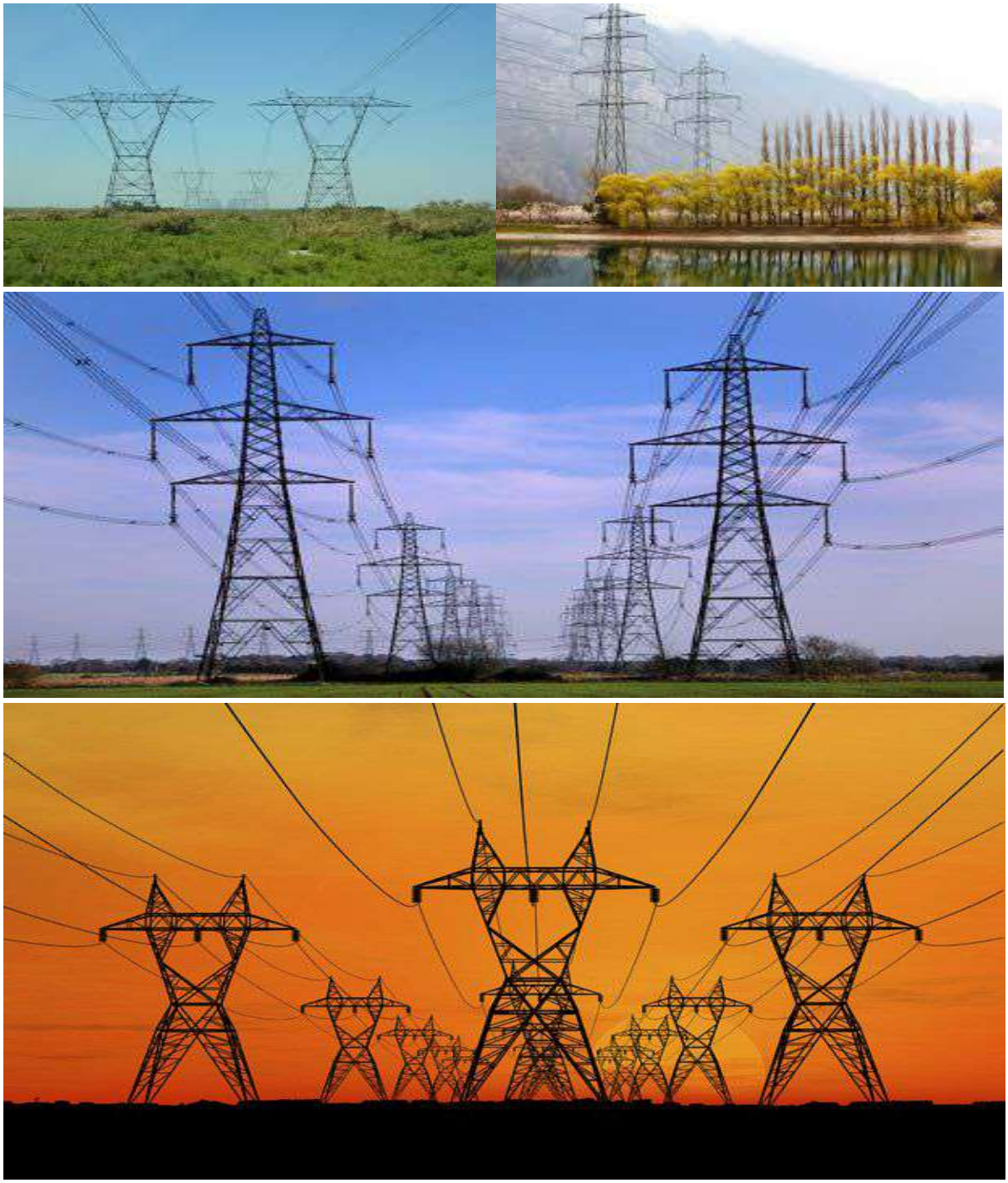
GENERIC ENVIRONMENTAL MANAGEMENT PROGRAMME (EMPr) FOR THE DEVELOPMENT AND EXPANSION FOR OVERHEAD ELECTRICITY TRANSMISSION AND DISTRIBUTION INFRASTRUCTURE



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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 must 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 the competent 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 realisation of such infrastructure.

3. Objective

The objective of this generic EMPr is to prescribe and pre-approve generally accepted impact management outcomes and impact management actions, which can commonly and repeatedly be used for the avoidance, management and mitigation of 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 activity 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 Listing Notice 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 **not legally binding**	Definitions, acronyms, roles & responsibilities and documentation and reporting.
B	1	Pre-approved generic EMPr template	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 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 as once the generic EMPr is gazetted 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

Part	Section	Heading	Content
			will comply with the pre-approved generic EMPr template contained in Part B: Section 1, and understands that the impact management outcomes and impact management actions are **legally binding**. The preliminary infrastructure layout must be finalized to inform the final EMPr that is to be submitted with the basic assessment report (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 CA together with the final BAR or EIAR. The information submitted to the CA will be considered to be incomplete should a signed copy of Part B: section 2 not be submitted. 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 are present on the site which require site specific impact management outcomes and impact management actions, not included in the pre-approved generic EMPr, to manage impacts, these specific impact management outcomes and impact management actions must be included in this section. These specific environmental attributes must be referenced spatially and impact management outcomes and impact management actions must be provided. 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 is applicable to the site, it **is required** to be submitted 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 must contain his/her name and

Part	Section	Heading	Content
			expertise including a curriculum vitae. Once approved, Part C forms part of the EMPr for the site and is legally binding. This section applies only **to additional** impact management outcomes and impact management actions that are necessary for the avoidance, management and mitigation of impacts and risks associated with the specific development or expansion and which are not already included in Part B: section 1.
Appendix 1			Contains the method statements to be prepared prior to 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 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 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 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 impact management outcomes and impact management actions in the following manner:

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

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

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 coordinates of the corridor in which the proposed overhead electricity transmission and distribution infrastructure is proposed as well as the 21-digit Surveyor General code of each cadastral land parcel and, where available, the farm name.

Sub-section 2 is to be prepared by an EAP and must contain his/her name and expertise including a curriculum vitae. This sub-section must include a map of the site sensitivity 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 and any known sensitive features in the surrounding landscape within 50m from 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 in the case of a change of ownership must complete, which 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 to be 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 the 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 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;

"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 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 any liquid 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 horizontal units;

"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 which is unsuitable for use as material in the construction works or is material which 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	Environment 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&APs	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 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 implementation of an EMPr*

Responsible Person (s)	**Role and Responsibilities**
Developer's Project Manager (DPM)	<u>Role</u> The Project Developer is accountable for ensuring compliance with the EMPr and any conditions of approval from the competent authority (CA). Where required, an environmental control officer (ECO) must be contracted by the Project Developer to objectively monitor the implementation of the EMPr according to relevant environmental legislation, and the conditions of the environmental authorisation (EA). The Project Developer is further responsible for providing and giving mandate to enable the ECO to perform responsibilities, and he must ensure that the ECO is integrated as part of the project team while remaining independent. <u>Responsibilities</u> - Be fully conversant with the conditions of the EA; - Ensure that all stipulations within the EMPr are communicated and adhered to by the Developer and its Contractor(s); - Issuing of site instructions to the Contractor for corrective actions required; - Monitor the implementation of the EMPr throughout the project by means of site inspections and meetings. Overall management of the project and EMPr implementation; and - Ensure that periodic environmental performance audits are undertaken on the project implementation.

Responsible Person (s)	Role and Responsibilities
Developer Site Supervisor (DSS)	Role The DSS reports directly to the DPM, oversees site works, liaises with the contractor(s) and the ECO. The DSS is responsible for the day to day implementation of the EMPr and for ensuring the compliance of all contractors 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. In this respect, the ECO is to conduct periodic site inspections, attend regular site meetings, pre-empt problems and 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 in turn reports back to the Contractor and potential and Registered Interested &Affected Parties (RI&APs), 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 which have a cost implication (i.e. those that are deemed to be a

Responsible Person (s)	Role and Responsibilities
	variation, not allowed for in the Performance Specification) must be endorsed by the Project Manager. The ECO must also, as specified by the EA, report to the relevant CA as and when required. <u>Responsibilities</u> 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 which 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;

Responsible Person (s)	Role and Responsibilities
	- 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-compliances, 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; - Communication of all modifications to the EMPr to the relevant stakeholders.
developer Environmental Officer (dEO)	<u>Role</u> The dEOs will report to the Project Manager and are responsible for implementation of the EMPr, environmental monitoring and reporting, providing environmental input to the Project Manager and Contractor's Manager, liaising with contractors and the landowners as well as 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 these measures; - Ensure that all stipulations within the EMPr are communicated and adhered to by the Employees, Contractor(s) ; - Confine the development site to the demarcated area; - Conduct environmental internal audits with regards to EMPr and authorisation compliance (on cEO); - Assist the contractors in addressing environmental challenges on site; - Assist in incident management:

Responsible Person (s)	Role and Responsibilities
	- Reporting environmental incidents to the developer and ensuring that corrective action is taken, and lessons learnt 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 and contractor.
Contractor	<u>Role</u> 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 as 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 for overhead electricity transmission and distribution infrastructure activities. <u>Responsibilities</u> - 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;

Responsible Person (s)	Role and Responsibilities
	- ensure that contractors' staff repair, at their own cost, any environmental damage as a result of a 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, who is 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; a 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, labourers, 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 the 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 for all 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 for the 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 of site 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 filed in 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 is to 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.

4.4 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 that is distributed to attendees. Each set of minutes must clearly record "Matters for Attention" that will be reviewed at the next meeting.

4.5 Required Method Statements

The method statement will be done in such detail that the ECOs are enabled 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 site;
- how the equipment/ material will be moved while on site;
- how and where material will be stored;
- the containment (or action to be taken if containment is not possible) of leaks or 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 following method statements to the Project Manager no less than 14 days prior to the commencement date 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 Substances;
- 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 to properties 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 – wildlife interaction especially on game farms; and
- Heritage and palaeontology 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.

4.6 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 notice would not be issued. An environmental incident is defined as:

- Any deviation from the listed impact management actions (listed in this EMPr) that 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 in the 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, and recorded 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.

4.7 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 received and correct whatever is the cause for the issuing of the notice. Complaints received regarding activities on the development site pertaining to the environment shall be recorded in a dedicated register and the response noted with the date and action 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 the manner by which the environment is managed. Failure to redress the cause shall be reported to the relevant CA for them to 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.

4.8 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 corrective actions required take place 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 signed off by the ECOs.

4.9 Photographic record

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

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-compliances;
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.

4.10 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. The Complaints 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. Where0 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 keep a 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 be signed by the Contractor, ECO and affected party. Where a damage claim is issued by the complainant, the ECOs shall respond as described in (**section 4.11**) below.

4.11 Claims for damages

In the event that a Claim for Damages is submitted by a community, landowner or individual, 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 the incident to the Developer's negotiator and legal department; and
4. A formal record of the response by the ECOs to the claimant as well as the rectification of the method of making payments not amount will be recorded in the EMPr file.

4.12 Interactions with affected parties

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

The ECOs shall:

1. Ensure that all queries, complaints and claims are dealt within an agreed timeframe;

2. Ensure that any or all agreements are documented, signed by all parties and a record of the agreement kept in the EMPr file;
3. Ensure that a complaints telephone numbers are made available to all landowners and affected parties; and
4. Ensure that contact with affected parties is courteous at all times;

4.13 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 be 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. At a frequency determined by the EA, the ECOs shall submit the monthly reports to the CA. 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.

4.14 Final environmental audits

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

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 that are 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 to ensure 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 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 understand 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;	ECO / cEO / dEO	Hold environmental awareness training workshops	Pre-construction Construction	ECO dEO	Monthly and as and when required	Attendance register and training minutes / notes for the record
– The Contractor must allow for sufficient sessions to train all personnel with no more than 20 personnel attending each course;	Contractor	Scheduling of sufficient sessions through consultation with the ECO / cEO / dEO	Pre-construction Construction	ECO dEO	Monthly and as and when required	Attendance register and training minutes / notes for the record
– Refresher environmental awareness training is available as and when required;	cEO / dEO in consultation with the ECO	Hold refresher environmental awareness training workshops	During the construction phase	ECO dEO	Monthly and as and when required	Attendance register and training minutes / notes for the record
– 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;	cEO / dEO	Hold training workshops and ensure that the EA and EMPr is readily available	During the construction phase	ECO dEO	Monthly and as and when required	Attendance register and training minutes / notes for the record
– 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	Contractor	Develop and place appropriate	Pre-construction Construction	ECO dEO cEO	Monthly	Photographic record

Impact Management Actions	Implementation			Monitoring		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
b) No littering.		posters at key locations				
– Environmental awareness training must include as a minimum the following: a) Description of significant environmental impacts, actual or potential, related to their 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.	cEO / dEO in consultation with the ECO	Develop environmental awareness training material which covers the minimum requirements	Pre-construction Construction	ECO dEO	Prior to the commencement of the environmental awareness training	Environmental awareness training material requirements checklist
– A record of all environmental awareness training courses undertaken as part of the EMPr must be available;	ECO / cEO / dEO	Filing system including all proof of training (i.e. attendance register and training minutes / notes for the record)	During the construction phase	ECO dEO	Monthly	Completed and up to date filing system with proof of training

Impact Management Actions	Implementation			Monitoring		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
– Educate workers on the dangers of open and/or unattended fires;	cEO / dEO in consultation with the ECO	Develop environmental awareness training material which covers the dangers of open and/or unattended fire	Pre-construction Construction	ECO dEO	Prior to the commencement of the environmental awareness training	Environmental awareness training material requirements checklist
– A staff attendance register of all staff to have received environmental awareness training must be available.	ECO / cEO / dEO	Filing system including all proof of training (i.e. attendance register)	During the construction phase	ECO dEO	Monthly	Completed and up to date filing system inclusive of all attendance registers
– Course material must be available and presented in appropriate languages that all staff can understand.	ECO / cEO / dEO	Develop environmental awareness training material in the required languages. Training material must by readily available to all staff	During the construction phase	ECO dEO	Monthly	Environmental awareness training material requirements checklist and the training register which must indicate the language of the training

5.2 Site Establishment Development

Impact management outcome: Impacts on the environment are minimised during site establishment and the development footprint is kept to the demarcated development area.

Impact Management Actions	Implementation			Monitoring		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
– A method statement must be provided by the contractor prior to 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), including but 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;	Contractor	Development of an appropriate method statement	Pre-construction	ECO dEO	Once, prior to construction	Availability of the method statement which complies with the minimum requirements listed
– Location of construction camps must be within approved area to ensure that the site does not impact on sensitive areas identified in the environmental assessment or site walk through;	DPM	Place construction camps outside of sensitive areas identified in the Basic Assessment Report	Pre-construction Construction	ECO dEO	Once, prior to construction	Availability of a layout and sensitivity map indicating avoidance of sensitive areas

Impact Management Actions	Implementation			Monitoring		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
– Sites must be located where possible on previously disturbed areas;	DPM	Place site outside of sensitive areas and within previously disturbed areas identified in the BA Report	Pre-construction	ECO dEO	Once, prior to construction	Availability of a layout and sensitivity map indicating avoidance of sensitive areas and placement within disturbed areas
– The camp must be fenced in accordance with ***Section 5.5: Fencing and gate installation***; and	DPM	Design and implementation of fencing as per the requirements of Section 5.5 of this EMPr	Pre-construction & Construction	ECO dEO	Once, prior to construction and once during the construction of the fencing	The camp is fenced in accordance with Section 5.5 of this EMPr
– The use of existing accommodation for contractor staff, where possible, is encouraged.	Not applicable – the development of new accommodation facilities will not be required. Staff will be accommodated in the nearby town of Sutherland.					

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;	dEO / cEO in consultation with the ECO	Spatially demarcate access restricted areas informed by the BA Report	Pre-construction	ECO	Once, prior to construction	Access restricted areas are identified and provided in a spatial format
– 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	dEO / cEO in consultation with the ECO	Erect appropriate temporary barriers around access restricted areas	At the commencement and for the duration of the construction phase	ECO	Monthly	Access restricted areas are closed-off through temporary barriers and barriers are maintained to a sufficient standard
– Unauthorised access and development related activity inside access restricted areas is prohibited.	Contractor / dEO / cEO	Erect appropriate temporary barriers around access restricted areas and	During the construction phase	ECO	Monthly, and as and when required	Photographic evidence and notes of compliance that no unauthorised access or

Impact Management Actions	Implementation			Monitoring		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
		provide clear signage of restricted status				activities has taken place within the access restricted areas

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;	DPM	Undertake negotiations for access to the servitude and tower positions with landowners affected by the grid connection corridor	Pre-construction Construction Operation	dEO	Ongoing throughout construction and operation	Proof of negotiations with affected landowners and requirements for access to the servitude and tower positions in the form of written and

Impact Management Actions	Implementation			Monitoring		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
						signed agreements
– An access agreement must be formalised and signed by the DPM, Contractor and landowner before commencing with the activities;	DPM Contractor	Develop access agreements with the affected landowners. Ensure that agreements are approved and signed	Pre-construction	dEO ECO	Once, prior to construction	Availability of approved and signed negotiations
– The access roads to tower positions must be signposted after access has been negotiated and before the commencement of the activities;	Contractor	Develop and install signs to indicate access for the project	Pre-construction	cEO / ECO	Once, prior to construction	Photographic record of signposted access roads and GPS co-ordinates of where these are placed
– 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	Contractor	Undertake maintenance activities on gravel roads used for construction as degradation takes place	During the construction phase	cEO / ECO	Weekly	Photographic record of the pre-construction condition and degradation of roads, and records of the implementation and

Impact Management Actions	Implementation			Monitoring		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
						effectiveness of maintenance activities
– All contractors must be made aware of all the access routes.	dEO / cEO	Develop a map illustrating all access routes associated with the project and present and provide the map to all contractors	Pre-construction Construction	ECO	Once, prior to construction	Access routes map readily available
– Any access route deviation from that in the written agreement must be closed and re-vegetated immediately, at the contractor's expense.	Contractor	All access routes developed that are not in-line with the access route agreements must be closed and re-habilitated to the pre-disturbance state	Construction and Rehabilitation	ECO	Bi-weekly (every two weeks)	Photographic record of the closure of access roads and re-vegetation
– Maximum use of both existing servitudes and existing roads must be made to minimise further disturbance through the development of new roads;	Contractor (and Eskom maintenance staff where	Existing access routes to be used must be specified and	Construction and operation	cEO Operation and maintenance team	Weekly	Implementation of the approved layout

Impact Management Actions	Implementation			Monitoring		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
	relevant to operation)	the development of new roads must be avoided as far as possible				
– 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;	dEO / cEO	Record the conditions of private roads to be used (prior to use) as per the requirements of section 4.9 and agree on the required condition of the roads with the landowner, DPM and contractor	During the construction phase	ECO	Prior to the use of private roads	Photographic record and proof of the road conditions agreed upon with the relevant parties
– Access roads in flattish areas must follow fence lines and tree belts to avoid fragmentation of vegetated areas or croplands.	DPM and Contractor	Design access roads to follow fence lines and avoid vegetated areas	Pre-construction	ECO	Once during the design and once prior to construction	Implementation of the approved layout
– Access roads must only be developed on pre-planned and approved roads.	Contractor	Construction of access roads only on pre-planned and	During the construction phase	ECO dEO	Once during the design and weekly during	Implementation of the approved layout

Impact Management Actions	Implementation			Monitoring		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
		approved access roads			the construction of access 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.	Contractor	Identify and inform all relevant staff of the existing gates to be used	Pre-construction & Construction	dEO	Monthly	Existing gates are utilised on a frequent basis and only limited new access gates are developed
– Existing and new gates to be recorded and documented in accordance with section 4.9: photographic record.	dEO	Existing and new gates will be recorded and documented as per the	During the construction phase	ECO	Once, when the construction of all new gates has been completed	Photographic record of the existing and new gates as per the

Impact Management Actions	Implementation			Monitoring		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
		requirements of section 4.9				requirements of section 4.9
– All gates must be fitted with locks and be kept locked at all times during the development phase, unless otherwise agreed with the landowner.	Contractor	Ensure all relevant gates are fitted with locks and are always locked	Construction and Operation	ECO Operation and maintenance team	Bi-weekly (every second week)	All gates are locked and no complaints from landowners are received in this regard
– At points where the line crosses an existing 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.	dEO	Install new gates where required with the approval of the affected landowner	During the construction phase	ECO	Once, prior to construction and during the construction phase, as and when required	New gates are installed where the power line crosses fences
– Care must be taken that the gates must be so erected that there is a gap of no more than 100mm between the bottom of the gate and the ground.	Contractor	Install gates in a manner so that there is a gap of no more than 100mm between the bottom of the gate and the ground	During the construction phase	cEO	Once, during the erection of the gates during the construction phase	New gates installed as per the requirement
– Where gates are installed in jackal proof fencing, a suitable reinforced concrete sill must be provided beneath the gate.	Contractor	Implement a reinforced concrete sill beneath gates	During the construction phase	cEO	Once, during the erection of the gates during the	New gates installed as per the requirement

Impact Management Actions	Implementation			Monitoring		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
		installed for jackal proofing			construction phase	
– Original tension must be maintained in the fence wires.	Contractor	Maintain original tension of fences through required activities	During the construction phase	ECO	Monthly	No tension reduction on fence wires
– All gates installed in electrified fencing must be re-electrified.	Contractor	Electrify gates installed in electrified fencing	During the construction phase	ECO	Once, during the erection of the gates during the construction phase	Gates installed in electrified fencing is electrified
– All demarcation fencing and barriers must be maintained in good working order for the duration of overhead transmission and distribution electricity infrastructure development activities.	Contractor	Undertake maintenance activities on fences and barriers	During the construction phase	ECO	Monthly	Photographic record of maintained fences and barriers
– 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.	Contractor	Fence construction camps, batching plants, hazardous storage areas and access restricted areas. Avoid sensitive flora	During the construction phase	ECO	Once during the erection of fencing	Photographic record of fences erected

Impact Management Actions	Implementation			Monitoring		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
– Any temporary fencing to restrict the movement of livestock must only be erected with the permission of the landowner.	dEO/ cEO Contractor	Obtain written approval from the relevant landowner where temporary fencing is required to restrict livestock movement	During the construction phase	ECO	To be monitored as temporary fencing is required	Written approval to be provided by the dEO
– All fencing must be developed of high-quality material bearing the SABS mark.	Contractor	Make use of high-quality materials approved by SABS	During the construction phase	cEO	To be monitored as fencing is erected during the construction phase	Use of high-quality materials for fencing approved by SABS
– The use of razor wire as fencing must be avoided as far as possible.	Contractor	Razor wire must not be sourced or used for the erection of fencing	During the construction phase	ECO	To be monitored as fencing is erected during the construction phase	Fences erected do not make use of razor wire
– Fenced areas with gate access must remain locked after hours, during weekends and on holidays if staff is away from site. Site security will be required at all times.	DSS and Contractor	Ensure fenced areas are locked as required through the implementation of a formalised process.	During the construction phase	cEO	Weekly and as and when required	Fences are locked and no complaints from landowners are received. A security

Impact Management Actions	Implementation			Monitoring		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
		Appoint a security company				company is appointed
– On completion of the development phase all temporary fences are to be removed.	Contractor	Removal of all temporary fences	At the end of the Construction Phase	ECO dEO	Once, following the completion of the construction phase	No temporary fences associated with the project is present following the completion of the construction phase
– The contractor must ensure that all fence uprights are appropriately removed, ensuring that no uprights are cut at ground level but rather removed completely.	Contractor	Appropriate removal of all fence uprights	At the end of the Construction Phase	ECO dEO	Once, following the completion of the construction phase	No fence uprights associated with the project is present following the completion of the construction phase

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.	DPM / Contractor / dEO / cEO in consultation with the ECO	The onsite borehole must be registered with the DWS prior to commencement of activities	Prior to commencement, during construction and operational phase	ECO / dEO	Registration of borehole once off prior commencement of construction and monitoring of abstraction volumes on a daily basis during construction and during operation.	Proof of registration of borehole from DWS and proof of daily records of abstraction volumes to be attached to monthly audit reports.
– 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 riverbed or banks and that the abstraction of water does not entail stream diversion activities; and	Not applicable - It is the intention of the project applicant to source the required amounts of water from an onsite borehole.					

