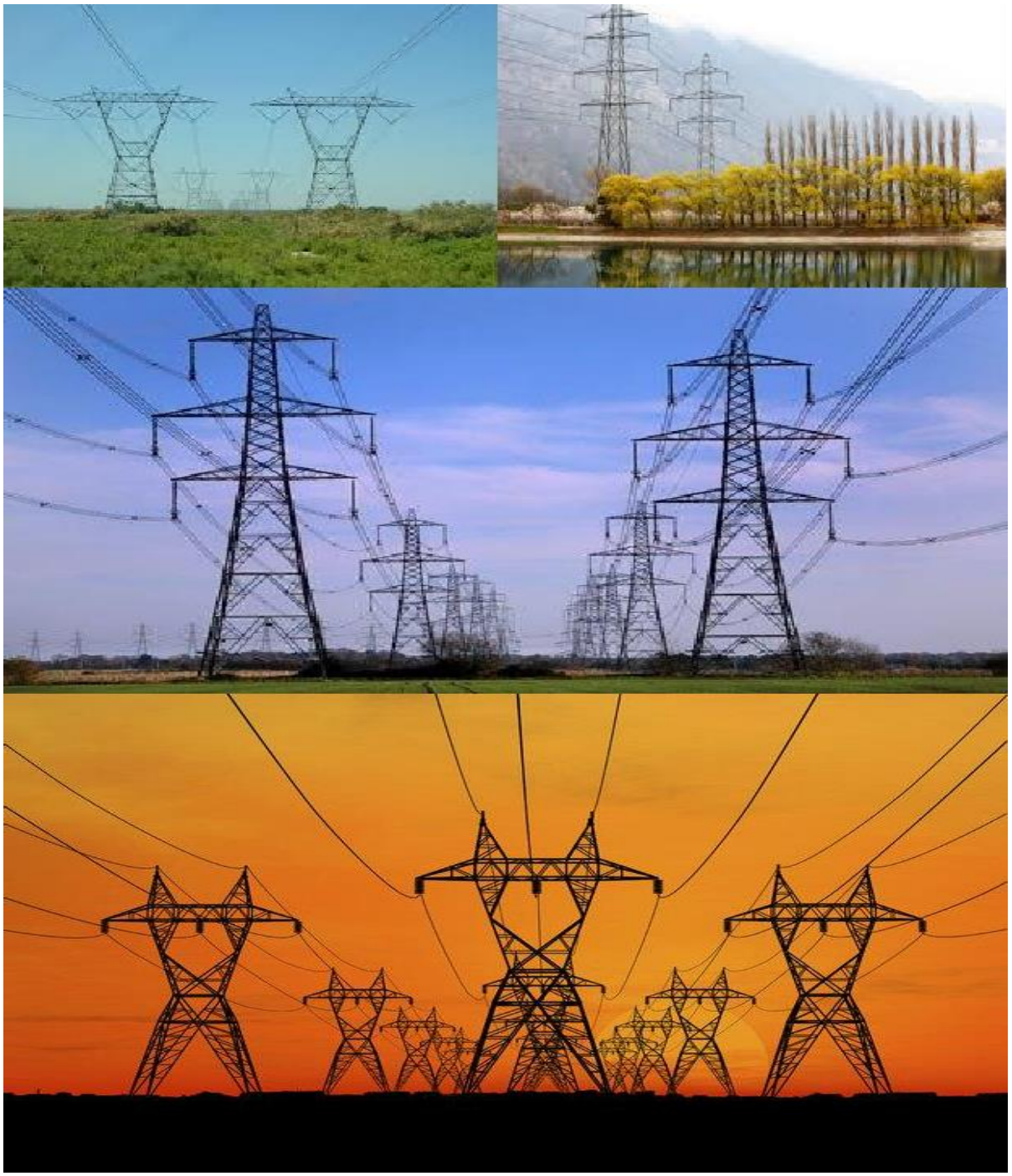
APPENDIX 1

GENERIC ENVIRONMENTAL MANAGEMENT PROGRAMME (EMPr) FOR THEDEVELOPMENT AND EXPANSION FOR OVERHEAD ELECTRICITY TRANSMISSION AND DISTRIBUTION INFRASTRUCTURE



environmental affairs
Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

TABLE OF CONTENTS

List of figures

List of tables

INTRODUCTION

1. Background

The National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA) requires that an environmental management programme (EMPr) be submitted where an environmental impact assessment (EIA) has been identified as the environmental instrument to be utilised as the basis for a decision on an application for environmental authorisation (EA). The content of an EMPr must either contain the information set out in Appendix 4 of the Environmental Impact Assessment Regulations, 2014, as amended (EIA Regulations) or be a generic EMPr relevant to an application as identified and gazetted by the Minister in a government notice. Once the Minister has identified, through a government notice, that a generic EMPr is relevant to an application for EA, that generic EMPr must be applied by all parties involved in the EA process, including, but not limited to, the applicant and thecompetent authority (CA).

2. Purpose

This document constitutes a generic EMPr relevant to applications for the development or expansion of overhead electricity transmission and distribution infrastructure and all listed and specified activities necessary for the realization of such infrastructure.

3. Objective

The objective of this generic EMPr is to prescribe and pre-approve generally accepted impact management outcomes and actions, which can commonly and repeatedly be used to avoid, manage, and mitigate impacts and risks associated with the development or expansion of overhead electricity transmission and distribution infrastructure. The use of a generic EMPr is intended to reduce the need to prepare and review individual EMPrs for applications of a similar nature.

4. Scope

The scope of this generic EMPr applies to the development or expansion of overhead electricity transmission and distribution infrastructure requiring EA in terms of NEMA, i.e., with a capacity of 33 kilovolts or more. This generic EMPr applies to activities requiring EA, mainly activities 11 and 47 of the Environmental Impact Assessment Regulations Listing Notice 1 of 2014, as amended, and activity 9 of the Environmental Impact Assessment Regulations ListingNotice 2 of 2014, as amended, and all associated listed or specified activities necessary for the realisation of such infrastructure.

5. Structure of this document

This document is structured in three parts with an Appendix as indicated in the table below:

Part	Section	Heading	Content
A		Provides general guidance and information and is **legally not binding.**	Definitions, acronyms, roles & responsibilities, documentation and reporting.
B	1	Pre-approved EMPr template generic	Contains generally accepted impact management outcomes and impact management actions required for the avoidance, management, and mitigation of impacts and risks associated with the development or expansion of overhead electricity transmission and distribution infrastructure, which are presented in the form of a template that has been pre-approved. The template in this section is to be completed by the contractor, with each completed page signed and dated by the holder of the EA prior to the commencement of the activity. Where an impact management outcome is not relevant, the words "not applicable" can be inserted in the template under the "responsible persons" column. Once completed and signed, the template represents the EMPr for the activity approved by the CA and is legally binding. The template is not required to be submitted to the CA at once. The generic EMPr is a gazette for implementation; it has been approved by the CA. To allow interested and affected parties access to the pre-approved EMPr template for consideration through the decision-making process, the EAP, on behalf of the applicant /proponent, must make the hard copy of this EMPr available at a public location and where the applicant has a website, the EMPr should also be made available on such publicly accessible website.
	2	Site-specific information	Contains preliminary infrastructure layout and a declaration that the applicant/holder of the EA will comply with the pre-approved generic EMPr
Part	**Section**	**Heading**	**Content**

			template contained in Part B: Section 1 andunderstands that the impact management outcomes and impact management actions are **legally binding**. The preliminary infrastructurelayout must be finalized to inform the final EMPr to be submitted with the basic assessmentreport (BAR) or environmental impact assessment report (EIAR), ensuring that all impact management outcomes and actions have been either pre-approved or approved in terms of Part C. This section **must be** submitted to the CAwith the final BAR or EIAR. If a signed copy of Part B: section 2 is not submitted, the information will be considered incomplete. Once approved, this Section forms part of the EMPr for the development and is legally binding.
C		Site-specific sensitivities/attributes	If any specific environmental sensitivities/ attributes on the site that require site-specific impact management outcomes and impact management actions are not included in the pre-approved generic EMPr to manage impacts, these specific impact management outcomes and actions must be included in this section. These specific environmental attributes must be referenced spatially, and impact management outcomes and actions must beprovided. These specific impact management outcomes and impact management actions must be presented in the format of the pre-approved EMPr template (Part B: section 1) This section will not be required should the site contain no specific environmental sensitivities or attributes. However, if Part C applies to the site, it must be submitted together with the BAR or EIAR for consideration and decision on the application for EA. The information in this section must be prepared by an EAP and must contain his/her name and expertise, including a curriculum vitae. Once approved, Part C forms part of the EMPr for the site and is legally binding.

Part	Section	Heading	Content
			This section applies only **to additional** impact management outcomes and actions that are necessary for the avoidance, management, and mitigation of impacts and risks associated with the specific development or expansion and that are not already included in Part B: section 1.
Appendix 1			Contains the method statements to be prepared prior to the commencement of the activity. The method statements are **not required** to be submitted to the competent authority.

6. Completion of part B: section 1: the pre-approved generic EMPr template

The template is to be completed prior to the commencement of the activity by providing the following information for each environmental impact management action:

- For implementation
  - a 'responsible person',
  - a method for implementation,
  - a timeframe for implementation
- For monitoring
  - a responsible person
  - frequency
  - evidence of compliance.

The completed template must be signed and dated by the holder of the EA prior to the commencement of the activity. The method statements prepared and agreed to by the holder of the EA must be appended to the template as Appendix 1. Each method statementmust be signed and dated on each page by the holder of the EA. This template, once signed and dated, is legally binding. The holder of the EA will remain responsible for its implementation.

7. Amendments of the impact management outcomes and impact management actions

Once the activity has commenced, a holder of an EA may make amendments to the impactmanagement outcomes and impact management actions in the following manner:

- Amendment of the impact management outcomes: in line with the processcontemplated in regulation 37 of the EIA Regulations; and
- Amendment of the impact management actions: in line with the processcontemplated in regulation 36 of the EIA Regulations.

8. Documents to be submitted as part of part B: section 2 site-specific information anddeclaration

Part B: Section 2 has three distinct sub-sections. The first and third sub-sections are in a template format. Sub-section two requires a map to be produced.

Sub-section 1 contains the project name, the applicant's name and contact details, the site information, which includes the coordinates of the corridor in which the proposed overhead electricity transmission and distribution infrastructure is proposed, the 21-digit Surveyor General code of each cadastral land parcel, and, where available, the farm name.

Sub-section 2 must be prepared by an EAP and contain his/her name and expertise, including a curriculum vitae. This sub-section must include a site sensitivity map overlaid with the preliminary infrastructure layout using the national web-based environmental screening tool when available for compulsory use at https://screening.environment.gov.za/screeningtool. The sensitivity map shall identify the nature of each sensitive feature, e.g., raptor nest, threatened plant species, archaeological site, etc. Sensitivity maps must identify features both within the planned working area andany known sensitive features in the surrounding landscape within 50m of the development footprint. The overhead transmission and distribution profile must be illustrated at an appropriate resolution to enable fine-scale interrogation. It is recommended that <20 km of overhead transmission and distribution length is illustrated per page in A3 landscape format. Where considered appropriate, photographs of sensitive features in the context of tower positions must be used.

Sub-section 3 is the declaration that the applicant/proponent or holder of the EA must complete in the case of a change of ownership. It confirms that the applicant/EA holder will comply with the pre-approved generic EMPr template in Section 1 and understands that the impact management outcomes and actions are legally binding.

(a) Amendments to Part B: Section 2 – site-specific information and declaration

Should the EA be transferred, Part B: Section 2 must be completed by the new applicant/proponent and submitted with the application for an amendment of the EA in terms of Regulations 29 or 31 of the EIA Regulations, whichever applies. The information submitted as part of such an application for an amendment to an EA will be considered incomplete should a signed copy of Part B: Section 2 not be submitted. Once approved, Part B: Section 2 forms part of the EMPr for development, and the EMPr becomes legally binding to the new EA holder.

PART A – GENERAL INFORMATION

1. DEFINITIONS

In this EMPr any word or expression to which a meaning has been assigned in the NEMA or EIA Regulations has that meaning, and unless the context requires otherwise –

"clearing" means the clearing and removal of vegetation, whether partially or in whole, including trees and shrubs, as specified;

"construction camp" is the area designated for key construction infrastructure and services, including but not limited to offices, overnight vehicle parking areas, stores, the workshop, stockpile and lay down areas, hazardous storage areas (including fuels), the batching plant (if one islocated at the construction camp), designated access routes, equipment cleaning areas and the placement of staff accommodation, cooking and ablution facilities, waste and wastewater management;

"contractor" - The Contractor has overall responsibility for ensuring that all work, activities, and actions linked to the delivery of the contract are in line with the Environmental Management Programme and that Method Statements are implemented as described.

