and SDF.
2.2	Considering the socio-economic context, what will the socio-economic impacts be of the development (and its separate elements/aspects), and specifically also on the socio-economic objectives of the area? Will the development complement the local socioeconomic initiatives (such as local economic development (LED) initiatives), or skills development programs?	Benefits: • Enhances regional power distribution. • Improve the quality of towers/infrastructure used for the 132kv distribution line. • Creates temporary employment opportunities during the construction phase. • Provides a financial injection into the local economy.

		• Improves livelihoods for local residents. Disadvantages: • Potential disruption to local communities during construction (e.g., noise, dust, and increased traffic). • Tensions with local landowners over access control. • Community safety concerns over the new people with the communities.
2.3	How will this development address the specific physical, psychological, developmental, cultural and social needs and interests of the relevant communities?	During the PPP, the EAP will consider the concerns raised by stakeholders regarding the proposed development and will address these concerns in the BAR.
2.4	Will the development result in equitable (intra- and inter-generational) impact distribution, in the short and long-term? Will the impacts be socially and economically sustainable in the short- and long-term?	The project is likely to result in an equitable distribution of impacts across different generations, both in the short and long term, as it aims to improve electricity distribution. In the short term, there may be temporary disruptions, but the long-term benefits could lead to enhanced economic opportunities and social equity. Overall, the impacts are expected to be socially and economically sustainable, contributing to the well-being of both current and future communities.

2.5	In terms of location, describe how the placement of the proposed development will: (1) result in the creation of residential and employment opportunities in close proximity to or integrated with each other; (2) reduce the need for transport of people and goods; (3) result in access to public transport or enable non motorised and pedestrian transport; (4) compliment other uses in the area; (5) be in line with the planning for the area; (6) for urban related development, make use of underutilized land available with the urban edge; (7) optimise the use of existing resources and infrastructure; (8) opportunity costs in terms of bulk infrastructure expansions in non-priority areas; (9) discourage "urban sprawl" and contribute to compaction/densification; (10) contribute to the correction of the historically distorted spatial patterns of settlements and to the optimum use of existing infrastructure in excess of current needs;	1. The proposed project will likely result in the creation of residential employment opportunities that are in close proximity to the proposed powerline repairs. 2. By improving the quality of electricity distribution infrastructure, the local communities that benefit from the 132kv line will have undisturbed electricity and limit the use of other sources of energy. 3. The proposed project is a energy/electricity project, the maintenance of the distribution line will not impact on transport. 4. The project will complement other uses in the area, such as commercial, residential, and industrial activities, by improving infrastructure that supports these functions. 5. The proposed project aligns with the planning for the area by supporting regional development frameworks and adhering to local Integrated Development Plans (IDPs) and Spatial Development Frameworks (SDFs). 6. For urban-related development, the project could facilitate the use of underutilized land within the urban edge by making these areas more accessible and desirable for development.

	(11) encourage environmentally sustainable land development practices and processes; (12) take into account special locational factors that might favour the specific location; (13) the investment in the settlement or area in question will generate the highest socioeconomic returns; (14) impact on the sense of history, sense of place and heritage of the area and the socio-cultural and cultural-historic characteristics and sensitivities of the area; and (15) in terms of the nature, scale and location of the development promote or act as a catalyst to create a more integrated settlement?	7. The upgrade will optimize the use of existing resources and infrastructure by improving the infrastructure for the distribution line, thereby enhancing the efficiency and capacity of the existing servitude. 8. Opportunity costs related to bulk infrastructure expansions in non-priority areas are minimized as the project focuses on an existing critical route, ensuring that resources are directed to high-priority areas. 9. The project will discourage urban sprawl by promoting compaction and densification, particularly in areas adjacent to the project where development can be concentrated. 10. The project contributes to correcting historically distorted spatial settlement patterns by improving access to infrastructure and services in previously underserved areas, promoting more balanced regional development. 11. The placement encourages environmentally sustainable land development practices by supporting development within the existing urban framework and reducing the environmental impact of power distribution.

		12. Special locational factors, such as the strategic importance of the power line as a major distribution corridor, favor the specific location for project. 13. Investment in the project is expected to generate high socio-economic returns by improving regional connectivity, reducing loadshedding/power cuts, and enhancing economic activities within the region. 14. The impact on the sense of history, sense of place, and heritage of the area will be carefully considered, ensuring that any upgrades respect and integrate with the socio-cultural and cultural-historic characteristics of the region. 15. The nature, scale, and location of the project are likely to promote or act as a catalyst for creating a more integrated settlement by enhancing connectivity, encouraging mixed-use development, and improving access to services and employment.
2.6	How were a risk-averse and cautious approach applied in terms of socio-economic impacts? (1) What are the limits of current knowledge?	1. The social and economic outlook of the areas affected by the project was sourced from mainly desktop as such the information may have limitations.

	(2) What is the level of risk associated with the limits of current knowledge? (3) Based on the limits of knowledge and the level of risk, how and to what extent was a risk-averse and cautious approach applied to the development?	2. The limitations may cause a misrepresentation and data used to make analysis and findings was a desktop. 3. The information provided will not form part of conditions for the authorization as such they will not have effect on the construction and operational activities of the project.
2.7	How will the socio-economic impacts be resulting from this development impacts on people's environmental right in terms of the following: (1) Negative impacts: e.g. health (e.g. HIV-Aids), safety, social ills, etc. What measures were taken to firstly avoid negative impacts, but if avoidance is not possible, to minimise, manage and remedy negative impacts? (2) Positive impacts: What measures were taken to enhance positive impacts?	The BAR has identified impacts generally associated with development of this nature. It is not anticipated that a development of this nature or scale will unduly impact on people's environmental right. Apart from localised dust and noise impacts during the construction phase, the influx of job seekers and the increased crime are potential negative socio-economic impacts expected from the proposed development during the construction phase. Job creation opportunities and economic income are positive impacts expected from the construction phase of the proposed development. I&APs will be provided with an opportunity to raise any concerns relating to the proposed development, should

		they feel their environmental right is being negatively impacted.
2.8	Considering the linkages and dependencies between human well-being, livelihoods and ecosystem services, describe the linkages and dependencies applicable to the area in question and how the development's socio-economic impacts will result in ecological impacts?	The development site has largely been altered by agriculture over many years and the existing powerline distribution infrastructure, so the ecological impact of the proposed development is expected to be minimal. Additionally, the socio-economic impacts mentioned in Response 2.2 are not anticipated to cause any significant ecological effects.
2.9	What measures were taken to pursue the selection of the "best practicable environmental option" in terms of socio-economic considerations?	For this project, the selection of the "best practicable environmental option" involved evaluating various alternatives to maximize socio-economic benefits, such as improving access to employment opportunities and enhancing regional economic growth. Stakeholder consultations were conducted to incorporate local needs and concerns into the decision-making process. The chosen option was also aligned with local planning frameworks to ensure long-term socio-economic sustainability and minimize negative impacts.
2.10	What measures were taken to pursue environmental justice so that adverse environmental impacts shall not be distributed in	It is not expected that negative environmental impacts will be distributed in a way that unfairly discriminates

	such a manner as to unfairly discriminate against any person, particularly vulnerable and disadvantaged persons? Considering the need for social equity and justice, do the alternatives identified, allow the "best practicable environmental option" to be selected, or is there a need for other alternatives to be considered?	against anyone. The local community is set to benefit from the project, as outlined in Section I(4) of the BAR. Based on feedback from the public and relevant authorities, additional adjustments to the site layout may be necessary to achieve the best practicable environmental option (BPEO).
2.11	What measures were taken to pursue equitable access to environmental resources, benefits and services to meet basic human needs and ensure human wellbeing, and what special measures were taken to ensure access thereto by categories of persons disadvantaged by unfair discrimination?	It is not anticipated that the proposed development will impact adversely on the environment, and the benefits that will accrue to the local community as a result of the project are summarised in Section 8 of the BAR. i. Various type of skills required related to powerline construction and maintenance Contractor will finalise e.g. Concrete and steel works. ii 30% work will be outsourced to local construction companies ii 10% work will be performed by local labourers
2.12	What measures were taken to ensure that the responsibility for the environmental health and safety consequences of the development has been addressed throughout the development's life cycle?	A Generic EMPr has been prepared for both the construction and operational phases of the development to ensure environmental safety during construction and the protection of staff on site. See Appendix E for details. Additionally, the Proponent must ensure that working

		conditions throughout the project comply with the minimum standards set by the Occupational Health and Safety Act (Act No. 85 of 1993).
2.13	What measures were taken to: (1) ensure the participation of all interested and affected parties; (2) provide all people with an opportunity to develop the understanding, skills and capacity necessary for achieving equitable and effective participation; (3) ensure participation by vulnerable and disadvantaged persons; (4) promote community wellbeing and empowerment through environmental education, the raising of environmental awareness, the sharing of knowledge and experience and other appropriate means; (5) ensure openness and transparency, and access to information in terms of the process; (6) ensure that the interests, needs and values of all interested and affected parties were taken into account, and that adequate recognition were given to all forms of knowledge, including traditional and ordinary knowledge; and	The public participation process is detailed in Section 7 and Appendix D of this report, outlining the steps taken to reach and engage a wide range of Interested and Affected Parties (I&APs) and provide them with an opportunity to offer feedback. All received comments will be reviewed and addressed in a Comments and Response Table.

	(7) ensure that the vital role of women and youth in environmental management and development were recognised and their full participation therein were promoted.	
2.14	Considering the interests, needs and values of all the interested and affected parties, describe how the development will allow for opportunities for all the segments of the community (e.g. a mixture of low-, middle-, and high-income housing opportunities) that is consistent with the priority needs of the local area (or that is proportional to the needs of an area)?	It is not anticipated that the proposed development will impact adversely on the environment, and the benefits that will accrue to the local community as a result of the project are summarised in Section 8 of the BAR.
2.15	What measures have been taken to ensure that current and/or future workers will be informed of work that potentially might be harmful to human health or the environment or dangers of associated with the work, and what measures have been taken to ensure that the right of workers to refuse such work will be respected and protected?	The EMPr includes provisions for conducting "Tool Box Talks" or environmental training with all on-site workers, where they will be informed about job-related hazards and their right to refuse tasks that could harm human health or the environment. Additionally, the applicant must ensure that on-site working conditions meet the minimum standards set by the Occupational Health and Safety Act (Act No. 85 of 1993).
2.16	Describe how the development will impact on job creation in terms of, amongst other aspects:	Various type of skills required related to powerline construction/maintenance Contractor will finalise e.g. Concrete work and steel works etc.

	(1) the number of temporary versus permanent jobs that will be created; (2) whether the labour available in the area will be able to take up the job opportunities (i.e. do the required skills match the skills available in the area); (3) the distance from where the labourers will have to travel; (4) the location of job opportunities versus the location of impacts (i.e. equitable distribution of costs and benefits; and (5) the opportunity costs in terms of job creation.	
2.17	What measures were taken to ensure: (1) that there were intergovernmental coordination and harmonization of policies, legislation and actions relating to the environment, and (2) that actual or potential conflicts of interest between organs of state were resolved through conflict resolution procedures?	(1) Section 2 of the BAR summarises the legal and policy context applicable to the proposed development. (2) A list of organs of state that have been notified and provided with an opportunity to comment on the Draft BAR. The EAP is not aware of any current conflicts of interest between organs of state that are required to be resolved.
2.18	What measures were taken to ensure that the environment will be held in public trust for the people, that the beneficial use of environmental resources will serve the public interest, and that the environment will be protected as the people's common heritage?	To inform the initial site layout of the development on the properties, several specialist studies were commissioned. These studies assessed factors such as agricultural potential, vegetation condition, and the presence or absence of surface water resources to guide

		the preferred site layout, with realistic mitigation measures proposed to address or enhance impacts. Consequently, the "measures" will involve incorporating various specialist inputs to ensure that the best practicable environmental option (BPEO) is evaluated and submitted to the DFFE for approval.
2.19	Are the mitigation measures proposed realistic and what long-term environmental legacy and managed burden will be left?	The proposed mitigation measures must be practical and feasible for the impact assessment results to be dependable. The EAP believes that the mitigation and monitoring measures recommended by specialist practitioners are realistic given the nature and scale of the proposed development.
2.20	What measures were taken to ensure that the costs of remedying pollution, environmental degradation and consequent adverse health effects and of preventing, controlling or minimising further pollution, environmental damage or adverse health effects will be paid for by those responsible for harming the environment?	Section 28 of NEMA (Duty of Care) holds anyone who causes, has caused, or may cause significant pollution or environmental degradation accountable. The mechanisms outlined in NEMA allow for any individual or relevant authority to hold those responsible for such pollution and degradation accountable. The EMPr includes necessary rehabilitation measures, making the applicant responsible for covering the costs associated with addressing environmental degradation, such as topsoil