Impact Management Actions	Implementation			Monitoring		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
– 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 / cEO in consultation with the ECO	Implement the required water conservation measures throughout on-site construction processes	During the construction phase	ECO	Monthly, and as and when required	Successful implementation of water conservation

5.7 Storm and wastewater management

Impact management outcome: Impacts to the environment caused by stormwater 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.	Contractor	Implement measures for the control and management of runoff	During the construction phase	ECO	Weekly	No mismanagement of runoff or contaminated water due to the temporary concrete batching plant
– 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.	Contractor and cEO	Obtain approved absorbent material and make use of licensed waste disposal facilities for disposal of oil	During the Construction Phase	ECO	Monthly	Availability of approved absorbent material at the construction site and proof of disposal of oil at licensed disposal facilities
– Natural stormwater 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.	DPM in consultation with the ECO	Consultation between the DPM and the ECO to determine if water can be discharged directly into water bodies (where present). The necessary water quality testing must be	During the construction phase	ECO	As and when the need arises to discharge natural stormwater runoff and clean water	Proof of consultation between the DPM and ECO and the outcomes thereof to be provided. Proof of water quality testing and the results thereof.

Impact Management Actions	Implementation			Monitoring		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
		undertaken prior to discharge				
– 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.	DPM in consultation with the ECO	Consultation between the DPM and the ECO to determine if water can be discharged directly into water bodies (where present). The necessary water quality testing must be undertaken prior to discharge	During the construction phase	ECO	As and when the need arises to discharge water	Proof of consultation between the DPM and ECO and the outcomes thereof to be provided. Proof of water quality testing and the results thereof.

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.	Contractor	Develop and implement a waste management plan	During the construction phase	ECO	Monthly	Implementation of the waste management plan and proof of waste management through proof of responsible disposal
– Sufficient, covered waste collection bins (scavenger and weatherproof) must be provided.	Contractor	Provision of appropriate waste collection bins strategically placed throughout the site	During the construction phase	ECO	Weekly	Appropriate waste collection bins are available throughout the site
– A suitably positioned and clearly demarcated waste collection site must be identified and provided.	DPM and Contractor	Identify an appropriate location for the waste collection site which must be clearly demarcated through signage and temporary fencing	Design and Construction Phase	ECO	Once, prior to the commencement of construction	A waste collection site is appropriately placed and demarcated
– The waste collection site must be maintained in a clean and orderly manner.	Contractor	Regular collection of waste and maintenance of	During the Construction Phase	ECO	Weekly	The waste collection site is maintained and clean

Impact Management Actions	Implementation			Monitoring		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
		the area must be undertaken as per the waste requirements for the project during construction				
– Waste must be segregated into separate bins and clearly marked for each waste type for recycling and safe disposal.	Contractor	Provide separate and marked bins for the different waste types associated with the construction phase	During the Construction Phase	cEO	Weekly	Separate waste bins are available on site and waste generated is separated into the relevant bins
– Staff must be trained in waste segregation.	cEO / dEO	Include waste segregation as part of the environmental awareness training material.	Pre-construction Construction	ECO	Monthly, and as and when required	Environmental awareness training material requirements checklist
– Bins must be emptied regularly.	Contractor cEO	Bins must be emptied before reaching total capacity and on a regular basis as required for the project	During the construction phase	ECO	Monthly	No mismanagement of bins.

Impact Management Actions	Implementation			Monitoring		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
– General waste produced onsite must be disposed of at registered waste disposal sites/ recycling company.	Contractor cEO	Disposal of general waste at licensed waste disposal facilities must be undertaken as per the waste management plan	During the construction phase	ECO	Monthly	Disposal certificates of disposal at licensed facilities to be provided
– Hazardous waste must be disposed of at a registered waste disposal site.	Contractor cEO	Disposal of hazardous waste at licensed waste disposal facilities must be undertaken as per the waste management plan	During the construction phase	ECO	Monthly	Disposal certificates of disposal at licensed facilities to be provided
– Certificates of safe disposal for general, hazardous and recycled waste must be maintained.	Contractor cEO	Obtain certificates for safe disposal of waste	During the construction phase	ECO	Monthly	Disposal certificates of disposal at licensed facilities to be provided and filed as part of the filing system

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 and contaminated water or organic material resulting from the Contractor's activities.	Contractor and cEO	Contractor to undertake activities which can cause spills of pollutants outside of watercourses	During the construction phase	ECO	Weekly	No incidents reported of spillage of pollutants into watercourses
– In the event of a spill, prompt action must be taken to clear the polluted or affected areas.	Contractor and cEO	Develop a management plan or process for implementation should a spill take place	During the construction phase	ECO	Weekly	Feedback must be provided by the contractor in terms of how the spill was handled and photographic evidence of the feedback must be provided and kept on record
– Where possible, no development equipment must traverse any seasonal or permanent wetland.	Contractor and cEO	Contractor to ensure that movement of equipment is undertaken outside the footprint and riparian habitat of the wetlands	During the construction phase	ECO	Weekly	No incidents of the movement of equipment within the wetlands or their riparian habitat.

Impact Management Actions	Implementation			Monitoring		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
		identified within the area.				
– No return flow into the estuaries must be allowed and no disturbance of the Estuarine Functional Zone should occur.	Not applicable – no estuaries were identified within the grid connection corridor.					
– Development of permanent watercourse or estuary crossing must only be undertaken where no alternative access to tower position is available.	Contractor and cEO	Ensure that only existing roads or tracks are used to access construction areas within the vicinity of watercourses (including wetlands). No new access roads/tracks should be constructed to provide access to construction areas within the vicinity of watercourses and wetlands within the grid connection corridor/servitude.	During the construction phase	ECO	Weekly	Ensure that permanent crossings are developed if there is no alternative.

Impact Management Actions	Implementation			Monitoring		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
– There must not be any impact on the long-term morphological dynamics of watercourses or estuaries.	DPM Contractor cEO	Develop a management plan or process for implementation should morphological changes be visible within the watercourses and the wetlands within the grid connection corridor	During the construction and operation phase	ECO dEO	For all phases of the project life cycle (i.e. construction, operation, decommissioning)	No incidents reported of spillage of pollutants into watercourses
– Existing crossing points must be favoured over the creation of new crossings (including temporary access).	DPM Contractor cEO	Develop a management plan or process for implementation should a spill take place within a watercourse and ensure continuous monitoring Existing crossing points to be	During the pre-construction and construction phase	ECO dEO	During the construction phase of the project.	Existing crossing points utilised as opposed to new ones created and no incidents reported of spillage of pollutants into watercourses

Impact Management Actions	Implementation			Monitoring		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
		used must be identified and personnel within the construction must be aware of these crossings for their use.				
– When working in or near any watercourse or estuary, the following environmental controls and consideration must be taken: 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 measures for the watercourse banks must be implemented timeously. In this regard, the banks should be appropriately and incrementally stabilised as soon as development allows.	Contractor cEO	Activities undertaken near watercourses must be in-line with and consider the specified environmental controls	During the construction phase	ECO	Monthly, and as and when required	No degradation of the watercourses and no incidents of destruction reported

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.	cEO and Contractor	Demarcate areas of indigenous vegetation to be avoided before clearance is undertaken	Construction and operation (i.e. for maintenance purposes)	ECO Operation and maintenance team	Weekly, and as and when required	No unnecessary clearance of indigenous vegetation is undertaken
– Protected or endangered species may occur on or near the development site. Special care should be taken not to damage such species.	Contractor cEO	Demarcate areas containing protected or endangered species to be avoided by construction activities	During the Construction Phase	ECO	Weekly, and as and when required	No clearance of protected or endangered species other than those permitted to be removed
– 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.	Relevant specialist in consultation with the Contractor	Develop and implement a Plant Search and Rescue Plan	Pre-construction & Construction	ECO	Weekly, and as and when required	Implementation of the Plant Search and Rescue Plan and photographic evidence and

Impact Management Actions	Implementation			Monitoring		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
						notes of the implementation of the plan
– Permits for removal must be obtained from the Department of Agriculture, Forestry and Fisheries (DAFF) and the Northern Cape Department of Environment and Nature Conservation (DENC) prior to the cutting or clearing of the affected species, and they must be filed.	DPM dEO	Undertake the permitting process in order to obtain the relevant permits for the removal of protected species. Permits must be kept on file	Pre-construction	ECO	Once, prior to the commencement of the construction phase and removal of the protected species	DAFF and DENC permits on file
– 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 of approvals.	ECO	Ensure that the audit report indicates all species rescued and replanted and provides feedback in terms of compliance with the conditions of permits for replanting	During the Construction Phase and following the completion of the Construction Phase	Not Applicable		
– Trees felled due to construction must be documented and form part of the Environmental Audit Report.	ECO	Ensure that the audit report documents the details of trees felled	During the Construction Phase and following the completion of	Not Applicable		

Impact Management Actions	Implementation			Monitoring		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
			the Construction Phase			
– Rivers and watercourses must be kept clear of felled trees, vegetation cuttings and debris.	Contractor cEO	Felled trees, vegetation cuttings and debris must be disposed of at a licensed waste disposal facility	During the Construction Phase	ECO	Monthly	No felled trees, vegetation cuttings and debris are dumped in inappropriate locations and disposal certificates are available as proof of responsible disposal
– 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 that is appropriately trained.	DPM dEO Contractor cEO and Eskom maintenance staff where relevant to operation)	A suitably qualified pest control operator must be appointed	Construction and Operation	ECO	As and when the use of herbicides is required	Only registered pest control operators must be appointed and proof of their registration must be provided
– A daily register must be kept of all relevant details of herbicide usage.	Contractor cEO	Develop a daily register for the documentation of the details of herbicide usage	During the construction phase	ECO	Monthly	Daily register provided by the pest control operator
– No herbicides must be used in estuaries.	Not applicable -no estuaries were identified within the grid connection corridor.					

Impact Management Actions	Implementation			Monitoring		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
– All protected species and sensitive vegetation not removed must be clearly marked and such areas fenced off in accordance to **Section 5.3: Access restricted areas**.	Contractor, cEO in consultation with the dEO	Spatially demarcate protected species and sensitive vegetation and implement appropriate fencing where required as per section 5.3	During the construction phase	ECO	Once, during the undertaking of the demarcation of the areas and the erection of the fencing	Demarcation and fencing is undertaken in-line with the requirements of section 5.3
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.	Contractor, cEO in consultation with the DPM and Eskom maintenance staff where relevant to operation)	Identify areas of vegetation not to be trimmed.	Construction and Operation	ECO Operation and maintenance team	Monthly	An indication of the areas where vegetation has not been trimmed or where vegetation has been removed from access roads must be provided.
– Where clearing for access purposes is essential, the maximum width to be cleared within the servitude must be in accordance to distance as agreed between the landowner and the EA holder.	Contractor cEO and Eskom maintenance staff where relevant to operation)	Clearing for access must be undertaken as per the requirements provided by the	During the construction phase	ECO	Monthly, and as and when required	Proof must be provided that only agreed upon areas have been cleared

Impact Management Actions	Implementation			Monitoring		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
		landowner 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.	Contractor cEO	Undertake removal of alien invasive vegetation in accordance with the relevant guideline relevant to the project area and ensure the vegetation is disposed of at a licensed waste disposal facility	Construction and Operation	ECO Operation and maintenance team	Monthly, and as and when required	Proof must be provided that alien invasive vegetation has been cleared in accordance to the relevant guideline and that the vegetation was disposed of at a licensed 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..	Contractor cEO and Eskom maintenance staff where relevant to operation)	Develop a procedure for the trimming of vegetation in terms of the listed requirements	Construction and operation	ECO Operation and maintenance team	Monthly, and as and when required	Proof must be provided that vegetation is trimmed in accordance with the listed requirements
– 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.	Contractor cEO and Eskom maintenance staff where relevant to operation)	Dispose of the debris in accordance with the waste management plan	Construction and operation	ECO Operation and maintenance team	Monthly, and as and when required	Proof must be provided that the debris has been disposed of at a licensed waste disposal facility or

Impact Management Actions	Implementation			Monitoring		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
						retained by the landowners.
– In the case of the development of new overhead transmission and distribution infrastructures, a one metre "trace-line" must be cut through the vegetation for stringing purposes only and no vehicle access must be cleared along the "trace-line". Alternative methods of stringing that limit impact to the environment must always be considered.	Contractor cEO and Eskom maintenance staff where relevant to operation)	Develop a procedure for the cutting of vegetation for stringing purposes	Pre-construction & Construction	ECO	Once, prior to the commencement of construction	Proof of implementation of the procedure for the cutting of vegetation for stringing purposes

5.11 Protection of fauna

Impact management outcome: Minimise disturbance to fauna and avifauna.

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.	dEO / cEO Contractor	Develop a procedure for dealing with livestock within the affected properties	Pre-construction and during the construction phase	ECO	Once, prior to the commencement of construction and as and when required during the	Written consent provided by the landowner and proof of representation of the landowner

Impact Management Actions	Implementation			Monitoring		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
					construction phase	during interference
– The breeding sites of raptors and other wild bird species must be taken into consideration during the planning of the development programme.	dEO / cEO in consultation with the Contractor	Ensure that the planning and development programme considers breeding sites for raptors and wild bird species	Pre-construction & Construction	ECO	Once, prior to the commencement of construction and as and when required	The planning and development programme includes the consideration of breeding sites for wild bird species
– Breeding sites must be kept intact and disturbance to breeding birds must be avoided. Special care must be taken where nestlings or fledglings are present.	dEO / cEO in consultation with the Contractor and Eskom maintenance staff where relevant to operation)	Avoid breeding sites and ensure that special care is taken in the presence of nestlings and fledglings	During the Construction Phase Operation Phase	ECO Operation and maintenance team	Weekly, and as an when required during the construction. Monthly, and as and when required during operation	Photographic record of intact breeding sites
– Nesting sites on existing parallel lines must documented.	dEO / cEO and Eskom maintenance staff where relevant to operation)	Walk-downs of the existing lines located parallel to the project must be undertaken and nests and the details thereof documented	During the Construction Phase Operation Phase	ECO Operation and maintenance team	Quarterly, and as and when required	Details of walk-downs undertaken must be noted and kept on file and photographic records of nesting sites must be kept

Impact Management Actions	Implementation			Monitoring		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
– Special recommendations of the avian specialist must be adhered to at all times to prevent unnecessary disturbance of birds.	dEO / cEO in consultation with the Contractor and Eskom maintenance staff where relevant to operation)	All mitigation measures recommended by the avifauna specialist must be implemented	During the Construction Phase Operation Phase	ECO Operation and maintenance team	Weekly during construction and monthly during operation	Photographic record of compliance and successful implementation of the recommended measures
– Bird guards and diverters must be installed on the new line as per the recommendations of the specialist.	dEO / cEO in consultation with the Contractor and Eskom maintenance staff where relevant to operation)	Recommendations made by the specialist for the installation of bird guards and diverters must be adhered to and implemented as appropriate. Bird guards and diverters must be maintained	During the Construction Phase Operation Phase	ECO Operation and maintenance team	Monthly, and as and when required	Photographic record of implementation and maintenance of bird guards and diverters
– 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.	dEO / cEO in consultation with the Contractor	All site staff must be informed of this requirement during the Environmental Awareness Training and the consequences of not adhering to the	During the Construction Phase	ECO	Monthly, and as and when required	No instances of poaching are reported

Impact Management Actions	Implementation			Monitoring		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
		requirement. These areas must be demarcated as Access Restricted Areas				
– No deliberate or intentional killing of fauna is allowed.	dEO / cEO in consultation with the Contractor	All site staff must be informed of this requirement during the Environmental Awareness Training and the consequences of not adhering to the requirement. These areas must be demarcated as Access Restricted Areas	During the Construction Phase	ECO	Monthly, and as and when required	No instances of deliberate or intentional killing is reported
– In areas where snakes are abundant, snake deterrents are to be deployed on the pylons to prevent snakes climbing up, being electrocuted and causing power outages; and	dEO / cEO in consultation with the Contractor and Eskom maintenance staff where relevant to operation)	Implement and maintain snake deterrents on pylons in areas where snakes are abundant	During the Construction Phase Operation Phase	ECO Operation and maintenance team	Once, during the construction of the pylons and as and when required. Monthly during operation	Photographic record of the implementation and maintenance of snake deterrents

Impact Management Actions	Implementation			Monitoring		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
– 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.	DPM in consultation with the dEO	Undertake a permitting process to obtain the required permits	Pre-construction	ECO	Once, prior to the commencement of construction and as and when required	Permits for removal and/relocation must be kept on file and be readily available

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;	DPM and a suitably qualified specialist dEO / cEO in consultation with the Contractor	Undertake a Heritage Walk-through Survey Spatially identify and demarcate areas of heritage significance as per the Heritage Walk-through Report and as per the	Pre-construction	ECO	Once, prior to the commencement of construction	Proof of avoidance of sensitive heritage features through details of avoidance and photographic records

Impact Management Actions	Implementation			Monitoring		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
		requirements of section 5.3				
– Carry out general monitoring of excavations for potential fossils, artefacts and material of heritage importance;	Suitably qualified specialist in consultation with the dEO / cEO	Appoint a suitably qualified specialist to carry out the monitoring of excavations for fossils, artefacts and important heritage material	During the Construction Phase	ECO	During the undertaking of excavations of fossils, artefacts and heritage material	Proof of appointment of a suitably qualified specialist and photographic record of required monitoring by the specialist
– 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/ palaeontologist (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. In the event that any unanticipated heritage feature is uncovered during construction or operation phases of the project, alert the relevant heritage authority and mitigate if deemed necessary. – The contact details for SAHRA are: – Tel: 021 462 4502 – Fax: 021 462 4509 – Email: mgalimberti@sahra.org	dEO / cEO in consultation with the Contractor and ECO	Develop and implement procedures for situations where human remains, archaeological, palaeontological or historical material are uncovered	During the Construction Phase	ECO	Weekly, during the construction phase and as and when required	Proof of work ceased and the required procedures followed in cases where material is discovered.

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 to these areas as well as notify the local authority of any potential threats e.g. large brush stockpiles, fuels etc.;	cEO in consultation with the Contractor	Develop an Emergency Preparedness, Response and Fire Management Plan specific to the project	Pre-construction Construction	ECO	Once, prior to the commencement of construction and weekly during the construction phase	Compliance with the Emergency Preparedness, Response and Fire Management Plan
– All unattended open excavations must be adequately fenced or demarcated;	Contractor	Ensure that all excavations undertaken is fenced and demarcated within a reasonable timeframe and in instances where excavations will be open for long-periods of time	During the Construction Phase	ECO	Weekly	Excavations are fenced where required and photographic proof can be provided

Impact Management Actions	Implementation			Monitoring		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
– Adequate protective measures must be implemented to prevent unauthorised access to and climbing of partly constructed towers and protective scaffolding;	Contractor	All staff must be easily identifiable and the climbing of towers and scaffolding must be undertaken by authorised personnel as managed by the Contractor	During the construction phase	ECO	Monthly, and as and when required	No incidents of unauthorised climbing is reported
– Ensure structures vulnerable to high winds are secured; and	Contractor	Ensure that sufficient stabilisation measures are implemented to secure structures vulnerable to high winds	During the construction phase	ECO	Weekly, and as and when required	No incidents of unstable structures due to high winds is reported
– Maintain an incidents and complaints register in which all incidents or complaints involving the public are logged.	cEO	Compile and regularly update as incidents and complaints are submitted from the public and indicate the actions taken to resolve the complaint	During the construction phase	ECO	Monthly, and as and when required	The incidents and complaints register is complete and provides all the required details

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;	Contractor	Mobile chemical toilets must be placed appropriately and in areas that avoid environmental sensitivities	During the Construction Phase	ECO	Weekly	Mobile toilets are installed and avoid environmental sensitivities
– The use of ablution facilities and or mobile toilets must be used at all times and no indiscriminate use of the veld for the purposes of ablutions must be permitted under any circumstances;	Contractor in consultation with the cEO	All site staff must be informed of this requirement during the Environmental Awareness Training and the consequences of not adhering to the requirement.	Pe-construction & Construction	ECO	Monthly, and as and when required	No evidence of non-compliance identified
– Where mobile chemical toilets are required, the following must be ensured: a) Toilets are located no closer than 100m to any watercourse or water body;	Contractor in consultation with the cEO	The installation of the toilets by the Contractor must be as per	During the Construction Phase	ECO	Weekly	No evidence of non-compliance identified

Impact Management Actions	Implementation			Monitoring		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
b) Toilets are secured to the ground to prevent them from toppling due to wind or any other cause; c) No spillage occurs when the toilets are cleaned or emptied and the contents are managed in accordance with the EMPr; d) 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; e) Toilets are emptied before long weekends and workers holidays, and must be locked after working hours; and f) Toilets are serviced regularly and the ECO must inspect toilets to ensure compliance to health standards.		the listed requirements				
– A copy of the waste disposal certificates must be maintained.	Contractor	Certificates obtained from the licensed waste disposal facility with the emptying of the toilets must be kept on file	During the Construction Phase	ECO	Monthly, and as and when required	Certificates for waste disposal from the licensed waste disposal facility