"hazardous substance" is a substance governed by the Hazardous Substances Act, 1973 (Act No. 15 of 1973) as well as the Hazardous Chemical and Substances Regulations, 1995;

"method statement" means a written submission by the Contractor to the Project Manager in response to this EMPr or a request by the Project Manager and ECO. The method statement must set out the equipment, materials, labour and method(s) the Contractor proposes using to carry out an activity identified by the Project Manager when requesting the Method Statement. This must be done in such detail that the Project Manager and ECO is able to assess whether the Contractor's proposal is in accordance with this specification and/or will produce results in accordance with this specification;

The method statement must cover applicable details with regard to:

(i) Construction procedures;

(ii) Plant, materials, and equipment to be used;

(iii) Transporting the equipment to and from the site;

(iv) How the plant/ material/ equipment will be moved while on site;

(v) How and where the plant/ material/ equipment will be stored;

(vi) The containment (or action to be taken if containment is not possible) of leaks or spills of anyliquid or material that may occur;

(vii) Timing and location of activities;

(viii) Compliance/ non-compliance; and

(ix) Any other information deemed necessary by the Project Manager.

"slope" means the inclination of a surface expressed as one unit of rise or fall for so many horizontalunits;

"solid waste" means all solid waste, including construction debris, hazardous waste, excess cement/ concrete, wrapping materials, timber, cans, drums, wire, nails, food, and domestic waste (e.g. plastic packets and wrappers);

"spoil" means excavated material that is unsuitable for use as material in the construction works or is material that is surplus to the requirements of the construction works;

"topsoil" means a varying depth (up to 300 mm) of the soil profile irrespective of the fertility, appearance, structure, agricultural potential, fertility and composition of the soil; and

"works" means the works to be executed in terms of the Contract.

2. ACRONYMS and ABBREVIATIONS

CA	Competent Authority
cEO	Contractors Environmental Officer
dEO	Developer Environmental Officer
DPM	Developer Project Manager
DSS	Developer Site Supervisor
EAR	Environmental Audit Report
ECA	Environmental Conservation Act No. 73 of 1989
ECO	Environmental Control Officer
EA	Environmental Authorisation
EIA	Environmental Impact Assessment
ERAP	Emergency Response Action Plan
EMPr	Environmental Management Programme Report
EAP	Environmental Assessment Practitioner
FPA	Fire Protection Agency
HCS	Hazardous chemical Substance
NEMA	National Environmental Management Act,1998 (Act No. 107 of 1998)
NEMBA	National Environmental Management: Biodiversity Act ,2004 (Act No. 10 of 2004)
NEMWA	National Environmental Management:Waste Act, 2008 (Act No. 59 of 2008)
MSDS	Material Safety Data Sheet
RI&AP's	Registered interested and affected parties

3. ROLES AND RESPONSIBILITIES FOR ENVIRONMENTAL MANAGEMENT PROGRAMME (EMPr) IMPLEMENTATION

The effective implementation of this generic EMPr is dependent on established and clear roles, responsibilities, and reporting lines within an institutional framework. This section of the EMPr gives guidance to the various environmental roles and reporting lines; however, project-specific requirements will ultimately determine the need for the appointment of a specific person(s) to undertake specific roles and or responsibilities. As such, it must be noted that in the event that no specific person, for example, an environmental control officer (ECO) is appointed, the holder of the EA remains responsible for ensuring that the duties indicated in this document for action by the ECO are undertaken.

Table 1: *Guide to roles and responsibilities for the implementation of an EMPr*

Responsible Person (s)	Role and Responsibilities
Developer Site Supervisor (DSS)	Role The DSS reports directly to the DPM, oversees site work, and liaises with the contractor(s) and the ECO. The DSS is responsible for the day- t o - d a y implementation of the EMPr and for ensuring the compliance of allcontractors with the conditions and requirements stipulated in the EMPr. Responsibilities - Ensure that all contractors identify a contractor's Environmental Officer (cEO); - Must be fully conversant with the conditions of the EA. Oversees site works liaison with Contractor,DPM and ECO; - Must ensure that all landowners have the relevant contact details of the site staff, ECO and cEO; - Issuing of site instructions to the Contractor for corrective actions required; - Will issue all non-compliances to contractors; and Ratify the Monthly Environmental Report.
Environmental Control Officer (ECO)	Role The ECO should have appropriate training and experience in the implementation of environmental management specifications. The primary role of the ECO is to act as an independent quality controller and monitoring agent regarding all environmental concerns and associated environmental impacts. Inthis respect, the ECO is to conduct periodic site inspections, attend regular site meetings, pre-empt problems suggest mitigation and be available to advise on incidental issues that arise. The ECO is also required to conduct compliance audits, verifying the monitoring reports submitted by the cEO. The ECO provides feedback to the DSS and Project Manager regarding all environmental matters. The Contractor, cEO and dEO are answerable to the Environmental Control Officer for non- compliance with the Performance Specifications as set

	out in the EA and EMPr. The ECO provides feedback to the DSS and Project Manager, who reports back to the Contractor and potential and Registered Interested &Affected Parties' (RI&AP's), as required. Issues of non-compliance raised by the ECO must be taken up by the Project Manager and resolved with the Contractor as per the conditions of his contract. Decisions regarding environmental procedures, specifications, and requirements that have a cost implication (i.e., those that are deemed to be a variation, not allowed for in the Performance Specification) must be endorsed by the Project Manager. TheECO must also, as specified by the EA, report to the relevant CA as and when required. Responsibilities The responsibilities of the ECO will include the following: - Be aware of the findings and conclusions of all EA related to the development; - Be familiar with the recommendations and mitigation measures of this EMPr; - Be conversant with relevant environmental legislation, policies and procedures and ensure compliance with them; - Undertake regular and comprehensive site inspections / audits of the construction site according to the generic EMPr and applicable licenses in order to monitor compliance as required; - Educate the construction team about the management measures contained in the EMPr and environmental licenses; - Compilation and administration of an environmental monitoring plan to ensure that the environmental management measures are implemented and are effective; - Monitoring the performance of the Contractors and ensuring compliance with the EMPr and associated Method Statements; - In consultation with the Developer Site Supervisor, order the removal of person(s) and/or equipment that are in contravention of the specifications of the EMPr and/or environmental licenses; - Liaison between the DPM, Contractors, authorities, and other lead stakeholders on all environmental concerns; - Compile a regular environmental audit report highlighting any non-compliance issues as well as satisfactory or exceptional compliance with the EMPr; - Validating the regular site inspection reports, which are to be prepared by the contractor Environmental Officer (cEO); - Checking the cEO's record of environmental incidents (spills, impacts, legal transgressions, etc) as well as corrective and preventive actions taken;

	- Checking the cEO's public complaints register in which all complaints are recorded, as well as action taken; - Assisting in the resolution of conflicts; - Facilitate training for all personnel on the site – this may range from carrying out the training to reviewing the training programmes of the Contractor; - In case of non-compliance, the ECO must first communicate this to the Senior Site Supervisor, who has the power to ensure this matter is addressed. Should no action or insufficient action be taken, the ECO may report this matter to the authorities as non-compliance; - Maintenance, update, and review of the EMPr; - Communicate all modifications to the EMPr to the relevant stakeholders.
developer Environmental Officer	<u>Role</u> The dEOs will report to the Project Manager and are responsible for implementing the EMPr, environmental monitoring and reporting, providing environmental input to the Project Manager and Contractor's Manager, liaising with contractors and landowners, and a range of environmental coordination responsibilities. <u>Responsibilities</u> - Be fully conversant with the EMPr; - Be familiar with the recommendations and mitigation measures of this EMPr and implement thesemeasures; - Ensure that all stipulations within the EMPr are communicated and adhered to by the Employees and contractor (s) ; - Confine the development site to the demarcated area; - Conduct environmental internal audits with regards to EMPr and authorisation compliance (oncEO); - Assist the contractors in addressing environmental challenges on site; - Assist in incident management: - Reporting environmental incidents to the developer and ensuring that corrective action is taken andlessons learned shared; - Assist the contractor in investigating environmental incidents and compile investigation reports; - Follow-up on pre-warnings, defects, non-conformance reports; - Measure and communicate environmental performance to the Contractor; - Conduct environmental awareness training on-site together with ECO and cEO;

	- Ensure that the necessary legal permits and / or licenses are in place and up to date; - Acting as Developer's Environmental Representative on site and work together with the ECO andcontractor;
Contractor	Role The Contractor appoints the cEO and has overall responsibility for ensuring that all work, activities, and actions linked to the delivery of the contract are in line with the EMPr and that Method Statements are implemented as described. External contractors must ensure compliance with this EMPr while performing the onsite activities per their contract with the Project Developer. The contractors are required, where specified, to provide method statements setting out in detail how the impact management actions contained in the EMPr will be implemented during the development or expansion of overhead electricity transmission and distribution infrastructure activities. Responsibilities - project delivery and quality control for the development services as per appointment; - employ a suitably qualified person to monitor and report to the Project Developer's appointed person on the daily activities on-site during the construction period; - ensure that safe, environmentally acceptable working methods and practices are implemented and that equipment is properly operated and maintained to facilitate proper access and enable any operation to be carried out safely; - attend on-site meeting(s) prior to the commencement of activities to confirm the procedure and designated activity zones; - ensure that contractors' staff repair, at their own cost, any environmental damage resulting from contravention of the specifications contained in EMPr to the satisfaction of the ECO.
contractor Environmental Officer(cEO)	Role Each Contractor affected by the EMPr should appoint a cEO responsible for the on-site implementation of the EMPr (or relevant sections of the EMPr). The Contractor's representative can be the site agent, site engineer, dedicated environmental officer, or an independent consultant. The Contractor must ensure that the Contractor's Representative is suitably qualified to perform the necessary tasks and is appointed at a level such that she/he can interact effectively with other site Contractors, laborers, the Environmental Control Officer, and the public. As a minimum, the cEO shall meet the following criteria: Responsibilities - Be on-site throughout the duration of the project and be dedicated to the project;

	- Ensure all their staff are aware of the environmental requirements, conditions and constraints with respect to all of their activities on site; - Implementing the environmental conditions, guidelines and requirements as stipulated within the EA, EMPr and Method Statements; - Attend the Environmental Site Meeting; - Undertaking corrective actions where non-compliances are registered within the stipulated timeframes; - Report back formally on the completion of corrective actions; - Assist the ECO in maintaining all the site documentation; - Prepare the site inspection reports and corrective action reports for submission to the ECO; - Assist the ECO with preparing of the monthly report and - Where more than one Contractor is undertaking work on site, each company appointed as a Contractor will appoint a cEO representing that company.

4. ENVIRONMENTAL DOCUMENTATION REPORTING AND COMPLIANCE

To ensure accountable and demonstrated implementation of the EMPr, a number of reporting systems, documentation controls and compliance mechanisms must be in place fo rall overhead electricity transmission and distribution infrastructure projects as a minimum requirement.

4.1 Document control/Filing system

The holder of the EA is solely responsible for the upkeep and management of the EMPr file. At a minimum, all documentation detailed below will be stored in the EMPr file. A hard copy of all documentation shall be filed, while an electronic copy may be kept where relevant. A duplicate file will be maintained in the office of the DSS (where applicable). This duplicate file must remain current and up-to-date. The filing system must be updated and relevant documents added as required. The EMPr file must be made available at all times on request by the CA or other relevant authorities. The EMPr file will form part of any environmental audits undertaken as prescribed in the EIA Regulations.

4.2 Documentation to be available.

At the outset of the project, the following preliminary list of documents shall be placed in the filing system and be accessible at all times:

- Full copy of the signed EA from the CA in terms of NEMA, granting approval forthe development or expansion;
- Copy of the generic and site specific EMPr as well as any amendments thereof;
- Copy of declaration of implementing generic EMPr and subsequent approval ofsite specific EMPr and amendments thereof;
- All method statements;
- Completed environmental checklists;
- Minutes and attendance register of environmental site meetings;
- An up-to-date environmental incident log;
- A copy of all instructions or directives issued;
- A copy of all corrective actions signed off. The corrective actions must be filedin such a way that a clear reference is made to the non-compliance record;
- Complaints register.

4.3 Weekly Environmental Checklist

The ECOs are required to complete a Weekly Environmental Checklist, the format of which isto be agreed prior to commencement of the activity. The ECOs are required to sign and date the checklist, retain a copy in the EMPr file and submit a copy of the completed checklist to the DSS on a weekly basis.

The checklists will form the basis for the Monthly Environmental Reports. Copies of all completed checklists will be attached

as Annexures to the Environmental Audit Report as required in terms of the EIA Regulations. Environmental site meetings

Minutes of the environmental site meetings shall be kept. The minutes must include an attendance register and will be attached to the Monthly Report distributed to attendees. Each set of minutes must clearly record “Matters for Attention” that will be reviewed at the next meeting.

4.4 Required Method Statements

The method statement will be detailed enough for the ECOs to assess whether the contractor's proposal is in accordance with the EMPr.

The method statement must cover applicable details with regard to:

- development procedures;
- materials and equipment to be used;
- getting the equipment to and from the site;
- how the equipment/ material will be moved while on site;
- how and where the material will be stored;
- the containment (or action to be taken if containment is not possible) of leaksor spills of any liquid or material that may occur;
- timing and location of activities;
- compliance/ non-compliance with the EMPr; and
- any other information deemed necessary by the ECOs.