		erosion or groundwater pollution, that may occur during the construction phase.
2.21	Considering the need to secure ecological integrity and a healthy bio-physical environment, describe how the alternatives identified (in terms of all the different elements of the development and all the different impacts being proposed), resulted in the selection of the best practicable environmental option in terms of socio-economic considerations?	The socio-economic considerations, including aspects like sense of place, cultural landscape impact, scenic routes, and effects on farming operations, are detailed in the BAR. The pre-application public participation phase, along with input from engineers and specialists, will help ensure that the "best practicable environmental option" in terms of both environmental and socio-economic factors is proposed for approval. Potential impacts are assessed in the relevant section.
2.22	Describe the positive and negative cumulative socio-economic impacts bearing in mind the size, scale, scope and nature of the project in relation to its location and other planned developments in the area?	Influx of Job Seekers: Development projects often lead to an influx of people into the area, particularly with powerline repair activities that create temporary employment opportunities. While there may be an increase in job-seekers, especially from labor-sending areas like Kroonstad, the impact is expected to be low due to the local advertisement of job openings and adherence to HR policies prioritizing local youth. Additionally, since no labor accommodation will be provided, the likelihood of people moving to the area in

		search of jobs will be reduced. Concerns about increased competition for jobs, potential risky behaviors, and social conflicts may arise but are considered unlikely due to the project's management strategies and focus on local employment. Unrestricted Access of Construction Vehicles/Workers onto Farm Land and Adjacent Areas: Farmers are concerned about potential unauthorized access and security issues, which could be exacerbated if not properly managed. The impact is expected to be most significant during construction, with reduced concerns once the project is completed and fewer construction vehicles are needed. Potential Increase in Crime: The potential for increased crime, including livestock theft and farmer attacks, is a concern due to the influx of workers and vehicles. Farm owners worry that new job-seekers or outsiders could lead to higher crime rates or introduce criminal behavior to the local community. The rural nature of the area makes police surveillance

		difficult, potentially affecting farm owners, workers, and local residents. Fire Hazards: Given the area's grassland and flammable crops, fire hazards are a significant concern during the construction phase. Fires could have serious health, safety, and economic impacts, affecting crops, livestock, and housing around the servitude. Employing Local Labour: While exact job numbers are not yet available, most employment opportunities are anticipated during construction. Employing local residents is crucial as it provides income and can help reduce crime, substance abuse, and domestic violence. Prioritizing local employment will have broad social benefits. Skills Training and Further Training Opportunities: Local residents may lack the necessary skills for the work required. It is recommended that the proponent implement training programs to provide local residents with the skills needed for the job and future

		opportunities, which will benefit both the current project and future local employment. Contributing to Local and Regional Businesses: Eskom is encouraged to support labor-sending communities and stimulate local small businesses. The construction phase will benefit local suppliers and retailers, increasing local economic activity and purchasing power.

5. PROJECT ALTERNATIVES

According to the EIA Regulations 2014 (as amended in 2017), evaluating feasible alternatives is a necessary part of the environmental investigation process. This requirement is also stipulated by Section 24(4) of NEMA (Act No. 107 of 1998) (as amended). In the context of a proposed activity, an alternative refers to different methods of achieving the general objectives and requirements of the activity. This may include considering alternatives related to:

- The property or location where the activity is proposed;
- The type of activity to be undertaken;
- The design or layout of the activity;
- The technology to be used;
- The operational aspects of the activity; and
- The option of not carrying out the activity at all.

5.1 Site Alternatives

The project involves the repair of an existing distribution line between Quarry Traction Substation and Pietermeinties Traction Substation. The powerline starts from Boskloof Substation to Laingsburg Substation and the other two substations are between Boskloof Substation and Laingsburg Substation.. As such, the project will not assess an alternative site since the line has a registered servitude and it's an existing powerline.

5.2 Type of Activity Alternatives

A type of activity alternative for the proposed project will not be assessed, as the activities associated with the proposed project does not have alternative for Eskom Distribution, the main purpose of the proposed project is to repair an existing infrastructure. The operational phase of the proposed project is mainly the distribution of 132kv power. Ongoing maintenance of the powerline will be required throughout its lifespan.

5.3 Design Alternatives

For the purpose of this project two (2) alternative designs/layout for the Towers in respect of 132kv powerline have been investigated. The alternative design for towers include; Monopole Tower (preferred) and Lattice Tower (alternative 1).

5.3.1 Monopole Towers vs Lattice Towers

Table 9: Design alternative (advantage and disadvantage)

Design option/Alternative	Advantage	Disadvantage
Monopole Towers (Preferred)	- Strong foundation - Strong still structures - Can withstand heavy winds and floods	- Expansive to install - More steel structure required. - Large area required for ground clearance.
Lattice Towers	- Easy to install - Require relatively small area for ground clearance	- Can not be reliable to withstand severe weather conditions (winds and floods).

For the purpose of the proposed maintenance and planed replacement of the Lattice Towers within the servitude the project team from Eskom has recommended the replacement of Lattice Towers with the Monopoles Towers. The main motive for the choice of monopoles is that they can withstand severe weather conditions which prevails within the project area as experienced in 2024.

5.4 Technology Alternative

8.2.1 Underground VS Above Ground Powerline

For this project a technical alternative was identified. The alternatives include an overhead (above ground) and underground cabling of powerlines. The common method of distribution line is an overhead (above ground) and this project has accessed the underground cabling.

Table 10: Technical Alternative (advantage and disadvantage)

Option	Advantage	Disadvantage
Underground 132kV Line	- Minimal Visual Impact • Minimal Impact on Avifaunal population. Including visual impacts - Safe from strong winds	- Increased ground disturbance, therefore increased impact on sensitive environments. - High maintenance cost - High construction costs; underground costs 4 times more than the above ground cables
Above ground 132V Line	- Easy maintenance and reduced maintenance cost. - Economically feasible as it offers a cost saving. - Minimal ground disturbance therefore reduced impact on sensitive environments.	- Considerable Visual Impact - Exposure to extreme and strong winds

However, for the proposed project, the underground powerline alternative would not be the most feasible owing to the undulating nature of the area. This could cause major technical problems and would have major cost implications. Furthermore, the proposed project is for maintenance of an existing overhead distribution line as such, Eskom will keep the overhead line.

5.5 NO-GO Alternative

No-go alternative in accordance with GN R.982, consideration must be given to the option not to act. This option is usually considered when the proposed development is envisaged to have significant negative environmental impacts that mitigation measures cannot ameliorate the identified impacts effectively. The no-go alternative would be the option of not undertaking the development of the proposed project. It would imply that the current electricity supply network is not strengthened, industrial development in the area will be hindered and the

integration of potential renewable energy in the area will not be possible. Should the no-go alternative be adopted, the grid will be deprived of a much needed essential service, particularly given the already existing energy supply challenge countrywide.

Advantages of no-go alternative

- There will be no loss of biodiversity
- No vegetation clearance or disturbances of ecosystems
- No waste generation
- No visual impacts associated with the development of permanent infrastructure related to the development
- No risk of soil and underground water contamination through leakage
- Reduced risk of fire hazards associated with handling of fuel.

Disadvantages of no-go alternative

- Potential to attract investors in the area will not be established
- There will be no indirect employment opportunities
- Temporary job opportunities will not be achieved
- Associated benefits such as improved electricity infrastructure will not be realized to assist in the upkeep and maintenance of the local and district area.

6. DESCRIPTION OF THE BASELINE ENVIRONMENT

6.1 Climate

The regional climate is influenced by the steppe climate. The amount of rainfall remains low during the entire year. Köppen and Geiger classify this climate as BSk. The mean yearly temperature recorded in Laingsburg is 16.6 °C. Each year, there is an approximate 253 mm of precipitation that occurs. This location is in the southern region of the globe. According to the Macro-climatic regions of Southern Africa (source: adapted from Weinert, 1980), the 132kv Boskloof – Laingsburg powerline is within a dry area with approx. weinert N Value of >5 (refer to the map below).

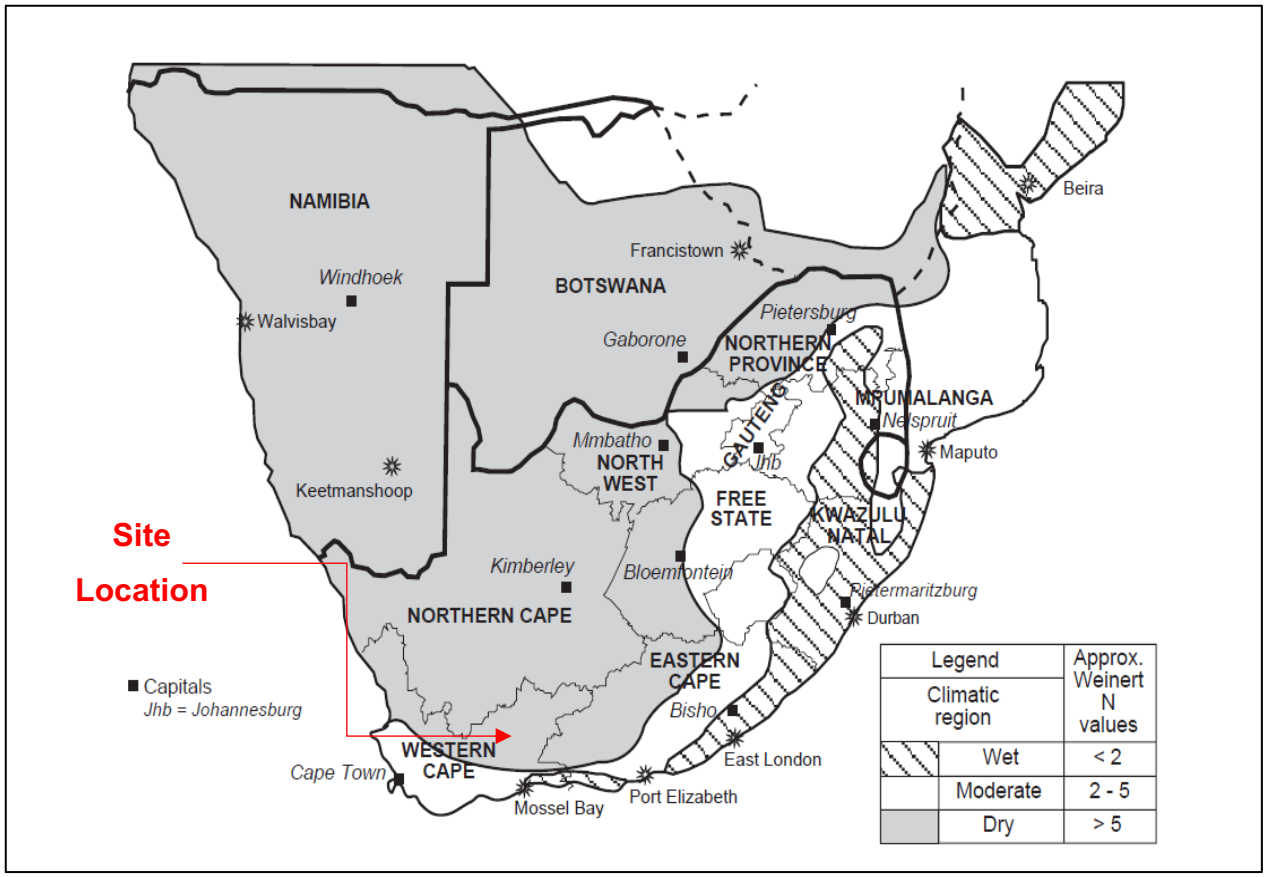

Figure 4: Macro-climatic regions of Southern Africa (source: adapted from Weinert, 1980).

The probability of rain is given for the entire year, but it is higher in winter. The Mean Annual Precipitation (MAP) is slightly above 200 mm. There are two slight rainfall optima: one in March and another spread from May to August. The mean annual temperature is close to 16˚C, and the incidence of frost relatively high (30 days). See also climate diagram for SKv 6 Koedoesberge-Moordenaars Karoo.