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;	Contractor	Only environmentally-friendly pest control must be used, when required	During the Construction Phase	ECO	As and when pest control is required for the project	Contractor to provide proof of pest control used being environmentally-friendly
– Ensure that the workforce is sensitised to the effects of sexually transmitted diseases, especially HIV/ AIDS;	cEO / Contractor	The effects of sexually transmitted diseases and HIV/ AIDS must be covered in the Environmental Awareness Training	Pre-construction & Construction	ECO	Once, prior to the commencement of construction and monthly during construction	Environmental awareness training material requirements checklist
– The Contractor must ensure that information posters on HIV/ AIDS are displayed in the Contractor Camp area;	Contractor	Develop and place information posters on HIV/ AIDS	During the Construction Phase	ECO	Weekly	Photographic evidence of poster placement
– Information and education relating to sexually transmitted diseases to be made available to both construction workers and local community, where applicable;	cEO / Contractor	Information and education of sexually transmitted diseases must be covered in the Environmental Awareness Training.	Pre-construction & Construction	ECO	Monthly	Environmental awareness training material requirements checklist

Impact Management Actions	Implementation			Monitoring		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
– Free condoms must be made available to all staff on site at central points;	Contractor	Placement of free condoms in mobile toilets and at the construction camps	During the Construction Phase	ECO	Monthly	Proof of placement of free condoms by the contractor to be provided
– Medical support must be made available; and	dEO / cEO in consultation with the Contractor	Ensure that designated personnel with first aid training are available on site and that first aid kits to provide medical support is readily available	Construction and Operations	ECO	Monthly	Check the availability of first aid trained personnel and medical kits (including if these are complete in terms of supplies)
– Provide access to Voluntary HIV Testing and Counselling Services.	Contractor	Compile a HIV testing schedule and provide counselling services where required	During the Construction Phase	ECO	Quarterly, and as and when required	Voluntary testing schedules and proof of counselling (where undertaken)

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		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
– Compile an Emergency Response Action Plan (ERAP) prior to the commencement of the proposed project;	Contractor	Develop an Emergency Preparedness, Response and Fire Management Plan specific to the project	Pre-construction	ECO	Once, prior to the commencement of construction	Emergency Preparedness, Response and Fire Management Plan compiled
– The Emergency Plan must deal with accidents, potential spillages and fires in line with relevant legislation;	Contractor	Develop an Emergency Preparedness, Response and Fire Management Plan specific to the project which covers accidents, potential spillages and fires	Pre-construction	ECO	Once, prior to the commencement of construction	Emergency Preparedness, Response and Fire Management Plan includes required specifications
– All staff must be made aware of emergency procedures as part of environmental awareness training;	cEO / dEO	Develop environmental awareness training material which covers the relevant emergency procedures	Pre-construction	ECO	Prior to the commencement of the environmental awareness training	Environmental awareness training material requirements checklist

Impact Management Actions	Implementation			Monitoring		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
– The relevant local authority must be made aware of a fire as soon as it starts; and	Contractor	Develop and include a procedure in the Emergency Preparedness, Response and Fire Management Plan for the event of a fire and the procedure to be followed for informing the local authority	Construction	ECO	As and when a fire occurs	The local authority was informed as per the relevant procedure set out in the Emergency Preparedness, Response and Fire Management Plan
– In the event of emergency, necessary mitigation measures to contain the spill or leak must be implemented (see **Hazardous Substances section 5.17**).	Contractor and Eskom maintenance staff where relevant to operation)	Implement the required mitigation measures in the event of a spill or leak as per the requirements of Section 5.17.	Construction and Operations	ECO	As and when a spill or leak occurs	The mitigation measures included under Section 5.17 have been adhered to

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;	cEO in consultation with the Contractor	Develop a strategy of how hazardous substances can be and should be minimised	Pre-construction & Construction	ECO	Once, prior to the commencement of construction and monthly during the construction phase	Contractor to provide evidence of substances used for proof of compliance
– All hazardous substances must be stored in suitable containers as defined in the Method Statement;	Contractor	Develop a Method Statement for the storage of hazardous substances in suitable containers	Pre-construction & Construction	ECO	Once, prior to the commencement of construction and monthly during the construction phase	Photographic proof that hazardous substances are stored in suitable containers as per the requirements of the relevant Method Statements
– Containers must be clearly marked to indicate contents, quantities and safety requirements;	Contractor	Where hazardous waste is stored these must be clearly marked	During the Construction Phase	ECO	Monthly	Photographic proof that containers are marked as per the requirements

Impact Management Actions	Implementation			Monitoring		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
		indicating the required details of the contents				
– All storage areas must be bunded. The bunded area must be of sufficient capacity to contain a spill / leak from the stored containers;	Contractor	Ensure that storage areas are sufficiently bunded which are of sufficient capacity to contain a spill / leak from the stored containers	During the Construction Phase	ECO	Monthly during the Construction Phase	Photographic proof that storage areas are bunded and proof that the bund areas are of sufficient capacity to contain a spill / leak from the stored containers
– Bunded areas to be suitably lined with a SABS approved liner;	Contractor	Ensure that bunded storage areas are suitably lined	During the Construction Phase	ECO	Once, during the Construction Phase	Photographic proof that bunded storage areas are suitably lined
– An Alphabetical Hazardous Chemical Substance (HCS) control sheet must be drawn up and kept up to date on a continuous basis;	cEO / Contractor	Compile and update an Alphabetical Hazardous Chemical Substance (HCS) control sheet specific to the project	During the Construction Phase	ECO	Monthly, and as and when required	Complete and up to date control sheet provided by the Contractor

Impact Management Actions	Implementation			Monitoring		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
– All hazardous chemicals that will be used on site must have Material Safety Data Sheets (MSDS);	cEO / Contractor	Keep a record of all hazardous chemicals and the respective MSDS	During the Construction Phase	ECO	Monthly, and as and when required	Record of hazardous chemicals and the respective MSDS
– All employees working with HCS must be trained in the safe use of the substance and according to the safety data sheet;	cEO / Contractor	Provide training for personnel working with HCS	Pre-construction	ECO	Once, prior to the commencement of construction and as and when required	Record of training provided to personnel working with HCS
– 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;	cEO / Contractor	Develop environmental awareness training material which covers the relevant impacts and safety measures. Provide appropriate training and personal protective equipment for the relevant personnel handling hazardous	Pre-construction & Construction	ECO	Prior to the commencement of the environmental awareness training and monthly during the construction phase for personal protective equipment	Environmental awareness training material requirements checklist and all relevant personnel have undergone appropriate training and have access to personal protective equipment

Impact Management Actions	Implementation			Monitoring		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
		substances and materials				
– The Contractor must ensure that diesel and other liquid fuel, oil and hydraulic fluid is stored in appropriate storage tanks or in bowsers;	Contractor	Appropriate storage facilities must be constructed or obtained for the storing of diesel, other liquid fuel, oil and hydraulic fluid	During the Construction Phase	ECO	Monthly, and as and when required	Storage tanks for the project are appropriate and no incidents are reported in this regard
– 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);	Contractor	Appropriate storage facilities must be constructed or obtained for tanks as per the requirements listed	During the Construction Phase	ECO	Monthly, and as and when required	Storage areas for the tanks/ bowsers for the project are appropriate and no incidents are reported in this regard
– The floor of the bund must be sloped, draining to an oil separator;	Contractor	Appropriate storage facilities must be constructed as per the requirements listed	During the Construction Phase	ECO	Once, during construction	Bunded storage areas are constructed according to the requirements
– Provision must be made for refuelling at the storage area by protecting the soil with an impermeable groundcover. Where dispensing equipment is used, a	Contractor	Appropriately constructed refuelling facility must be	During the Construction Phase	ECO cEO	Monthly Weekly	Soils at the refuelling facility are protected as required and

Impact Management Actions	Implementation			Monitoring		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
drip tray must be used to ensure small spills are contained;		developed as per the requirements. Drip trays must be provided for use				drip trays are provided and used
– All empty externally dirty drums must be stored on a drip tray or within a bunded area;	Contractor	Ensure that empty dirty drums are stored appropriately as per the requirements	During the Construction Phase	ECO cEO	Monthly Weekly	Drip trays or bunded areas are used for the storage of dirty drums
– No unauthorised access into the hazardous substances storage areas must be permitted;	Contractor	Ensure through the implementation of procedures that no unauthorised access is undertaken into the storage areas	During the Construction Phase	ECO	Monthly	Proof of the implementation of the relevant procedure must be provided by the contractor
– No smoking must be allowed within the vicinity of the hazardous storage areas;	Contractor	Inform all employees of the requirement and develop and place relevant signage in the relevant areas	During the Construction Phase	ECO cEO	Monthly Weekly	Photographic record of the signage placed must be provided

Impact Management Actions	Implementation			Monitoring		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
– Adequate fire-fighting equipment must be made available at all hazardous storage areas;	Contractor	Hazardous storage areas must be fitted with adequate fire-fighting equipment	During the Construction Phase	ECO	Monthly	Adequate fire-fighting equipment is available and has been serviced
– Where refuelling away from the dedicated refuelling station is required, a mobile refuelling unit must be used. Appropriate ground protection such as drip trays must be used;	Contractor	Provide a mobile refuelling unit as well as suitable ground protection, where required	During the Construction Phase	ECO	Monthly, and as and when required	A mobile refuelling unit and suitable ground protection is available for use
– 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;	Contractor	Provide an appropriate spill kit for the project for the use of hazardous substances	During the Construction Phase	ECO	Monthly, and as and when required	Appropriate spill kits are available for use
– The responsible operator must have the required training to make use of the spill kit in emergency situations;	cEO and Contractor	Provide training on the use of spill kits to the relevant employees	Pre-construction	ECO	Once, prior to the commencement of construction	Proof of training to be provided by the contractor
– An appropriate number of spill kits must be available and must be located in all areas where activities are being undertaken; and	cEO and Contractor	Provide an appropriate number of spill kits in relevant areas	During the Construction Phase	ECO	Monthly	Proof of appropriate number of spill kits in appropriate areas to be

Impact Management Actions	Implementation			Monitoring		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
						provided by the contractor
– In the event of a spill, contaminated soil must be collected in containers and 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 procedures concerning storm and wastewater management and 5.8 for solid and hazardous waste management.	cEO and Contractor	Storage and disposal of contaminated soil must be in accordance with the National Environmental Management: Waste Act and sections 5.7 and 5.8 of this EMPr	During the Construction Phase	ECO	Monthly, and as and when required	Proof of storage and disposal in terms of the National Environmental Management: Waste Act must be provided. Certificates of disposal at licensed waste disposal facilities must be provided

5.18 Workshop, equipment maintenance and storage

Impact management outcome: Soil, surface water and groundwater contamination is minimised.

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;	Contractor	Demarcate specific areas for the maintenance of vehicles and equipment	During the Construction Phase	ECO	Monthly	A dedicated area for the maintenance of vehicles and machinery is used.
– During servicing of vehicles or equipment, especially where emergency repairs are effected outside the workshop area, a suitable drip tray must be used to prevent spills onto the soil.	Contractor	Ensure that a drip tray is available for any emergency repairs required	During the Construction Phase	ECO	Monthly	Contractor to provide evidence of drip tray use for emergency repairs
– Leaking equipment must be repaired immediately or be removed from site to facilitate repair;	Contractor	Ensure that where leaking equipment is identified it is repaired immediately or removed from site for repairs	During the Construction Phase	ECO	Monthly	Contractor to provide details of equipment repaired or removed from site
– Workshop areas must be monitored for oil and fuel spills;	cEO	Undertake regular inspections of the workshop	During the Construction Phase	ECO	Monthly	Updated register of inspection

Impact Management Actions	Implementation			Monitoring		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
		areas for oil and fuel spills and keep an updated register of inspection on site				
– Appropriately sized spill kit kept onsite relevant to the scale of the activity taking place must be available;	Contractor	Provide an appropriate spill kit for the project	During the Construction Phase	ECO	Monthly, and as and when required	Appropriate spill kits are available for use
– The workshop area must have a bunded concrete slab that is sloped to facilitate runoff into a collection sump or suitable oil / water separator where maintenance work on vehicles and equipment can be performed;	Contractor	Ensure that the workshop area is sufficiently bunded in accordance with the required specification	During the Construction Phase	ECO	Once, during the Construction Phase and as and when required	Workshop area is bunded in accordance with the required specification
– Water drainage from the workshop must be contained and managed in accordance with Section 5.7: storm and wastewater management.	Contractor	Ensure that water drainage from workshop area is managed as per the requirements of section 5.7	During the Construction Phase	ECO	Monthly	Workshop drainage is managed in accordance with the requirements

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;	Contractor	Provide impermeable surface for the mixing of concrete	During the Construction Phase	ECO	Weekly	No concrete mixing is undertaken on open ground
– Batching plants areas must be fitted with a containment facility for the collection of cement laden water.	Contractor	Ensure batching plant used on site contains a containment facility for the collection of cement laden water.	During the Construction Phase	ECO	Weekly	No run-off cement laden water is released into the surrounding area from the batching plant.
– Dirty water from the batching plant must be contained to prevent soil and groundwater contamination	Contractor	Dirty water from the batching plant is safely stored.	During the Construction Phase	ECO	Weekly	No leaks of dirty water from the batching plant into the surrounding area is reported.
– Bagged cement must be stored in an appropriate facility and at least 10m away from any water courses, gullies and drains;	Contractor	Demarcate and provide a storage area for bagged cement in-line with the	During the Construction Phase	ECO	Weekly	Photographic proof of bagged cement stored within the

Impact Management Actions	Implementation			Monitoring		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
		listed requirements				demarcated area
– A washout facility must be provided for washing of concrete associated equipment. Water used for washing must be restricted;	Contractor	Provide a washout facility for the washing of associated equipment. Enforce limitations on water use for washing of equipment	During the Construction Phase	ECO	Weekly	No cement laden water is released into the environment. Only minimal water is used for washing
– Hardened concrete from the washout facility or concrete mixer can either be reused or disposed of at an appropriate licensed disposal facility;	Contractor cEO	Make use of hardened concrete where possible or dispose of concrete in a suitable manner	During the Construction Phase	ECO	Monthly	Certificates of disposal of concrete at licensed waste disposal facility
– Empty cement bags must be secured with adequate binding material if these will be temporarily stored on site;	Contractor cEO	Bind empty cement bags and temporarily store it in an appropriate area on site	During the Construction Phase	ECO	Monthly	Proof of binding of empty cement bags and storage in an appropriate area on site to be provided by the Contractor

Impact Management Actions	Implementation			Monitoring		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
– Sand and aggregates containing cement must be kept damp to prevent the generation of dust (Refer to Section 5.20: Dust emissions)	Contractor	Ensure that sand and aggregates are kept damp or otherwise protected from dust generation	During the Construction Phase	ECO	Monthly	Proof of damping (or alternative dust suppression) of sand and aggregates must be provided by the Contractor
– Any excess sand, stone and cement must be removed or reused from site on completion of construction period and disposed at a registered disposal facility; and	Contractor	Ensure that all excess sand, stone and cement is removed or reused	At the completion of the Construction Phase	ECO	Once, with the completion of construction	Certificates for the disposal of sand, stone and cement at licensed waste disposal facilities or proof of reuse must be provided
– Temporary fencing must be erected around batching plants in accordance with Section 5.5: Fencing and gate installation.	Contractor	Installation of fencing around the batching plant.	Prior to commencement of construction activities	ECO	Weekly	Fencing is installed around the footprint of the batching plant.

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;	Contractor cEO	Apply appropriate dust suppressant	During the Construction Phase	ECO	Weekly	Contractor to provide proof of use of appropriate dust suppressants
– 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;	Contractor cEO	Proper planning for vegetation removal must be undertaken as well as for the associated rehabilitation	During the Construction Phase and Rehabilitation	ECO	Weekly	Plan for implementation must be provided by the Contractor
– Excavation, handling and transport of erodible materials must be avoided under high wind conditions or when a visible dust plume is present;	Contractor cEO	Ensure that specific limitations are placed on the transport and handling of erodible materials during high wind conditions or when a visible	During the Construction Phase	ECO	Bi-weekly (every second week)	No complaints submitted in this regard

Impact Management Actions	Implementation			Monitoring		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
		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 acceptable level;	ECO	ECO to provide adequate recommendations	During the Construction Phase	Not Applicable		
– Where possible, soil stockpiles must be located in sheltered areas where they are not exposed to the erosive effects of the wind;	Contractor cEO	Place soil stockpiles in areas less affected by wind	During the Construction Phase	ECO	Bi-weekly (every second week)	Soil stockpiles are not exposed to wind and have not been eroded
– Where erosion of stockpiles becomes a problem, erosion control measures must be implemented at the discretion of the ECO;	Contractor in consultation with the ECO	Contractor to implement erosion control measures as recommended and agreed with the ECO	During the Construction Phase	ECO	Weekly, until erosion is no longer a problem	Recommendations made by the ECO have been implemented by the Contractor
– Vehicle speeds must not exceed 40km/h along dust roads or 20km/h when traversing unconsolidated and non-vegetated areas;	cEO / dEO / contractor and Eskom maintenance staff where relevant to operation)	Inform all drivers of speed limits and place appropriate signage along the relevant roads	During the Construction Phase Operation Phase	ECO Operation and Maintenance team	Monthly	No complaints from community members are submitted

Impact Management Actions	Implementation			Monitoring		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
– Straw stabilisation must be applied at a rate of one bale/10m² and harrowed into the top 100mm of top material, for all completed earthworks;	Contractor	Ensure that straw stabilisation is undertaken as per the listed requirements	During the Construction Phase	ECO	Monthly	Photographic record of all straw stabilisation undertaken
– For significant areas of excavation or exposed ground, dust suppression measures must be used to minimise the spread of dust.	Contractor	Appropriate dust suppressant measures are implemented	During the Construction Phase	ECO	Weekly	Photographic record of measures being implemented and the results thereof

5.21 Blasting

Impact management outcome: Impact to the 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	Not Applicable – no blasting will be required for the project.					
– Notification of surrounding landowners, 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 ensuring that noise from construction activities is mitigated.

Impact Management Actions	Implementation			Monitoring		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
– The Contractor must keep noise level within acceptable limits. Restrict the use of sound amplification equipment for communication and emergency only;	Contractor	Ensure that noise limits do not exceed acceptable limits and avoid the use of amplification communication	During the Construction Phase	ECO	Monthly, and as and when required	No complaints registered in this regard. No amplification equipment is used.
– All vehicles and machinery must be fitted with appropriate silencing technology and must be properly maintained;	Contractor cEO	Provide and implement silencing technology	During the Construction Phase	ECO	Monthly, and as and when required	No complaints registered in this regard. Silencing technology is utilised.
– 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;	Contractor cEO	Update complaints register. Provide daily transport to and from site for employees	During the Construction Phase	ECO	Monthly, and as and when required	Complaints register provided by the cEO and proof of transportation services provided

Impact Management Actions	Implementation			Monitoring		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
– Develop a Code of Conduct for the construction phase in terms of behaviour 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 must still meet the impact management outcome related to noise management.	Contractor cEO	Compile a Code of Conduct for staff. Appropriate operating hours must be identified for the project.	Pre-construction and Construction	ECO	Once, prior to the commencement of construction	No complaints registered in this regard.

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;	cEO / Contractor	Identify and demarcate through signage designated smoking areas	Pre-construction & Construction	ECO	Monthly	Photographic record of designated smoking area
– Firefighting equipment must be available on all vehicles located on site;	cEO / dEO in consultation with the Contractor	Provide all vehicles with firefighting equipment	Construction	ECO	Monthly	All vehicles are fitted with firefighting equipment and the details thereof are

Impact Management Actions	Implementation			Monitoring		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
						provided by the cEO
– The local Fire Protection Agency (FPA) must be informed of construction activities;	cEO	Undertake formal consultation to inform the local FPA of the associated construction activities	Pre-construction	ECO	Once, during the commencement of the Construction Phase	Proof of consultation with the FPA
– Contact numbers for the FPA and emergency services must be communicated in environmental awareness training and displayed at a central location on site;	dEO / cEO / Contractor	Develop environmental awareness training material which covers the contact numbers for the FPA and emergency services. Place the contact numbers for the FPA and emergency services at a visible and central location	Pre-construction & Construction	ECO	Prior to the commencement of the environmental awareness training and once during the construction phase	Environmental awareness training material requirements checklist and photographic record of contact numbers on display

Impact Management Actions	Implementation			Monitoring		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
– Two-way swop of contact details between ECO and FPA.	ECO	Consultation between the ECO and FPA in order to exchange contact details	Pre-construction	Not Applicable		

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 and water bodies;	Contractor	Identify and demarcate an appropriate location for the storage of excavated materials	Pre-construction & Construction	ECO	Monthly	Excavated material is not stored within sensitive environmental areas
– All stockpiled material must be maintained and kept clear of weeds and alien vegetation growth by undertaking regular weeding and control methods;	Contractor	Implement appropriate and sufficient maintenance on stockpiled	During the Construction Phase	ECO	Bi-weekly (every second week)	Stockpiled material is maintained sufficiently and is clear of weeds

Impact Management Actions	Implementation			Monitoring		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
		material regularly				and alien vegetation
– Topsoil stockpiles must not exceed 2m in height;	Contractor	Enforce limitations for the height of topsoil stockpiles	During the Construction Phase	ECO	Bi-weekly (every second week)	Topsoil stockpiles do not exceed 2m in height
– During periods of strong winds and heavy rain, the stockpiles must be covered with appropriate material (e.g. cloth, tarpaulin etc.);	Contractor	Appropriate material must be provided in order to cover stockpiles when required	During the Construction Phase	ECO	Monthly	Contractor to provide proof of availability of appropriate material to cover stockpiles when required
– Where possible, sandbags (or similar) must be placed at the bases of the stockpiled material in order to prevent erosion of the material.	Contractor	Sandbags must be provided in order to prevent erosion of stockpiled materials	During the Construction Phase	ECO	Monthly	Contractor to provide proof of availability of sandbags to prevent erosion of stockpiled materials

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 survey and pegging operations;	Contractor	Implement restrictions in terms of vegetation clearing during the survey and pegging operations	Pre-construction	ECO	Weekly	Contractor to provide photographic proof that no vegetation has been cleared
– No new access roads must be developed to facilitate access for survey and pegging purposes;	Contractor	Restrict the development of new access roads for survey and pegging purposes	Pre-construction	ECO	Weekly	Contractor to provide photographic proof that no new roads have been developed
– Project manager, botanical specialist and contractor to agree on final tower positions based on survey within assessed and approved areas;	DPM, Suitably Qualified Specialist and Contractor	Undertake consultation between the relevant responsible people and finalise the tower positions for the power line	Pre-construction	ECO	Once the final tower positions have been finalised and agreed upon	Provision of final tower positions to the ECO
– The surveyor is to demarcate (peg) access roads/tracks in consultation with ECO. No deviations will be allowed without the prior written consent from the ECO.	Surveyor in consultation with the ECO	Undertake consultation between the surveyor and the ECO	Pre-construction	ECO	Weekly	Consultation with the ECO regarding the distribution of pegs.