Unless indicated otherwise by the Project Manager, the Contractor shall provide the followingmethod statements to the Project Manager no less than 14 days prior to the commencementdate of the activity:

- Site establishment – Camps, Lay-down or storage areas, satellite camps, infrastructure;
- Batch plants;
- Workshop or plant servicing;
- Handling, transport, and storage of Hazardous Chemical Substance;
- Vegetation management – Protected, clearing, aliens, felling;
- Access management – Roads, gates, crossings, etc.;
- Fire plan;
- Waste management – transport, storage, segregation, classification,disposal (all waste streams);
- Social interaction – complaints management, compensation claims, access toproperties, etc.;
- Water – use (source, abstraction, and disposal), access and all related information,crossings, and mitigation;
- Emergency preparedness – Spills, training, other environmental emergencies;
- Dust and noise management methodologies;

- Fauna interaction and risk management – only if the risk was identified – wildlifeinteraction, especially on game farms; and
- Heritage and paleontology management.

The ECOs shall monitor and ensure that the contractors perform in accordance with these method statements. Completed and agreed method statements between the holder of the EA and the contractor shall be captured in Appendix 1.

4.5 Environmental Incident Log (Diary)

The ECOs are required to maintain an up-to-date and current Environmental Incident Log (environmental diary). The Environmental Incident Log is a means to record all environmental incidents and/or all non-compliance notices would not be issued. An environmental incident is defined as:

- Any deviation from the listed impact management actions (listed in this EMPr) may be addressed immediately by the ECOs. (For example, a contractor's staff member littering or a drip tray that has not been emptied);
- Any environmental impact resulting from an action or activity by a contractor in contravention of the environmental stipulations and guidelines listed in the EMPr which, as a single event, would have a minor impact but which, if cumulative and continuous, would have a significant effect (for example no toilet paper available inthe ablutions for an afternoon); and
- General environmental information such as road kills or injured wildlife.

The ECOs are to record all environmental incidents in the Environmental Incident Log. All incidents, regardless of severity, must be reported to the Developer. The Log is to be kept in the EMPr file, and at a minimum, the following will be recorded for each environmental incident:

- The date and time of the incident;
- Description of the incident;
- The name of the Contractor responsible;
- The incident must be listed as significant or minor;
- If the incident is listed as significant, a non-compliance notice must be issued andrecorded in the log;
- Remedial or corrective action taken to mitigate the incident; and
- Record of repeat minor offences by the same contractor or staff member.

The Environmental Incident Log will be captured in the EAR.

4.6 Non-compliance

A non-compliance notice will be issued to the responsible contractor by the ECOs via the DSS or Project Manager. The non-compliance notice will be issued in writing; a copy filed in the EMPr file and will, at a minimum, include the following:

- Time and date of the non-compliance;
- Name of the contractor responsible;
- Nature and description of the non-compliance;
- Recommended/required corrective action; and
- Date by which the corrective action to be completed.
- The contractors shall act immediately when a notice of non-compliance is receivedand correct whatever is the cause for the issuing of the notice. Complaints received regarding activities on the development site pertaining to the environmentshall be recorded in a dedicated register and the response noted with the date andaction taken. The ECO should be made aware of any complaints. Any non-compliance with the agreed procedures of the EMPr is a transgression of the various statutes and laws that define how the environment is managed. Failure to redress the cause shall be reported to the relevant CA for themto deal with the transgression, as it deems fit. The contractor is deemed not to have complied with the EMPr if, inter alia, There is a deviation from the environmental conditions, impact management outcomes, and impact management actions, as approved in generic and site-specific EMPr as relevant as set out in the EMPr, which deviation has, or may cause, an environmental impact.

4.7 Corrective action records

For each non-compliance notice issued, a documented corrective action must be recorded. On receiving a non-compliance notice from the DSS, the contractor's cEO will ensure that the required corrective actions occur within the stipulated timeframe. On completion of the corrective action, the CEO is to issue a Corrective Action Report in writing to the ECOs. If satisfied that the corrective action has been completed, the ECOs are to sign off on the Corrective Action Report and attach the report to the non-compliance notice in the EMPr file. A corrective action is considered complete once the report has been signed off by the ECOs.

4.8 Photographic record

A digital photographic record will be kept. This record will be used to show before, during, and post-rehabilitation evidence of the project and in cases of damages claims if they arise. Each image must be dated and attached a brief description note.

The Contractor shall:

1. Allow the ECOs access to take photographs of all areas, activities, and actions.

The ECOs shall keep an electronic database of photographic records, which will include:

1. Pictures of all areas designated as work areas, camp areas, development sites and storage areas taken before these areas are set up;
2. All bunding and fencing;
3. Road conditions and road verges;

4. Condition of all farm fences;
5. Topsoil storage areas;
6. All areas to be cordoned off during construction;
7. Waste management sites;
8. Ablution facilities (inside and out);
9. Any non-conformances deemed to be “significant”;
10. All completed corrective actions for non-compliance;
11. All required signage;
12. Photographic recordings of incidents;
13. All areas before, during and post-rehabilitation; and
14. Include relevant photographs in the Final Environmental Audit Report.

4.9 Complaints Register

The ECOs shall keep a current and up-to-date complaints register. The complaints register is to be a record of all complaints received from communities, stakeholders, and individuals. TheComplaints Record shall:

1. Record the name and contact details of the complainant;
2. Record the time and date of the complaint;
3. Contain a detailed description of the complaint;
4. Where relevant and appropriate, contain photographic evidence of the complaint or damage (ECOs to take relevant photographs); and
5. Contain a copy of the ECOs written response to each complaint received and keepa record of any further correspondence with the complainant. The ECO’s written response will include a description of any corrective action to be taken and must besigned by the Contractor, ECO, and affected party. Where the complainant issues a damage claim, the ECOs shall respond as described in (**section 4.11**) below.

4.10 Claims for damages.

In the event that a community, landowner, or individual submits a Claim for Damages,the ECOs shall:

1. Record the full detail of the complaint as described in (**section 4.10**) above;
2. The DPM will evaluate the claim and associated damage and submit the evaluation to the Senior Site Representative for approval;
3. Following consideration by the DPM, the claim is to be resolved and settled immediately, or the reason for not accepting the claim communicated in writing to the claimant. Should the claimant not accept this, the ECO shall, in writing, report theincident to the Developer’s negotiator and legal department; and
4. The EMPr file will record a formal record of the ECOs' response to the claimant and the rectification of the method of making payments, not the amount.

4.11 Interactions with affected parties

Open, transparent, and good relations with affected landowners, communities, and regional staff are essential to the successful management and mitigation of environmental impacts.

The ECOs shall:

1. Ensure that all queries, complaints, and claims are dealt with within an agreed timeframe;
2. Ensure that any or all agreements are documented and signed by all parties and arecord of the agreement is kept in the EMPr file;
3. Ensure that complaints telephone numbers are made available to alllandowners and affected parties; and
4. Ensure that contact with affected parties is courteous at all times;

4.12 Environmental audits

Internal environmental audits of the activity and implementation of the EMPr must be undertaken. The findings and outcomes must be included in the EMPr file and submitted to the CA at intervals as indicated in the EA.

An Environmental Audit Report must be prepared monthly. The report will be tabled as the key point on the agenda of the Environmental Site Meeting. The Report is submitted for acceptance at the meeting, and the final report will be circulated to the Project Manager and filed in the EMPr file. The ECOs shall submit the monthly reports to the CA at a frequency determined by the EA. At a minimum, the monthly report is to cover the following:

- Weekly Environmental Checklists;
- Deviations and non-compliances with the checklists;
- Non-compliances issued;
- Completed and reported corrective actions;
- Environmental Monitoring;
- General environmental findings and actions; and
- Minutes of the Bi-monthly Environmental Site Meetings.

4.13 Final environmental audits

On the final completion of the rehabilitation and/or EA requirements, a final EAR is to be prepared and submitted to the CA. The EAR must comply with Appendix 7 of the EIARegulations.

PART B: SECTION 1: Pre-approved generic EMPr template

5. IMPACT MANAGEMENT OUTCOMES AND IMPACT MANAGEMENT ACTIONS

This section provides a pre-approved generic EMPr template with aspects common to the development of overhead electricity transmission and distribution infrastructure. There is a list of aspects identified for the development or expansion of overhead electricity transmission and distribution infrastructure, and for each aspect a set of prescribed impact management outcomes and associated impact management actions have been identified.Holders of EAs are responsible for ensuring the implementation of these outcomes and actions for all projects as a minimum requirement in order to mitigate the impact of such aspects identified for the development or expansion of overhead electricity transmission and distribution infrastructure.

The template provided below is to be completed by providing the information under each heading for each environmental impact management action.

The completed template must be signed and dated on each page by both the contractor and the holder of the EA prior to the commencement of the activity. The method statements prepared and agreed to by the holder of the EA must be appended to the template as Appendix 1. Each method statement must also be duly signed and dated on each page by the contactor and the holder of the EA. This template, once signed and dated, is legally binding. The holder of the EA will remain responsible for its implementation.

5.1 Environmental awareness training

Impact management outcome: All onsite staff are aware and understands the individual responsibilities in terms of this EMPr.

Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
– All staff must receive environmental awareness training prior to commencement of the activities; – The Contractor must allow for sufficient sessions to train all personnel with no more than 20 personnel attending each course; – Refresher environmental awareness training is available as and when required; – All staff are aware of the conditions and controls linked to the EA and within the EMPr and made aware of their individual roles and responsibilities in achieving compliance with the EA and EMPr; – The Contractor must erect and maintain information posters at key locations on site, and the posters must include the following information as a minimum: a) Safety notifications; and b) No littering. – Environmental awareness training must include as a minimum the following: a) Description of significant environmental impacts,actual or potential, related to their	–Contractor. –dEO.	–Inductions. –Toolbox talks.	–Weekly and monthly audits –Throughout construction phase.	–dEO. –ECO.	–Daily.	–Signed attendance register. –Employee interviews. –Contents of induction presentation.

work activities; b) Mitigation measures to be implemented when carrying out specific activities; c) Emergency preparedness and response procedures; d) Emergency procedures; e) Procedures to be followed when working near or within sensitive areas; f) Wastewater management procedures; g) Water usage and conservation; h) Solid waste management procedures; i) Sanitation procedures; j) Fire prevention; and k) Disease prevention. – A record of all environmental awareness training courses undertaken as part of the EMPr must be available; – Educate workers on the dangers of open and/or unattended fires; – A staff attendance registers of all staff to have received environmental awareness training must be available. – Course material must be available and presented in appropriate languages that all staff can understand.						

5.2 Site Establishment Development

Impact management outcome: Environmental impacts are minimised during site establishment, and the development footprint is kept to a demarcated development area.						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
– The contractor must provide a method statement before any onsite activity that includes the layout of the construction camp in the form of a plan showing the location of key infrastructure and services (where applicable), includingbut not limited to offices, overnight vehicle parking areas, stores, the workshop, stockpile and lay down areas, hazardous materials storage areas (including fuels), the batching plant (if one is located at the construction camp), designated access routes, equipment cleaning areas and the placement of staff accommodation, cooking and ablution facilities, waste, and wastewater management; – Location of camps must be within the approved area to ensure that the site does not impact sensitive areas identified in the environmental assessment or site walk-through; – Sites must be located where possible on previously disturbed areas; – The camp must be fenced in accordance with ***Section 5.5: Fencing and gate installation***; and – The use of existing accommodation for contractor staff, where possible, is encouraged.	–Contractor. –dEO.	–Method statement with layout plan of the construction camp / laydown area.	–Prior to site Establishment.	–dEO. –ECO.	–Once-off.	–Approved method Statements. –Approved construction camp and laydown area layout plan.

5.3 Access restricted areas

Impact management outcome: Access to restricted areas prevented.						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
– Identification of access restricted areas is to be informed by the environmental assessment, site walk through and any additional areas identified during development; – Erect, demarcate and maintain a temporary barrier with clear signage around the perimeter of any access restricted area, colour coding could be used if appropriate; and – Unauthorised access and development related activity inside access restricted areas is prohibited.	–Contractor. –DSS.	–Weather-proof barrier signs at boundaries of no-go areas.	–Prior to site establishment.	–dEO. –ECO.	–Weekly.	–Barriers and signage maintained in good condition.

5.4 Access roads

Impact management outcome: Minimise impact to the environment through the planned and restricted movement of vehicles on site.						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
– Access to the servitude and tower positions must be negotiated with the relevant landowner and must fall within the assessed and authorised area; – An access agreement must be formalised and signed by the DPM, Contractor and landowner before commencing with the activities; – The access roads to tower positions must be signposted	–Contractor. –DPM.	–Written access agreement.	–Prior to site establishment.	–dEO. –ECO.	–Weekly.	–Access roads used as agreed.

after access has been negotiated and before the commencement of the activities; – All private roads used for access to the servitude must be maintained and upon completion of the works, be left in at least the original condition. – All contractors must be made aware of all these access routes. – Any access route deviation from that in the written agreement must be closed and re-vegetated immediately, at the contractor's expense; – Maximum use of both existing servitudes and existing roads must be made to minimize further disturbance through the development of new roads; – In circumstances where private roads must be used, the condition of the said roads must be recorded in accordance with ***section 4.9: photographic record***; prior to use and the condition thereof agreed by the landowner, the DPM, and the contractor; – Access roads in flattish areas must follow fence lines and treebelts to avoid fragmentation of vegetated areas or croplands. – Access roads must only be developed on pre-planned and approved roads.						