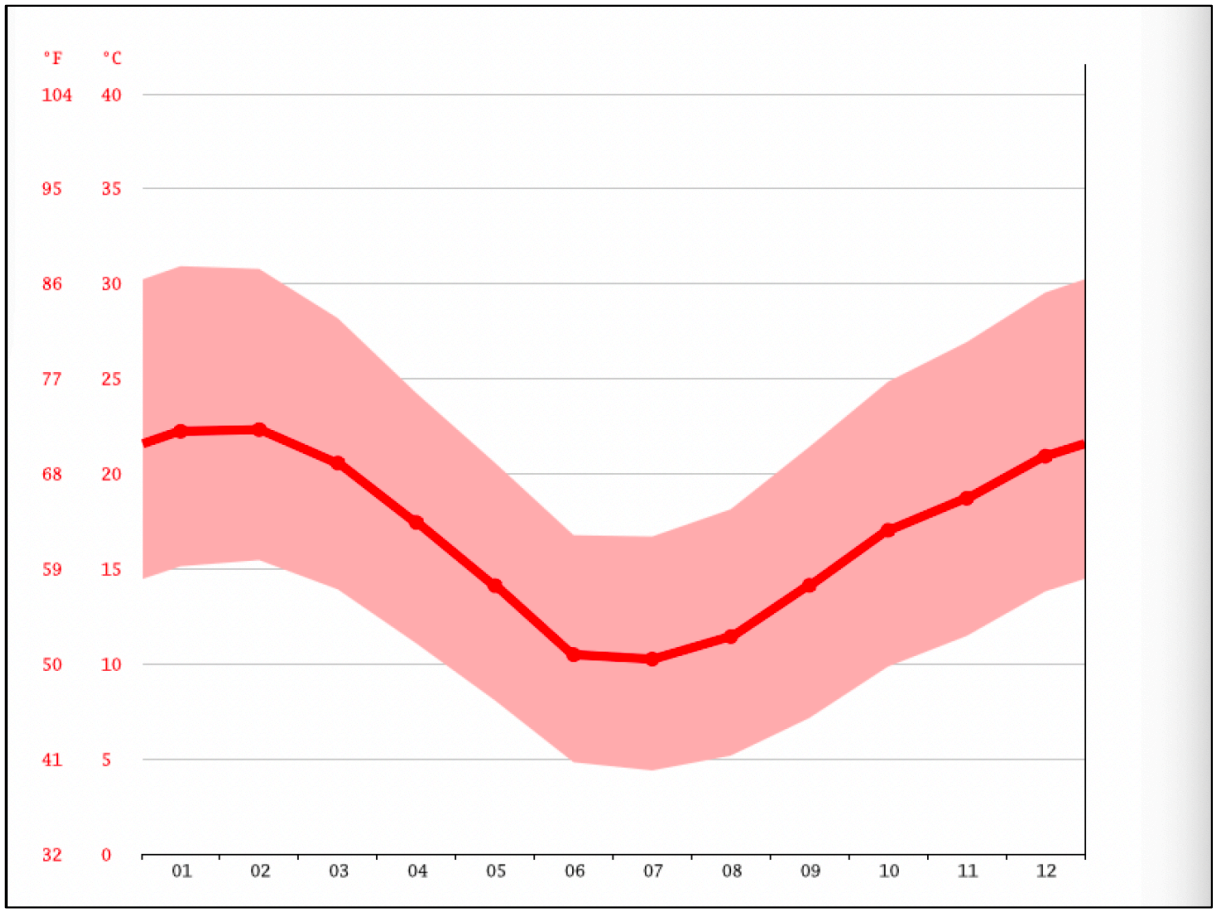

Figure 5: Annual Average Temperature graph

The driest month is September, with 13 mm of rainfall. On average, the highest amount of rainfall occurs during March with a mean value of 29 mm. The warmest month of the year is February, with an average temperature of 22.3 °C. The rainfall map below shows that the 132kv line traverses over the areas that receives lowest of 0 – 200mm average rainfall per year which is in the Laingsburg area, 201 – 400mm average rainfall per year which is in the Matjiesfontein and Touws River area. The area that receives high rainfall is where the Boskloof substation is situated near Worcester town which receives average annual rainfall of 401- 600mm per year (refer to the map below).

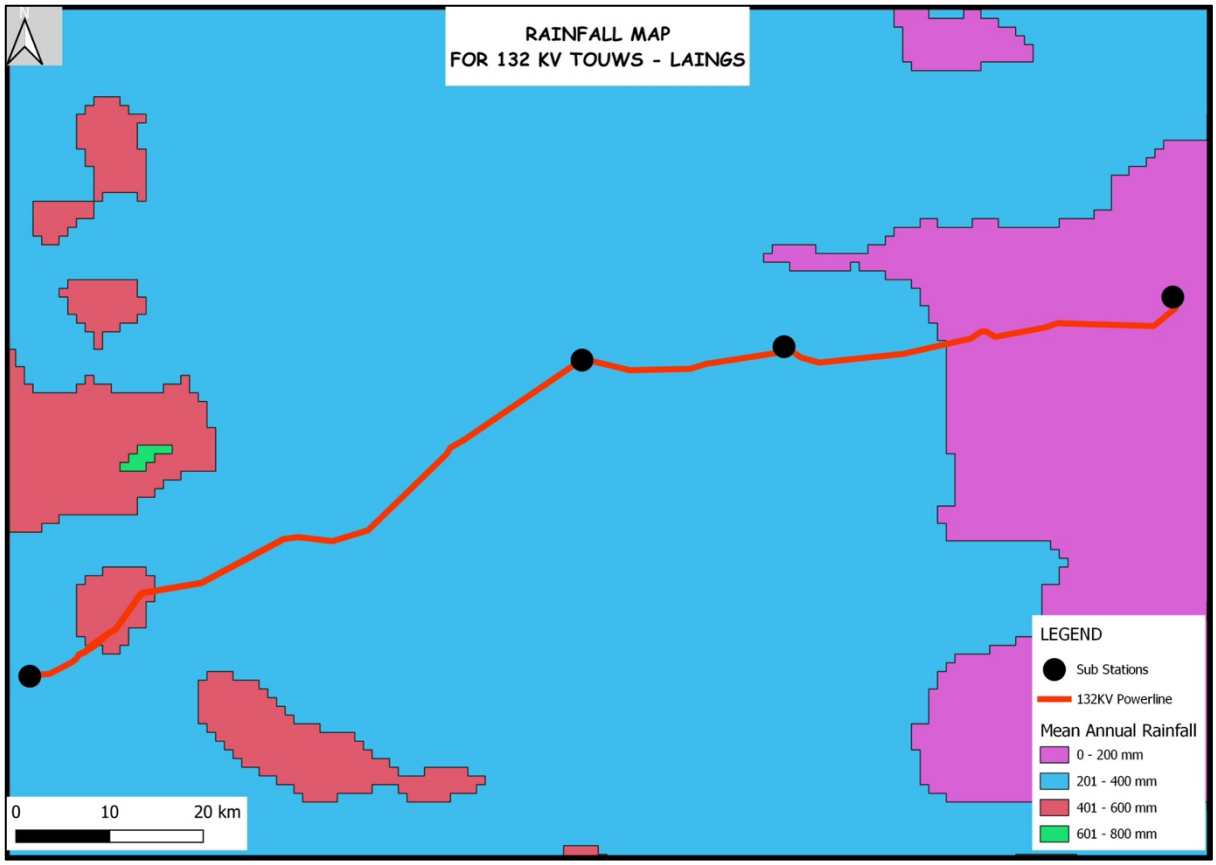

Figure 6: Rainfall Map

On average, the month of July is considered to be the coldest time of year with temperatures averaging around 10.3 °C. The difference in precipitation between the driest month and the wettest month is 16 mm.

6.3 Hydrology

The study site is located within the Breede Gouritz Water Management Area (WMA=27), Groot Subwater Management Area (WMA=17). The National Freshwater Ecosystems Priority Areas (NFEPA) identifies important wetlands in South Africa. The proposed development is located within a number of watercourses which are classified as the NFEPA Rivers (refer to the map below).

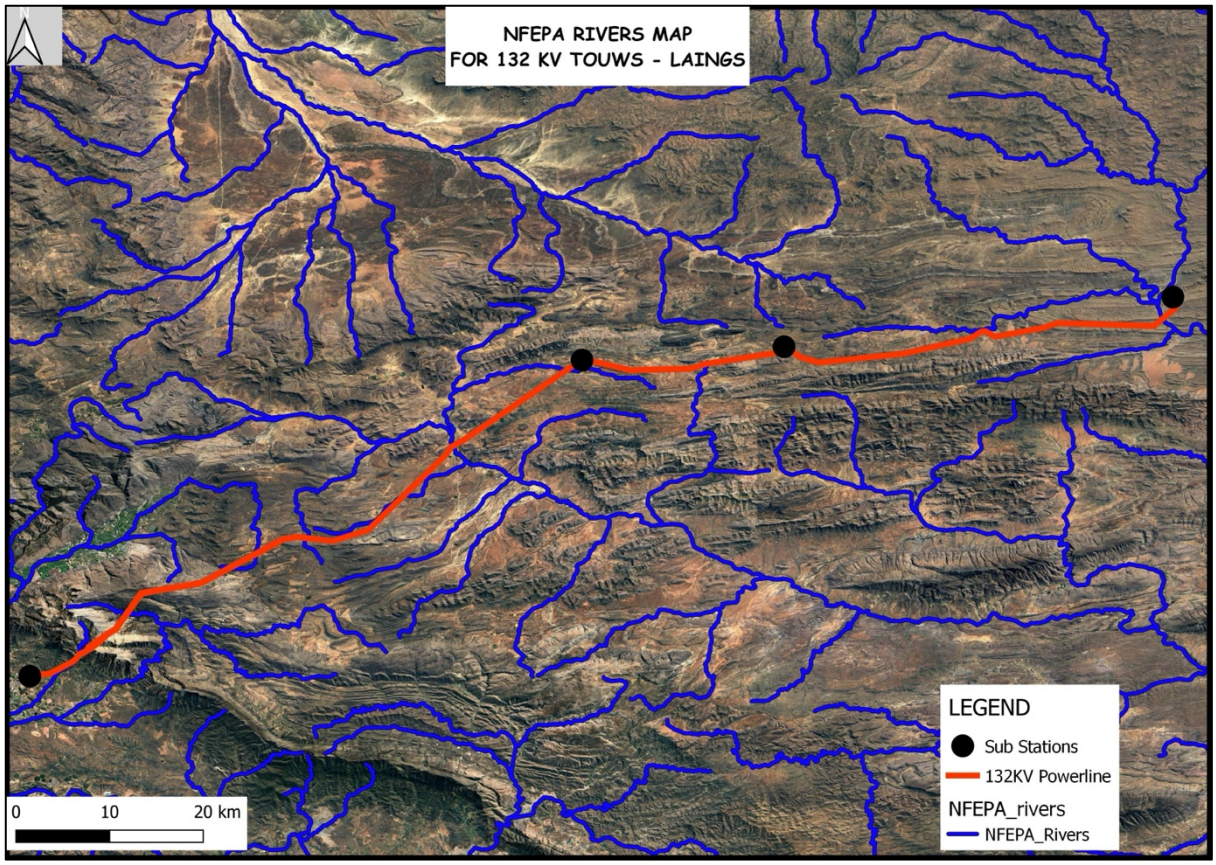

Figure 7: Surface water Map

Wetlands within the study area serve to improve habitat within and potentially downstream of the study area through the provision of various ecosystem services. Many of these functional benefits contribute directly or indirectly to increased biodiversity within the transformed study area as well as downstream of the study area through provision and maintenance of appropriate habitat and associated ecological processes.

6.2 Biodiversity

6.3.1 Vegetation Bioregion

The 132kv distribution powerline is located within various Bioregions

- Inland Saline Vegetation
- Southern Fynbos
- Western Fynbos-Renosterved
- Rainshadow Valley Karoo

Refer to the Vegetation bioregion map below.

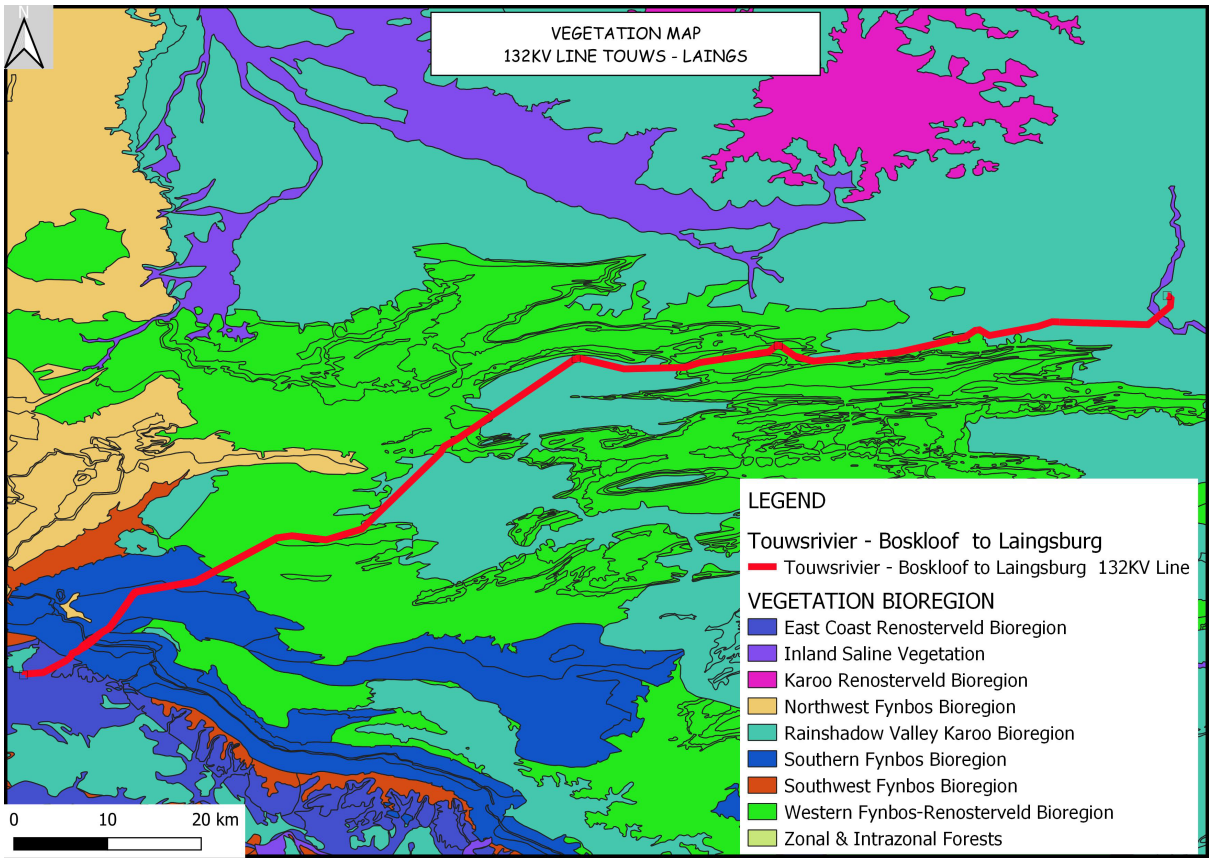

Figure 8: Vegetation Map

6.3.2 Vegetation Unit

The study area traverse over the falling vegetation units;

a) Breede Alluvium Renosterveld (FRa 1)