5.26 Excavation and Installation of foundations

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;	Contractor	Use a licensed waste disposal facility for the disposal of excess spoil	During the Construction Phase	ECO	Monthly	Certificates obtained for the disposal of excess spoil at a licensed waste disposal facility
– Spoil can however be used for landscaping purposes and must be covered with a layer of 150 mm topsoil for rehabilitation purposes;	Contractor	Spoil used for landscaping must be applied as per the listed requirements	Construction and Rehabilitation	ECO	Monthly	Photographic record of spoil used for landscaping purposes as well as feedback from the contractor
– Management of equipment for excavation purposes must be undertaken in accordance with Section 5.18: Workshop equipment maintenance and storage; and	Contractor	Undertake the management of equipment for excavation as per the requirements of section 5.18	During the Construction Phase	ECO	Monthly	Management of equipment is undertaken in line with the requirements of section 5.18
– Hazardous substances spills from equipment must be managed in accordance with Section 5.17: Hazardous substances.	Contractor	Undertake the management of hazardous	During the Construction Phase	ECO	Monthly	Management of hazardous substances spills

Impact Management Actions	Implementation			Monitoring		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
		substances spills from equipment as per the requirements of section 5.17				from equipment is undertaken in line with the requirements of section 5.17
– Batching of cement to be undertaken in accordance with Section 5.19: Batching plants;	Contractor	Undertake the batching of cement as per the requirements of section 5.19.	During the Construction Phase	ECO	Monthly	Management of the batching of cement in accordance with the requirements of section 5.19.
– Residual cement must be disposed of in accordance with Section 5.8: Solid and hazardous waste management.	Contractor	Undertake the disposal of residual cement as per the requirements of section 5.8	During the Construction Phase	ECO	Monthly	The disposal of residual cement is undertaken in line with section 5.8.

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 erection, assembled towers and tower sections must be stored on elevated surfaces (suggest wooden blocks) to minimise damage to the underlying vegetation;	Contractor	Provide the necessary materials for the elevated surface, where towers are to be placed on indigenous vegetation	During the Construction Phase	ECO	Weekly	Implementation of elevated surface and photographic record thereof
– In sensitive areas, tower assembly must take place off-site or away from sensitive positions;	Contractor in consultation with the cEO	Identify sensitive areas, including buffers, to be avoided by tower assembly and ensure that the areas are not infringed upon	Pre-construction & Construction	ECO	Weekly	Tower assembly is undertaken outside of sensitive areas
– The crane used for tower assembly must be operated in a manner which minimises impact to the environment;	Contractor in consultation with the cEO	Ensure that no impact to the environment is imposed during the operation of the crane	Pre-construction & Construction	ECO	Weekly	No environmental damages incurred as a result of the crane.
– The number of crane trips to each site must be minimised;	Contractor in consultation with the cEO	Ensure that the utilisation of the crane is maximised when on site.	Pre-construction & Construction	ECO	Weekly	Few crane trips to each site observed.

Impact Management Actions	Implementation			Monitoring		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
– Wheeled cranes must be utilised in preference to tracked cranes;	Contractor	Ensure wheeled cranes are utilised.	Pre-construction & Construction	ECO	Weekly	Wheeled cranes observed on site.
– Consideration must be given to erecting towers by helicopter or by hand where it is warranted to limit the extent of environmental impact;	Contractor	Contractor to undertaken erecting of towers in an environmentally acceptable manner	During the Construction Phase	ECO	Monthly	No unacceptable environmental impacts occur with the erecting of the towers
– Access to tower positions to be undertaken in accordance with access requirements specified in **Section 5.4: Access Roads**;	Contractor	Undertake access to tower positions as per the requirements of section 5.4	During the Construction Phase	ECO	Monthly	Access to tower positions are undertaken as per the requirements of section 5.4
– Vegetation clearance to be undertaken in accordance with general vegetation clearance requirements specified in **Section 5.10: Vegetation clearing**;	Contractor	Undertake vegetation clearance as per the requirements of section 5.10	During the Construction Phase	ECO	Weekly	Vegetation clearance is undertaken as per the requirements of section 5.10
– No levelling at tower sites must be permitted unless approved by the Development Project Manager or Developer Site Supervisor;	Contractor in consultation with the DPM and DSS	Written permission for levelling at tower sites, if required, must be obtained from the DPM and DSS prior to	During the Construction Phase	ECO	Monthly, and as and when required	Written permission from the DPM and DSS provided to the Contractor

Impact Management Actions	Implementation			Monitoring		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
		the undertaking of any levelling activities				
– Topsoil must be removed separately from subsoil material and stored for later use during rehabilitation of such tower sites;	Contractor	Implement appropriate measures to ensure that topsoil is removed from subsoil material	Construction and Rehabilitation	ECO	Weekly, and as and when required	Proof of appropriate measures implemented must be provided by the Contractor
– Topsoil must be stored in heaps not higher than 2m to prevent destruction of the seed bank within the topsoil;	Contractor	Implement the listed requirements for the storage of topsoil	During the Construction Phase	ECO	Weekly	Topsoil is stored as per the listed requirements
– Excavated slopes must be no greater that 1:3, but where this is unavoidable, appropriate measures must be undertaken to stabilise the slopes;	Contractor	Implement the listed requirements for the excavation of slopes	During the Construction Phase	ECO	Weekly	Excavation of slopes is undertaken as per the listed requirements
– 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;	Not Applicable - no blasting activities will be required for the project.					
– Only existing disturbed areas are utilised as spoil areas;	Contractor	Identify, demarcate and use existing disturbed areas for spoil areas	Pre-construction & Construction	ECO	Weekly	Only identified disturbed areas are used as spoil areas

Impact Management Actions	Implementation			Monitoring		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
– Drainage is provided to control groundwater exit gradient with the spill areas such that migration of fires is kept to a minimum;	Not Applicable					
– Surface water runoff is appropriately channelled through or around spoil areas;	DPM and Contractor	Design and implement appropriate surface runoff measures for spoil areas	Pre-construction & Construction	ECO	Once, during the construction of the surface runoff measures	Implementation of surface runoff measures through and/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;	Contractor	Develop and implement backfilling procedures which ensures that topsoil is not placed at the bottom of foundations.	Pre-construction & Construction	ECO	Weekly	Backfilling operations are undertaken as per the procedures developed
– The surface of the spoil is appropriately rehabilitated in accordance with the requirements specified in Section 5.29: Landscaping and rehabilitation;	Contractor	Rehabilitation of the surface spoil must be undertaken in accordance with the requirements of section 5.29	Rehabilitation	ECO	Weekly	Rehabilitation of the surface spoil is undertaken as per the requirements of section 5.29
– 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 is complete.	Contractor	Ensure that topsoil is spread evenly and compacted	Rehabilitation	ECO	Weekly	Proof that topsoil has been spread evenly and compacted

Impact Management Actions	Implementation			Monitoring		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
Spreading of topsoil must not be undertaken at the beginning of the dry season.		appropriately. This must be undertaken outside of the start of the dry season				correctly must be provided by the Contractor/ cEO. Proof that the activities were undertaken outside of the start of the dry season must be provided by the Contractor

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;	Contractor	Identify and demarcate areas appropriate for the siting of winch and tensioner stations which	Pre-construction & Construction	ECO	Weekly	Winch and tensioner stations are located outside of identified sensitive areas

Impact Management Actions	Implementation			Monitoring		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
		does not infringe on access restricted areas or environmentally 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;	Contractor	Provide sufficient drip trays	During the Construction Phase	ECO	Weekly	Sufficient drip trays are available for the winch and tensioner stations and no spills occur
– Refuelling of the winch and tensioner stations must be undertaken in accordance with **Section 5.17: Hazardous substances;**	Contractor	The refuelling of winch and tensioner stations must be undertaken as per the requirements of section 5.17	During the Construction Phase	ECO	Monthly	The refuelling of winch and tensioner stations is undertaken as per the requirements of section 5.17
– 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 undertaken by hand, using chainsaws and handheld implements, with vegetation being cut off at ground level. No tracked or wheeled mechanised equipment must be used;	Contractor	Develop and implement procedures for implementation for vegetation clearing during stringing in line with the specification.	Pre-construction & Construction	ECO	Once, prior to the commencement of construction and weekly during stringing	Implementation of the procedures put in place and proof thereof from the Contractor

Impact Management Actions	Implementation			Monitoring		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
– Alternative methods of stringing which limit impact to the environment must always be considered e.g. by hand or by using a helicopter;	Contractor	Identify and implement the stringing method with the least environmental impact	During the Construction Phase	ECO	Weekly	Implementation of identified method of stringing with the least environmental impact
– 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;	Contractor	Identify prior to construction areas where protection measures will be required during stringing. Where access is to be restricted timeous written notice must be provided to the affected parties	Pre-construction & Construction	ECO	Monthly, and as and when required	Proof of implementation of protection measures and proof of written notice to affected parties must be provided by the Contractor
– No services (electrical distribution lines, telephone lines, roads, railways 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;	Contractor in consultation with the cEO	Avoid the damaging or disturbance of existing services. Where services will be disrupted timeous notice must be provided to the affected parties	During the Construction Phase	ECO	Monthly, and as and when required	No disruption of services occurs. Where disruption occurs proof of written notice to affected parties must be provided by the Contractor

Impact Management Actions	Implementation			Monitoring		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
– Where stringing operations cross cultivated land, damage to crops is restricted to the minimum required to conduct stringing operations, and reasonable notice (10 workdays minimum), in writing, must be provided to the landowner;	Not Applicable - no cultivated land is present within the grid connection corridor.					
– Necessary scaffolding protection measures must be installed to prevent damage to the structures supporting certain high value agricultural areas such as vineyards, orchards, nurseries.	Not Applicable – no high value agricultural areas are present within the grid connection corridor.					

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;	dEO / cEO	Identify and implement appropriate strategies for communication with the communities through consideration of the community needs	Pre-construction & Construction	ECO	Once, prior to the commencement of construction and monthly during the construction	Communication is undertaken as per the identified strategies and no complaints are submitted regarding communication

Impact Management Actions	Implementation			Monitoring		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
– Develop and implement a collaborative and constructive approach to conflict resolution as part of the external stakeholder engagement process;	Contractor	Development and implement a Grievance Mechanism which considers the community needs and provides procedures for conflict resolution	Pre-construction & Construction	ECO	Once, prior to the commencement of construction and monthly during the construction phase	Conflict resolution is undertaken in line with the requirements of the Grievance Mechanism. No complaints on conflict resolution is submitted by the community
– Sustain continuous communication and liaison with neighbouring owners and residents	Contractor	Development and implement a Grievance Mechanism which provides procedures for communication / liaison with neighbouring landowners and residents	Pre-construction & Construction	ECO	Once, prior to the commencement of construction and monthly during the construction phase	Communication / liaison with neighbouring landowners and residents are undertaken in line with the requirements of the Grievance Mechanism. No complaints on communication with neighbouring landowners and residents is submitted

Impact Management Actions	Implementation			Monitoring		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
– Create work and training opportunities for local stakeholders; and	Contractor	Develop and implement a "locals first" policy for the provision of employment opportunities	Pre-construction & Construction	ECO	Once, prior to the commencement of construction and monthly during the construction phase	The "locals first" policy is considered in terms of the employment and training opportunities
– Where feasible, no workers, with the exception of security personnel, must be permitted to stay over-night on the site. This would reduce the risk to local farmers.	Not Applicable - no workers, other than security is proposed to stay on-site overnight.					

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**;	Contractor	Regular emptying of the bunds must be undertaken. This must be undertaken as per the	During the Construction Phase	ECO	Prior to site closure for more than 05 days	Bunds are emptied as per the requirements listed under sections 5.17 and 5.18

Impact Management Actions	Implementation			Monitoring		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
		requirements listed in sections 5.17 and 5.18				
– Hazardous storage areas must be well ventilated;	Contractor	Install appropriate ventilation in all hazardous storage areas	During the construction phase	ECO	Prior to site closure for more than 05 days	Effective ventilation is installed in hazardous storage areas
– Fire extinguishers must be serviced and accessible. Service records to be filed and audited at last service;	Contractor / cEO	Ensure fire extinguishers are serviced, as required and are easily accessible with appropriate signage indicating location. Ensure service records are kept up to date and filed	During the Construction Phase	ECO	Prior to site closure for more than 05 days	Signage placed indicating location of fire extinguishers and service records
– Emergency and contact details must be displayed;	Contractor / cEO	Place emergency and contact details which are readily available and easily accessible	During the Construction Phase	ECO	Prior to site closure for more than 05 days	Photographic proof of contact details on display
– Security personnel must be briefed and have the facilities to contact or be contacted by relevant management and emergency personnel;	Contractor	Hold a workshop with all security personnel to	Pre-construction & construction	ECO	Prior to site closure for more than 05 days	Proof of the workshop held must be kept on

Impact Management Actions	Implementation			Monitoring		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
		provide a brief of the project and security requirements. Provide facilities in order to contact management and emergency personnel				file by the contractor.
– Night hazards such as reflectors, lighting, traffic signage etc. must have been checked;	Contractor	Regular checks of night hazards must be undertaken	During the Construction Phase	ECO	Prior to site closure for more than 05 days	Proof of checks of night hazards must be provided by the contractor
– Fire hazards identified and the local authority must have been notified of any potential threats e.g. large brush stockpiles, fuels etc.;	cEO / Contractor	Identify any potential fire hazards and notify the relevant local authority	During the Construction Phase	ECO	Prior to site closure for more than 05 days	Proof of notification of the fire hazards to the local authority must be provided by the Contractor
– Structures vulnerable to high winds must be secured;	Contractor	Ensure structures vulnerable to wind are secure prior to site closure	During the Construction Phase	ECO	Prior to site closure for more than 05 days	Structures vulnerable to wind are secured prior to site closure
– Wind and dust mitigation must be implemented;	Contractor	Implement wind and dust	During the Construction Phase	ECO	Prior to site closure for more than 05 days	Wind and dust mitigation is implemented

Impact Management Actions	Implementation			Monitoring		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
		mitigation prior to site closure				prior to site closure
– Cement and materials stores must have been secured;	Contractor	Ensure cement and material stores are secured prior to site closure	During the Construction Phase	ECO	Prior to site closure for more than 05 days	Cement and material stores are secured prior to site closure
– Toilets must have been emptied and secured;	Contractor	Ensure toilets are emptied and secured prior to site closure	During the Construction Phase	ECO	Prior to site closure for more than 05 days	Toilets are emptied and secured prior to site closure
– Refuse bins must have been emptied and secured;	Contractor	Ensure refuse bins are emptied and secured prior to site closure	During the Construction Phase	ECO	Prior to site closure for more than 05 days	Refuse bins are emptied and secured prior to site closure
– Drip trays must have been emptied and secured.	Contractor	Ensure drip trays are emptied and secured prior to site closure	During the Construction Phase	ECO	Prior to site closure for more than 05 days	Drip trays are emptied and secured prior to site closure

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 spoil and waste must be disposed to a registered waste site and certificates of disposal provided;	Contractor	Develop and implement a rehabilitation plan for the rehabilitation of all disturbed areas. Dispose of all spoil and waste at a licensed waste disposal facility	Pre-construction & Rehabilitation	ECO	Weekly	Rehabilitation of the disturbed areas is undertaken as per the rehabilitation plan. All certificates of waste disposal at licensed facilities are available.
– All slopes must be assessed for contouring, and to contour only when the need is identified in accordance with the Conservation of Agricultural Resources Act, No 43 of 1983	Contractor	Assess all slopes and determine whether contouring is required	Rehabilitation	ECO	Weekly	All slopes are assessed and contoured as required
– 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;	Contractor	Assess all slopes and determine whether terracing is required	Rehabilitation	ECO	Weekly	All slopes are assessed and terraced as required

Impact Management Actions	Implementation			Monitoring		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
– Berms that have been created must have a slope of 1:4 and be replanted with indigenous species and grasses that approximates the original condition;	Contractor	Ensure all berms have a slope of 1:4 and is replanted with indigenous species and grasses	Rehabilitation	ECO	Weekly	All berms have a slope of 1:4 and is replanted with indigenous species and grasses
– Where new access roads have crossed cultivated farmlands, that lands must be rehabilitated by ripping which must be agreed to by the holder of the EA and the landowners;	Contractor	The upper 10cm of soil which was stripped and stockpiled from the entire area where levelling has been conducted should be re-spread over the disturbed surface during rehabilitation: If no levelling was done on a particular area, it is not necessary to strip topsoil from that area.	Rehabilitation	ECO	Weekly	Topsoil is spread evenly
– Rehabilitation of tower sites and access roads outside of farmland;	Contractor	Ensure stockpiled topsoil is used as	Rehabilitation	ECO	Weekly	Topsoil is spread evenly

Impact Management Actions	Implementation			Monitoring		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
		per the requirements listed under section 5.24				
– Indigenous species must be used for with species and/grasses to where it compliments or approximates the original condition;	Contractor	Make use of indigenous species for rehabilitation	Rehabilitation	ECO	Weekly	Indigenous species are used for rehabilitation
– Stockpiled topsoil must be used for rehabilitation (refer to **Section 5.24: Stockpiling and stockpiled areas**);	Contractor	Ensure stockpiled topsoil is used as per the requirements listed under section 5.24	Rehabilitation	ECO	Weekly	Stockpiled topsoil is used as per the requirements listed under section 5.24
– Stockpiled topsoil must be evenly spread so as to facilitate seeding and minimise loss of soil due to erosion;	Contractor	Ensure that topsoil is spread evenly	Rehabilitation	ECO	Weekly	Topsoil is spread evenly
– Before placing topsoil, all visible weeds from the placement area and from the topsoil must be removed;	Contractor	Remove all visible weeds from placement area and topsoil before spreading the topsoil	Rehabilitation	ECO	Weekly	No weeds are visible in the placement area or the topsoil
– Subsoil must be ripped before topsoil is placed;	Contractor	Undertake the ripping of subsoil prior to the	Rehabilitation	ECO	Weekly	Subsoil is ripped before topsoil is placed

Impact Management Actions	Implementation			Monitoring		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
		spreading of topsoil				
– The rehabilitation must be timed so that rehabilitation can take place at the optimal time for vegetation establishment;	Contractor	Plan the timeframe for rehabilitation in order to undertake vegetation planting during the optimal time for vegetation establishment	Rehabilitation	ECO	At the start of rehabilitation to confirm correct timeframe	Rehabilitation is undertaken during the optimal time
– Where impacted through construction related activity, all sloped areas must be stabilised to ensure proper rehabilitation is effected and erosion is controlled;	Contractor	All disturbed slope areas must be stabilised	Rehabilitation	ECO	Weekly	Disturbed slopes are stabilised sufficiently
– Sloped areas stabilised 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;	Contractor	Stabilise slopes as per the design specifications	Pre-construction & Rehabilitation	ECO	Weekly	Slopes are stabilised as per the design specifications
– Spoil can be used for backfilling or landscaping as long as it is covered by a minimum of 150mm of topsoil.	Contractor	Spoil used for landscaping must be applied as per the listed requirements	Rehabilitation	ECO	Weekly	Photographic record of spoil used for landscaping purposes as well as feedback from the contractor

Impact Management Actions	Implementation			Monitoring		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
– Where required, re-vegetation including hydro-seeding can be enhanced using a vegetation seed mixture as described below. A mixture of seed 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	Contractor in consultation with a suitably qualified specialist	Make use of a suitable vegetation seed mixture should enhancement be required	Rehabilitation	ECO	As and when required	Use of a suitable vegetation seed mixture if required

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 public in accordance with the requirements of regulation 26(h) of the EIA Regulations.

PART B: SECTION 2

7 SITE SPECIFIC INFORMATION AND DECLARATION

7.1 Contact details and description of the project

7.1.1. Details of the Applicant

Applicant Name	South Africa Mainstream Renewable Power Developments(Pty) Ltd
Contact Person	Eugene Marais
Physical Address	4th Floor Mariendahl House, Newlands on Main, Corner Main and Campground Road, Claremont, Cape Town, 7708
Postal Address	PO Box 45063, Claremont, 7735
Telephone	021 657 4052
Fax	N/A
Cell	(073) 871 5781
Email Address	Eugene.Marais@mainstreamrp.com

7.1.2. Details and Expertise of Environmental Assessment Practitioner (EAP)

EAP Name	Arlene Singh
EAP Qualifications	B.Sc. (Hons.) Environmental Management
Professional Affiliation/Registration	SACNASP EAPASA
Physical Address	Waterfall, Cnr Old Main Road & Maxwell Drive, Johannesburg, 2090
Telephone	N/A
Fax	086 471 4190
Cell	084 277 7074
Email Address	arlene@veersgroup.com

Refer to **Appendix A** of the EMPr for the detailed experience of the EAP and the Project Team.

7.1.3. Project Details

Project Name: ESTABLISHMENT OF GRID CONNECTION INFRASTRUTCURE ASSOCIATED WITH THE SUTHERLAND 2 WIND ENERGY FACILITY, NORTHERN CAPE PROVINCE

7.1.4. Project Description

South Africa Mainstream Renewable Power Developments (PTY) Ltd (herein-after referred to as Mainstream) received an Environmental Authorisation (DEA Ref:. 14/12/16/3/3/1/1814) dated 02 February 2018 for the electrical grid infrastructure to support the Sutherland 2 Wind Energy Facility (WEF), within the Namakwa District Municipality in the Northern Cape Province. No other amendments were undertaken following receipt of the Environmental Authorisation.

Part 1 Amendment Application to confirm the impacts associated with the construction of a 132 kV distribution line from the proposed Sutherland 2 WEF on-site substation to the third party substation (alternative 1, the proposed collector hub) .This also includes connection to the third party substation;

In this regard a Part 1 Amendment Application has been undertaken to split the Environmental Authorisation as per the above mentioned.

The following grid connection infrastructure is considered within the Part 1 Amendment Application to confirm the impacts associated with the split of the said grid infrastructure and any recommendations from the specialists for the development of Generic EMPrs for the grid connection infrastructure:

- The preferred option (alternative 1, of the proposed distribution line for the Sutherland 2 WEF Electrical Grid Infrastructure project will exit the proposed Sutherland 2 on-site substation extending to the Suurplat Substation (collector hub) at a distance of approximately 37km in length.

- Co- ordinates of the authorised grid infrastructure:

Preferred Electrical Connection Route	**Latitude**	**Longitude**
Start portion	32°36'35.374"S	20°45'58.131"E
Middle Bend	32°36'36.284"S	20°46'54.686"E
End Point	32° 38'41.011"S	20°55'3.784"E

The approved EMPr as per the EA granted 02 February 2018 has been approved, however separate Generic EMPrs are required for the 132kV powerline and Eskom portion of the onsite substation for the split of the EA. 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. The generic EMPr applies to activities requiring EA, mainly activity 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 Listing Notice 2 of 2014, as amended, and all associated listed or specified activities necessary for the realisation of such infrastructure.

The Environmental Authorisation for the 132kV Powerline was issued on the 20 October 2021 (DFFE Ref:. 14/12/16/3/3/1814/2).

This Generic EMPr is applicable to the 132kV powerline infrastructure following the transfers of the holder of the Environmental Authorisation to Eskom during the operational phase of the facility.