5.5 Fencing and Gate installation

Impact management outcome: Minimise impact to the environment and ensure safe and controlled access to the site through the erection of fencing and gates where required.						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
– Use existing gates provided to gain access to all parts of the area authorised for development, where possible; – Existing and new gates to be recorded and documented in accordance with **section *4.9: photographic record***; – All gates must be fitted with locks and be kept locked at all times during the development phase, unless otherwise agreed with the landowner; – At points where the line crosses a fence in which there is no suitable gate within the extent of the line servitude, on the instruction of the DPM, a gate must be installed at the approval of the landowner; – Care must be taken that the gates must be so erected that there is a gap of no more than 100 mm between the bottomof the gate and the ground; – Where gates are installed in jackal proof fencing, a suitable reinforced concrete sill must be provided beneath the gate; – Original tension must be maintained in the fence wires; – All gates installed in electrified fencing must be re-electrified; – All demarcation fencing and barriers must be maintained in good working order for the duration of overheadtransmission	–Contractor. –dEO.	–Access measures implemented.	–Throughout Construction.	–ECO. –dEO.	–Weekly.	–Evidence of access control (e.g., locks used as prescribed).

and distribution electricity infrastructuredevelopment activities; – Fencing must be erected around the camp, batching plants, hazardous storage areas, and all designated access restricted areas, where appropriate and would not cause harm to the sensitive flora; – Any temporary fencing to restrict the movement of life-stock must only be erected with the permission of the land owner. – All fencing must be developed of high-quality material bearing the SABS mark; – The use of razor wire as fencing must be avoided; – Fenced areas with gate access must remain locked after hours, during weekends and holidays if staff is away from site. Site security will be required at all times; – On completion of the development phase, all temporary fences are to be removed; – The contractor must ensure that all fence uprights are appropriately removed, ensuring that no uprights are cut at ground level but rather removed completely.						

5.6 Water Supply Management

Impact management outcome: Undertake responsible water usage**.**						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance

– All abstraction points or bore holes must be registered with the DWS and suitable water meters installed to ensure that the abstracted volumes are measured on a daily basis; – The Contractor must ensure the following: a. The vehicle abstracting water from a river does not enter or cross it and does not operate from within the river; b. No damage occurs to the river bed or banks and that the abstraction of water does not entail stream diversion activities; and c. All reasonable measures to limit pollution or sedimentation of the downstream watercourse are implemented. – Ensure water conservation is being practiced by: a. Minimising water use during cleaning of equipment; b. Undertaking regular audits of water systems; and c. Including a discussion on water usage and conservation during environmental awareness training. d. The use of grey water is encouraged.	–Contractor. –dEO.	–Monitoring of water availability.	–Ongoing.	–ECO.	–Weekly.	–Monitoring records. –Water use audit reports. –Water conservation covered in toolbox. talks.

5.7 Storm and waste water management

Impact management outcome: Impacts to the environment caused by storm water and wastewater discharges during construction are avoided.						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
– Runoff from the cement/ concrete batching areas must be strictly controlled, and contaminated water must be collected, stored and either treated or disposed of off-site,at a location approved by the project manager; – All spillage of oil onto concrete surfaces must be controlled by the use of an approved absorbent material and the used absorbent material disposed of at an appropriate waste disposal facility; – Natural storm water runoff not contaminated during the development and clean water can be discharged directly to watercourses and water bodies, subject to the Project Manager's approval and support by the ECO; – Water that has been contaminated with suspended solids, such as soils and silt, may be released into watercourses or water bodies only once all suspended solids have been removed from the water by settling out these solids in settlement ponds. The release of settled water back into the environment must be subject to the Project Manager's approval and support by the ECO.	–Contractor. –dEO.	–Use of absorbent materials in concrete mixing areas. –Disposal of contaminated water at suitable facility.	–Ongoing.	–ECO.	–Weekly.	– Contaminated water disposal records. –No evidence of soil and water contamination. – No evidence of water contamination from sources on site.

5.8 Solid and hazardous waste management

Impact management outcome: Waste is appropriately stored, handled and safely disposed of at a recognised waste facility**.**						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
– All measures regarding waste management must be undertaken using an integrated waste management approach; – Sufficient, covered waste collection bins (scavenger and weatherproof) must be provided; – A suitably positioned and clearly demarcated waste collection site must be identified and provided; – The waste collection site must be maintained in a clean and orderly manner; – Waste must be segregated into separate bins and clearly marked for each waste type for recycling and safe disposal; – Staff must be trained in waste segregation; – Bins must be emptied regularly; – General waste produced onsite must be disposed of at registered waste disposal sites/ recycling company; – Hazardous waste must be disposed of at a registered waste disposal site; – Certificates of safe disposal for general, hazardous and recycled waste must be maintained.	–Contractor. –dEO.	–Segregated disposal bins. –All waste containers have lids. –A waste contractor must be appointed. –Daily to weekly site cleanups.	–Ongoing.	–dEO. –ECO.	–Weekly.	–Contract with waste contractor. –Safe disposal certificates. –Employee knowledge and practice of waste segregation. –No overflowing bins on site.

5.9 Protection of watercourses and estuaries

Impact management outcome: Pollution and contamination of the watercourse environment and or estuary erosion are prevented.						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
– All watercourses must be protected from direct or indirect spills of pollutants such as solid waste, sewage, cement, oils, fuels, chemicals, aggregate tailings, wash andcontaminated water or organic material resulting from the Contractor's activities; – In the event of a spill, prompt action must be taken to clear the polluted or affected areas; – Where possible, no development equipment must traverse any seasonal or permanent wetland; – No return flow into the estuaries must be allowed and no disturbance of the Estuarine Functional Zone should occur; – Development of permanent watercourse or estuary crossing must only be undertaken where no alternative access to tower position is available; – There must not be any impact on the long-term morphological dynamics of watercourses or estuaries; – Existing crossing points must be favored over the creation of new crossings (including temporary access) – When working in or near any watercourse or estuary, the following environmental controls and consideration must be taken:	–Contractor. –dEO.	–Spill control kits are available on site and operators must be trained to use them. –Spills cleaned promptly to prevent water contamination. –Designated and limited crossing points for watercourses. –Watercourses to be off-limits during construction.	–Ongoing.	–dEO. –ECO.	–Weekly.	–Spills controlled. –Training records for spill Prevention. –No evidence of water contamination from construction activities. –Watercourse crossing points maintained.

a) Water levels during the period of construction; No altering of the bed, banks, course or characteristics of a watercourse b) During the execution of the works, appropriate measures to prevent pollution and contamination of the riparian environment must be implemented e.g., including ensuring that construction equipment is well maintained; c) Where earthwork is being undertaken in close proximity to any watercourse, slopes must be stabilised using suitable materials, i.e., sandbags or geotextile fabric, to prevent sand and rock from entering the channel; and d) Appropriate rehabilitation and re-vegetation measuresfor the watercourse banks must be implemented timeously. In this regard, the banks should be appropriately and incrementally stabilised as soon as development allows.						

5.10 Vegetation clearing

Impact management outcome: Vegetation clearing is restricted to the authorised development footprint of the proposed infrastructure.						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
General: – Indigenous vegetation which does not interfere with the development must be left undisturbed; – Protected or endangered species may occur on or near the development site. Special care should be taken not to damage such species; – Search, rescue and replanting of all protected and endangered species likely to be damaged during project development must be identified by the relevant specialist and completed prior to any development or clearing; – Permits for removal must be obtained from the Department of Agriculture, Forestry and Fisheries prior to the cutting or clearing of the affected species, and they must be filed; – The Environmental Audit Report must confirm that all identified species have been rescued and replanted and that the location of replanting is compliant with conditions ofapprovals; – Trees felled due to construction must be documented and form part of the Environmental Audit Report; – Rivers and watercourses must be kept clear of felled	–Contractor. –dEO.	–Areas of natural vegetation to be clearly demarcated and protected. –Plant rescue plan submitted and implemented.	–Prior to site establishment	–dEO. –ECO	–Weekly	–Permits for transplanting protected species. –No access to protected areas of the site.

trees, vegetation cuttings and debris; – Only a registered pest control operator may apply herbicides on a commercial basis, and commercial application must be carried out under the supervision of a registered pest control operator, supervision of a registered pest control operator or is appropriately trained; – A daily register must be kept of all relevant details of herbicide usage; – No herbicides must be used in estuaries; – All protected species and sensitive vegetation not removed must be clearly marked and such areas fenced off in accordance with **Section 5.3: Access restricted areas.** **Servitude:** – Vegetation that does not grow high enough to cause interference with overhead transmission and distribution infrastructures, or cause a fire hazard to any plantation, must not be cut or trimmed unless it is growing in the road access area, and then only at the discretion of the Project Manager; – Where clearing for access purposes is essential, the maximum width to be cleared within the servitude must be in accordance with distance as agreed between the land owner and the EA holder. – Alien invasive vegetation must be removed according to a plan (in line with relevant municipal and provincial						

procedures, guidelines and recommendations) and disposed of at a recognised waste disposal facility; – Vegetation must be trimmed where it is likely to intrude on the minimum vegetation clearance distance (MVCD) or will intrude on this distance before the next scheduled clearance. MVCD is determined from SANS 10280; – Debris resulting from clearing and pruning must be disposed of at a recognised waste disposal facility unless the landowners wish to retain the cut vegetation; – In developing new overhead transmission and distribution infrastructures, a one-metre "trace-line" must be cut through the vegetation for stringing.						

5.11 Protection of Fauna

Impact management outcome: Minimise disturbance to fauna.						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
– No interference with livestock must occur without the landowner's written consent and with the landowner or a person representing the landowner being present; – The breeding sites of raptors and other wild birds species must be taken into consideration during the planning of the development programme; – Breeding sites must be kept intact and disturbance to breeding birds must be avoided. Special care must be	–Contractor. –dEO.	–Areas of natural vegetation that provide habitat for animals not to be disturbed clearly demarcated. –Implementation of training to prohibit hunting.	–Through Construction.	–dEO. –ECO.	–Weekly.	–No evidence of hunting or trapping animals on site. –Training records available including hunting prohibition.

taken where nestlings or fledglings are present; – Nesting sites on existing parallel lines must documented; – Special recommendations of the avian specialist must be adhered to at all times to prevent unnecessary disturbance of birds; – Bird guards and diverters must be installed on the new line as per the recommendations of the specialist; – No poaching must be tolerated under any circumstances. All animal dens in close proximity to the works areas must be marked as Access restricted areas; – No deliberate or intentional killing of fauna is allowed; – In areas where snakes are abundant, snake deterrents to be deployed on the pylons to prevent snakes climbing up, being electrocuted and causing power outages; and – No Threatened or Protected species (ToPs) and/or protected fauna as listed according NEMBA (Act No. 10 of 2004) and relevant provincial ordinances may be removed and/or relocated without appropriate authorisations/permits.						

5.12 Protection of heritage resources

Impact management outcome: Minimise impact to heritage resources.						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance

– Identify, demarcate and prevent impact to all known sensitive heritage features on site in accordance with the No-Go procedure in Section 5.3: Access restricted areas; – Carry out general monitoring of excavations for potential fossils, artefacts and material of heritage importance; – All work must cease immediately, if any human remains and/or other archaeological, palaeontological and historical material are uncovered. Such material, if exposed, must be reported to the nearest museum, archaeologist/ paleontologist (or the South African Police Services), so that a systematic and professional investigation can be undertaken. Sufficient time must be allowed to remove/collect such material before development recommences.	–Contractor. –dEO. –Heritage Specialist	–Implement chance finds Procedure immediately upon uncovering heritage material. –Training in chance finds for all employees.	–Throughout construction.	–dEO. –ECO.	–Weekly.	–Chance finds records. –Training records of chance finds.

5.13 Safety of the public

Impact management outcome: All precautions are taken to minimise the risk of injury, harm or complaints.						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
– Identify fire hazards, demarcate and restrict public access tothese areas as well as notify the local authority of any potential threats e.g., large brush stockpiles, fuels etc.; – All unattended open excavations must be adequately fenced or demarcated; – Adequate protective measures must be implemented to prevent unauthorised access to and climbing of partly constructed towers and protective scaffolding; – Ensure structures vulnerable to high winds are secured; – Maintain an incidents and complaints register in which all incidents or complaints involving the public are logged.	–Contractor. –dEO.	–Maintain access control. –Site hazards to be clearly demarcated. –Incidents and Complaints register accessible at site entrance.	–Throughout construction.	–dEO. –ECO.	–Weekly.	–Access control is effective. – No unauthorised access obtained. –Site hazards signage installed and maintained. –Excavations fenced.

5.14 Sanitation

Impact management outcome: Clean and well-maintained toilet facilities are available to all staff in an effort to minimise the risk of disease and impact to the environment.						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance

– Mobile chemical toilets are installed onsite if no other ablution facilities are available; – The use of ablution facilities and or mobile toilets must be used at all times, and no indiscriminate use of the veld for ablutions must be permitted under any circumstances; – Where mobile chemical toilets are required, the following must be ensured: • Toilets are located no closer than 100 m to any watercourse or water body; • Toilets are secured to the ground to prevent them fromtoppling due to wind or any other cause; • No spillage occurs when the toilets are cleaned or emptied and the contents are managed in accordancewith the EMPr; • Toilets have an external closing mechanism and are closed and secured from the outside when not in use to prevent toilet paper from being blown out; • Toilets are emptied before long weekends and workers holidays, and must be locked after working hours; • Toilets are serviced regularly and the ECO must inspect toilets to ensure compliance to health standards; – A copy of the waste disposal certificates must be maintained.	–Contractor. –dEO.	–Sufficient toilets provided for the number of employees. –Toilets within easy access to all work areas.	–Throughout construction.	–dEO. –ECO.	–Weekly.	–Disposal certificates available for effluent. –Records of toolbox talks on sanitation. –No overflowing toilets.