The existing Boskloof substation is located with the Breede Alluvium Renosterveld (FRa 1) vegetation unit, this unit consists of flat alluvial fans and valley bottoms supporting short grassy cupressoid-leaved shrubland usually dominated by renosterbos. The unit is distributed in the Western Cape Province, Breede River, it forms broad areas and narrow bands on valley bottomlands from Worcester to Ashton including the largest patch from Worcester to Nuy and Toontjiesrivier, and the belt in the vicinity of the Breede River also with many of its tributaries such as the Doringrivier south of Kwaggaskloof, Poesienetsrivier, Vinkrivier and Keisersrivier. Altitude 150–450 m.

The Breede Alluvium Renosterveld (FRa 1) is classified as Endangered. A conservation target of 27% has been set with small patches conserved in the Vrolijkheid and Riviersonderend Nature Reserves. Some 57% already transformed (cultivation, mainly vineyards). Alien species of Acacia occur locally at low densities, and erosion is generally moderate and very low, but also high in some places.

b) Breede Shale Renosterveld (FRs 8)

A small section of the line traverses the Breede Shale Renosterveld (FRs 8) vegetation unit which can be observed in Low hills, slightly undulating to undulating plains and lower mountain slopes. In the western regions low, cupressoid-leaved shrubland (with scattered emergent small trees) is dominated by renosterbos. Elements of shale fynbos are present. In the eastern regions open, tall shrublands (possibly closely affiliated to FRs 12 Central Rûens Shale Renosterveld) are found, with microphyllous shrubs forming the dominant layer. Breede Shale Renosterveld grades into SKv 7 Robertson Karoo in the central valley, with karoo shrublands usually occurring on the northern aspects and renosterveld found on the southern aspects, with a decline in the extent of the karoo shrublands to the south. Heuweltjies are very prominent, with either bush clumps in moister areas or succulent shrubs in drier habitats.

The Breede Shale Renosterveld (FRs 8) vegetation unit is distributed in the Western Cape Province: Patches in the Breede River Valley from Tulbagh to Swellendam; more specifically, most of the valley floor between Tulbagh and Wolseley, isolated small patches to the vicinity of Worcester, diverse patches between Stettyn and McGregor south of the Breede River, a near continuous but irregular band on the southern foothills of the Langeberg from Philipsdale near Worcester to Ashton. The most extensive area occurs near Ashton. McGregor and the confluence of the Riviersonderend and Breede Rivers west of Swellendam. Altitude 100–650 m.

This vegetation unit is classified as Vulnerable. A conservation Target of 27% has been set. The unit is statutorily conserved in the Vrolijkheid Nature Reserve (2%) as well as in Langeberg-wes and Matroosberg mountain catchment areas. Some 31% transformed, mainly by cultivation. Alien Pinus pinaster and several species of Acacia occur locally, at low levels. Erosion spans high and very low.

c) Robertson Karoo (SKv 7)

The Boskloof substation also touches the Robertson Karoo (SKv 7), which forms undulating flats and adjacent hills (sometimes with very steep flanks) supporting dwarf succulent shrubland to succulent thicket of medium height dominated by succulent species of Euphorbia, Crassula (and related genera) and vygies (Drosanthemum and Ruschia the major structural players). Euphorbia mauritanica (var. corallothamnus) is usually dominant on heuweltjies, which are an important element of the landscape and vegetation of the Robertson Karoo (Midgley & Musil 1990, Van Wyk & Smith 2001).

This vegetation is distributed in the Western Cape Province, it forms Broad valley of the middle reaches of the Breede River around Worcester, Robertson and Ashton. It is foun Altitudes range between 160–960 m.

The unit is classified as Least threatened, and a 16 % conservation target has been set. A small area is statutorily conserved in the Vrolijkheid Nature Reserve as well as on the premises of the Karoo Desert National Botanical Garden in Worcester (Oliver 2000) and in the Department of Agriculture Field Reserve (Olivier 1979). Marginal patches of the Robertson Karoo are under protection of private reserves such as Matroosberg, Drooge Riviers Berg, Langeberg-wes, Riviersonderend and Doornkloof. About 16% has been transformed by urban development as well as by cultivation: vineyards and orchards. Alien plant invasions can be a problem in places. The pressure of natural erosion processes is moderate (45%) to both high (24%) and low (22%).

d) South Langeberg Sandstone Fynbos (FFs 16)

The 132kv line passes through the South Langeberg Sandstone Fynbos (FFs 16) vegetation unit which features Complex of gentle to very steep, south-facing slopes, not much dissected over most of the range, but deeply dissected in parts. The Cedarberg Shale Band is prominent in the east, in an almost vertical orientation, as a narrow, smooth-sided valley along which the hiking trails are orientated. Ericaceous and restioid fynbos predominate at higher altitudes, with moderately tall

to tall proteoid fynbos on middle and lower slopes. Scrub and restioid fynbos are found in habitats with much groundwater.

The unit is distributed in the Western Cape Province, it forms the southern slopes of the Langeberg from the Keerom Mountains near Worcester to Cloete's Pass north of Albertinia, Waboomsberg (north of Montagu), Warmwaterberg (north of Barrydale) and Amandelbosberg (northeast of Heidelberg) Mountains. Altitude 200–1 800 m with several high peaks such as Misty Point (1 709 m) and Grootberg (1 637 m), generally higher in the west than the east.

The unit is classified as Least threatened, A 30% conservation target has been set. An estimated 23% has been Statutorily conserved in the Marloth Nature Reserve and Boosmansbos Wilderness Area. While an additional 54% enjoys protection in mountain catchment areas such as Langeberg-wes, Langeberg-oos and Matroosberg. Only 3% transformed (pine plantations, cultivation). *Alien Pinus pinaster, Hakea sericea* and *Acacia mearnsii* are found in places. Erosion very low and moderate.

e) Matjiesfontein Quartzite Fynbos (FFq 3)

The line touches the Matjiesfontein Quartzite Fynbos (FFq 3) at two sections, this vegetation unit features Low flat mountains and parallel ridges in a west-east orientation. Apart from the Witteberg and Elandsberg, this vegetation type consists of narrow, linear bands surrounded by FFh 2 Matjiesfontein Shale Fynbos and Succulent Karoo vegetation. It is a medium dense, medium tall shrubland, structurally classified mainly as asteraceous and proteoid fynbos, although restioid fynbos is also present. The lower northern slopes in the east, where there is a rainshadow effect due to the Swartberg Mountains, support Succulent Karoo vegetation.

It is distributed in the Western Cape Province, it forms a complex of ridges and low mountains mostly in the Western Little Karoo extending from Saalberg near Karoopoort and Skulpiesklip in the west to Elandsberg near the Gamkapoort Dam in the east. This includes parts of the Bontberg, Voetpadsberg and Koegaberge in the vicinity of Touws River, the Witteberg south of Matjiesfontein including many ridges between the Witteberg and Anysberg, and the higher ridges north of, and running

parallel to, the Klein Swartberg. Also between Ouberg Pass and Gatskraal (Mont Eco) west of Warmwaterberg and on hill summits around Ladismith, including Ladismith Hill. Altitude 750–1 684 m at an unnamed point north of Towerkop.

The is classified as Least threatened. A 27% conservation Target has been set, with estimated 5% Statutorily conserved in the Anysberg Nature Reserve and a further 3% in Vaalkloof Private Nature Reserve. Only about 15% has been transformed (cultivation). Erosion low and moderate.

f) Matjiesfontein Shale Renosterveld (FRs 6)

A significant length of the line touches the Matjiesfontein Shale Renosterveld (FRs 6) vegetation unit. This unit can be observed on Low mountains, parallel hills and mid-altitude plateaus supporting a low, open to medium dense, leptophyllous shrubland with a medium dense matrix of short, divaricate shrubs, dominated by renosterbos. Heuweltjies present at low densities in places.

It is distributed In the Western Cape Province: From De Doorns and the top of the Theronsberg Pass in the west to Gamka Poort in the east, remaining north of the Waboomberg and Warmwaterberg in the Little Karoo and north of the Anysberg and Groot Swartberg and positioned south of the Tanqua Karoo, the Grootrivier near Matjiesfontein and the Floriskraal Dam southeast of Laingsburg. This type surrounds the many higher elevation ridges of FFq 3 Matjiesfontein Quartzite Fynbos and FFh 2 Matjiesfontein Shale Fynbos.The unit thrives at altitudes ranging between 750–1 300 m.

The vegetation unit is classified as Least threatened, while a conservation Target of 27% has been set. About 7% in total conserved in the Anysberg Nature Reserve (CapeNature) and private conservation areas such as Rooikrans. Some 9% totally transformed (mainly cultivation). Erosion moderate to very low as well as very high in places.

g) Western Little Karoo (SKv 8)

The line near the Quarry Trac susbation consists of the Western Little Karoo (SKv 8) vegetation unit. This unit Flat or slightly undulating landscapes dominated by a

mosaic of Karoo shrublands of low and medium height encompassing (as dominants) both nonsucculent (*Chrysocoma, Pentzia, Pteronia, Rhigozum, Tripteris)* as well as succulent (*Crassula, Euphorbia, Ruschia, Tylecodon*) shrubs.

It is distributed in the Western Cape Province: The unit covers most of the western basin of the Little Karoo from the confluence of the Groot and Gouritz Rivers in the west as far as Anysberg by surrounding this mountain range and also extending along the northern flanks of the Klein Swartberg. Two larger patches of the Western Little Karoo are found immediately to the east and south of Touws River and one small isolated patch fringes the Langeberg Mountains in the Montagu area. Altitude 160–1 060 m (most of the area at 300–860 m).

The unit is classified as Least threatened. A conservation Target of 16% has been set About 4% of the area is statutorily conserved in Anysberg and Dornkloof Nature Reserves and Eyerpoort (private reserve). About 3% has been transformed by cultivation. Alien Acacia cyclops and A. saligna pose a threat to the vegetation locally. Invasive Atriplex lindleyi subsp. inflata is a serious local problem for grazing. Erosion is high (54%), moderate (19%) and very low (15%).

h) Koedoesberge-Moordenaars Karoo (SKv 6)

The bulk of line near the Laingsburg substation traverses through the Koedoesberge-Moordenaars Karoo (SKv6)br vegetation unit. This vegetation unit is typically found in slightly undulating to hilly landscape which is dominated by low succulent scrub and dotted by scattered tall shrubs, patches of ‘white’ grass visible on plains, the most conspicuous dominants being dwarf shrubs of *Pteronia, Drosanthemum and Galenia*.

The Koedoesberge-Moordenaars Karoo vegetation unit is distributed in the Western Cape and Northern Cape (smaller portion) Provinces, Koedoesberge and Pienaarse Berg low mountain ranges bordering on southern Tanqua Karoo and separated by the Klein Roggeveld Mountains from the Moordenaars Karoo in the broad area of Laingsburg and Merweville. The unit also includes the Doesberg region east of Laingsburg and piedmonts of the Elandsberg as far as beyond the Gamkapoort Dam

at Excelsior (west of Prince Albert). This vegetation unit thrives in altitudes ranging between 500–1 250 m (most of the area at 680–1 120 m).

The Koedoesberge-Moordenaars Karoo vegetation unit is classified as Least threatened. A conservation target 19% has been set, with a very small portion enjoying statutory conservation in the Gamkapoort Nature Reserve. The vegetation unit is transformed only to a very small extent. There are no serious alien plant invasions recorded. Erosion is moderate (88%) and only to lesser extent high or very low.