7.1.5. Project Location

Location details of the development of the substation:

Province	Northern Cape
District Municipality	Namakwa District Municipality
Local Municipality	Karoo Hoogland Local Municipality
Nearest town(s)	Sutherland
Affected Properties: Farm name(s), number(s) and portion numbers (on-site substation)	» Portion 1 of Tonteldoosfontein Farm 152; » Portion 2 of Gunstfontein Farm 151; » Portion 1 of Gunstfontein Farm 151; » Portion 1 of Beeren Valley Farm 150; » Remaining Extent of Beeren Valley Farm 150; » Remaining Extent of Nooitgedacht Farm 148; and » Remaining Extent of Hartebeeste Fontein Farm 147.
SG 21 Digit Code (s)	» C07200000000015200001 » C07200000000015100002 » C07200000000015100001 » C07200000000015000001 » C07200000000015000000 » C07200000000014800000 » C07200000000014700000
Current zoning and land use	Agriculture

7.1.6. Preliminary Technical Specifications of the 132kV powerline

Infrastructure	**Footprint, dimensions and details**
Powerline capacity	132kV
Powerline Servitude Width	32m
Powerline length	41km
Powerline corridor	500m
Tower Spacing	Up to 350m
Height of the Towers	Up to 32m

It should be noted that Eskom's requirements for work in or near Eskom servitudes should be adhered to.

7.1 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 both within the planned working area and any known 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 distribution length is illustrated per page in A3 landscape format. Where considered appropriate, photographs of sensitive features in the context of tower positions shall be used.

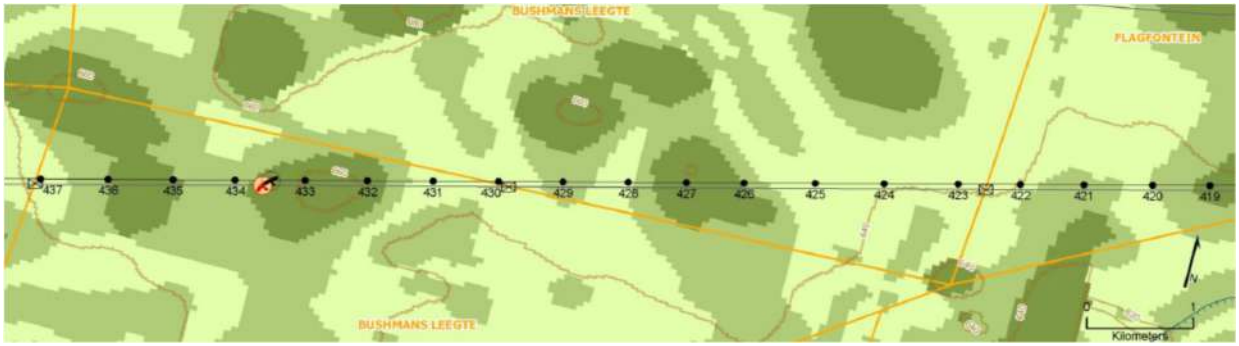

Figure 1: Example of an environmental sensitivity map in the context of a final overhead transmission and distribution profile

The national web-based environmental screening tool was utilised for this project and the grid connection corridor sensitivity maps can be seen in Figures 3 to 7. The site-specific environmental sensitivity map included in the BA Report is included as Figure 2.

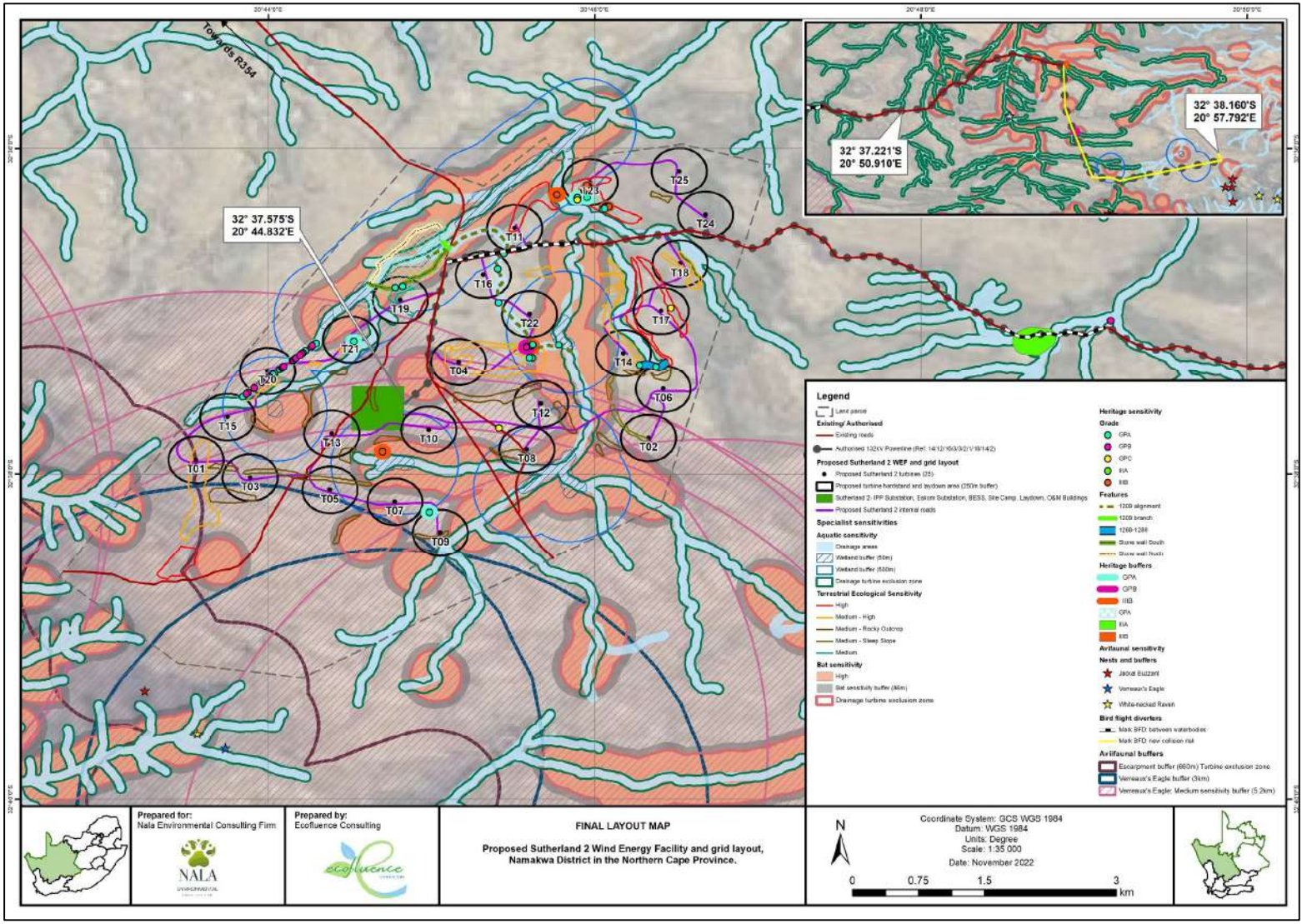

Figure 2: Environmental sensitivity map as per the final layout of the 132kV powerline associated with the Sutherland 2 Wind Energy Facility.

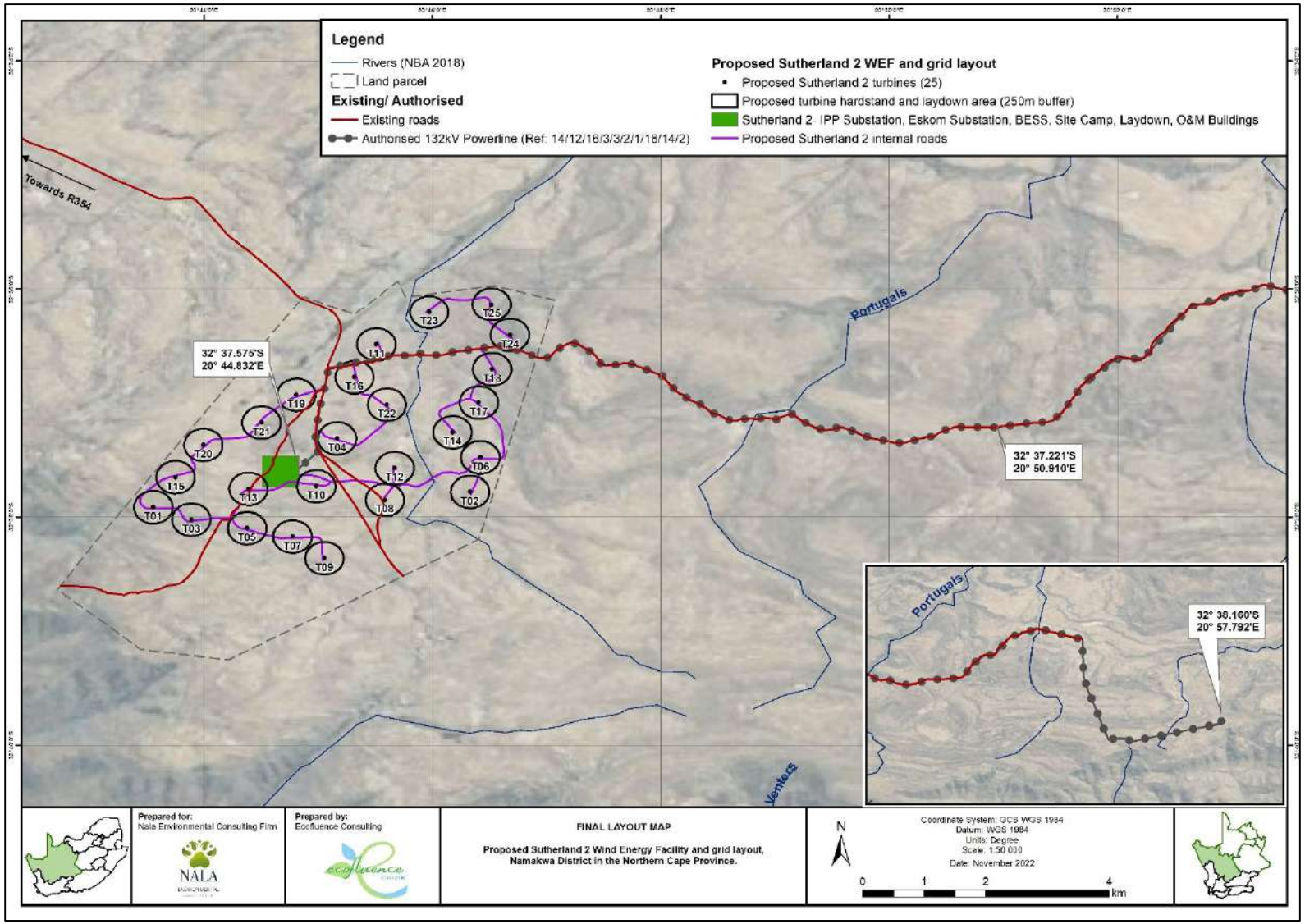

Figure 3: Layout map for grid route authorised as Alternative 1 , for the Sutherland 2 Wind Energy facility.