5.15 Prevention of disease

Impact Management outcome: All necessary precautions linked to the spread of disease are taken.						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
– Undertake environmentally friendly pest control in the camp area; – Ensure that the workforce is sensitised to the effects of sexually transmitted diseases, especially HIV AIDS; – The Contractor must ensure that information posters on AIDS are displayed in the Contractor Camp area; – Information and education relating to sexually transmitted diseases to be made available to both construction workers and the local community, where applicable; – Free condoms must be made available to all staff on-site at central points; – Medical support must be made available; – Provide access to Voluntary HIV Testing and Counselling Services.	–Contractor. –dEO.	–Environmentally friendly pest control –Methods employed. –Hand sanitizer is available at site entry points and eating areas. –Covid temperature and symptom screening for all entries to the site. –Implement isolation and testing protocol for any employees suspected of having Covid.	–Throughout Construction.	–dEO. –ECO.	–Weekly.	–Pest control methods are owl-friendly and scavenger friendly. –Condoms available in all toilets. –Posters of HIV, AIDS, and Covid are displayed.

5.16 Emergency procedures

Impact management outcome: Emergency procedures are in place to enable a rapid and effective response to all types of environmental emergencies.

Impact Management Actions	**Implementation**			**Monitoring**		
	Responsibleperson	Method ofimplementation	Timeframe for implementation	Responsible person	Frequency	Evidence ofcompliance
– Compile an Emergency Response Action Plan (ERAP) prior tothe commencement of the proposed project; – The Emergency Plan must deal with accidents, potential spillages and fires in line with relevant legislation; – All staff must be made aware of emergency procedures aspart of environmental awareness training; – The relevant local authority must be made aware of a fire assoon as it starts; – In the event of an emergency, necessary mitigation measures to contain the spill or leak must be implemented (see ***Hazardous Substances section 5.17***).	–Contractor. –dEO.	–Emergency Response and Action Plan: developed. –Display of authority and emergency response numbers.	–Throughout construction.	–dEO. –ECO	–Weekly	–Records of ERAP drill testing. –Evidence of training. –Emergency response numbers displayed.

5.17 Hazardous substances

Impact management outcome: Safe storage, handling, use and disposal of hazardous substances.						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
– The use and storage of hazardous substances to be minimised and non-hazardous and non-toxic alternatives substituted where possible; – All hazardous substances must be stored in suitable containers as defined in the Method Statement; – Containers must be clearly marked to indicate contents, quantities, and safety requirements; – All storage areas must be bunded. The bunded area must be of sufficient capacity to contain a spill/leak from the stored containers; – Bunded areas to be suitably lined with a SABS-approved liner; – An Alphabetical Hazardous Chemical Substance (HCS) control sheet must be drawn up and kept up to date on a continuous basis; – All hazardous chemicals that will be used on site must have Material Safety Data Sheets (MSDS); – All employees working with HCS must be trained in the safe use of the substance and according to the safety data sheet;	–Contractor. –dEO.	–Hazardous chemical store aligned with relevant legal requirements. –Bulk chemical containers bunded to 110%. –Hazardous chemicals control sheet maintained. –Legally compliant signage for all chemical hazards.	–Throughout construction.	–dEO. –ECO.	–Weekly.	–MSDSs for all hazardous chemicals available. –Bunding for bulk containers in good condition. –Training records and knowledge of employees. –Hazardous chemicals control sheet for all chemicals on site. –All chemical containers labelled. –No evidence of leakages or spills. –Response / cleanup records available for all spillages. –Evidence of spill response training and spill response drills. –Spill kits available in at-risk areas and maintained.

– Employees handling hazardous substances/materials must be aware of the potential impacts and follow appropriate safety measures. Appropriate personal protective equipment must be made available; – The Contractor must ensure that diesel and other liquid fuel, oil, and hydraulic fluid are stored in appropriate storage tanks or in browsers; – The tanks/ bowsers must be situated on a smooth, impermeable surface (concrete) with a permanent bund. The impermeable lining must extend to the crest of the bund, and the volume inside the bund must be 130% of the total capacity of all the storage tanks/ bowsers (110% statutory requirement plus an allowance for rainfall); – The floor of the bund must be sloped, draining to an oil separator; – Provision must be made for refueling at the storage area by protecting the soil with an impermeable ground cover. Where dispensing equipment is used, a drip tray must be used to ensure small spills are contained; – All empty externally dirty drums must be stored on a drip tray or within a bunded area; – No unauthorised access into the hazardous substances storage areas must be permitted; – No smoking must be allowed within the vicinity of the hazardous storage areas; – Adequate fire-fighting equipment must be made available						

at all hazardous storage areas; – Where refueling away from the dedicated refueling station is required, a mobile refueling unit must be used. Appropriate ground protection, such as drip trays, must be used; – An appropriately sized spill kit kept onsite relevant to the scale of the activity/s involving the use of hazardous substance must be available at all times; – The responsible operator must have the required training to make use of the spill kit in emergency situations; – An appropriate number of spill kits must be available and must be located in all areas where activities are being undertaken; – In the event of a spill, contaminated soil must be collected in containers, stored in a central location, and disposed of according to the National Environmental Management: Waste Act 59 of 2008. **Refer to Section 5.7 for storm and wastewater management procedures and 5.8 for solid and hazardous waste management.**						

5.18 Workshop, equipment maintenance, and storage

Impact management outcome: Soil, surface water, and groundwater contamination is minimized.						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
– Where possible and practical, all maintenance of vehicles and equipment must take place in the workshop area; – During servicing vehicles or equipment, especially when emergency repairs are affected outside the workshop area, a suitable drip tray must be used to prevent spills onto the soil. The relevant local authority must be made aware of a fire as soon as it starts; – Leaking equipment must be repaired immediately or be removed from the site to facilitate repair; – Workshop areas must be monitored for oil and fuel spills; – Appropriately sized spill kit kept onsite relevant to the scale of the activity taking place must be available; – The workshop area must have a bunded concrete slab thatis sloped to facilitate runoff into a collection sump or suitable oil/water separator where maintenance work on vehicles and equipment can be performed; – Water drainage from the workshop must be contained and managed in accordance with ***Section 5.7: storm and Wastewater Management***.	–Contractor. –dEO.	–Dedicated vehicle servicing facility with impermeable floor. –Drip trays. –Spill kits.	–Throughout construction.	–ECO. –dEO.	–Weekly.	–Drip trays used when needed. –No evidence of oil and fuel spillage. –Training records and knowledge of employees in vehicle maintenance. –Response / cleanup records available for all spillages. –Vehicles are well maintained and do not show evidence of leakages.

5.19 Batching plants

Impact management outcome: Minimise spillages and contamination of soil, surface water and groundwater.						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
– Concrete mixing must be carried out on an impermeable surface; – Batching plant areas must be fitted with a containment facility to collect cement laden water. – Dirty water from the batching plant must be contained to prevent soil and groundwater contamination. – Bagged cement must be stored in an appropriate facility and at least 10 m away from any water courses, gullies and drains; – A washout facility must be provided for the washing of concrete-associated equipment. Water used for washing must be restricted; – Hardened concrete from the washout facility or concrete mixer can either be reused or disposed of at an appropriately licenced disposal facility; – Empty cement bags must be secured with adequate binding material if these will be temporarily stored on site; – Sand and aggregates containing cement must be kept damp to prevent the generation of dust (Refer to ***Section 5.20: Dust emissions***)						

– Any excess sand, stone, and cement must be removed or reused from the site on completion of the construction period and disposed of at a registered disposal facility; – Temporary fencing must be erected around batching plants in accordance with **Section 5.5: Fencing and gate installation.**						

5.20 Dust emissions

Impact management outcome: Dust prevention measures are applied to minimise the generation of dust.						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
– Take all reasonable measures to minimise the generation of dust as a result of project development activities to the satisfaction of the ECO; – Removal of vegetation must be avoided until such time as soil stripping is required and similarly exposed surfaces must be re- vegetated or stabilised as soon as is practically possible; – Excavation, handling and transport of erodible materials must be avoided under high wind conditions or when a visible dust plume is present; – During high wind conditions, the ECO must evaluate the situation and make recommendations as to whether dust-damping measures are adequate, or whether working will cease altogether until the wind speed drops to an	–Contractor. –dEO.	–Dust suppression methods as directed by the ECO and CR. –Separate topsoil and subsoil during site clearance and stockpile separately. –Spread topsoil on the surface after final shaping. –Adherence to speed limits by vehicles. –Straw stabilization for completed earthworks.	–Throughout construction.	–ECO.	–Weekly.	–No evidence of excessive dust generation due to construction. –Dust control measures implemented. –Vehicles do not exceed the 40km/hr speed limit.

acceptable level; – Where possible, soil stockpiles must be located in sheltered areas where they are not exposed to the erosive effects of the wind; – Where erosion of stockpiles becomes a problem, erosion control measures must be implemented at the discretion of the ECO; – Vehicle speeds must not exceed 40 km/h along dust roads or 20 km/h when traversing unconsolidated and non-vegetated areas; – Straw stabilisation must be applied at a rate of one bale/10 m² and harrowed into the top 100 mm of top material for all completed earthworks; – For significant areas of excavation or exposed ground, dust suppression measures must be used to minimise the spread of dust.						

5.21 Blasting

Impact management outcome: Impactonthe environment is minimised through a safe blasting practice.						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
– Any blasting activity must be conducted by a suitably licensed blasting contractor and – Notification of surrounding landowners and emergency services site personnel of blasting activity 24 hours						

prior to such activity taking place on Site						

5.22 Noise

Impact Management outcome: Unnecessary noise is prevented by mitigating noise from construction activities.

Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
– The Contractor must keep the noise level within acceptable limits and restrict the use of sound amplification equipment to communication and emergencies only. – All vehicles and machinery must be fitted with appropriate silencing technology and properly maintained. – Any complaints received by the Contractor regarding noise must be recorded and communicated. Where possible or applicable, provide transport to and from the site on a daily basis for construction workers; – Develop a Code of Conduct for the construction phase regarding the behavior of construction staff. Operating hours as determined by the environmental authorisation are adhered to during the development phase. Where not defined, it must be ensured that development activities still meet the impact management outcome related to	–Contractor. –dEO.	–Construction should be only during daylight hours. –Maintain vehicles in good condition. –Staff code of conduct developed and communicated.	–Throughout construction.	–dEO. –ECO.	–Weekly.	–Records of staff code of conduct training. –No evidence of noise complaints in the complaints register.

noise management.						

5.23 Fire prevention

Impact management outcome: Prevention of uncontrollable fires.						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
– Designate smoking areas where the fire hazard could be regarded as insignificant; – Firefighting equipment must be available on all vehicles located on site; – The local Fire Protection Agency (FPA) must be informed of construction activities; – Contact numbers for the FPA and emergency services must be communicated in environmental awareness training and displayed at a central location on site; – Two-way swap of contact details between ECO and FPA.	–Contractor. –dEO.	–Designated smoking areas Services firefighting equipment –Emergency numbers for the Fire Protection Association must be displayed.	–Throughout construction.	–ECO.	–Weekly.	–Servicing records for fire extinguishers. –Records of fire-fighting training and drills. –Emergency numbers for the Fire Protection Association must be displayed.

5.24 Stockpiling and stockpile areas

Impact management outcome: Erosion and sedimentation as a result of stockpiling are reduced.						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
– All material that is excavated during the project development phase (either during piling (if required) or earthworks) must be stored appropriately on site in order to minimise impacts to watercourses, watercourses and water bodies; – All stockpiled material must be maintained and kept clear of weeds and alien vegetation growth by undertaking regular weeding and control methods; – Topsoil stockpiles must not exceed 2 m in height; – During periods of strong winds and heavy rain, the stockpiles must be covered with appropriate material (e.g. cloth, tarpaulin etc.); – Where possible, sandbags (or similar) must be placed at the bases of the stockpiled material in order to prevent erosionof the material.	–Contractor. –dEO.	–Soil stockpiles maintained and protected to prevent erosion.	–Throughout construction.	–ECO.	–Weekly.	–Minimal evidence of erosion from soil stockpiles. –Stockpiles <2m high.

5.25 Finalising tower positions

Impact management outcome: No environmental degradation occurs as a result of the survey and pegging operations.						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
– No vegetation clearing must occur during the survey and pegging operations; – No new access roads must be developed to facilitate access for survey and pegging purposes; – Project manager, botanical specialist, and contractor to agree on final tower positions based on survey within assessed and approved areas; – The surveyor is to demarcate (peg) access roads/tracks in consultation with ECO. No deviations will be allowed without prior written consent from the ECO.	–Contractor. –dEO.	–Ensure engineering designs for the towers considered the soil stability.	–Prior to construction.	–Engineers –ECO.	–Once-off.	– Pylons Layout.