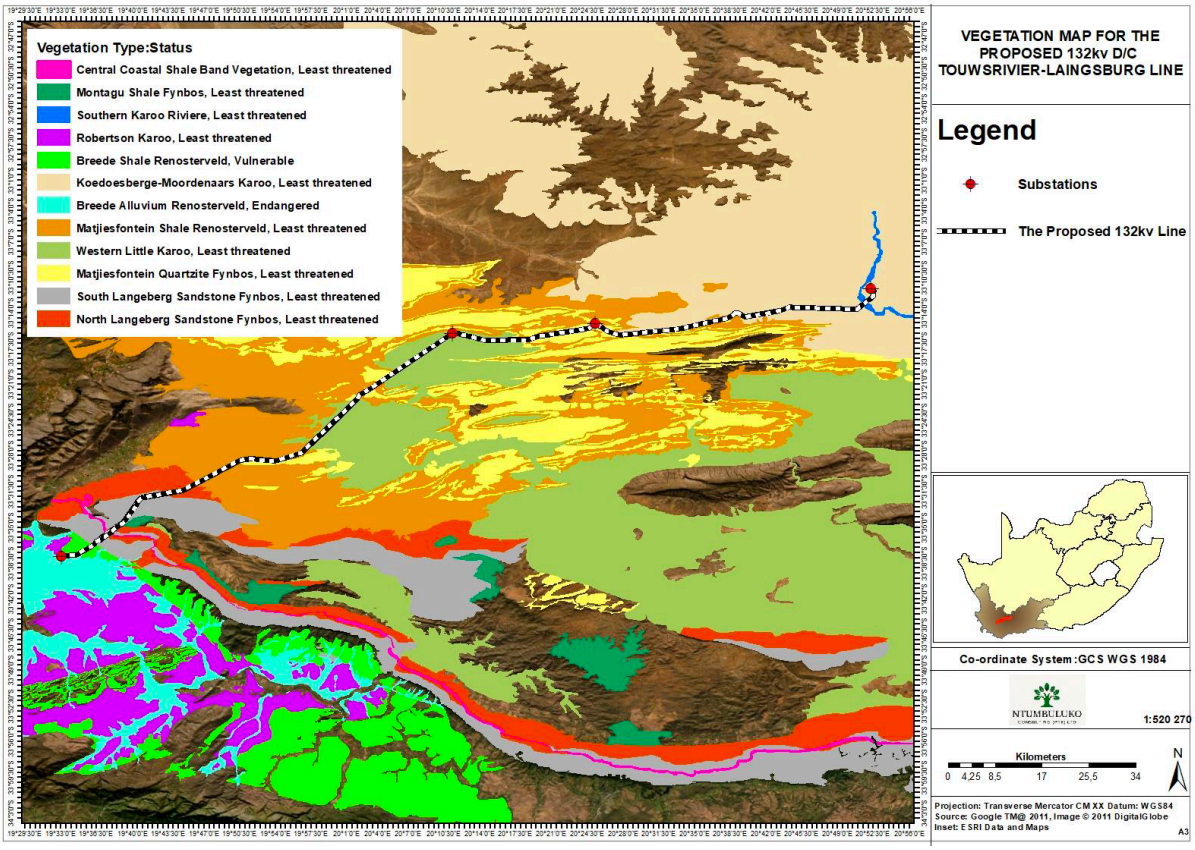

Figure 9: Vegetation Map

According to the DFFE Screening tool report the project area traverses over medium – low sensitive theme of the plant species theme. Refer to the map below. However the screening tool makes an indication that the line traverses over the area where the *Anderbergia ustulate* can occur.

The *Anderbergia ustulate* is a listed plant species within the red list of plant species.

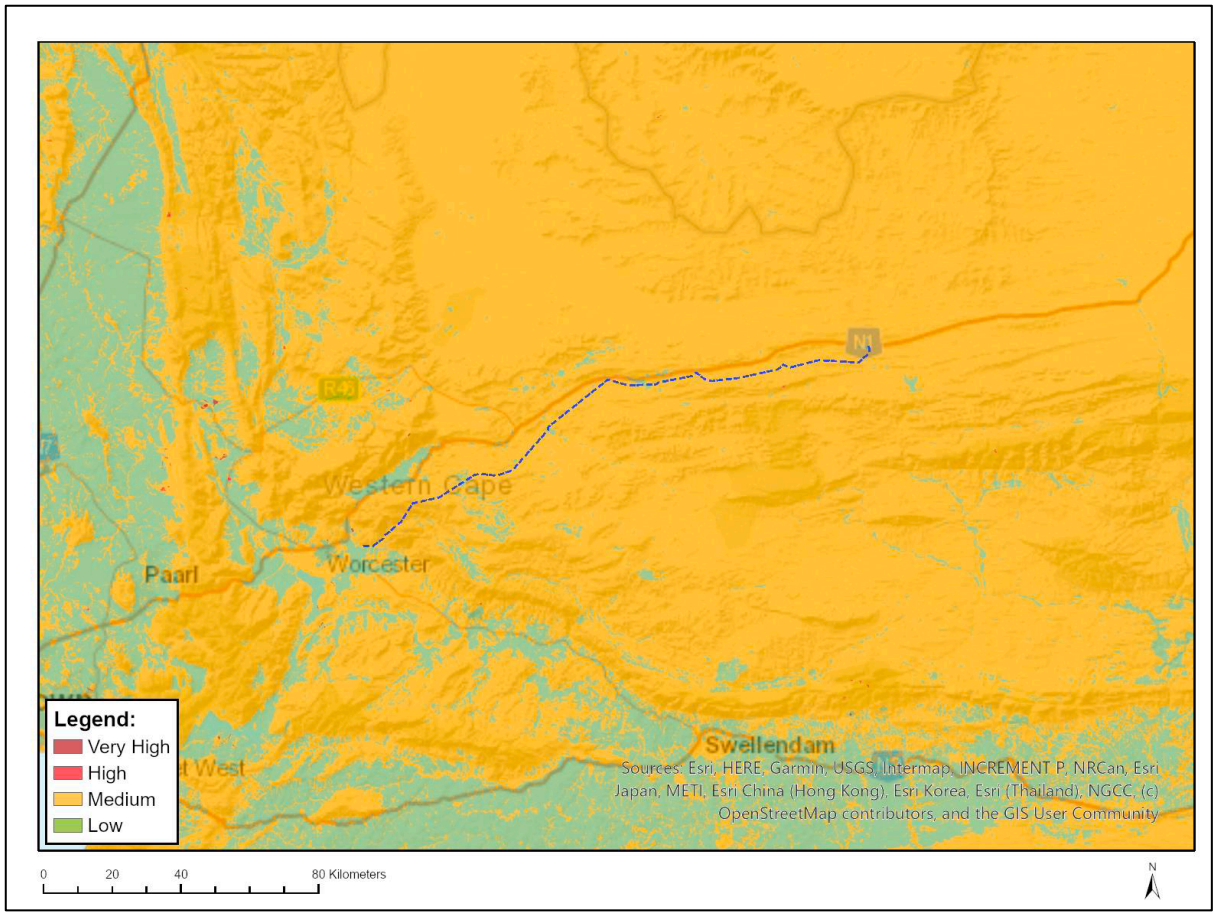

Figure 10: DFFE Screening tool Plant species sensitivity theme

6.3.2 Fauna

According to the desktop study conducted, forty-eight species of mammal are known to occur or likely to occur within the region (Friedmann & Daly 2004, Skinner & Chimimba 2005, Monadjem et al. 2010), and the majority of these can be expected to occur within the study area, given the habitats available and the relatively untransformed nature of much of the study area. The species listed in table below were identified as being possible to occur within the study area or the immediate vicinity of the study site. It must be noted that some of these species are very sensitive to habitat and in some instances; the likeliness for them to occur is minimal.

Table 11: List of mammal species that occur in the project area as well as their global and regional conservation statuses (IUCN, 2018; SANBI, 2016)

#	Scientific name	Common name	Red list category
1	ORDER Rodentia	Unidentified Rodentia	
2	*Raphicerus campestris*	Steenbok	Least Concern (2016)
3	*Sylvicapra grimmia*	Bush Duiker	Least Concern (2016)
4	*Canis mesomelas*	Black-backed Jackal	Least Concern (2016)
5	*Otocyon megalotis*	Bat-eared Fox	Least Concern (2016)
6	*Chlorocebus pygerythrus*	Vervet Monkey	Least Concern (2016)
7	*Papio ursinus*	Chacma Baboon	LC (IUCN, 2016)
8	*Caracal caracal*	Caracal	Least Concern (2016)
9	*Felis silvestris*	Wildcat	Least Concern (2016)
10	*Panthera pardus*	Leopard	Vulnerable (2016)
11	*Cynictis penicillata*	Yellow Mongoose	Least Concern (2016)
12	*Herpestes pulverulentus*	Cape Gray Mongoose	Least Concern (2016)
13	*Hyaena sp.*	Striped and Brown Hyaenas	
14	*Hystrix africaeaustralis*	Cape Porcupine	Least Concern
15	*Lepus capensis*	Cape Hare	Least Concern
16	*Desmodillus auricularis*	Cape Short-tailed Gerbil	Least Concern (2016)
17	*Otomys unisulcatus*	Karoo Bush Rat	Least Concern (2016)
18	*Parotomys brantsii*	Brants's Whistling Rat	Least Concern (2016)
19	*Rhabdomys pumilio*	Xeric Four-striped Grass Rat	Least Concern (2016)
20	*Procavia capensis capensis*	Cape Rock Hyrax	LC (IUCN 2015, global sp. level)
21	*Genetta tigrina*	Cape Genet (Cape Large-spotted Genet)	Least Concern (2016)

6.3.2.1 Reptiles and amphibians

Based on the IUCN Red List Spatial Data (IUCN, 2017) and the Reptile Map database provided by the Animal Demography Unit (ADU, 2017) 13 reptile species are expected to occur in the project area. No species of conservation concern should be present according to the above-mentioned sources within the project area but in situ observations may prove otherwise. During the site investigation 1 reptile was observed (tortoise, refer to the picture below).

Based on the IUCN Red List Spatial Data (IUCN, 2017) and the Amphibian Map database provided by the Animal Demography Unit (ADU, 2017) 3 amphibian species are expected to occur in the project area, namely:

- *Vandijkophrynus gariepensis gariepensis*
- *Amietia fuscigula*
- *Tomopterna delalandii*

Figure 11: Tortoise that was observed within the line

6.3.1.2 Avifuna

Birds are generally regarded as good ecological indicators, because their presence or absence tends to represent conditions pertaining to the proper functioning of an ecosystem. Bird communities and ecological conditions are directly linked to land cover. As the land cover of an area changes, so do the types of birds in that area (The Bird Community Index, 2007). Land cover is directly linked to habitats within

the study area. The diversity of these habitats should give rise to many different species.

The proposed powerline repairs are located within close proximity to the Anysberg Nature Reserve which is classified as an Important Bird Area (IBA). According to the South African Bird Atlas Project (SABAP2), over species of birds have been identified in the area. According to Birdlife South Africa, “Globally threatened species are Blue Crane, Ludwig’s Bustard, Southern Black Korhaan Afrotis afra, Martial Eagle and Black Harrier. Regionally threatened species are Karoo Korhaan, Verreauxs’ Eagle, Black Stork, Lanner Falcon Falco biarmicus and Cape Rockjumper. Restricted-range and biome-restricted species that are common in the IBA are Cape Spurfowl, Cape Bulbul and Karoo Chat. Locally common restricted-range or biome-restricted species are Karoo Lark, Layard’s Tit-Babbler, Karoo Eremomela and Namaqua Warbler, while uncommon species in this category are Ludwig’s Bustard, Sickle-winged Chat Cercomela sinuata, Cape Rockjumper, Victorin’s Warbler, Cape Sugarbird, Cape Siskin, Protea Seedeater Crithagra leucoptera, Orange-breasted Sunbird, Pale-winged Starling and Black-headed Canary”.

6.3.2.3 Invertebrates

Butterflies are a good indication of the habitats available in a specific region (Woodhall 2005). Although many species are eurytropes (able to use a wide range of habitats) and are widespread and common. South Africa has many stenotrope or endemic species (specific habitat requirements with populations concentrated in a small area) which may be very specialized (Woodhall 2005). Butterflies are useful indicators as they are relatively easy to locate and catch, and therefore identify.

6.4 Cultural Landscape, Built Landscape and Historical Background

The proposed development falls within the Karoo. The name 'Karoo' has its roots in the Khoisan word meaning 'place of great dryness. It once supported large grassy flatlands and the San and Khoekhoen migrated across the region for hunting and grazing purposes. Less than two hundred years ago large herds of antelope still roamed the grass plains. With the occupation of the area by stock farmers, the sheep gradually replaced the game and the grass receded along with changing grazing and

weather patterns (Winter et al 2009; Winter & Oberholzer 2013). By the late 17th century, the Khoenhoen had moved from the region into the more water-rich southern Karoo and the coastal plains. During the early colonial period, the harshness of the Karoo region formed an almost impenetrable barrier from the Cape to the interior for colonial explorers, hunters and travelers. The 18th century was characterized by a marked increase in the rate of expansion of the boundaries of the settlement at the Cape. This was associated with the emergence of the migrant stock farmer (trekboer) (Guelke 1982 in Winter et al 2009). Early routes into the interior largely followed the tracks initially used by migrating herds of game or the cattle herds and sheep flocks of the Khoekhoen on their seasonal route between coastal and inland grazing grounds. These routes were later reinforced by generations of trek farmers moving between the markets at the Cape and their farms (Winter et al 2009).