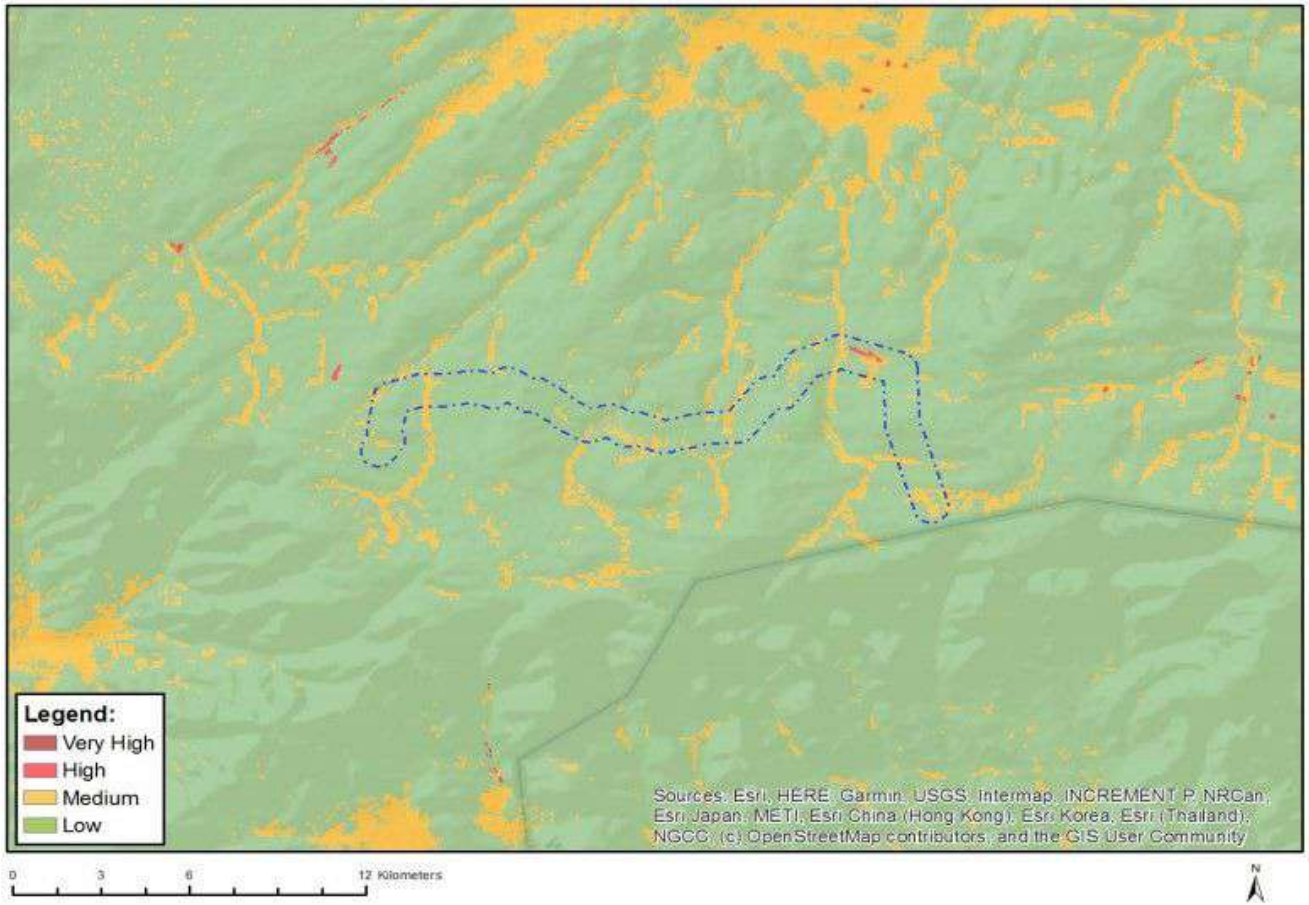

Figure 4: Map of Relative Agriculture Theme Sensitivity

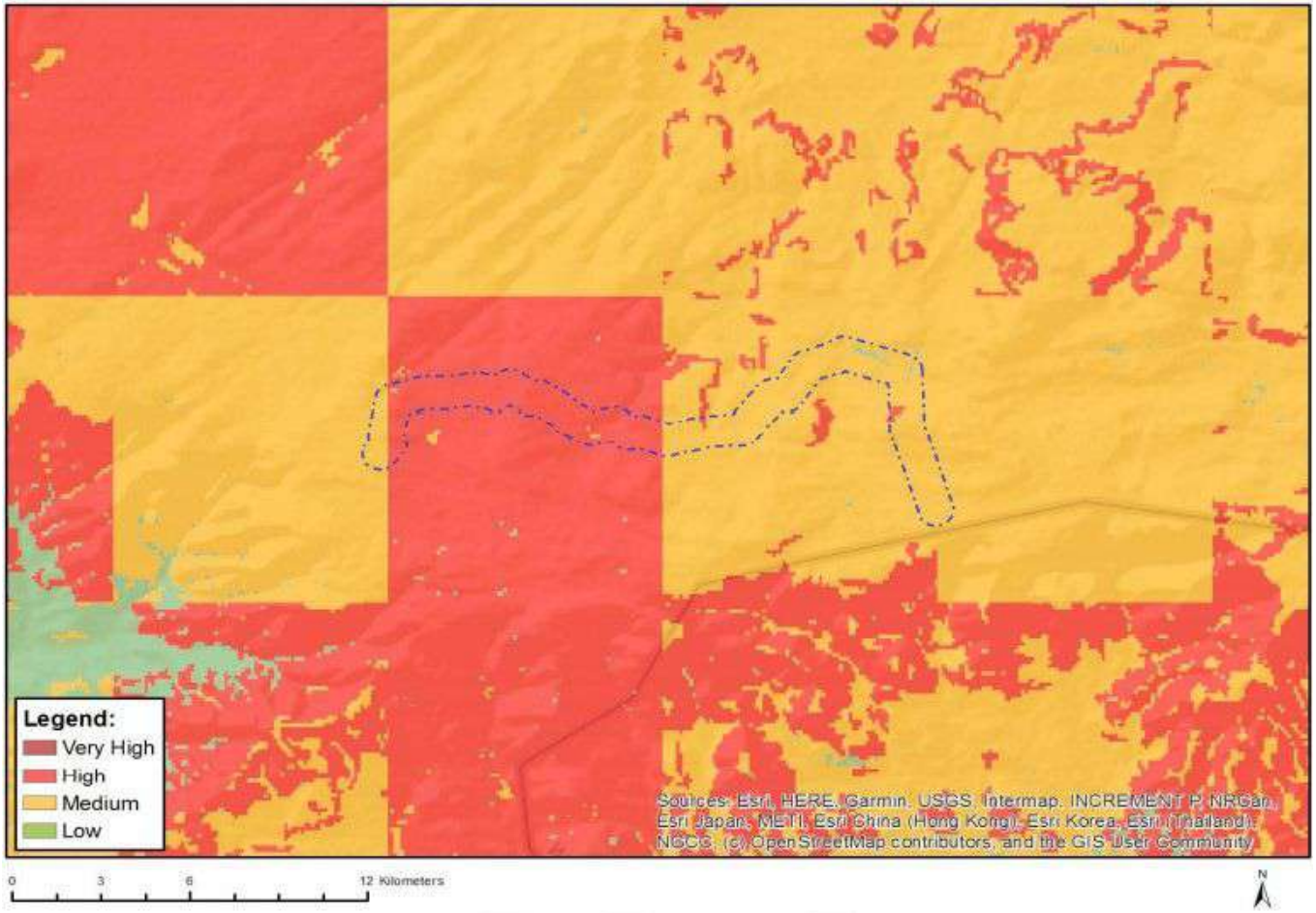

Figure 5: Map of Animal Species Theme Sensitivity

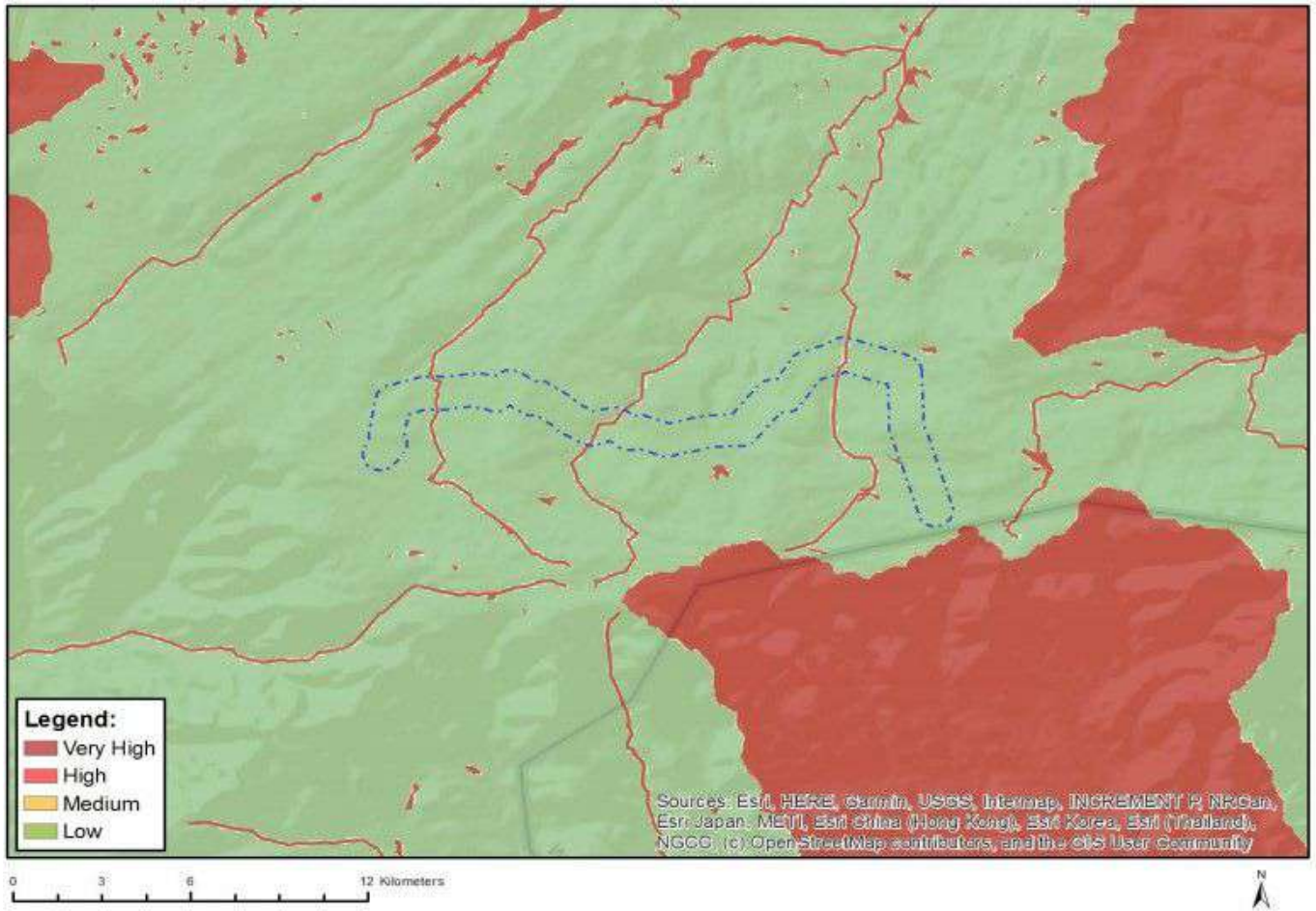

Figure 6: Map of Aquatic Biodiversity Theme Sensitivity

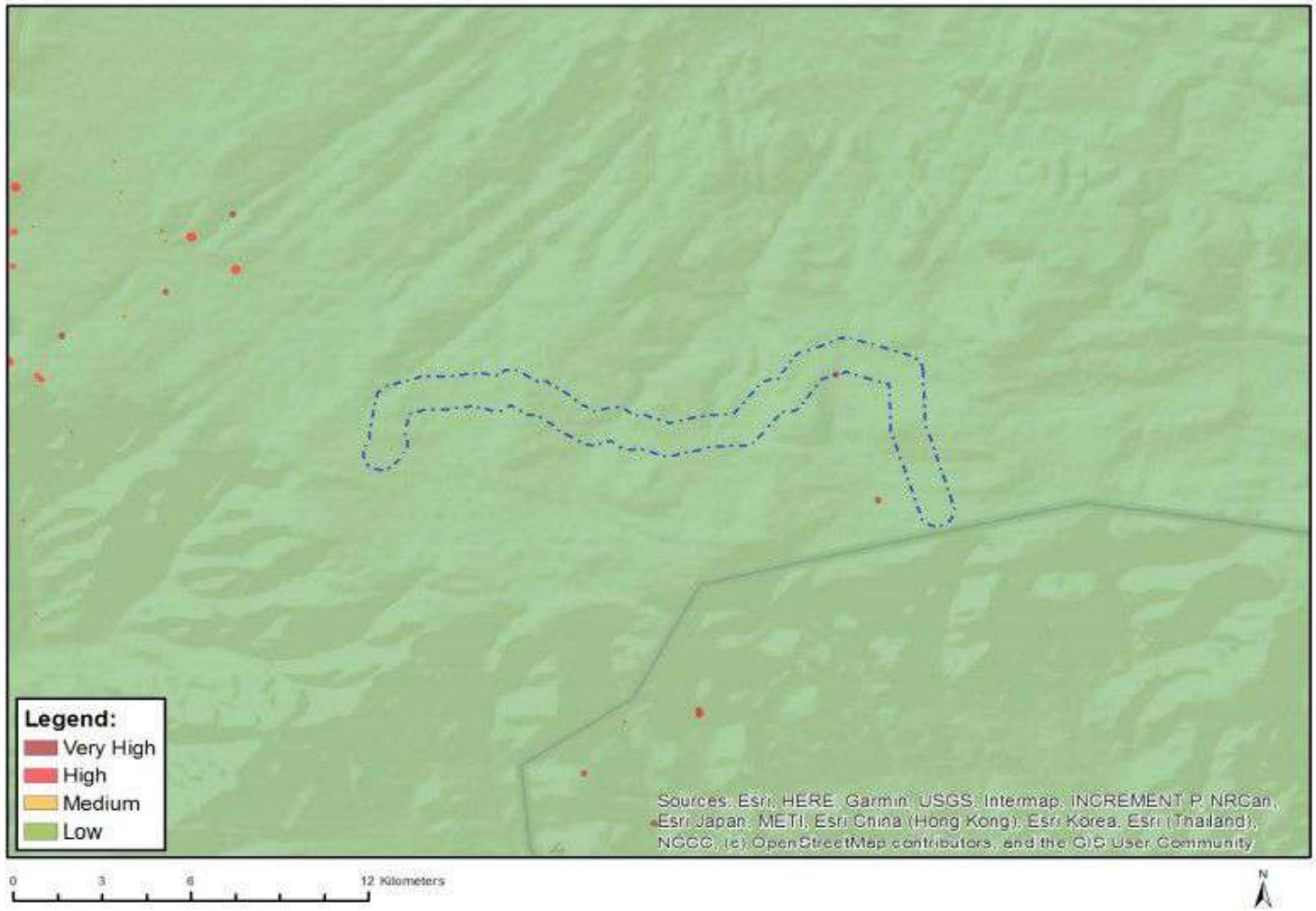

Figure 7: Map of Archaeological and Cultural Heritrage Species Theme Sensitivity

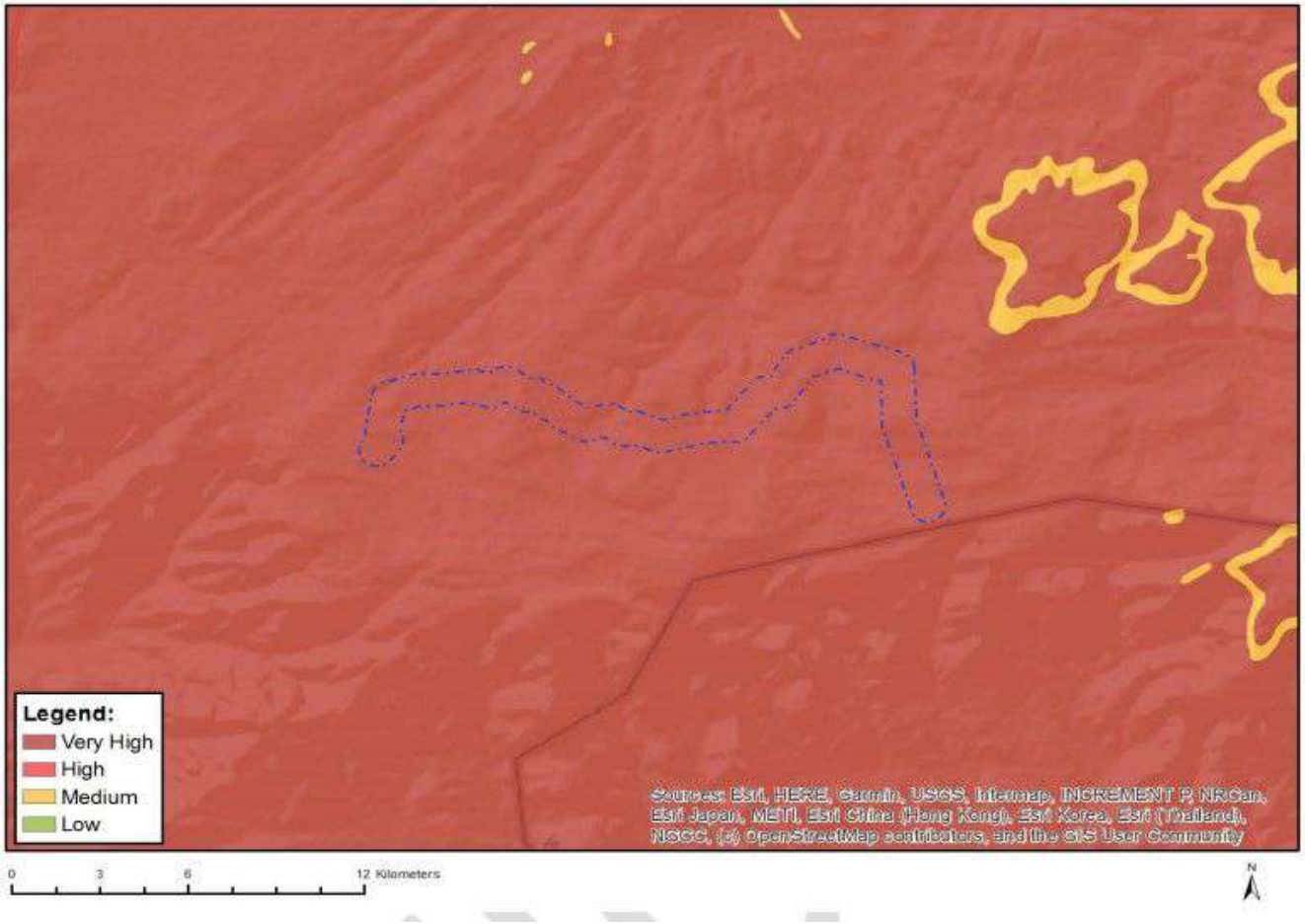

Figure 8: Map of Relative Palaeontology Theme Sensitivity

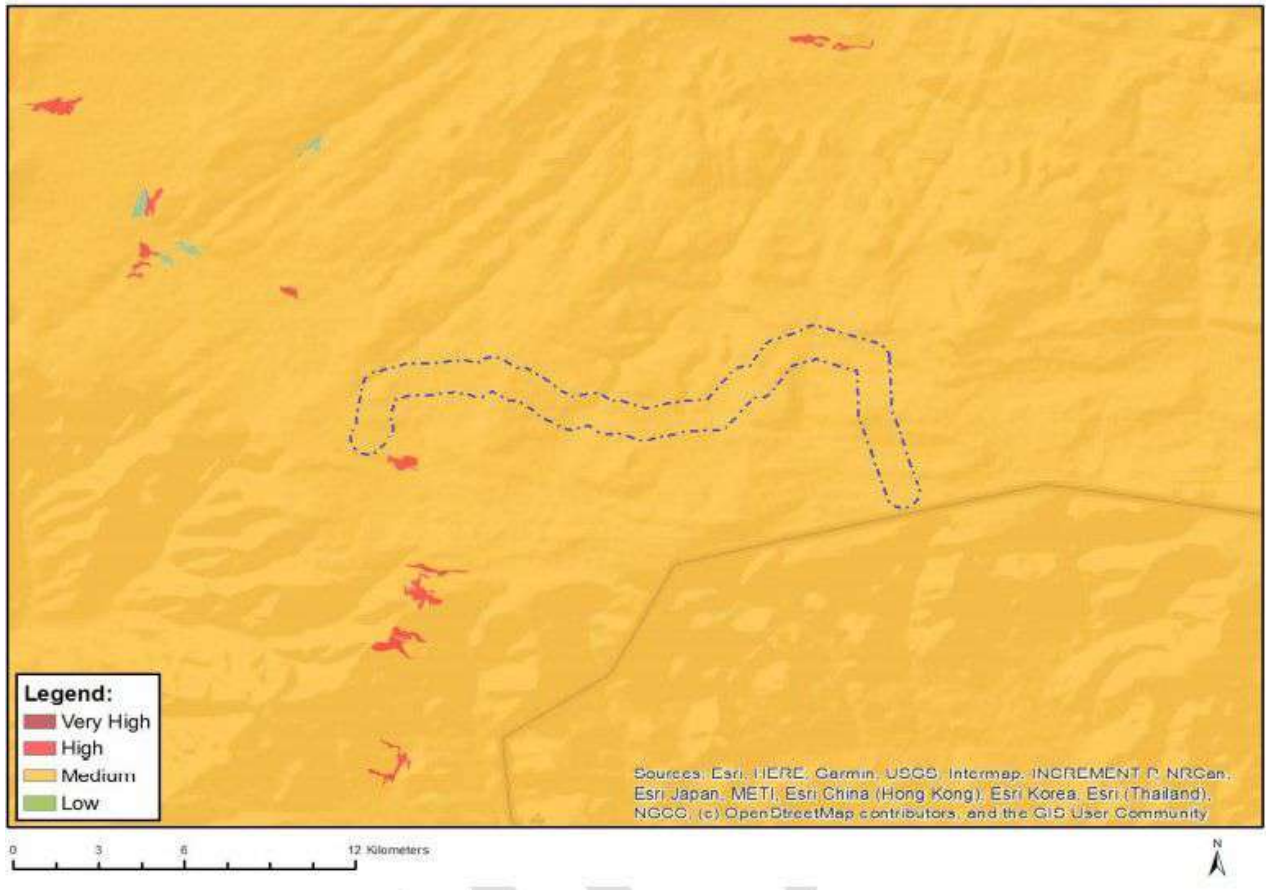

Figure 9: Map of Relative Plant Species Theme Sensitivity

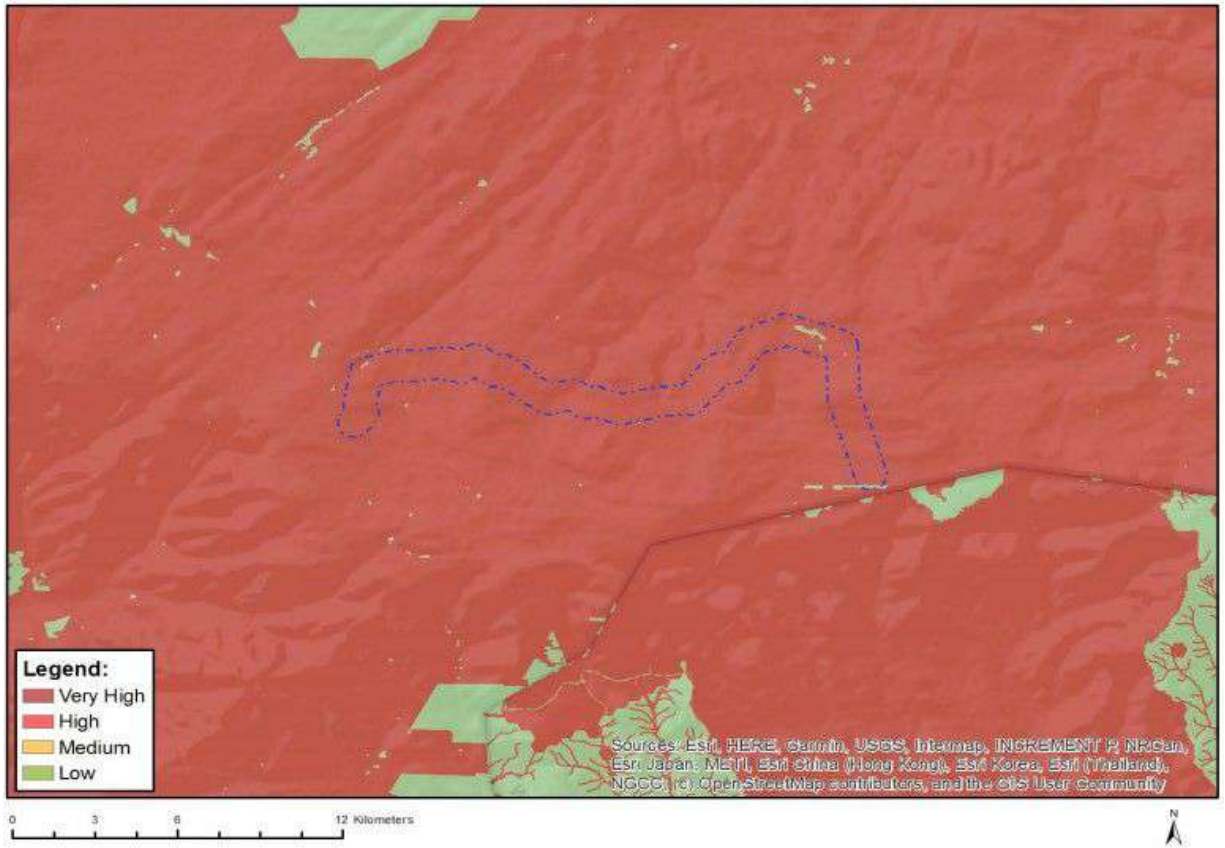

Figure 10: Map of Relative Terrestrial Biodiversity Theme Sensitivity

7.2 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 of commencement of construction to facilitate compliance inspections.

Signature Proponent/applicant/ holder of EA  Date: 2022/11/22

This declaration will be signed by the proponent/applicant/holder of the EA once the contractor is appointed and has provided inputs to this Generic EMPr as per the requirements of this template.

7.3 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 to be 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 the development and the EMPr becomes legally binding to the new EA holder.

PART C

8 SITE SPECIFIC ENVIRONMENTAL ATTRIBUTES

If any specific environmental sensitivities/attributes are present on the site which require more specific impact management outcomes and impact management actions, 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 must include impact management outcomes and impact management actions. The management controls including impact management outcomes and impact management actions must be presented in the format of the pre-approved generic EMPr template. This applies only to additional impact management outcomes and impact management actions that are necessary.

If Part C is applicable to the development as authorised in the EA, it is required to 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 are to 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 Terrestrial Ecology

Impact management outcome: Potential impact on terrestrial ecology as a result of the proposed infrastructure						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
Change in habitat through clearance of vegetation, habitat modification and related factors	Project Manager / dEO	Ensure that a Rehabilitation Plan is compiled that identifies tasks and procedures to be instituted at specific sites where transformation of habitat has arisen.	Once, prior to the commencement of the construction activities.	ECO	Once, before the commencement.	Ensure that this is taken into consideration during the planning and design phase, and that a suitable specialist is appointed to compile a Rehabilitation Plan. Review signed minutes of meetings or signed reports.

8.2 Aquatic Ecology (Freshwater Impacts)

Impact management outcome: Mitigate freshwater impacts during the project lifecycle						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
To reduce the impact of the proposed development on the surrounding drainage lines and freshwater features.	Project Manager /ECO	Ensure that the sensitivity maps guide the design and layout of the proposed development. In terms of the applicable legislation, a 32m zone of regulation in terms of the NEMA is stipulated around all freshwater features; and these should be respected where possible and as much as feasible. In addition, special mention is made of the need to ensure that	Once, prior to the commencement of the construction activities.	ECO	Once, before the commencement.	Ensure that the 32 m zone of regulation is taken into consideration in the final layout of the proposed electrical infrastructure. Ensure that this is taken into account, where possible and as feasible (as recommended by the Aquatic Ecology Specialist), and that the recommended mitigation measures are implemented as required.

		careful planning of the placement of the monopoles takes place in order to minimise the risk of placing infrastructure unnecessarily within riparian zones. Wherever possible, it is highly recommended that the linear development spans the relevant watercourse, and every effort should be made to prevent placement of monopoles within the riparian zone or associated 32m zone of regulation. If this is not avoidable, the monopoles should be placed as far from the active channel of the watercourse as				

		possible. However, the 32 m zone of regulation around the freshwater features must be adhered to in the vicinity of the substations, and in this regard, no activity may be permitted within the 32 m zone of regulation or any watercourse without obtaining the necessary authorisations from the respective authorities.				
	Project Manager /ECO	In terms of Section 21 (c) and (i) of the National Water Act (Act 36 of 1998) (NWA), the relevant authorisation must be obtained from the Department of Water and Sanitation (DWS) for any and all	Once-off prior to the commencement of construction, in consultation with the DWS (based on the requirements for a WULA).	ECO	Once, before the commencement.	Ensure that the requirements of the DWS are considered during the planning and design phase and prior to construction. Ensure that the WUL is submitted and approved prior to the commencement of

		any activities that take place within the watercourses. It is recommended that the relevant DWS officials be consulted in this regard to ensure that all legislative requirements are complied with. Overall, the relevant authorisations required for must be obtained in terms of Section 21 (c) and (i) of the NWA, and in terms of Regulation 509 of 2016 as it pertains to the NWA				construction (if required), based on the requirements of the DWS. It should be noted that in most cases, the DWS will only require submission of WULA documentation if the proposed WEF and associated electrical grid infrastructure receives preferred bidder status in terms of the REIPPPP. Conduct audits to verify if this has been undertaken and record and report any non-compliance.
	Project Manager /ECO	For those ephemeral drainage lines which were not defined as having riparian vegetation and	Once-off prior to the commencement of construction, in consultation with the DWS (based on the requirements for a WULA).	ECO	Once, before the commencement.	Ensure that a suitably qualified hydrologist is appointed to conduct a surface water baseline study for those features not defined as true

		therefore not defined as true watercourses from an ecological point of view, if any of these ephemeral drainage lines have a floodline applicable to them they would be defined as a watercourse and therefore require protection as such (i.e. the zone of regulation in terms of GN509 of 2016 as it relates to the NWA is the 1:100 year floodline). This should be verified by a suitably qualified hydrologist. It is recommended. that a surface water baseline study should be undertaken as part of the Water Use Licence Application (WULA) process				watercourses during the BA Process, if this is required by the DWS as part of the WULA Process. Conduct audits to verify if this has been undertaken and record and report any non-compliance.

		and in consultation with the DWS, and where applicable, should be used to guide the layout of the proposed development, planned mitigation and conditions of authorization.				
To reduce the impact of the proposed development on the surrounding surface water features and rivers.	Project Manager /ECO	Permit only essential construction personnel within 32m of the freshwater habitat, if absolutely necessary that they enter the regulatory zone.	During Construction	ECO	Weekly	Carry out visual inspections and site audits to verify if these management actions are undertaken, and record and report any non-compliance.
	Project Manager /ECO	Limit the footprint area of the construction activities to what is only essential in order to minimise environmental damage.	During Construction	ECO	Weekly	Carry out visual inspections and site audits to verify if these management actions are undertaken, and record and report any non-compliance.

	Project Manager /ECO	Implement effective waste management in order to prevent construction related waste from entering the freshwater environments.	During Construction	ECO	Weekly	Carry out visual inspections and site audits to verify if these management actions are undertaken, and record and report any non-compliance.
	Project Manager /ECO	Rehabilitate all wetland and riparian habitat areas possibly affected by the proposed electrical infrastructure to ensure that the ecology of these areas is re-instated during all phases.	During Construction	ECO	Weekly	Carry out visual inspections and site audits to verify if these management actions are undertaken, and record and report any non-compliance.
	Project Manager /ECO	As far as possible, all rehabilitation activities should occur in the low flow season, during the drier summer months.	During Construction	ECO	Weekly	Carry out visual inspections and site audits to verify if these management actions are undertaken, and record and report any non-compliance.

	Project Manager /ECO	As much vegetation growth as possible should be promoted within the proposed electrical infrastructure construction area in order to protect soils.	During Construction	ECO	Weekly	Carry out visual inspections and site audits to verify if these management actions are undertaken, and record and report any non-compliance.
	Project Manager /ECO	All areas affected by the electrical infrastructure construction should be rehabilitated upon completion of the electrical infrastructure construction.	During Construction	ECO	Weekly	Carry out visual inspections and site audits to verify if these management actions are undertaken, and record and report any non-compliance.
	Project Manager /ECO	Riparian vegetation cover should be monitored to ensure that sufficient vegetation is present to bind the bankside soils and prevent bankside erosion and incision.	During Construction	ECO	Weekly	Carry out visual inspections and site audits to verify if these management actions are undertaken, and record and report any non-compliance.

	Project Manager /ECO	It is recommended that a detailed rehabilitation plan be developed by a suitably qualified ecologist in order to address specific	During Construction	ECO	Weekly	Carry out visual inspections and site audits to verify if these management actions are undertaken, and record and report any non-compliance.