5.26 Excavation for Installation of Pylons

Impact management outcome: No environmental degradation occurs as a result of excavation or installation of foundations.						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
– All excess spoil generated during foundation excavation must be disposed of in an appropriate manner and at a recognised disposal site if not used for backfilling purposes; – Spoil can, however, be used for landscaping purposes and must be covered with a layer of 150 mm topsoil for rehabilitation purposes; – Management of equipment for excavation purposes must be undertaken in accordance with ***Section 5.18: Workshop equipment maintenance and storage*** and – Hazardous substances spills from equipment must be managed in accordance with ***Section 5.17: Hazardous substances.*** – Residual cement must be disposed of in accordance with **Section 5.8: Solid and Hazardous Waste Management**.	–dEO. –Contractor.	–Spread soil excavated from pylon foundations over a surrounding area or used for backfilling.	–During construction.	–ECO.	–Once-Off.	–Soil excavated from pylon foundations must be used for backfilling.

5.27 Assembly and erecting towers

Impact management outcome: No environmental degradation occurs as a result of assembly and erecting of towers.						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
– Prior to the erection, assembled towers and tower sections must be stored on an elevated surface (suggest wooden blocks) to minimise damage to the underlying vegetation; – In sensitive areas, tower assembly must take place off-site or away from sensitive positions; – The crane used for tower assembly must be operated in a manner which minimises impact on8 the environment; – The number of crane trips to each site must be minimised; – Wheeled cranes must be utilised in preference to trackedcranes; – Consideration must be given to erecting towers by helicopter or by hand where it is warranted to limit the extentof environmental impact; – Access to tower positions to be undertaken in accordance with access requirements specified in **Section 8.4: Access Roads**; – Vegetation clearance to be undertaken in accordance with general vegetation clearance requirements specified in **Section 8.10: Vegetation clearing**; – No levelling at tower sites must be permitted unless	–dEO. –Contractor.	–Lowest impact construction methods appropriate to the site conditions based on topography, proximity to existing transmission lines, availability of existing access roads and degree of existing disturbance.	–During and immediately after construction.	–ECO.	–Full time.	–Monitoring during construction to ensure that the lowest impact methods for site conditions are used.

approved by the Development Project Manager or Developer Site Supervisor; – Topsoil must be removed separately from subsoil material and stored for later use during rehabilitation of such tower sites; – Topsoil must be stored in heaps not higher than 1m to prevent destruction of the seed bank within the topsoil; – Excavated slopes must be no greater that 1:3, but where this is unavoidable, appropriate measures must be undertakento stabilise the slopes; – Fly rock from blasting activity must be minimised and any pieces greater than 150 mm falling beyond the Working Area, must be collected and removed; – Only existing disturbed areas are utilised as spoil areas; – Drainage is provided to control groundwater exit gradient with the spill areas such that migration of fines is kept to a minimum; – Surface water runoff is appropriately channeled through or around spoil areas; – During backfilling operations, care must be taken not to dump the topsoil at the bottom of the foundation and then put spoil on top of that; – The surface of the spoil is appropriately rehabilitated in accordance with the requirements specified in **Section 5.29: Landscaping and Rehabilitation**; – The retained topsoil must be spread evenly over areas to be rehabilitated and suitably compacted to effect re-						

vegetation of such areas to prevent erosion as soon as construction activities on the site are complete. Spreading of topsoil must not be undertaken at the beginning of the dry season.						

5.28 Stringing

Impact management outcome: No environmental degradation occurs as a result of stringing.						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
– Where possible, previously disturbed areas must be used for the siting of winch and tensioner stations. In all other instances, the siting of the winch and tensioner must avoid access restricted areas and other sensitive areas; – The winch and tensioner station must be equipped with drip trays in order to contain any fuel, hydraulic fuel or oil spills and leaks; – Refueling of the winch and tensioner stations must be undertaken in accordance with **Section 5.17: Hazardous substances**; – In the case of the development of overhead transmission and distribution infrastructure, a one-metre "trace line" may be cut through the vegetation for stringing purposes only, and no vehicle access must be cleared along" trace lines". Vegetation clearing must be	–Contractor. –dEO.	–Lowest impact construction methods appropriate to the site conditions based on topography, proximity to existing transmission lines, availability of existing access roads, and degree of existing disturbance.	–During and immediately after construction.	–ECO.	–Full time.	–Monitoring during construction to ensure that the lowest impact methods for site conditions are used.

undertaken by hand, using chainsaws and hand-held implements, with vegetation being cut off at ground level. No tracked or wheeled mechanized equipment must be used; – Alternative methods of stringing that limit the impact to the environment must always be considered e.g., by hand or by using a helicopter; – Where the stringing operation crosses a public or private road or railway line, the necessary scaffolding/ protection measures must be installed to facilitate access. If, for any reason, such access has to be closed for any period(s) during development, the persons affected must be given reasonable notice in writing; – No services (electrical distribution lines, telephone lines, roads, railway lines, pipelines, fences, etc.) must be damaged because of stringing operations. Where disruption to services is unavoidable, persons affected must be given reasonable notice in writing; – Where stringing operations cross cultivated land, damage tocrops is restricted to the minimum required to conduct stringing operations, and reasonable notice (10 work days minimum), in writing, must be provided to the landowner; – Necessary scaffolding protection measures must be installed to prevent damage to the structures supporting certain high-value agricultural areas such as vineyards, orchards, and nurseries.						

5.29 Socio-economic

Impact management outcome: Socio-economic development is enhanced.						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
– Develop and implement communication strategies to facilitate public participation; – Develop and implement a collaborative and constructive approach to conflict resolution as part of the external stakeholder engagement process; – Sustain continuous communication and liaison with neighboring owners and residents. – Create work and training opportunities for local stakeholders;and – Where feasible, no workers, with the exception of security personnel, must be permitted to stay overnight on the site.This would reduce the risk to locals.	–Contractor.	–Weekly communication on construction progress through established community communication channels.	– Six months prior to the start of construction. –Throughout construction.	–ECO.	–Weekly.	–Recorded grievances / informal complaints. –Records of community engagements (minutes, correspondence)

5.30 Temporary closure of site

Impact management outcome: Minimise the risk of environmental impact during periods of site closure greater than five days.						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
– Bunds must be emptied (where applicable) and need to be undertaken in accordance with the impact management actions included in ***sections 5.17: management of hazardous substances*** and ***5.18 workshop, equipment maintenance, and storage***; – Hazardous storage areas must be well-ventilated; – Fire extinguishers must be serviced and accessible. Service records are to be filed and audited at last service; – Emergency and contact details displayed must be displayed; – Security personnel must be briefed and have the facilities to contact or be contacted by relevant management andemergency personnel; – Night hazards such as reflectors, lighting, traffic signage, etc., must have been checked; – Fire hazards identified, and the local authority must havebeen notified of any potential threats e.g., large brush stockpiles, fuels, etc.; – Structures vulnerable to high winds must be secured; – Cement and materials stores must have been secured;	–Contractor.	–Implement impact management actions as specified.	–Throughout construction.	–ECO.	–Once-off.	–Site conditions indicate compliance.

– Toilets must have been emptied and secured; – Refuse bins must have been emptied and secured; – Drip trays must have been emptied and secured.						

5.31 Landscaping and rehabilitation

Impact management outcome: Areas disturbed during the development phase are returned to a state that approximates the original condition.						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
– All areas disturbed by construction activities must be subject to landscaping and rehabilitation; All waste must be disposed of at a registered waste site, and certificates of disposal provided; – All slopes must be assessed for contouring, and to contour only when the need is identified in accordance with theConservation of Agricultural Resources Act, No 43 of 1983 – All slopes must be assessed for terracing, and to terrace only when the need is identified in accordance with the Conservation of Agricultural Resources Act, No 43 of 1983; – Berms that have been created must have a slope of 1:4 and be replanted with indigenous species and grasses that approximate the original condition; – Where new access roads have crossed cultivated farmlands,that lands must be rehabilitated by ripping,	–dEO. –Contractor.	–Embankments vegetated by topsoil placement and erosion protection, with exception of those kept free of vegetation for fire control. –Install gabions around pylon bases as necessary where there is an erosion risk. –All disturbed areas to be revegetated by placing topsoil and seeded, if necessary.	–Throughout construction.	–ECO	–Weekly.	–Disturbed areas revegetated and topsoil spread.

which must be agreed to by the holder of the EA and the landowners; – Rehabilitation of tower sites and access roads outside offarmland; – Indigenous species must be used with species and/grasses to where they complement or approximate the original condition; – Stockpiled topsoil must be used for rehabilitation (refer to Section ***5.24: Stockpiling and stockpiled areas***); – Stockpiled topsoil must be evenly spread so as to facilitate seeding and minimise loss of soil due to erosion; – Before placing topsoil, all visible weeds from the placement area and from the topsoil must be removed; – Subsoil must be ripped before topsoil is placed; – The rehabilitation must be timed so that rehabilitation can take place at the optimal time for vegetation establishment; – Where impacted through construction-related activity, all sloped areas must be stabilised to ensure proper rehabilitation is affected and erosion is controlled; – Sloped areas stabilized using design structures or vegetation as specified in the design to prevent erosion of embankments. The contract design specifications must be adhered to and implemented strictly; – Spoil can be used for backfilling or landscaping as long as it is covered by a minimum of 150 mm of topsoil.						

– Where required, re-vegetation including hydro-seeding can be enhanced using a vegetation seed mixture as described below. A mixture of seeds can be used, provided the mixture is carefully selected to ensure the following: a) Annual and perennial plants are chosen; b) Pioneer species are included; c) Species chosen must be indigenous to the area, with the seeds used coming from the area; d) Root systems must have a binding effect on the soil; e) The final product must not cause an ecological imbalance in the area.						

6 ACCESS TO THE GENERIC EMPr

Once completed and signed, to allow the public access to the generic EMPr, the holder of the EA must make the EMPr available to the publicin accordance with the requirements of regulation 26(h) of the EIA Regulations.

PART B: SECTION 2

7 SITE-SPECIFIC INFORMATION AND DECLARATION

7.1 Sub-section 1: contact details and description of the project

7.1.1 Details of the applicant:

Table 1: Details of the Applicant

Name of Mine	Eskom Holdings SOC Limited
Physical Address	Megawatt Park Maxwell Drive Sunninghill Sandton
Postal Address	PO Box 1091 Johannesburg 2001
Contact Person	Vhonani Mashau
Telephone Number	068 1504 570
Email address	mashauvh@eskom.co.za
Project Manager	Vhonani Mashau
Telephone Number	068 1504 570
Email	mashauvh@eskom.co.za

7.1.2 Details and expertise of the EAP:

Table 2: Details of the EAP.

Name of Company	Nsovo Environmental Consulting
Person Responsible	Rejoice Aphane
Professional Registration	EAP (EAPASA): Reg 2019/1277
Telephone Number	087 803 9294
Fax Number	086 602 8821
Email	rejoice@nsovo.co.za
Qualifications & Experience	BA Environmental Management **11 years of experience**

Project Related Expertise	In terms of project-related expertise, the Environmental Assessment Practitioner has undertaken projects of varying scale and complexity, including: • Basic Assessment for the proposed upgrade of the Transnet Helipad (2023) • Integrated Environmental Impact Assessment and WULA for Exxaro discard dump expansion (2021). • Integrated Environmental Impact Assessment and WULA for Bushveld Vanchem Expansion project (2021). • Integrated Environmental Impact Assessment and WULA for Grammatikos Vogelfontein project (2021). • EIA for the proposed Tubatse Strengthening Phase 1 – Senakangwedi B integration within the jurisdiction of Greater Tubatse Local Municipality in Limpopo Province 2018). • EIA for the proposed Maphutha- Witkop powerline in Limpopo Province (2018). • EMPr, WULA, and EA amendment for the proposed Juno Gromis 400kV power line (2017).

7.1.3 Project name:

The proposed deviation of the SAR Rooikop 88kv powerline in Germiston South within the jurisdiction of Ekurhuleni Metropolitan Municipality, Gauteng province.

7.1.4 Description of the project:

Nsovo Environmental Consulting (hereafter referred to as Nsovo) has been appointed by Eskom Holdings SOC Limited (hereafter referred to as Eskom) to undertake Environmental Authorisation and Environmental Management Program as part of the Environmental Impact Assessment (EIA) process for the proposed 88KV SAR Rooikop powerline deviation in Ward 40 of Ekurhuleni Metropolitan Municipality in Gauteng Province, South Africa.

Eskom faces a critical challenge with the SAR Rooikop line, a vital 88kV transmission artery supplying the SAR Rooikop 88KV Traction Substation, from Germiston South 88/33kV Substation within the City of Ekurhuleni Metropolitan Municipality.

To address this challenge, Eskom proposes a deviation of the SAR Rooikop 88kV line covering 486 meters. This deviation involves dismantling the affected section of the line between (Structure 1 and 3) and installing two 20-meter steel monopole structures along the new servitude, along with 14 stays for support.

The SAR Rooikop line serves as a vital artery in the power distribution system, linking the Germiston South 88/33kV Substation to the SAR Rooikop 88KV Traction Substation for 1.96 kilometers. However, recent events have brought to light a significant impediment to its functionality – a fault between structures 1 and 3, located within a challenging terrain, namely a wetland. This fault has rendered the substation inactive, depriving the surrounding areas of an essential electricity supply and risking vandalism of the infrastructure. The Detailed Scope of Work will involve the following:

- Servitude acquisition along the perimeter of the wetland, from structure 3 to SAR Rooikop substation.
- Dismantle conductors and structures, from structure 1 to structure 3.
- Scrap the dismantled material on site.
- Install 2 x 20 m Steel Monopole structures, along the new servitude.
- Install 14 stays.
- String Panther conductors from structure 3 to SAR Rooikop substation

The SAR Rooikop substation is fed by a radial feed and there are no alternative back-feeding options. Therefore, it is important that the project is implemented to ensure that the supply is restored to the substation. The longer the substation is without supply, the higher the risk of the substation and overhead line being vandalized. This will increase the costs of normalizing the line and substation.