De Kock and Schulz (2011, SAHRIS NID 503543) in their HIA located less than 10km southeast of the western end of the proposed upgrade, describe the landscape as "an arid Karoo landscape and is located along a lower-lying, gentle, north-facing slope and with the Witteberg mountain range as natural backdrop to the south." One Provincial Heritage Site (PHS) is located within a 100m radius of the development. This site, Dutch Reformed Church, Voortrekker Street, Laingsburg (SAHRIS ID 28191) but has been mapped incorrectly on SAHRIS. The correct location is approximately 400m eastwards and is still within 100m of the proposed upgrade. The Laingsburg cemetery is also within 200m of the proposed upgrade.

7. PUBLIC PARTICIPATION PROCESS

Public Participation Process (PPP) is being undertaken in terms of regulation 41 of the EIA 2014 Regulations, as amended, for the project triggering listed activity under the NEMA. Ufefe Development Consultants (Pty) Ltd on behalf of Eskom: Distribution Cape Coastal Cluster took into account all relevant guidelines applicable to public participation as contemplated in section 24J of the NEMA. Ufefe Development Consultants (Pty) Ltd will be giving notices to all potential I&APs to participate in the proposed project by undertaking the following PPP:

7.1 Legal requirements of the PPP as required by Section 41 of the NEMA

41 (1) This regulation only applies in instances where adherence to the provisions of this regulation is specifically required.

(2) The person conducting a PPP must take into account any relevant guidelines applicable to public participation as contemplated in section 24J of the Act and must give notice to all potential I&APs of an application or the proposed application which is subjected to public participation by:

(a) fixing a notice board at a place conspicuous to and accessible by the public at the boundary, on the fence or along the corridor of (i) the site where the activity to which the application or proposed application relates is or is to be undertaken; and (ii) any alternative site.

(b) giving written notice, in any of the manners provided for in section 47D of the Act, to (i) the occupiers of the site and, if the proponent or applicant is not the owner or person in control of the site on which the activity is to be undertaken, the owner or person in control of the site where the activity is or is to be undertaken and to any alternative site where the activity is to be undertaken; (ii) owners, persons in control of, and occupiers of land adjacent to the site where the activity is or is to be undertaken and to any alternative site where the activity is to be undertaken; (iii) the municipal councilor of the ward in which the site and alternative site is situated and any organisation of ratepayers that represent the

community in the area; (iv) the municipality which has jurisdiction in the area; (v) any organ of state having jurisdiction in respect of any aspect of the activity; and (vi) any other party as required by the competent authority;

(c) placing an advertisement in (i) one local newspaper; or (ii) any official that is published specifically for the purpose of providing public notice of applications or other submissions made in terms of these Regulations;

(d) placing an advertisement in at least one provincial newspaper or national newspaper, if the activity has or may have an impact that extends beyond the boundaries of the metropolitan or district municipality in which it is or will be undertaken: Provided that this paragraph need not be complied with if an advertisement has been placed in an official referred to in paragraph (c)(ii); and

(e) using reasonable alternative methods, as agreed to by the competent authority, in those instances where a person is desirous of but unable to participate in the process due to (i) illiteracy; (ii) disability; or (iii) any other disadvantage.

(3) A notice, notice board or advertisement referred to in sub regulation (2) must (a) give details of the application or proposed application which is subjected to public participation; and

(b) state (i) whether a BA or S&EIR procedures are being applied to the application; (ii) the nature and location of the activity to which the application relates; (iii) where further information on the application or proposed application can be obtained; and (iv) the manner in which and the person to whom representations in respect of the application or proposed application may be made.

(4) A notice board referred to in sub regulation (2) must (a) be of a size of at least 60cm by 42cm; and (b) display the required information in lettering and in a format as may be determined by the competent authority.

7.2 Announcement of the project and the draft basic assessment report availability

The project was announced to the public, by means of the placement of a newspaper advertisement and site notices. Background Information Documents (BIDs) are being

distributed to I&APs to create awareness of the project. Ufefe have announced the availability of the Draft BAR.

The report will be subjected to a PPP of at least 30 days and the Final BAR will reflect the incorporation of comments received, including any comments from the competent and commenting authorities.

The following processes are being undertaken to announce the project and the Draft Basic Assessment Report:

- An I&AP database has been opened and is being maintained, and it includes all potential I&APs in respect of the application in accordance with Regulation 42.
- Letters are being sent to all I&APs, written in any of the manners provided for in section 47D of the NEMA, announcing the project and the availability of the Draft BAR, containing project information and a locality map to the municipal councilor of the ward in which the site is situated and any organisation of ratepayers that represent the community in the area, the municipality which has jurisdiction in the area, any organ of state having jurisdiction in respect of any aspect of the activity; and any other party as required by the competent authority.
- Site notice boards were plugged at a place conspicuous to and accessible by the public at the boundary of the site where the activity to which the application relates to.
- A newspaper advertisement will be published on the *Standard Newspaper*, the advert was published on 29th August 2025.

Subsequent to the 30 days' period, all comments and representations received from I&APs will be considered and recorded in the Comments and Responses Report (CRR). All I&APs who would have participated in the PPP will be thanked, and their comments acknowledged.

The Draft Basic Assessment Report is made available for public comment for 30 days from the day they receive it.

7.4 Authority Consultation

The DFFE is the Competent Authority for this application. A record of all authority consultation undertaken, is included within this BAR. Consultation with the Competent Authorities (i.e. DFFE) will be undertaken throughout the BA Process. On-going consultation included the following:

- Notification and Consultation with Organs of State that may have jurisdiction over the project, including: Provincial departments and Local Municipality
- The draft BAR will be submitted to the DFFE for review between August and September 2025 for comments, simultaneously with public review of the Draft BAR.
- Similarly, the draft BAR will be submitted to the organs of state during the public review of the draft BAR.

7.5 Announcement of the decision

Ufefe Development Consultants will ensure that all registered I&APs are provided with access to the decision and the reasons for such decision. I&APs will be drawn to the fact that appeals may be lodged against the decision in terms of the National Appeals Regulations of 2014 (GNR. 993), if such appeals are available in the circumstances of the decision. The decision will be advertised through the following methods:

- Distribution of notification letters to the stakeholder database via emails; and
- Placement of a newspaper advert in the same local newspaper where the project and the availability of the Draft BAR was announced.

8. ENVIRONMNTAL IMPACTS ASSESSMENT

8.1 Impacts and risks identified

The table below presents the impacts and risk that have been identified associated with the proposed 132k/v powerline maintenance by Eskom: Distribution, the impact identified we assessed in their **Nature, Significance, Consequence, Extent, Duration and Probability.**

Table 12: Potential Environmental Impact Identified

Aspect	Rating	Impact Description
Climate	Neutral	Local climate conditions do not appear to be of a significant concern to the proposed project. In a broader scale the project will have no impact on the local and/or global climate change.
Topography	Neutral	The topography of the study area is undulating; this may pose design challenges particularly in the steeper area; however, the development will not have significant impact on the topography as the existing corridor will be used for the repairs and or maintenance of the powerline.
Heritage	Negative	The heritage significance of the project area has been classified as a Low sensitive in terms of the DFFE Screening tool report.
Air Pollution	Neutral	Potential air pollutant during construction may be dust emanating site preparation and excavations during construction. Given the nature and magnitude of the proposed project it is anticipated that pollution impact will be local in extent, and short term. Mitigation measures such as dust suppression can reduce the impact to become site specific.
Visual Aspect	Negative	Given the topography of the study area and that the proposed repairs will be undertaken within the existing corridor, the impact can be considered low significance.
Noise	Negative	An increase in noise is expected to emanate from construction activities, which might have an impact, especially on the surrounding farms. Noise associated with the construction activities can be mitigated by limiting the construction operation to business hours, during which noise will not be of such a big concern to surrounding residents.

Waste	Negative	Waste material will be generated during the construction phase. Such waste may accumulate from the workers campsite or from litter left around the work area by the construction staff. The aesthetic value of the area would decrease if such waste is not collected and disposed of appropriately. The impact of waste is definite and will last for the duration of the construction phase, after which it must be removed from site for re-use, recycling or safe disposal.
Soil Erosion	Negative	Movement of heavy machinery as well as vegetation clearance may cause destabilisation of soils which then become susceptible to erosion. Continuous movement of vehicles over the land during the construction phase may leave it susceptible to erosion. Depending on the season the proposed construction activities will commence, the impact may increase if construction activities are conducted in the wet season, the impact will be manageable during dry season.
Flora	Negative	Potential ecological impacts resulting from the proposed development would stem from a variety of different activities and risk factors associated with the preconstruction, construction, and operational phases of the project potentially. Vegetation clearing for access roads, laydown areas and the powerline site route may impact intact vegetation. Increased erosion risk would occur due to the loss of plant cover and soil disturbance during the construction phase. Some of the site options are steep and risk of erosion would be high. This may impact downstream riparian and wetland habitats if a lot of silt enters the drainage systems. Increased human presence can lead to illegal plant harvesting and other forms of disturbance such as fire. During the operational phase, the presence of the

		powerline may disrupt the connectivity of the landscape for some species which may impact their ability to disperse or maintain gene flow between subpopulations.
Fauna	Negative	No sensitive species or sensitive areas are flagged so far. The project will not substantially change the reigning ecological character of the general area. Further, the proposed project will not significantly impact negatively on the assemblages and conservation of the general area. Considering the insignificant extent of the relatively narrow and linear servitude it is not expected that endangered species of conservation will be put at risk; however, should any species of conservation concern be encountered, these will be protected.
Avifauna	Negative	The proposed project will pose a limited threat to the birds occurring in the vicinity of the infrastructure. The power line poses a low collision risk and a low electrocution risk. The impact of displacement due to habitat transformation will have a low impact on avifauna due to the largely transformed nature of the proposed site. Species will be particularly sensitive to this disturbance during the breeding season. Therefore, species within this landscape often experience disturbance and as a result disturbance of birds by the proposed powerline is anticipated to have low significance.
Socio-Economic	Positive and Negative	The construction phase may have a negative impact on the surrounding landowners if not properly managed. It could result to disturbance of residents as a result of construction related activities. Other social impacts that have been identified and will be assessed further

		include access across site, access to servitude across private property, crime and security, disturbance of cultural, spiritual, and religious sites, disturbance of sense of place, fencing, fire risk, and health issues among others. Conversely, a positive impact can emanate from the proposed development through employment of local residents. Also, a micro-economic environment could be created through vending/trade between contract workers and the locals.
Traffic	Negative	A significant amount of material and equipment will be delivered to the site during the construction phase of the development. As the line runs parallel to the National Road (N1) and crosses the railway and number of regional roads (including R318) there is a likelihood that, during the stringing process traffic disruption could occur, however, construction techniques are available that will keep these disruptions to a minimal level. Traffic disruptions during the maintenance phase, when considered across the lifespan of the project, will be minimal.
Land use	Negative	The proposed project is situated largely within private properties that are currently used for agriculture and residential use, as well as nature reserve. The construction phase of the project will have an impact on the land uses in particular the agricultural land use.

8.2 Impact Assessment Methodology

The potential environmental impacts associated with the project will be evaluated according to its nature, extent, duration, intensity, probability and significance of the impacts, whereby:

- **Nature:** A brief written statement of the environmental aspect being impacted upon by particular action or activity.
- **Extent:** The area over which the impact will be expressed. Typically, the severity and significance of an impact have different scales and as such bracketing ranges are often required. This is often useful during the detailed assessment phase of a project in terms of further defining the determined significance or intensity of an impact. For example, high at a local scale, but low at a regional scale;
- **Duration:** Indicates what the lifetime of the impact will be;
- **Intensity:** Describes whether an impact is destructive or benign;
- **Probability:** Describes the likelihood of an impact actually occurring; and
- **Cumulative:** In relation to an activity, means the impact of an activity that in itself may not be significant but may become significant when added to the existing and potential impacts eventuating from similar or diverse activities or undertakings in the area.