8.3. Visual Impacts

Impact management outcome: Reduce visual impacts associated with the electrical grid infrastructure						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
Reduce visual intrusion of construction activities project wide	DPM DESS dEO	Ensure plans are in place to minimise fire hazards and dust generation.	Design and Planning	dEO	During design cycle and before construction.	Ensure that this is taken into consideration during the planning and design phase by reviewing signed minutes of meetings or signed reports.
	DPM DESS dEO	Ensure plans are in place to rehabilitate temporary cleared areas as soon as possible.	Design and Planning	dEO	During design cycle and before construction.	Ensure that this is taken into consideration during the planning and design phase by reviewing signed minutes of meetings or signed reports.
	DPM DESS dEO	Ensure plans are in place to control and minimise erosion risks.	Design and Planning	dEO	During design cycle and before construction.	Ensure that this is taken into consideration during the planning and

						design phase by reviewing signed minutes of meetings or signed reports.
	DPM DESS dEO	The developer prefers to use monopole pylons for the overhead lines and in this case, where over a relatively long section of the route visual receptors are likely to be in close proximity to the line monopole pylons will be more aesthetically pleasing than lattice type towers. A mix of pylon types should also be avoided where possible when taking into consideration other projects in the area (e.g. Rietrug and Sutherland WEF electrical infrastructure). However, as noted in the Visual Impact Assessment these are not essential mitigation measures and other factors and specialist recommendations should be taken into account.	Ongoing during construction	ECO	Monthly	Ensure that this is taken into consideration during the planning and design phase by reviewing signed minutes of meetings or signed reports.
	Project Manager and Eskom maintenance staff where	Structure style (e.g. power line pylons/towers) should be the same as for other similar	Design and Planning	dEO	During design cycle and before construction.	Ensure that this is taken into consideration during the

	relevant to operation)	developments along the same route where possible (taking into consideration other specialist recommendations and specifications).				planning and design phase by reviewing signed minutes of meetings or signed reports.
Prevent unnecessary visual clutter and focusing attention of surrounding visual receptors on the proposed development.	ECO	Parking areas should be demarcated and strictly controlled so that vehicles are limited to specific areas only.	During Construction	ECO	Weekly	Carry out visual inspections to ensure the construction parking area is demarcated clearly, and record and report any non-compliance. Carry out visual inspections to ensure strict control over the parking of construction vehicles and access routes in order to restrict activities to within demarcated areas.
	ECO	Where possible construction camps and laydown areas should be located (where sensitive visual receptors are least likely to be affected):	During Construction	ECO	Weekly	Ensure that this is taken into consideration for the siting of the proposed

		• In low visibility areas (e.g. avoid ridgelines and open plains); • Previously disturbed areas (e.g. clearings created by farmers for other purposes which are no longer being used); and/or • Areas near derelict farmsteads (taking into consideration the findings of the Heritage Impact Assessment as well as other assessments that may be relevant), particularly where existing trees can be used to screen these areas from views.				construction site camp and laydown area. Carry out visual inspections to ensure the construction camp and laydown area are demarcated clearly, and record and report any non-compliance. Carry out visual inspections to ensure strict control over the boundary of the site camp and laydown area in order to restrict activities to within demarcated areas.
	ECO	Where possible construction camps and laydown areas should be located (where sensitive visual receptors are least likely to be affected):	During Construction	ECO	Weekly	Ensure that this is taken into consideration for the siting of the proposed construction site camp and laydown area.

		•In low visibility areas (e.g. avoid ridgelines and open plains); • Previously disturbed areas (e.g. clearings created by farmers for other purposes which are no longer being used); and/or • Areas near derelict farmsteads (taking into consideration the findings of the Heritage Impact Assessment as well as other assessments that may be relevant), particularly where existing trees can be used to screen these areas from views.				Carry out visual inspections to ensure the construction camp and laydown area are demarcated clearly, and record and report any non-compliance. Carry out visual inspections to ensure strict control over the boundary of the site camp and laydown area in order to restrict activities to within demarcated areas.
		Night time construction should be avoided where possible (however some construction work on electrical components may need to occur after dark).	During Construction	Construction Manager ECO	Daily	Construction operation times to be monitored and managed (as well as included in the tender contract).
		Night lighting of the construction sites should be minimised within requirements of safety and efficiency.				Complaints about night lights should be investigated and

						documented in a register.
		Particular care should be taken to avoid erosion scarring and damage along the ridge down the escarpment (which is applicable to Alternative 2 of the proposed distribution line and third party substation only).				Carry out site visits and inspections of the ridge down the escarpment during the proposed construction activities. Record and report any non-compliance.
		Maintain good housekeeping on site to avoid litter and minimize waste.				Carry out site visits and inspections of the construction sites and ensure good housekeeping is maintained. Record and
		Monitor construction sites for strict adherence to demarcated boundaries and minimise areas of vegetation, ground and surface disturbance. Existing clearings should be used where possible and where required.	During Construction	Construction Manager/ ECO	Daily	Carry out site visits and record and report any non-compliance.
		Monitor that existing roads will be used for access as far as possible and that construction of new access roads is minimised.				Carry out site visits and inspections of the access routes. Record

						and report any non-compliance.
		Monitor that topsoil from the site is stripped, stockpiled, and stabilised before excavating earth for the proposed construction				Carry out site visits and inspections of the topsoil management process. Record and report any non-compliance.
		Monitor that vegetation material from vegetation removal is mulched and spread over fresh soil disturbances to aid in the rehabilitation process.				Carry out site visits and inspections of the re-vegetation process. Record and report any non-compliance.
		Monitor adherence to lighting plan.	During Construction	Construction Manager/ECO	Daily	Complaints about night lights should be investigated and documented in a register. Investigate any complaints about night lights and document it in a register
		Monitor adherence to rehabilitation plan (i.e. where cleared areas are rehabilitated as soon as possible).				Visit sites requiring rehabilitation

		Monitor adherence to erosion control plan				Carry out site visits and record and report any non-compliance
		Monitor adherence to dust and fire control plans.				Carry out site visits and record and report any non-compliance
Prevent unnecessary visual clutter and focusing attention of surrounding visual receptors on the proposed development.	ECO	Disturbed and transformed areas should be contoured to approximate naturally occurring slopes to avoid lines and forms that will contrast with the existing landscapes. Edges of re-vegetated areas should be feathered to reduce form and line contrast	Decommissioning phase	ECO	Weekly	Conduct visual inspections to ensure that landscaping is following the rehabilitation plan.
		Where possible decommissioning camps and laydown areas should be located (where sensitive visual receptors are least likely to be affected): In low visibility areas (e.g. avoid ridgelines and open plains); Previously disturbed areas (e.g. clearings created by farmers for other purposes which are no longer being used); and/or Areas near derelict farmsteads (taking into				Ensure that this is taken into consideration for the siting of the proposed site camp and laydown area. Carry out visual inspections to ensure the site camp and laydown area are demarcated clearly, and record and report

		consideration the findings of the Heritage Impact Assessment as well as other assessments that may be relevant), particularly where existing trees can be used to screen these areas from views.				any non-compliance. Carry out visual inspections to ensure strict control over the boundary of the site camp and laydown area in order to restrict activities to within demarcated areas.
		Stockpiled topsoil should be reapplied to disturbed areas and these areas should be revegetated using a mix of indigenous species in such a way that the areas will form as little contrast in form, line, colour and texture with the surrounding undisturbed landscape	Decommissioning phase	ECO	Weekly	Site visits to ensure that stockpiled topsoil (or appropriate soil for vegetation when stockpiled topsoil is exhausted) is used.
		Night lighting of decommissioning sites should be minimised within requirements of safety and efficiency.	Decommissioning phase	ECO	Weekly	Complaints about night lights should be investigated and documented in a register.
		Working at night should be avoided where possible.	Decommissioning phase	ECO	Weekly	Operation times for decommissioning

						activities to be monitored and managed (as well as included in the tender contract).
Reduce the visual impact of decommissioning activities project wide	Decommissioning Manager and Environmental Control Officer	Maintain good housekeeping on site to avoid litter and minimize waste.	Decommissioning phase	ECO	Daily	Carry out site visits and inspections of the sites and ensure good housekeeping is maintained. Record and report any non-compliance.
		Monitor sites for strict adherence to demarcated boundaries and minimise areas of vegetation, ground and surface disturbance. Existing clearings should be used where possible and where required.				Carry out site visits and record and report any non-compliance.
		Monitor that existing roads will be used for access as far as possible.				Carry out site visits and inspections of the access routes. Record and report any non-compliance.
		Monitor that topsoil from the site is stripped, stockpiled, and stabilised before excavating earth.				Carry out site visits and inspections of the topsoil management

						process. Record and report any non-compliance.
		Monitor that vegetation material from vegetation removal is mulched and spread over fresh soil disturbances to aid in the rehabilitation process.				Carry out site visits and inspections of the re-vegetation process. Record and report any non-compliance
		Monitor adherence to lighting plan.				Complaints about night lights should be investigated and documented in a register. Investigate any complaints about night lights and document it in a register.
		Monitor adherence to rehabilitation plan (i.e. where cleared areas are rehabilitated as soon as possible).				Visit sites requiring rehabilitation.
		Monitor adherence to erosion control plan.				Carry out site visits and record and report any non-compliance.
		Monitor adherence to dust and fire control plans				Carry out site visits and record

						and report any non-compliance.

8.4. Heritage Impacts

Impact management outcome: Reduce potential impact on archaeological and heritage resources						
8.4. Heritage Impacts	**Implementation**			**Monitoring**		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
– Achieve a layout that minimizes the potential later impacts to archaeological remains and palaeontological material.	DPM DESS dEO	A Heritage Management Plan (HMP) must be developed for all heritage resources located within the proposed development footprint, and all heritage resources that require no-go bufferzones. The HMP must be submitted to SAHRA prior to construction commencing	Design and Planning	dEO/Heritage Specialist	Once-off prior to commencement	Take cognizance of the archaeological remains and palaeontological material reported in the HIA when designing layout and routing.
	DPM DESS dEO	Ensure that the project layout avoids significant palaeontological and archaeological sites that were identified in the Heritage Impact Assessment (Appendix D.4 of the BA Report). These sites should be identified on project maps and regarded as no-go zones with buffers of at least 30 m around all associated features. The	Design and Planning	dEO	Once-off prior to commencement	Ensure and verify that the significant palaeontological and archaeological sites identified in the Heritage Impact Assessment (Appendix D.4 of the auth BA Report) are

		relevant waypoints to be avoided with the 30 m buffers are as follows: 575; 576, 524, 546, 527 614, 498 (whole complex included), 492 and the palaeontological site (i.e. a scatter of petrified wood) approximately 500 m from Alternative 2 of the proposed distribution line routing identified in the Palaeontological Impact Assessment (Appendix 3 of the Heritage Impact Assessment). Waypoint 492 includes a rock art site that was found by the specialist, and the 30 m buffer does not need to be applied to this site, as the proposed service road diversion for Alternative 2 is routed within 20 m of the site, however an existing farm track is used, therefore the specialist has recommended that this is acceptable. The site at waypoint 546 will not be completely avoidable because a current access road passes through it, but special care should be				included on project maps and regarded as no-go zones with buffers during the planning and design phase. Review the site layout plan, and signed minutes of

		taken within the bounds of the site to ensure that no damage is done				
		The ECO should be trained by a specialist palaeontologist for the identification of potential for fossils to be uncovered during excavations. As many excavations as possible should be monitored by the ECO during construction and if any fossils are uncovered they should be protected in situ and immediately reported to a palaeontologist in order to plan a way forward.	Design and Planning	dEO	Once-off prior to commencement	A Palaeontological Specialist is to be appointed to provide training to the ECO.
	DPM DESS dEO	These no-go sites should be examined periodically by the ECO during the construction phase to ensure that they are being respected and secure and fenced off during the construction phase	Construction phase	ECO	Monthly	Ensure and verify that the significant palaeontological and archaeological sites identified in the Heritage Impact Assessment (Appendix D.4 of the BA Report) are included on project maps

						and regarded as no-go zones with buffers during the planning and design phase. Review the site layout plan, and signed minutes of meetings or signed reports
Minimise the chances of significant archaeological sites being disturbed. Minimise the chances of impacts to other heritage resources located outside of the proposed route of the electrical grid infrastructure.	Project Developer (Mainstream) and Archaeologist	Ensure that a suitably qualified archaeologist is appointed to carry out a pre-construction survey of the sections of the final alignment that were not surveyed in order to locate any sites that need to be avoided or mitigated. Note that this requirement pertains to un-surveyed parts of the assessed routes as well as to any alterations to the routing made after comp	Prior to start of construction.	Project Developer and Archaeologist	Once-off, prior to start of construction.	Appoint a suitably qualified archaeologist to conduct a preconstruction survey. Ensure that this is taken into consideration by reviewing signed minutes of meetings or signed reports.
		Record significant sites within the project footprint that cannot be avoided (none have been found to date). The one site noted as occurring in the proposed on-site substation development envelope (at waypoint 576) does not merit	Prior to start of construction	ECO/ Archaeologist		Monitor and verify if any significant sites are found within the project footprint that cannot be avoided, subsequent to

		mitigation but should be avoided if possible. No other sites requiring mitigation have been found within the project footprint to date.				the pre-construction survey. Ensure that this is taken into consideration in the site plan.
		Avoid and protect all identified archaeological sites if possible. Ensure that all sensitive areas are cordoned off and protected prior to the start of construction with the buffers as stated in the Heritage Impact Assessment (i.e. waypoints 576 (if possible), 524, 546, 527, 614, 498 (whole complex included), 492 and the palaeontological site (i.e. a scatter of petrified wood)).	During construction		On-going during construction	Identify and cordon off sites with appropriate barriers. Carry out visual inspections and site visits to ensure strict control over the demarcation of no-go areas. Record and report any non-compliance.
		Ensure that the farm road passing through the kraal complex (at waypoint 546) is not widened towards the east and should preferably not be widened at all. The site at waypoint 546 will not be completely avoidable because a current access road passes through it, but special care should be		ECO		Carry out visual inspections and site visits to ensure that the farm road passing through the kraal complex is not widened as a result of the proposed project. Record

		taken within the bounds of the site to ensure that no damage is done.				and report any non-compliance.
		The no-go sites should be examined periodically by the ECO during the construction phase to ensure that they are being respected.				Carry out visual inspections and site visits to ensure strict control over the demarcation of no-go areas. Record and report any non-compliance.
		If any archaeological material is encountered during any phase of the project, work in the immediate area should be halted, and the find should be protected in situ and reported to an appropriate specialist and/or to the relevant heritage resources authority (i.e. Heritage Western Cape for the Western Cape and the South African Heritage Resources Agency (SAHRA) for the Northern Cape) so that a decision can be made as to how to proceed (i.e. it may require inspection by an archaeologist). Such heritage is the property of	During construction			Monitor excavations and construction activities for archaeological materials via visual inspections and report the finds accordingly. Contact the heritage authorities and the identified archaeologist if any heritage features are uncovered.

		the state and may require excavation and curation in an approved institution. Sufficient time should be allowed to remove/collect such material. If unmarked human burials are uncovered, the SAHRA Burial Grounds and Graves (BGG) Unit (for the Northern Cape) and Heritage Western Cape (for the Western Cape), must be alerted immediately. If the newly discovered heritage resources prove to be of archaeological or palaeontological significance, a Phase 2 rescue operation may be required.				
		Ensure that no activity takes place outside of the authorized construction footprint (and construction vehicles should remain within the construction corridor).				Carry out visual inspections to ensure strict control over the behaviour of construction staff in order to restrict activities to within demarcated areas.
Ensure the protection of known sensitive fossil sites from disturbance.	Project Developer/ ECO	Ensure that a suitably qualified palaeontologist is appointed to undertake a	Prior to construction	Project Developer/ ECO	Once-off prior to construction.	Appoint a suitably qualified palaeontologist

Safeguarding, recording and sampling of significant new chance fossil finds. This will lead to an improved palaeontological database for the south-west Karoo region.		pre-construction walk-down for any sectors of the 132 kV power line route finally chosen that were not covered or surveyed during the BA Phase (as indicated by the yellow dashed rectangle in Figure 1 of the Palaeontological Impact Assessment, which is included as an appendix to the Heritage Impact Assessment. Note that this requirement pertains to unsurveyed parts of the assessed routes as well as to any alterations to the routing made after completion of the Heritage Impact Assessment. The resulting report will need to be submitted to and approved by the relevant heritage management authority.				to conduct a preconstruction survey. Ensure that this is taken into consideration by reviewing signed minutes of meetings or signed reports. Palaeontologist to undertake a field study of areas not surveyed in the original assessment.
	ECO	Ensure the safeguarding of identified sites of high palaeontological sensitivity by a 30-m wide buffer zone (i.e. extensive surface scatter of petrified wood plus occasional bone fragments on either side of a farm track, as indicated in	During construction.	ECO	On-going	Carry out visual inspections and site visits to ensure strict control over the demarcation of no-go areas. Record and report any non-compliance.

		Figure 48 of the Palaeontological Impact Assessment, which is included as an appendix to the Heritage Impact Assessment.				
		Monitoring of all surface clearance and substantial (deeper than 1 m) excavations by the ECO for fossil material. The ECO should be made aware of the potential occurrence of scientifically-important fossil remains within the development footprint.	Once-off prior to construction.	ECO	On-going	Ensure that the ECO monitors all substantial excavations into sedimentary bedrocks for fossil material (e.g. bones, teeth, fossilized wood).
		Safeguarding of chance fossil finds (preferably in-situ) during the construction phase by the ECO.	During construction.	ECO	On-going	Carry out Environmental Awareness Training to ensure that the Contractors are informed of the possible type of heritage features that may be encountered during the construction phase. Ensure that all chance fossil
	ECO	Reporting of chance fossil finds to Heritage Western Cape (for the Western Cape) or SAHRA (for the Northern Cape).	During construction.			

						finds are safeguarded in-situ via visual inspections and record and report any non-compliance in this regard.
	Qualified palaeontologist appointed and commissioned by the Project Developer (Mainstream)	Recording and judicious sampling of significant chance fossil finds by a qualified palaeontologist, together with pertinent contextual data (stratigraphy, sedimentology,taphonomy) (Phase 2 mitigation). The palaeontologist concerned with potential mitigation work (Phase 2) would need a valid fossil collection permit from the relevant heritage management authority, i.e. Heritage Western Cape (for the Western Cape) or SAHRA (for the Northern Cape).	During fossil finds (construction phase)	Qualified palaeontologist appointed and commissioned by the Project Developer (Mainstream	During fossil finds	Appoint a suitably qualified palaeontologist to conduct recording and sampling of chance fossil finds. Ensure that this is taken into consideration by reviewing signed minutes of meetings or signed reports. Palaeontologist to apply for a fossil collection permit from the relevant heritage authority and undertake recording and sampling of significant

						chance fossil finds.
Ensure the protection of known sensitive fossil sites from disturbance. Safeguarding, recording and sampling of significant new chance fossil finds. This will lead to an improved palaeontological database for the south-west Karoo region.		Curation of fossil material within an approved repository (museum/ university fossil collection) and submission of a Phase 2 palaeontological heritage report to (for the Western Cape) or SAHRA (for the Northern Cape) by a qualified palaeontologist. All palaeontological fieldwork and reporting should meet the minimum standards outlined by Heritage Western Cape (2016) and SAHRA (2013).	During fossil finds (construction phase)	Qualified palaeontologist appointed and commissioned by the Project Developer	During fossil finds	Undertake audits to verify the curation of the fossil material.
Minimise the chances of significant archaeological sites and/or graves being disturbed.	Project Developer	Ensure that all vehicles remain on the service road at all times and ensure that no activity takes place outside of the authorized operational footprint.	Operational phase	ECO/Environmental Manager	Weekly	Carry out visual inspections to ensure strict control over the behaviour of operational staff in order to restrict activities to within demarcated areas.
Minimise the chances of significant fossil material or palaeontological sites being disturbed.	Project Developer	Ensure that all vehicles remain on the service road at all times and ensure that no activity takes place	Operational phase	ECO/Environmental Manager	Weekly	Carry out visual inspections to ensure strict control over the behaviour of

		outside of the authorized operational footprint.				operational staff in order to restrict activities to within demarcated areas

8.5. Avifauna Impacts

Impact management outcome: Reduce potential impacts of avifauna						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
– Mortality of Red Data avifauna due to collisions with the earthwire of the proposed power line.	DPM DESS dEO	Ensure that the proposed power line design includes Bird Flight Diverters (BFDs), if required and recommended by the avifauna specialist.	Design and Planning	dEO/Avifaunal Specialist	Once-off prior to commencement	Ensure that the BFD design is suitable for installation on the proposed powerline design.
Manage habitat transformation and conserve Red Data species. Prevent unnecessary impacts on the surrounding environment by ensuring that contractors are aware of the requirements of the sitespecific Construction EMPr.	ECO	A site-specific Construction EMPr must be implemented, which gives an appropriate and detailed description of how construction activities must be conducted to reduce unnecessary destruction and degradation of habitat. All contractors are to adhere to the Construction EMPr and should apply good environmental practice during construction. The Construction EMPr should	Design and Planning	ECO	Weekly	The Construction EMPr is implemented and enforced via site audits and inspections. Report and record any non-compliance. Ensure that the construction area and footprint is kept to a minimum. Carry out regular site inspections to

		specifically include the following: The minimum footprint areas for infrastructure should be used wherever possible, including road widths and lengths; Ensure that no off-road driving is allowed; Ensure maximum use of existing roads; Measures to control dust; Ensure that access to the rest of the property is restricted; and Following construction, rehabilitation of all areas disturbed (e.g. temporary access tracks) must be undertaken and to this end a habitat restoration plan is to be developed by a rehabilitation specialist and implemented accordingly.				verify the limits of the construction area to ensure unnecessary disturbance is avoided. Ensure that construction personnel are made aware of the impacts relating to off-road driving. Construction access roads must be demarcated clearly. Undertake site inspections to verify. Construction access roads must be demarcated clearly. Undertake site inspections to verify. Monitor the implementation of dust control mechanisms via site inspections and record and report non-compliance. Ensure that the construction area is

						demarcated clearly and that construction personnel are made aware of these demarcations. Monitor via site inspections and report non-compliance. Appointment of Rehabilitation Specialist to develop a Habitat Restoration Plan and ensure that it is approved by auditing the final and signed report acceptance. Monitor rehabilitation via site audits and site inspections to ensure compliance. Record and report any non-compliance.