The proposed development triggers the NEMA EIA listed activities; as such, Eskom is required to undertake a Basic Assessment (EIA) process and obtain an Environmental Authorisation in line with the requirements of the EIA Regulations of 2014 as amended promulgated in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA). This is an Environmental Authorisation for listed activities as contained in Government Notice Regulations (GN R) GN 983, and GNR 985.

7.1.5 Project location:

The proposed development is located within the jurisdiction of Ekurhuleni Metropolitan Municipality, ward 40, Gauteng Province.

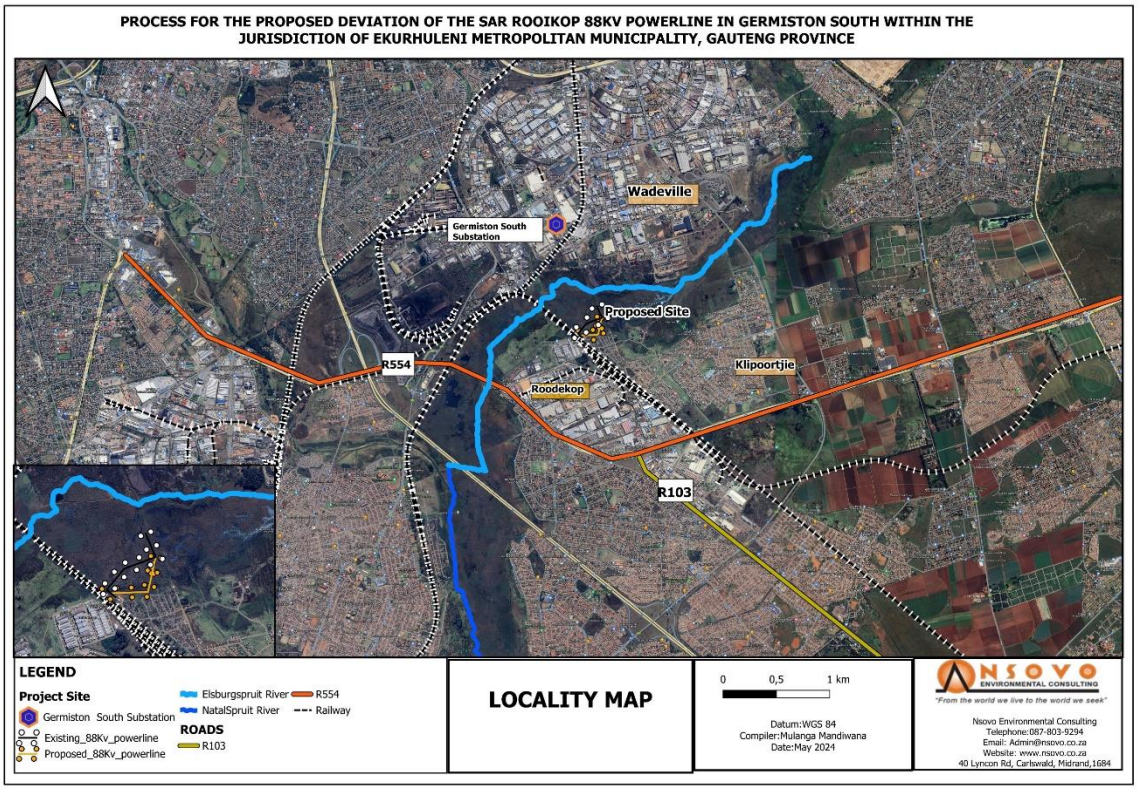


Figure 1: Locality Map of the Proposed SAR Rooikop 88Kv powerline.

The proposed development traverses various farms and their names, as well as the 21-digit Surveyor General Code. The GPS start, middle, and end coordinates for the proposed power line are shown in Table 3 below.

Table 3: Details of the proposed site property

Location	Latitude	Longitude
Start	26°17'15.80"S	28°10'57.11"E
Middle	26°17'14.74"S	28°11'4.37"E
End	26°17'7.90"S	28°11'6.08"E

7.16 Preliminary technical specification of the overhead transmission and distribution:

The Eskom Germiston South / SAR Rooikop powerline is a 1.96KM 88kV powerline that feeds the SAR Rooikop 88KV Traction Substation. The proposed deviation is approximately 486m for the 88KV powerline. The proposed powerline will run on the opposite side of the existing 88kV powerline and transverse more in dry land than the existing which is fully inside a wetland. The preferred construction method is the break and build on the preferred route which entails demolishing some sections of the existing broken powerline to erect or connect the new powerline in a different direction. Therefore, for the proposed project, the proposed servitude is more preferred as it will alleviate the issues that Eskom has faced in maintenance inside a wetland.

The detailed scope of work will involve the following:

- Servitude acquisition along the perimeter of the wetland, from structure 3 to SAR Rooikop substation.
- Dismantle conductors and structures, from structure 1 to structure 3.
- Scrap the dismantled material on site.
- Install 2 x 20 m Steel Monopole structures, along the new servitude.
- Install 14 stays.
- String Panther conductors from structure 3 to SAR Rooikop substation (use a helicopter to string Panther conductors from structure 3, along the new servitude and monopole structures, to structure 1.)

There is a desire to have as little impact on the wetland as possible hence the deviation special foundations will have to be in place as to account for the muddy soil that runs along the perimeter of the wetland.

7.2 Sub-section 2: Development footprint site map

This sub-section must include a map of the site sensitivity overlaid with the preliminary infrastructure layout. The sensitivity map must be prepared from the national web based environmental screening tool, when available for compulsory use at: https://screening.environment.gov.za/screeningtool. The sensitivity map shall identify the nature of each sensitive feature e.g. raptor nest, threatened plant species, archaeological site, etc. Sensitivity maps shall identify features within the planned working area and anyknown sensitive features in the surrounding landscape. The overhead transmission and distribution profile shall be illustrated at an appropriate resolution to enable fine-scale interrogation. It is recommended that <20 km of overhead transmission and distributionlength is illustrated per page in A3 landscape format. Where considered appropriate, photographs of sensitive features in the context of tower positions shall be used.

According to the aquatic study, the proposed 88kV powerline footprint is situated in an area of High Aquatic Biodiversity sensitivity. Assessments for the present water course were performed, and the potential impacts were very high. Owing to the fact that the existing lines are directly inside a wetland while the new proposed line is along the banks of the wetland, the impact of such a construction will likely have been assessed and is considered not as severe as the existing, but it is still significant and warrants mitigation measures to be adopted.

Additionally, placing and building a tower in a wetland would require a license from the Department of Water and Sanitation, as this activity would fall under one of the specified water uses under Section 21 of the National Water Act: (i) altering the bed, banks, course, or characteristics of a watercourse.

The clearing of natural vegetation and stripping topsoil and sub-soils for placing pylons will potentially result in increased sediment runoff from the site into watercourses associated with the study area. Considering the nature of the operation and the proposed work procedure, the proposed impact will likely not be significant. However, mitigation Measures were proposed, and they include:

- The layout of pylons should be cognizant of the delineated wetland boundaries. The approach to the working site should be designed to avoid wetland habitats as far as possible effectively.
- Develop soil management measures for the construction sites that will prevent sediment runoff into the associated watercourses, e.g., scheduling the construction phase during low rainfall periods, installing soil curtains, using swales to capture runoff water and settle suspended materials, etc., to Avoid the possibility of sediment ending up in watercourses.

A wetland monitoring program must be in place to proactively detect threats to wetlands before it can cause damage through an adaptive management approach, e.g., the initiation of new concentrated drainage pathways and erosion processes because of new access roads, etc. It is recommended that a wetland specialist (preferential) or ecologist have at least one visit during the construction process and one visit after construction is completed. The wetland specialist needs to ensure that no negative impacts on wetlands have occurred or that processes have been initiated that could harm wetlands in the future, e.g. preferential flow paths or erosion.

Specific conditions recommended for the EA from an aquatic perspective;

- Implement mitigation controls during the construction and operational phase as specified in the mitigation requirements. Monitor and report on their effectiveness.
- Preserve as much of the natural habitat as possible during construction and operation to lessen the operational impacts and to reduce the irreversibility of impacts.
- Effective restoration of the intact natural habitats before the development should be implemented and reported on after decommissioning.
- Avoid construction activities in wetlands or preferential hydrological pathways supporting wetlands through proper planning, appropriate design and minimizing the construction footprint as per previous impacts discussed.
- Caution must be taken to ensure building materials are not dumped or stored within the delineated wetland zones.
- Emergency plans must be in place in case of spillages.
- Littering and contamination of water sources during construction must be mitigated by effective construction camp management.
- All construction materials, including fuels and oil, should be stored in a demarcated area within a bunded impermeable surface to avoid contamination (outside of wetlands or wetland buffer zones).
- Cement and plaster should only be mixed within mixing trays. Washing and cleaning of equipment should also be done within a beamed area to trap any cement or plaster and avoid excessive soil erosion. These sites must be rehabilitated prior to commencing the operational phase.

The Heritage specialist conducted their study as recommended by the DFFE Screening tool; the heritage sensitivity was highlighted as High on the screening tool. Upon Further study and site visits, the sensitivity was downgraded to low, this downgrade is due to the lack of evidence of a high sensitivity to heritage and cultural themes in and around the area. However, should any heritage relics be found during construction, the heritage specialist is to be notified, and the ECO, along with the CEO, to assist in the demarcation of the affected area until the site is cleared for continuation by the heritage specialist. The agricultural land capability was also very high, but it was apparent that the area is not used for any agricultural activities, and therefore, the high sensitivity is noted and acknowledged.

Avifauna sensitivity is medium according to the screening report, nonetheless, there are impacts identified. The construction phase will result in habitat destruction, impacting the faunal communities, including avifauna. The impacts identified include the following:

- Loss of priority avian species from important habitats.
- Loss of resident avifauna through increased disturbance.
- Long-term or permanent degradation and modification of the receiving environment resulting to the loss of critical avian habitats.
- Collisions with powerline infrastructure.
- Electrocution risks leading to injury or loss of avian life, which decreases avifauna species diversity.