Table 13: Criteria for evaluating potential environmental impacts

CRITERIA	DESCRIPTION			
Extent	National (4) : The whole of South Africa	Regional (3): Provincial and parts of neighbouring provinces	Local (2): Within a radius of 2 km of the site	Site (1): Within the site
Duration	Permanent (4): Mitigation either by man or natural process will not occur in such a way or in such a time span that the impact can be considered transient	Long-term (3): The impact will continue or last for the entire operational life of the development, but will be mitigated by direct human action or by natural processes thereafter. The only class of impact which will be non-transitory	Medium-term (2): The impact will last for the period of the site establishment phase, where after it will be entirely negated	Short-term (1): The impact will either disappear with mitigation or will be mitigated through natural process in a span shorter than the site establishment phase
Intensity	Very High (4): Natural, cultural and social functions and processes are altered to extent that they permanently cease	High (3): Natural, cultural and social functions and processes are altered to extent that they temporarily cease	Moderate (2): Affected environment is altered, but natural, cultural and social functions and processes continue albeit in a modified way	Low (1): Impact affects the environment in such a way that natural, cultural and social functions and processes are not affected

CRITERIA	DESCRIPTION			
Probability of Occurrence	Definite (4): Impact will certainly occur	Highly Probable (3): Most likely that the impact will occur	Possible (2): The impact may occur	Improbable (1): Likelihood of the impact materialising is very low
Impact Reversal	Highly Impossible (4): Impact reversal will certainly be impossible	Moderate (3): Impact can be reversed to some extent with loss of natural resources	Possible (2): High possibility of impact reversal	Definite (1): Impact can be totally reversed
Loss of irreplaceable resources	Definite (4): Resources definitely be lost	Highly Probable (3): Most likely that resources will be lost	Possible (2): Resources may be lost	Improbable (1): Loss of resources is highly unlikely

Significance is determined through a synthesis of impact characteristics. Significance is also an indication of the importance of the impact in terms of both physical extent and time scale, and therefore indicates the level of mitigation required. The total number of points scored for each impact indicates the level of significance of the impact.

Significance=Extent+ Duration +Intensity x Probability

Table 14: Criteria for classifying impacts

Low impact/ Minor (3 -10 points)	A low impact has no permanent impact of significance. Mitigation measures are feasible and are readily instituted as part of a standing design, construction or operating procedure.
Medium impact/ Moderate (11 -20 points)	Mitigation is possible with additional design and construction inputs.
High impact (21 -30 points)	The design of the site may be affected. Mitigation and possible remediation are needed during the construction and/or operational phases. The effects of the impact may affect the broader environment.
Very high impact/ Major (31 or more points)	Permanent and important impacts. The design of the site may be affected. Intensive remediation is needed during construction and/or operational phases. Any activity which results in a "very high impact" is likely to be a fatal flaw.
Status	Denotes the perceived effect of the impact on the affected area.
Positive (+)	Beneficial impact.
Negative (-)	Deleterious or adverse impact.
Neutral (/)	Impact is neither beneficial nor adverse.
It is important to note that the status of an impact is assigned based on the status quo – i.e. should the project not proceed. Therefore not all negative impacts are equally significant.	

The suitability and feasibility of all proposed mitigation measures is included in the assessment of significant impacts. This was achieved through the comparison of the

significance of the impact before and after the proposed mitigation measure is implemented.

8.3 The positive and negative impacts of the proposed activity

At this moment there is no alternative layout, should the comments from IAPs and other relevant stakeholders warrants that we change the layout or have alternative, those comments will be addressed accordingly.

8.4 Motivation where no alternative sites were considered

The nature of the proposed activity dictates the proposed site location. The proposed project is for an existing 132kv powerline distribution, the proponent does not intend to change the distribution capacity and does not intent to increase the number of the towers within the servitude, the proponent only intends to continue with maintenance and replace the lattice towers with the monopoles towers in order to avoid power cuts during severe weather conditions such as strong winds as experienced in the year 2024. As such, the project did not consider a location and or activity alternative.

8.5 Assessment of impacts

Potential impact of each main activity in each phase, and corresponding significance assessment. The significance of each activity in each phase of the proposed mining activity associated with the borrow pit is discussed in the tables below.

NB: SR= Significance rating; E=Extent; D=Duration; I=Intensity; P=Probability

Table 15: Impact assessment for the proposed repairs

Impact pathway	Nature of potential impact/risk	Phase impact occurs	Before Mitigation				Significance of impact	Reversibility of impact	Irreplaceability of receiving environment	After Mitigation				Significance of impact
			E	D	I	P				E	D	I	P	
Non-compliance with legislative requirements	Non commencement/ delayed commencement of proposed project.	Planning	3	4	3	2	(20 -ve)	Yes	N/A	1	1	1	2	(6 -ve)
Destruction loss of indigenous natural vegetation	Habitat and loss of species	Construction	2	3	3	3	(21 -ve)	Yes	Moderate	1	2	2	3	(15-ve)
	Alien plant invasions in disturbed areas	Construction	2	3	3	3	(21 -ve)	Yes	Moderate	1	2	1	3	(15 -ve)
	Loss of indigenous natural vegetation due to clearance of vegetation, for the replacement of towers.	Construction	2	3	3	3	21-ve)	Yes						

Impact pathway	Nature of potential impact/risk	Phase impact occurs	Before Mitigation				Significance of impact	Reversibility of impact	Irreplaceability of receiving environment	After Mitigation				Significance of impact
			E	D	I	P				E	D	I	P	
Disturbance of soils and increase erosion	Vegetation cover establishes areas of soil stability. Clearance of vegetation may lead to rapid soil erosion.	Construction	2	3	3	3	(24-ve)	Yes	Moderate	1	2	2	2	(10-ve)
Fauna	Faunal mortality and displacement on site.	Construction	1	2	2	3	(15-ve)	Yes	Moderate -Low	2	1	1	2	(8 -ve)
Groundwater quality	The trenches may result in the drawdown, which may affect the yield to the surrounding groundwater users. Material used for	Construction	3	3	3	4	(36 -ve)	Yes	Very High	2	2	3	3	(21 -ve)

Impact pathway	Nature of potential impact/risk	Phase impact occurs	Before Mitigation				Significance of impact	Reversibility of impact	Irreplaceability of receiving environment	After Mitigation				Significance of impact
			E	D	I	P				E	D	I	P	
	backfilling may leach pollutants that will result in the pollution of the surrounding groundwater regime.													
Surface water	Degradation and/or destruction of watercourse habitats.	Construction	2	2	3	3	21(-ve)	No	Moderate					
Waste Management	Waste from the construction material and from workers, during construction phase.	Construction phase	2	3	3	3	24 (-ve)	Yes	Moderate	2	2	2	2	12 (-ve)

Impact pathway	Nature of potential impact/risk	Phase impact occurs	Before Mitigation				Significance of impact	Reversibility of impact	Irreplaceability of receiving environment	After Mitigation				Significance of impact
			E	D	I	P				E	D	I	P	
Noise disturbance	Noise generated from the movement of heavy vehicles on site	Construction	2	3	2	2	(14 -ve)	No	Moderate	1	2	2	2	(10 -ve)
Project expenditure (incl. direct capital investment)	Investment and growth in local economy	Construction and Operational Phase	2	3	3	4	(32+ve)	No	Very High	2	3	3	4	(32+ve)
Socio-economic	Potential friction with land owners and legal occupants on various properties within the line	Planning, Operational Phase	3	3	2	3	(24 -ve)	Yes	N/A	1	2	1	2	(8 -ve)

Impact pathway	Nature of potential impact/risk	Phase impact occurs	Before Mitigation				Significance of impact	Reversibility of impact	Irreplaceability of receiving environment	After Mitigation				Significance of impact
			E	D	I	P				E	D	I	P	
	Potential spread of disease and increase in criminal activities within the Laingsburg and Breede Valley municipalities.	Construction	1	2	3	3	18(-ve)	Yes	Moderate	1	2	2	2	10 (-ve)
	Temporary employment opportunities	Construction Operational Phase	2	2	2	4	(24 +ve)	Yes	N/A	2	2	2	4	(24 +ve)
Cultural/ Heritage historical impacts	Discovery of gravesites and historical artefacts in the 132kv line servitude.	Construction Phase	1	2	1	3	(12-ve)	Yes	Moderate	1	1	1	2	(6 -ve)
Palaeontology	The potential impact of the proposed project on local fossil heritage	Construction Phase	1	2	3	3	18(-ve)	Yes	Moderate - Low	1	1	2	2	8(-ve)

Impact pathway	Nature of potential impact/risk	Phase impact occurs	Before Mitigation				Significance of impact	Reversibility of impact	Irreplaceability of receiving environment	After Mitigation				Significance of impact
			E	D	I	P				E	D	I	P	
	resources is primarily confined to the construction phase. The destruction, damage, or disturbance of fossils during construction could result in direct negative impacts on palaeontological heritage resources within the development footprint.													

8.6 Proposed Mitigation Measures

8.6.1 Loss or fragmentation of indigenous natural vegetation

- Construction vehicles and machinery must not encroach into identified 'no-go' areas or areas outside the project footprint.
- Topsoil (20 cm, where possible) must be collected and stored in an area of low sensitivity and used to rehabilitate impacted areas that are no longer required during the operational phase (e.g. laydown areas).
- Only indigenous species must be used for rehabilitation.
- Lay down areas must not be located within any watercourses or drainage lines.
- Employees must be prohibited from making open fires during the construction phase.
- The Alien Invasive Management Plan should be complied and implemented.

8.6.2 Loss of Plant species of conservation concern

If populations of Vulnerable or SCC are found, a permit must be obtained for their relocation to a similar habitat type within the site where they will not be disturbed.

8.6.3 Impact on faunal species habitat

- Only areas targeted for the proposed development should be cleared of vegetation, no other areas.
- Access to the site must only be through existing roads or authorised roads and as approved by the engineer and the Environmental Control Officer (ECO).
- Continuous rehabilitation and maintenance of the construction site should occur during construction. Seed mixes should match the surrounding vegetation types.
- Animals may under no circumstances be handled, removed, killed or interfered with by the Contractor, his employees, his Sub-Contractors or his Subcontractors' employees. This includes foraging, food and wood collecting outside of the project and servitude.

- If animals become trapped in trenches and diggings, a specialist must be contacted to adequately and safely remove these and relocate them to the adjacent habitat.
- Implement speed limits on access roads to prevent unnecessary killing of animals by vehicles.
- No burning of material should be allowed on site.
- Snaring and poaching by employees are strictly forbidden.
- Suitable terrestrial movement corridors such as the watercourse areas should be demarcated as no-go areas where possible to facilitate safe movement of animals.
- Measures must be taken to ensure that workers are aware of laws and restrictions governing the hunting, capturing or trapping of animals and should be advised on the penalties associated with the needless destruction of wildlife.
- Conservation orientated clauses should be built into Contracts for personnel, complete with penalty clauses for non-compliance.
- The surface infrastructure site should be well demarcated, and workers should not enter into adjacent areas.
- The site must be kept clean and tidy and free from litter that could attract rodents and other animal species.

8.6.4 Soil erosion

- Do not clear large areas of indigenous vegetation at a time, without work being conducted in that specific area.
- Erosion control must be implemented where vegetation cover is removed by strict monitoring and implementing erosion control measures where needed.
- Use of siltation bags, berms or gabions can reduce erosion by slowing the run of water.
- Revegetation of cleared areas must be undertaken as soon as possible. Reseed any areas where earthworks have taken place with indigenous grasses to prevent further erosion.
- Topsoil stockpiles must be protected from erosion.
- Topsoil must be protected from getting washed into drainage ways.

- Compaction of soils should be limited and / or avoided as far as possible. Compaction will reduce water infiltration and will result in increased runoff and erosion. Where any disturbance of the soil takes place (have taken place), these areas must be stabilised and any alien plants which establish should be cleared and monitoring must be undertaken until the snag list is completed and or all construction activities have been completed.
- Where compaction becomes apparent, remedial measures must be taken (e.g., "ripping and scarifying" the affected area).
- The use of machinery within the aquatic areas will lead to compaction of soils and destruction of vegetation and must therefore be strictly controlled.
- Appropriate buffer zones should be implemented around the aquatic areas, where required, to prevent sediment changes.

8.6.4 Groundwater contamination

- The proper storage, handling and disposal of hazardous substances (e.g. fuel, oil, cement, etc.) must be undertaken.
- All hazardous substances must be stored in appropriate containment structures free from the ingress and egress of stormwater runoff. Hazardous storage and re-fuelling areas must be bunded prior to their use on site during the construction period.
- The bund wall should be high enough to contain at least 110% of any stored volume. Mixing and/or decanting of all chemicals and hazardous substances must take place on a tray, shutter boards or on an impermeable surface and must be protected from the ingress and egress of stormwater. Cement/concrete batching is to be located in an area to be hardened and must first be approved by the ECO.
- No batching activities shall occur directly on the ground. Provide drip-trays beneath standing machinery/plant that are prone to leaks. Control of waste discharges and do not allow dirty water from operational activities to enter the watercourse.
- Ensure that no construction activities impact on the watercourse or buffer area. This includes edge effects, failure of infrastructure such as sewage pipes.

- Implement litter traps at all watercourse crossings.
- The development footprint must be fenced off or barricaded from the watercourses and no related impacts may be allowed into the watercourse e.g. water runoff from cleaning of equipment, vehicle access etc.