Prevent unnecessary displacement of Red Data avifauna by ensuring that contractors are aware of the requirements of the Construction EMPr.	ECO, Project Developer (Mainstream), Avifauna Specialist	A site-specific Construction EMPr must be implemented, which gives an appropriate and detailed description of how construction activities must be conducted. All contractors are to adhere to the Construction EMPr and should apply good environmental practice during construction. The Construction EMPr must specifically include the following: Ensure that no off-road driving is allowed; Ensure maximum use of existing roads; Measures to control noise; Ensure that access to the rest of the property is restricted; Ensure that the footprint is restricted to the absolute minimum; The appointed ECO must be trained by an avifaunal specialist to identify the potential priority species as	Prior to construction for a three-day period.	ECO, Project Developer (Mainstream), Avifauna Specialist	Weekly/Once-off before construction commences, for a three-day period.	Oversee activities to ensure that the Construction EMPr is implemented and enforced via site audits and inspections. Report and record any non-compliance. Ensure that construction personnel are made aware of the impacts relating to off-road driving. Construction access roads must be demarcated clearly. Undertake site inspections to verify. Construction access roads must be demarcated clearly. Undertake site inspections to verify. Monitor the implementation of noise control mechanisms via

		well as the signs that indicate possible breeding by these species. The ECO must then, during audits/site visits, make a concerted effort to look out for such breeding activities of Red Data species, and such efforts may include the training of construction staff to identify Red Data species, followed by regular questioning of staff as to the regular whereabouts on site of these species. If any of the Red Data species are confirmed to be breeding (e.g. if a nest site is found), construction activities within 500 m of the breeding site must cease, and an avifaunal specialist is to be contacted immediately for further assessment of the situation and instruction on how to proceed; and Prior to construction, an avifaunal specialist should conduct a site walk through, covering the final service road and power line routes, to identify any nests/breeding/roosting activity of priority species, as				site inspections and record and report non-compliance. Ensure that the construction area is demarcated clearly and that construction personnel are made aware of these demarcations. Monitor via site inspections and report non-compliance. Appoint an Avifauna Specialist prior to the construction phase to train and guide the ECO in order identify potential priority species and signs for potential breeding. ECO to undertake site visits and audits to find breeding sites.

		well as any additional sensitive habitats. The results of which may inform the final construction schedule in close proximity to that specific area, including abbreviating construction time, scheduling activities around avian breeding and/or movement schedules, and lowering levels of associated noise.				ECO to provide training and information sessions to the construction personnel to identify Red Data species. Conduct regular audits of attendance registers for training. Ensure that construction activities are stopped within 500 m of any breeding sites of Red Data species. Ensure that an Avifaunal Specialist is contacted immediately for further assessment. Conduct audits to verify the placement of the buffer area and verify if the Avifaunal Specialist

						has been appointed. Appointment of Avifaunal Specialist to conduct site walk through of the final service road and power line routes. Record and report any non-compliance.
Prevent any electrocutions of Red Data avifauna during construction of the proposed power line.	ECO, Project Developer (Mainstream), Avifauna Specialist	The avifaunal specialist must certify that the pole structures to be used on the 132kV powerline are bird-friendly. The pole design must be presented to the avifaunal specialist for sign off prior to commencement of construction.	Once-off before construction commences.	Avifaunal specialist and Project Developer (Mainstream)	Once-off before construction commences.	Appointment of Avifauna Specialist to sign off on the powerline design. ECO to ensure that this has been complied with by auditing reports, minutes of meetings or sign-off process.
Mortality of Red Data avifauna due to collisions with the earth-wire of the proposed powerline.	Project Developer, Avifauna Specialist	The operational monitoring programme must include regular monitoring and inspections (i.e. quarterly) of the grid connection power line for collision-related mortalities by an avifaunal specialist.	During Operation	Avifaunal specialist and Project Developer	Quarterly	Avifaunal specialist to be appointed and must conduct a quarterly walkthrough of the grid connection. Environmental Manager to verify appointment of

						specialist and monitor the frequency of monitoring by auditing signed reports and minutes of meetings.

APPENDIX 1: METHOD STATEMENTS

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

APPENDIX 2: CURRICULA VITAE

Kikuyu Waterfall
Cnr. Old Pretoria Main Road & Maxewell Drive
Johannesburg, South Africa

Email: arlene@veersgroup.com
Tel: +278 277 7074

CURRICULUM VITAE OF ARLENE SINGH

Profession: Environmental Assessment Practitioner (EAP) / Director

Specialisation: Environmental Assessments, report writing, report reviewing, development of project proposals for procuring new projects and project administration.

Work Experience: 9 years' experience in Environmental Assessments and 1 year in Sustainability Consulting.

VOCATIONAL EXPERIENCE

Professional execution of consulting services for projects in the environmental management field, specialising in Environmental Impact Assessment studies, environmental permitting, public participation, compilation of Environmental Management Plans and Programmes, environmental policy, and integrated environmental management. Responsibilities include report writing, project management, review of specialist studies and the identification and assessment of potential negative environmental impacts and benefits. Compilation of the reports for environmental studies is in accordance with all relevant environmental legislation.

Experience in conducting environmental impact assessments for infrastructure development projects (roads, stormwater, pipelines), Mixed Use Developments and Section 24G Applications for complex projects. She has extensive experience in managing and monitoring ECO functions and compliance on relevant projects. She has gained the ability to conduct sustainability assurance audits for non-financial environmental KPI's through her experience with listed mining corporations.

SKILLS BASE AND CORE COMPETENCIES

- Compilation of environmental impact assessment reports and environmental management programmes in accordance with relevant environmental legislative requirements;
- Identification and assessment of potential negative environmental impacts and benefits through the review of specialist studies;
- Key experience in the assessment of impacts associated with complex Section 24G Applications.
- Review of environmental impact assessment reports, impacts matrices and environmental management programme reports;
- Conducting of ECO audits, managing ECO staff, review of ECO reports and liaison with the client;
- Review of Carbon Footprint Analysis report and provision of recommendations for industry;
- Developing Business Development Plans, action plans and carrying out Business Development initiatives;
- Compilation of Integrated Reports in line with King IV;
- Conducting Mining Permit Applications with the DMR and the associated Basic Assessment process in line with the MPRDA;
- Extensive experience in compilation and submission of Tenders and Proposals;

EDUCATION AND PROFESSIONAL STATUS

Degrees:

- B.Sc. (Hons.) Environmental Management (2016), University of South Africa (UNISA);
- B.Sc. Environmental Science (2012), University of Kwa-Zulu Natal, Westville

Short Courses:

- Official DWS Section 21 (c) and (i) Water Use Authorisation Course (2018)- Dr Wietsche Roets, Specialist Scientist: (In Stream Water Use);
- SMME Green Building Face to Face Workshop (2018)- GBCSA hosted by JP Morgan;
- ArcGISBasic 10,3 (2016)- Esri South Africa
- Energy within Environmental Constraints (2020)- Harvard (Online)
- Becoming an Entrepreneur (2020)- Massachusetts Institute of Technology (Online)

Professional Society Affiliations:

- South African Council for Natural Scientific Professionals - Professional Natural Scientist: Environmental Scientist) – Reg No. 118872
- Environmental Assessment Practitioners Association of South Africa- Reg No: 2019/898

Other Relevant Skills:

- Compiling and submission of invoices on projects;
- Registration of Waste Management Facilities on GWIS

EMPLOYMENT

Date	Company	Roles and Responsibilities
16 December 2020- Current	Nala Environmental (Pty) Ltd	Environmental Assessment Practitioner / Director *Tasks include:* *Compilation of Environmental Impact Assessment (EIA) reports; Basic Assessment (BA) reports and Environmental Management Programmes; Environmental Screening reports; Co-ordination of the public participation process; Project management; project proposals and tenders; Client liaison and Marketing; Process EIA Applications. Business Development, Integrated reporting. Strategy, policy and procedure*

Date	Company	Roles and Responsibilities
		development. Planning of staff on engagements and Invoicing of clients.
08 April 2019- 15 December 2020:	Savannah Environmental (Pty) Ltd	Environmental Assessment Practitioner *<u>Tasks include</u>:* *Compilation of Environmental Impact Assessment (EIA) reports; Basic Assessment (BA) reports and Environmental Management Programmes; Environmental Screening reports; Co-ordination of the public participation process; Project management; project proposals and tenders; Client liaison and Marketing; Process EIA Applications.*
01 January 2016- 05 April 2019	Triplo4 Sustainable Solutions (Pty) Ltd	Environmental Consultant/Gauteng Office Manager *<u>Tasks included:</u>* *Review of Basic Assessment reports, Environmental Management Programme reports, Impact Matrices. Review of Environmental Control Officer functions, report and planning of site visits. Compiling Waste Management License Applications and Section 24G Application with reports for review by company Director. Review of specialist reports. Compilation of tenders, proposals and fee proposals. Co-ordinate public participation processes. Liaison with clients, stakeholders and competent authorities. Business Development, Integrated reporting. Strategy, policy and procedure development. Planning of staff on engagements and Invoicing of clients.*
01 October 2014 – 31 December 2015	PricewaterHouse Coopers (PwC)	Sustainability Consultant 2 *<u>Tasks included:</u>* *Non-financial auditing of Environmental KPI's (Primary water, Total Waste, Total Electricity, Total CDP Calc, Scope 1, 2 and 3 emissions, Total CSI spend, Total Environmental incidents and Total Rock waste generated) for listed mining companies. Role included, testing of controls, applications of audit standards and guidelines, preparation and conclusions of audit papers and files, reporting to management and preparation of audit reports.*

Date	Company	Roles and Responsibilities
01 January 2013- 30 September 2014	Triplo4 Sustainable Solutions (Pty) Ltd	Junior Environmental Consultant *Tasks included:* *Conducting Environmental Control Officer audits and drafting of ECO reports for review. Drafting of Basic Assessment (BA) reports, Environmental Management Programme reports for review by Environmental Consultant. Conducting public participation by liaison with competent authorities and stakeholders. Assisting with compiling of Basic Assessment documents.*

PROJECT EXPERIENCE

Arlene has extensive experience in conducting environmental impact assessments for infrastructure development projects (roads, stormwater, pipelines) and renewable energy projects (solar, wind, csp and hybrid projects), Mixed Use Developments and Section 24G Applications for complex projects and housing developments. She has extensive experience in managing and monitoring ECO functions and compliance on relevant projects. She has gained the ability to conduct sustainability assurance audits for non-financial environmental KPI's through her experience with listed mining corporations. She has also been involved in undertaking Part 2 Amendment Applications and impact assessments for Renewable Energy Projects in South Africa. She currently manages staff and undertakes project planning to ensure that projects are executed within the appropriate timeframes and within budget.

MINING SECTOR PROJECTS

Environmental Impact Assessments and Environmental Management Programmes

Project Name & Location	*Client Name*	*Role*
Yzermyn Coal Mine EMPr, Piet Retief, Mpumalanga	*Atha Group*	*EAP*

Basic Assessments

Project Name & Location	*Client Name*	*Role*
Shaya Quarry Basic Assessment process, Empangeni, Kwazulu-Natal	*Mbavuza Minerals*	*Project Manager*
Umvoti River Sand Mining Basic Assessment process, Kwazulu-Natal	*Izimbiwe Minerals Pty Ltd*	*Project Manager*

Environmental Permitting, S53, Water Use Licence (WUL), Waste Management Licence (WML) & Other Applications

Project Name & Location	*Client Name*	*Role*

Shaya Quarry Mining Permit Application, Empangeni, Kwazulu-Natal	*Mbavuza Minerals*	*Project Manager*
Umvoti River Sand Mining Mining Permit Application, Kwazulu-Natal	*Izimbiwe Minerals Pty Ltd*	*Project Manager*
Newark Quarry, Ilembe Municipality, Kwazulu-Natal	*iLembe Concrete Pty Ltd*	*Junior EAP*

INFRASTRUCTURE DEVELOPMENT PROJECTS (BRIDGES, PIPELINES, ROADS, WATER RESOURCES, STORAGE, ETC)

Basic Assessments

Project Name & Location	***Client Name***	***Role***
Replacement of Nseleni Bridge- Empangeni, Kwazulu-Natal	*RHDHV*	*EAP*
Construction of the 60ML Ntuzuma Reservoir, Ntuzuma, Kwazulu-Natal	*eThekwini Metropolitan Municipality*	*Project Manager*
Upgrade of the Nyathikazi box culvert, Darnell, Kwazulu-Natal	*KwaDukuza Municipality*	*Junior EAP*
Upgrade and Expansion Provincial Main Road D887, Kwazulu-Natal	*RHDHV*	*Junior EAP*
Expansion of LOX and Diesel Storage at the Air Products Facility in Coega, Eastern Cape	*Air Products South Africa (Pty) Ltd*	*EAP*

Environmental Compliance, Auditing and ECO

Project Name & Location	***Client Name***	***Role***
ECO Monitoring for Construction of Offtake 1 Reservoir, KwaDukuza, Kwazulu-Natal	*KwaDukuza Municipality*	*Project Manager*
ECO Monitoring for Construction of Offtake 6A2, 6D, 8C, 8D, 9, 11D Pipelines, KwaDukuza, Kwazulu-Natal	*KwaDukuza Municipality*	*Project Manager*
ECO Monitoring for the Construction of the Jozini RCWSS Phase 1A, Jozini, Kwazulu-Natal	*RHDHV*	*ECO (1 year), Project Manager*
ECO Monitoring for the Greytown BWSS, Greytown, Kwazulu-Natal	*RHDHV*	*Project Manager*
ECO Monitoring for the Kranskop Water Supply Scheme, Kranskop, Kwazulu-Natal	*RHDHV*	*ECO*
ECO Monitoring for the Zulti South Access Road, Richards Bay, Kwazulu-Natal	*RHDHV*	*Project Manager*

Compliance Advice and ESAP reporting

Project Name & Location	***Client Name***	***Role***
Ethafeni Cemetery Environmental Assessment Report, KwaDukuza, Kwazulu-Natal	*KwaDukuza Municipality*	*EAP*

Environmental Permitting, S53, Water Use Licence (WUL), Waste Management Licence (WML) & Other Applications

Project Name & Location	***Client Name***	***Role***
General Authorisation for the Replacement of the Nseleni Bridge, Empangeni, Kwzulu-Natal	*RHDHV*	*EAP*
Water Use Licence Amendment for Country Club Johannesburg	*Country Club Johannesburg*	*EAP*

HOUSING AND URBAN PROJECTS

Environmental Impact Assessments and Environmental Management Programmes

Project Name & Location	***Client Name***	***Role***
Ethafeni Precinct Project Section 24G Application- Groutville , Kwazulu- Natal.	*KwaDukuza Municipality*	*Project Manager/Lead Consultant*
Environmental Management Programme report Brettenwood Residential Development, Kwazulu-Natal.	*Brettenwood Coastal Estate*	*EAP*
Environmental Management Programme report for CTM Ballito, Ballito, Kwazulu-Natal	*CTM*	*EAP*

Basic Assessments

Project Name & Location	***Client Name***	***Role***
Upgrade of residential dwelling on Colwyn Drive, Salt Rock, Kwazulu-Natal	*Mike Graham*	*Junior EAP*
Ethafeni Precinct Project Basic Assessment, Groutville, Kwazulu-Natal	*KwaDukuza Municipality*	*Project Manager*
105 Nkwazi Drive Single Residential House Basic Assessment, Zinkwazi, Kwazulu-Natal	*Ituwiz Pty Ltd*	*Project Manager*

Environmental Compliance, Auditing and ECO

Project Name & Location	***Client Name***	***Role***
88 Compensation ECO Audits – Ballito, Kwazulu- Natal	*Imali Corp*	*Environmental Control Officer (ECO)*
Oceans Umhlanga Hotel & Residential Development, Umhlanga, Kwazulu-Natal	*Edison Property Group*	*Project Manager*
Inoxa Cookware Factory Warehouse, Woodmead Estate, Shakaskraal, Kwazulu-Natal	*Shree Property*	*Project Manager*
Woodmead Estate Warehousing, Gauteng	*Shree Property*	*Project Manager*
Ridgeside Commercial Development, Umhlanga, Kwazulu-Natal	*Shree Property*	*Project Manager*

Construction of Jozini Shopping Centre, Jozini, Kwazulu-Natal	*GK Projects*	*ECO*
Birdhaven Residential Development, Ballito, Kwazulu-Natal	*Mike Graham Trust*	*ECO*
Foxhill Church and Residential Development, Ballito, Kwazulu-Natal	*M&C Janigh Trust*	*ECO*
Beema Bamboo Plantation Site (Bamboo to Energy project, Kwazulu-Natal	*Green Grid Energy*	*ECO*

OTHER PROJECTS

Environmental Compliance, Auditing and ECO

Project Name & Location	***Client Name***	***Role***
Beema Bamboo Plantation Site (Bamboo to Energy project, Kwazulu-Natal	*Green Grid Energy*	*ECO*
Mkondeni Medical Waste External Waste Management License Audit , Pietermaritzburg	*Ecocyle Waste Solutions*	*Auditor*
Dube Tradeport External Audit, eThekwini	*Dube Tradeport Corporation*	*Junior Auditor*

Carbon Footprint Analysis

Project Name & Location	***Client Name***	***Role***
Carbon footprint analysis of Newcastle and Sasolburg Plants, (Kwazulu Natal & North West	*Karbochem Pty Ltd*	*EAP*
Measure Carbon Emissions and provide updated baseline that would enable DTPC to quantify, monitor and assess carbon footprint and its climate change impact for DTPC, eThekwini	*Dube Tradeport Corporation*	*Junior EAP*

Waste Management

Project Name & Location	***Client Name***	***Role***
Waste Classification Assessment for Karbochem Newcastle facility , Kwazulu-Natal	*Karbochem Pty Ltd*	*EAP*
Waste Management Licenses for Wadeville & Rosslyn Waste Management Facilities, Gauteng.	*Planet Care Pty Ltd*	*EAP*

Compliance Advice and ESAP reporting

Project Name & Location	***Client Name***	***Role***

Environmental Opinion and Enquiry for the Rosslyn Tyre Pyrolysis Plant, Gauteng	*Cosmic Energy*	*EAP*

Non-Financial Auditing

KPI'S Audited	***Client Name & Location***	***Role***
Total Primary Water Use, Total Electricity Used, Total Waste Generated, Scope 1, 2 & 3 Emissions and Total Number of Environmental Incidents.	*Anglo Platinum (South Africa)*	*Sustainability Consultant*
Total Primary Water Use, Total Waste Generate and Total Number of Environmental Incidents.	*De Beers (Namibia)*	*Sustainability Consultant*
Scope 1, 2 & 3 Emissions, Total Electricity Purchased, Total Primary Water Used.	*Harmony Gold (South Africa)*	*Sustainability Consultant*
Scope 1, 2 & 3 Emissions, Total Electricity Purchased, Total Primary Water Used and Total Rock Waste Generated.	*Exxaro (South Africa, Papua New Guinea)*	*Sustainability Consultant*
Total Corporate Social Investment fund spend by Barclays Group	*Barclays Group*	*Sustainability Consultant*
Audit Environmental and Social Risk Finance Projects - Equator Principles	*MTN (South Africa & Nigeria)*	*Sustainability Consultant*

Renewable Energy Projects

Part 2 Amendment Applications and Motivation Reports

Project Name & Location	***Client Name***	***Role***
Transalloys Coal-Fired Power Station near Emalahleni, Mpumalanga Province	*Transalloys (Pty) Ltd*	*EAP*
Zen Wind Energy Facility, Western Cape	*Energy Team (Pty) Ltd*	*EAP*
Hartebeest Wind Energy Facility, Western Cape	*juwi Renewable Energies (Pty) Ltd*	*EAP*
Khai-Ma and Korana Wind Energy Facilities	*Mainstream Renewable Power (Pty) Ltd*	*EAP*
Korana Solar PV facility	*Mainstream Renewable Power (Pty) Ltd*	*EAP*
Sutherland Wind Energy Facility	*Mainstream Renewable Power (Pty) Ltd*	*EAP*
Rietrug Wind Energy Facility	*Mainstream Renewable Power (Pty) Ltd*	*EAP*

Basic Assessments

Project Name & Location	*Client Name*	*Role*
Upilanga Solar Park, Northern Cape (x6 100MW PV's and x3 350MW PV Basic Assessments)	*Emvelo Capital Projects (Pty) Ltd*	*EAP*
Kolkies and Sadawa PV facilities and associated grid infrastructure	*Mainstream Renewable Power South Africa (Pty) Ltd*	*EAP*
Hyperion Overhead Powerline	*Red Rocket (Pty) Ltd*	*EAP*
132KkV Phinda Power underground transmission line	*Phinda Power Producers (Pty) Ltd*	*EAP*
Msenge Emoyeni Wind Energy Facility supporting infrastructure	*Windlab (Pty) Ltd*	*EAP*
Sutherland Wind Energy Facility Grid Infrastructure	*Mainstream Renewable Power South Africa (Pty) Ltd*	*EAP*
Rietrug Wind Energy Facility Grid Infrastructure	*Mainstream Renewable Power South Africa (Pty) Ltd*	*EAP*

Environmental Impact Assessments

Project Name & Location	*Client Name*	*Role*
Upilanga Solar Park, Northern Cape (350MW CSP Tower)	*Emvelo Capital Projects (Pty) Ltd*	*EAP*
350MW Risk Mitigation Power Plant (Gas to Power facility)	*Phinda Power Producers (Pty) Ltd*	*EAP*
75mw Thermal Dual Fuel Facility and associated infrastructure (Hybrid facility i.e. gas to power and solar pv)	*Red Rocket (Pty) Ltd*	*EAP*
Berg River Wind Energy Facility	*Energy Team (Pty) Ltd*	*EAP*

Section 54 Audits

Project Name & Location	*Client Name*	*Role*
Mulilo 20MW PV Facility, Prieska, Northern Cape	*Mulilo (Pty) Ltd*	*Auditor*
Mulilo 10MW PV Facility, De Aar, Northern Cape	*Mulilo (Pty) Ltd*	*Auditor*
Karoshoek CSP I Facility/ Solar One,, Upington, Northern Cape	*Karoshoek Solar One (Pty) Ltd*	*Audit*

Environmental Assessment Practitioners Association of South Africa

Registration No. 2019/898

Herewith certifies that

Arlene Singh

is registered as an

Environmental Assessment Practitioner

Registered in accordance with the prescribed criteria of Regulation 15. (1) of the Section 24H Registration Authority Regulations (Regulation No. 849, Gazette No. 40154 of 22 July 2016, of the National Environmental Management Act (NEMA), Act No. 107 of 1998, as amended).

Effective: 01 March 2022

Expires: 28 February 2023

Chairperson

Registrar

SAQA
SOUTH AFRICAN QUALIFICATIONS AUTHORITY

SACNASP

South African Council for Natural Scientific Professions

herewith certifies that

Arlene Singh

Registration Number: 118872

is a registered scientist

in terms of section 20(3) of the Natural Scientific Professions Act, 2003
(Act 27 of 2003)
in the following fields(s) of practice (Schedule 1 of the Act)

Environmental Science (Professional Natural Scientist)

Effective **6 June 2018** Expires **31 March 2023**

Chairperson

Chief Executive Officer

To verify this certificate scan this code

CHANCE FIND PROTOCOL

1. PURPOSE

Monitoring Programme for Palaeontology – to commence once the excavations for all structures and infrastructure begin.

1. The following procedure is only required if fossils are seen on the surface and when excavations commence.
2. When excavations begin the rocks and must be given a cursory inspection by the environmental officer or designated person. Any fossiliferous material (silicified wood, plants, insects, bone, shells) should be put aside in a suitably protected place. This way the construction activities will not be interrupted.
3. Photographs of similar fossils must be provided to the developer to assist in recognizing the fossil plants and bones in the pans or channels This information will be built into the EMP's training and awareness plan and procedures.
4. Photographs of the putative fossils can be sent to the palaeontologist for a preliminary assessment.
5. If there is any possible fossil material found by the developer/environmental officer then the qualified palaeontologist sub-contracted for this project, should visit the site to inspect the selected material and check the excavations where feasible.
6. Fossil plants or vertebrates that are considered to be of good quality or scientific interest by the palaeontologist must be removed, catalogued and housed in a suitable institution where they can be made available for further study. Before the fossils are removed from the site, a South African Heritage Resources Agency (SAHRA) permit must be obtained. Annual reports must be submitted to SAHRA as required by the relevant permits.
7. If no good fossil material is recovered, then any site inspections by the palaeontologist will not be necessary.
8. If no fossils are found and the excavations have finished, then no further monitoring is required.