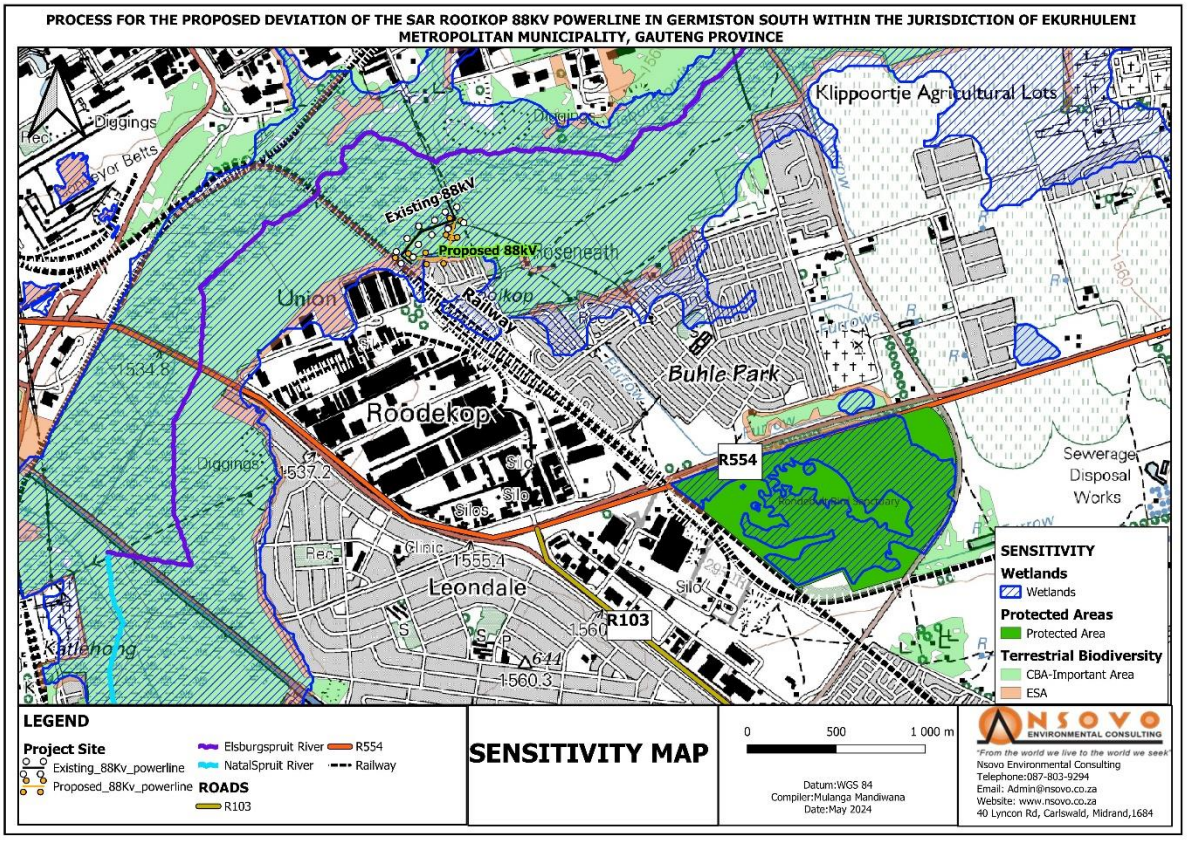


Figure 2: Site sensitivity in relation to the Eastern Cape conservation plan

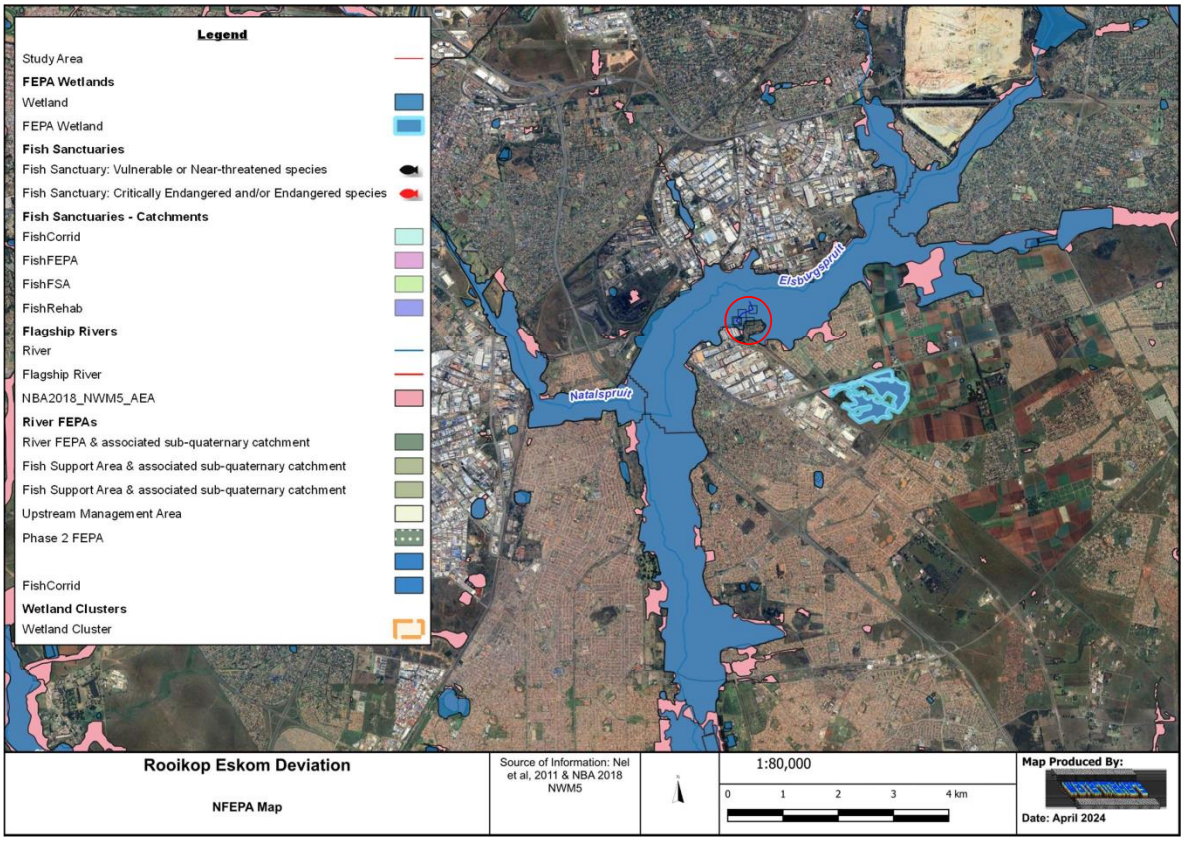


Figure 3: On site Hydrology (National Freshwater Ecosystem Priority Areas project)

Figure 4: Aquatic Biodiversity Theme Sensitivity.

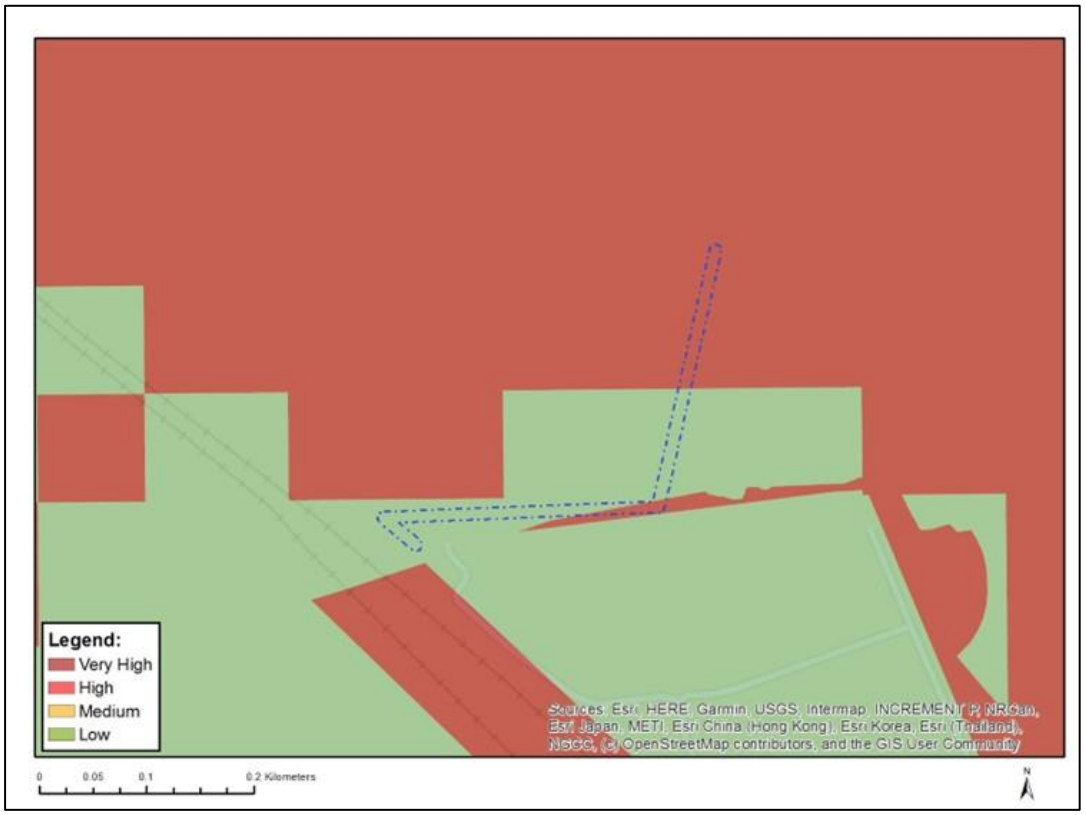


Figure 5: Terrestrial Biodiversity Theme Sensitivity.

Figure 6: Relative Animal (Aviation and mammals) Species theme

7.3 Sub-section 3: Declaration

The proponent/applicant or holder of the EA affirms that he/she will abide and comply with the prescribed impact management outcomes and impact management actions as stipulated in part B: section 1 of the generic EMPr and have the understanding that the impact management outcomes and impact management actions are legally binding. The proponent/applicant or holder of the EA affirms that he/she will provide written notice to the CA 14 days prior to the date on which the activity will commence commencement of construction to facilitate compliance inspections.

Signature Proponent/applicant/ holder of EA Date:

04 June 2024

7.4 Sub-section 4: amendments to site-specific information (Part B; Section 2)

Should the EA be transferred to a new holder, Part B: Section 2 must be completed by the new holder and submitted with the application for an amendment of the EA in terms of Regulations 29 or 31 of the EIA Regulations, whichever applies. The information submitted for an amendment to an environmental authorisation will be considered incomplete should a signed copy of Part B: Section 2 not be submitted. Once approved, Part B: Section 2forms part of the EMPr for the development and the EMPr becomes legally binding to the new EA holder.

Not Applicable

PART C

8 SITE-SPECIFIC ENVIRONMENTAL ATTRIBUTES

If any specific environmental sensitivities/attributes on the site that require morespecific impact management outcomes and impact management actions are not included in the pre-approved generic EMPr template to manage impacts, those impact management outcomes and actions must be included in this section. These specific management controls must be referenced spatially and include impact management outcomes and actions. The management controls, including impact management outcomes and actions, must be presented in the pre-approved generic EMPr template format. This applies only to additional impact management outcomes and impact management actions that are necessary.

If Part C applies to the development as authorised in the EA, it must be submitted to the CA together with the BAR or EIAR for consideration of and decision on the application for EA. The information in this section must be prepared by an EAP, and the name and expertise of the EAP, including the curriculum vitae, must be included. Once approved,Part C forms part of the EMPr for the site and is legally binding.

This section will **not be required** should the site contain no specific environmental sensitivities or attributes.

8.1 Sensitive Ecology

Impact management outcome: Minimise impact to the sensitive ecology						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
The proposed powerline will encroach on a Critical Biodiversity Area. Therefore, the following mitigation measures must be adhered to: – All high-sensitivity areas should be avoided as far as possible, and development must be prioritized in low or medium areas. – Existing access routes, especially roads, must be made use of. – Restrict laydown areas, chemical toilets, and materials storage to low-sensitivity areas. – Minimize and clearly demarcate the construction footprint to avoid disturbing adjacent areas. Keep road footprints to prescribed widths. – Litter, spills, fuels, chemicals, and human waste in and around the project area. – Noise must be kept to an absolute minimum during at night to minimize all possible disturbances to amphibian species and nocturnal mammals.	–Contractor. –DEO.	–Inductions. –Toolbox talks. –Updated site plans.	–Weekly and monthly audits	–EEO. –ECO.	–Daily.	–Visible demarcation on sensitive sites. –Barriers and signage maintained in good condition.

– Use prefabricated or reusable/recyclable materials for construction buildings. – Prohibit storage of vehicles or equipment outside designated project areas. – Conduct a pre-construction walk-through by an ecologist during the wet season to identify SCC. – Monitor all sites disturbed by construction activities for colonization by exotic or invasive plants and control these as they emerge. Monitoring should continue for at least two years after construction is complete. – Ensure that maintenance work does not take place haphazardly but according to a fixed plan. – Delay the re-introduction of livestock (where applicable) to all rehabilitation areas until an acceptable level of re-vegetation has been reached. – Maintenance workers may not trample natural vegetation, and work should be restricted to previously disturbed footprints. In addition, mitigation measures as set out for the construction phase should be adhered to						

8.2 8.2 Surface and groundwater pollution.

Impact management outcome: Minimise impact to water courses and buffers						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
– No activities should occur within a 100m or a 1:100-year flood line, whichever is greatest, without approval from DWS. – Care must be taken during construction to prevent leaks and spillage of materials that may detrimentally affect water quality (especially fuels and chemicals). – Care must be taken to avoid the destruction of water courses. – Adequate measures must be put in place to prevent runoff of construction debris to nearby water bodies. – The use of any temporary, chemical toilet facilities must not cause any pollution to a water resource or pose a health hazard. In addition, these toilets must not be situated within 100m of a watercourse or within the 1:100-year flood line (whichever is the greatest). Furthermore, no form of secondary pollution should arise from the disposal of refuse or sewage from the temporary, chemical toilets. Any pollution problems arising from the above are to be addressed immediately by Eskom.	– Contractor.	– ECO to monitor construction activities.	– Construction phase. – Operational phase	– ECO. – DEO.	– Daily	– No evidence of disturbance to wetland and rivers.

– It is important that any significant spillage of chemicals, fuels, etc., during the construction and/or operational phases is reported to this office and other relevant authorities. – Stockpiling of soil or any other materials used during the construction phase must not be allowed on or near steep slopes, a watercourse, or a water body. – Care must be taken during construction to prevent leaks and spillage of materials that may detrimentally affect water quality (especially fuels and chemicals). – Care must be taken to avoid destruction of water courses. – Maintenance activities should not take place within watercourses or buffer zones, nor should edge effects impact these areas.						

8.3 Fauna and Avifauna

Impact management outcome: Minimise impact to fauna and avifauna						
– Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
– Restrict activities to the designated servitude and avoid expanding the construction footprint.	– Contractor.	– Induction and toolbox focusing on avifauna	– Construction phase	– DEO. – ECO.	– Daily.	– Signage for prohibitions of killing of

– Implement an Environmental Management Plan (EMP) monitored by an onsite Environmental Control Officer (ECO – Issue Corrective measures Impact rating criteria Significance Nature Extent Duration Magnitude Probability – Minimize loss of indigenous vegetation by refining the development footprint and avoiding sensitive freshwater habitats. – Consult a qualified avifaunal specialist for managing discovered nests, ensuring nestlings or eggs fledge before removal. – Route lines correctly and install anti-collision marking devices. – Use bird-friendly pylon structures and fit devices on earth wires for visibility. – Manage nests on lines according to Eskom guidelines and legislation. – Fit poles with Eskom-approved bird perches to prevent electrocution. – Restrict vehicles to designated roadways.		protection. – Daily inspection.	– Operational phase			avifauna, Fauna, or birds. – No evidence of death of fauna or avifauna

APPENDIX 1: METHOD STATEMENTS

To be prepared by the contractor prior to the commencement of the activity. The methodstatements are **not required** to be submitted to the CA.