8.6.5 Surface water and wetlands

- A protocol or a method statement must be made available by the applicant regarding spillages of fuels, pesticides or chemicals into the wetland areas. These refer to protocols that will be in place in an emergency situation. The protocol must outline actions to be taken and must be widely communicated to all staff. Where necessary, the appropriate authorities must be notified. This is normally required within 24 hours but must be stated in the protocol or a method statement.
- There must be an ongoing programme to control invasive vegetation.
- All problems identified should be attended to timeously and the wetland should be protected.
- The working areas or tower positions on the powerline must be properly maintained and kept clean.

8.6.6 Social and economic (positive impacts)

- As far as possible, employ local residents during construction, where applicable. This will ensure a reduced dependency on temporary employment in addition to enhancing the living standards of local people.
- Use manual labour where possible and practical.
- Ensure recruitment measures are aimed particularly at construction workers classified as designated employees in terms of the Employment Equity Act (black people, as defined in the Act, women, and disabled people).
- The contractor must ensure that a transparent process of employment is followed to limit opportunities for conflict situations.
- Ensure that the Labour Relations Amendment Act, 2002 (Act No. 12 of 2002) as well as the necessary policies and procedures are taken into consideration to ensure the correct procurement procedures.

8.6.7 Social (negative impacts)

a) Community Protest

- Engage business (small and large) and civil society organisations ahead of the commencement of construction for the purpose of establishing lines of communication and fostering a spirit of co-operation.
- As far as possible, source local labour. All unskilled and semi-skilled labour should be sourced locally; establish a labour recruitment desk in conjunction with local municipality for this purpose.
- Employ a community liaison representative to ensure the free flow of information between the contractor and local communities.

b) Increased spread of disease

- An HIV/AIDS awareness/education component must be included in the induction programme for all personnel working on the proposed powerline repairs.
- Ensure there is easy access to HIV/AIDS related information and condoms for all workers involved with the proposed powerline repairs.

c) Increased crime

- Construction teams should be clearly identified by wearing uniforms and/or identification cards that should be exhibited in a visible place on their body.
- Instant dismissal and prosecution of any staff caught in criminal activities of any kind.
- Inform local law enforcement agencies of the possibilities of increased criminal activity in the area.
- In the event of boundary fences being temporarily compromised alternative security measures should be put in place.

8.6.8 Dust emission

- Dust caused by strong winds on exposed soils should be controlled by means of water spraying.

- Ensure all stockpiles are wet or covered.
- Minimise the number of exposed soils by only removing vegetation for construction when required.
- Ensure good 'housekeeping' is practiced on the construction site.
- Strict speed limits should be applied on any gravel roads to reduce dust levels. Unintended damages to private property.
- Ensure a photo record is kept of all areas where private property will be affected.

- Ensure that any unintended damages to private property including walls, access routes, etc. are immediately repaired.
- .
- In the event of security being compromised because of unintended damages, suitable arrangements should be made to ensure suitable security is provided until such time as repairs have been made
- .

8.6.9 Traffic Management

- Ensure that all staff members and people on site have suitable PPE.
- Ensure there is suitable signage informing road users of construction activities.
- Implement measures to reduce traffic speed.
- Ensure measures are put in place to prevent unauthorised people from accessing the area where powerline repairs are taking place.
- Ensure there is suitable road signage, including the use of the variable messaging system informing road users of construction activities and potential delays.
- Where possible, separate fast- and slow-moving traffic into specific lanes.

8.6.10 Heritage, Archaeology and Palaeontology

- Should any buried archaeological resources or human remains or burials be uncovered during the course of development activities, work must cease in

the vicinity of these finds. The South African Heritage Resources Agency (SAHRA) must be contacted immediately in order to determine an appropriate way forward.

- If fossils are found by the environmental officer, or other responsible person once new excavations for tower foundations and infrastructure have commenced then they should be rescued, and a palaeontologist called to assess and collect a representative sample.
- The attached Chance Fossil Finds Procedure, that has been prepared by the Paleontologist must be implemented.

8.7 Cumulative Impacts

The proposed project site is situated in an area already considered ecologically disturbed, particularly along the servitude. There are clear signs of disturbance due to ongoing human activities and nearby communities and farming activities (livestock) and light industrial activities. Based on the risk assessment, the proposed project and its associated infrastructure are expected to further strain the environment, particularly affecting the local fauna, which will face increased human presence, habitat reduction, and higher noise levels. The fauna survey results suggest that wildlife activity in the area may decrease due to the current disturbances. Additionally, a cumulative loss of both fauna and flora is anticipated.

9. SUMMARY OF KEY ENVIRONMENTAL FINDINGS

In accordance with the EIA Regulations (GN No. 326), this section provides a summary of the key findings of the Basic Assessment (BA) Process, including Specialist Study findings. This section also provides a reasoned opinion as to whether the activity should or should not be authorised and conditions that should be made in respect of that authorisation, as necessary. This chapter provides a summary of the impacts identified and significance ratings, summary of key findings and recommendations from specialists and a motivation for the proposed development.

9.1 Summary of Specialist Studies findings and Recommendations

9.1.1 Terrestrial Biodiversity Assessment

Ecological Characteristics of the study sites:

The proposed site consists of eight (8) vegetation units, majority of which are classified as Least Threatened, one Endangered and one Vulnerable. This implies that the powerline repairs may need to be conducted carefully near areas that are classified as Endangered and Vulnerable. The area consists of slightly undulating to hilly landscape covered by low succulent scrub and dotted by scattered tall shrubs, patches of 'white' grass visible on plains, the most conspicuous dominants being dwarf shrubs of *Pteronia, Drosanthemum* and *Galenia*. The powerline servitude has been disturbed to some extent, especially around the winelands. The most sensitive areas are linked to the nature reserves and the mountainous areas.

The proposed development is considered environmentally acceptable, provided that the mitigation measures and recommendations outlined in this report are fully implemented and adhered to. Given the scope of the project, extensive vegetation clearing will not be required, as activities will be confined to the existing servitude and pylons.

If populations of Critically Endangered as listed in **Table 6-3**, or Endangered SCC (i.e. *Eriocephalus grandiflorus Lotononis venosa, Cleretum lyratifolium* etc) are found consider relocating them to the areas outside of the development footprint, and where this is not feasible, permits for their removal must be obtained from the relevant competent authority. Species that are known to survive translocation should be translocated to the nearest similar habitat type (adjacent areas that are outside of the development footprint. The ECO will be able to guide this process). Where possible avoid the rocky outcrops that are located outside of the development footprint, and extra caution will be required when cutting through the mountainous area because they are aligned to the Critical Biodiversity Areas.

9.1.2 Aquatic Biodiversity Assessment

The proposed development activity is not perceived to have significant impacts on the receiving watercourses, wetland resources or aquatic biodiversity. This is due to the proposed project being established primarily outside of areas zoned as wetlands or watercourses, as well as the project footprint on the ground being limited to a few substations, but a number of pylons which may span powerline beyond 200m overhead (i.e. activity impact on the ground is limited to pylon installations and powerline establishment or their replacement).

With sound environmental management and where required mitigation of negligible to minor negative aquatic biodiversity impacts may refer, it is concluded that from an aquatic biodiversity impact point of view, the proposed project activity can be authorised under NEMA by incorporating the findings and recommendations of this report into the project EMPr; as well as in respect to the NWA, with compliance to the conditions of the new GA (DWS Notice 4167 in Government Gazette No 49833 of 8 December 2023) for water uses under Section 21 (c) and (i) (also to be incorporated in the project EMPr).

9.1.3 Palaeontological Assessment

Based on the site visit and walkdown in late July 2025 (winter) and the lack of any previously recorded fossils from the route, it is extremely unlikely that any fossils would be preserved in the overlying soils of the Quaternary. There is a small chance that fossils may occur below ground in the shales of the Ecca Group or the quartzites of many of the Cape Supergroup Formations, so a Fossil Chance Find Protocol should be added to the EMPr. If fossils are found by the environmental officer, or other responsible person once new excavations for tower foundations and infrastructure have commenced then they should be rescued and a palaeontologist called to assess and collect a representative sample. The impact on the paleontological heritage would be low, as far as the paleontology is concerned, so the project should be authorised.

The only no-go area is the cutting near the intersection of the powerline and the road to Montagu, Point 11 - S 33° 29' 09.65" E 19° 49' 15.29". The rest of the route does not appear to have fossils on the land surface.

9.2 Summary of impacts and significance rating

A concise summary of the impacts that has been identified for the proposed Boskloof to Laingsburg 132kv Line, as well as the residual impact significance ratings after the implementation of the proposed mitigation measures (impact management actions) are provided (refer to table below)

Table 16: Summary of identified impact

Environmental Aspect	Impacts
Construction Phase	
Vegetation	- Potential loss of indigenous vegetation units - Potential increase in alien vegetation - Potential loss of floral species of conservation importance - Loss of catchment area and decreased water inputs - Contamination of the area by petrochemical spillages - Contamination of the area by construction and domestic waste - Contamination of the area as a result of leaking portable toilet facilities.
Water Quality	- Increase in water turbidity due to sediment inputs and/or erosion - Physio-chemical water pollution related to potential spillages of cement and fuels.
Wildlife	- Potential loss of faunal species of conservation importance - Potential loss of vulture breeding habitat - Potential loss of foraging habitat for game species

Environmental Aspect	Impacts
	- Contamination of the area by petrochemical spillages - Contamination of the area by construction and domestic waste. - Contamination of the area as a result of leaking portable toilet facilities.
Soils, Land Capability and Land Use	- Soil Contamination - Soil loss / Soil erosion - Temporary change in land use from open veld to construction
Noise	- Noise disturbance from the movement of construction vehicles - Noise disturbance from the operation of machinery

9.3 Environmental Impact Statement

Assuming all phases of the project comply with the conditions outlined in the EMPr, it is anticipated that the construction will not have any significant negative environmental impact on the surrounding area. The Boskloof to Laingsburg 132kv line traverses over Critical Biodiversity Areas (1), meaning the site contributes to achieving biodiversity targets for ecosystems, species, and ecological processes as outlined in a systematic biodiversity plan.

The construction and operation phases are expected to yield positive impacts, such as uninterrupted power distribution, creating job opportunities, and enhancing skill development. However, the construction phase may also result in the degradation or destruction of wetland habitats, a reduction in the diversity of indigenous fauna and flora, loss of habitat, and potential harm to Species of Special Concern (SCC). During the operational phase, anticipated impacts include sedimentation and soil erosion, pollution of water resources and soil, the spread of invasive alien species, and ongoing habitat loss, however the operational impacts will be mitigated through the maintenance management. Eskom Distribution is also submitting an application to have the Maintenance Management Plan for this line adopted by the DFFE..

9.4 Construction Timeframes

It is requested that the Environmental Authorisation, if issued by the Competent Authority, be valid for a period of (10) ten years from the date of signature.

9.5 Other environmental authorisations, licenses and permits.

According to the National Water Act (NWA), 1998 (Act No.36 of 1998), the proposed development requires a General Authorisation application as per the following regulations:

- Section 21(c): Impeding or diverting the flow of water in a watercourse; and
- Section 21 (i): Altering the bed, banks, course or characteristics of a watercourse.

10. CONCLUSIONS AND RECOMMENDATIONS

The Basic Assessment Process for the proposed project has been undertaken as per EIA Regulations published in Government Notice 324-327 of 4 as amended in 2017, in terms of the National Environmental Management Act (NEMA; No107 of 1998). The Basic Assessment Process is aimed at ensuring informed decision-making and environmental accountability, and to assist in achieving environmentally sound and sustainable development. In terms of NEMA (No 107 of 1998), the commitment to sustainable development is evident in the provision that "development must be socially, environmentally and economically sustainable and requires the consideration of all relevant factors".

NEMA also imposes a duty of care, which places a positive obligation on any person who has caused, is causing, or is likely to cause damage to the environment to take reasonable steps to prevent such damage. In terms of NEMA's preventative principle, potentially negative impacts on the environment and people's environmental rights (in terms of the Constitution of the Republic of South Africa, Act 108 of 1996) should be anticipated and prevented, and where they cannot be altogether prevented, they must be minimised and remedied in terms of "reasonable measures".

The following key conditions would be required to be included within an authorisation issued for the proposed project and associated infrastructure:

- Conditions that may be set by DFFE in terms of the EA must be adhered to. If it is found that it will not be possible to adhere to certain conditions, this must be communicated to DFFE ahead of time to prevent a non-compliant situation.
- Should any additional activities listed in terms of the EIA Regulations be planned on the site, the appropriate application(s) for authorisation must be lodged with the relevant authority.
- All mitigation strategies described in this BA Report, must be put into practice.
- A project-specific draft EMPr (legally binding) has been compiled according to (but not limited to) the impacts and mitigation measures included in this assessment.

- Obtain the relevant permits for any protected plant species or specimens that will be lost during project construction.
- A validity period of 10 years of the Environmental Authorisation is requested, should the project obtain approval from DFFE.