TRANSMISSION AND DISTRIBUTION INFRASTRUCTURE GENERIC ENVIRONMENTAL MANAGEMENT PROGRAMME (EMPR)

PROPOSED VIRGINIA 132KV POWERLINE TO CONNECT THE VIRGINIA 1, 2 AND 3 SOLAR PARKS TO THE NATIONAL GRID, MATJHABENG AND MASILONYANA LOCAL MUNICIPALITY, FREE STATE PROVINCE

CLIENT: NORMA ENERGY (PTY) LTD

terramanzi GROUP (PTY) LTD

people. planet. prosperity.

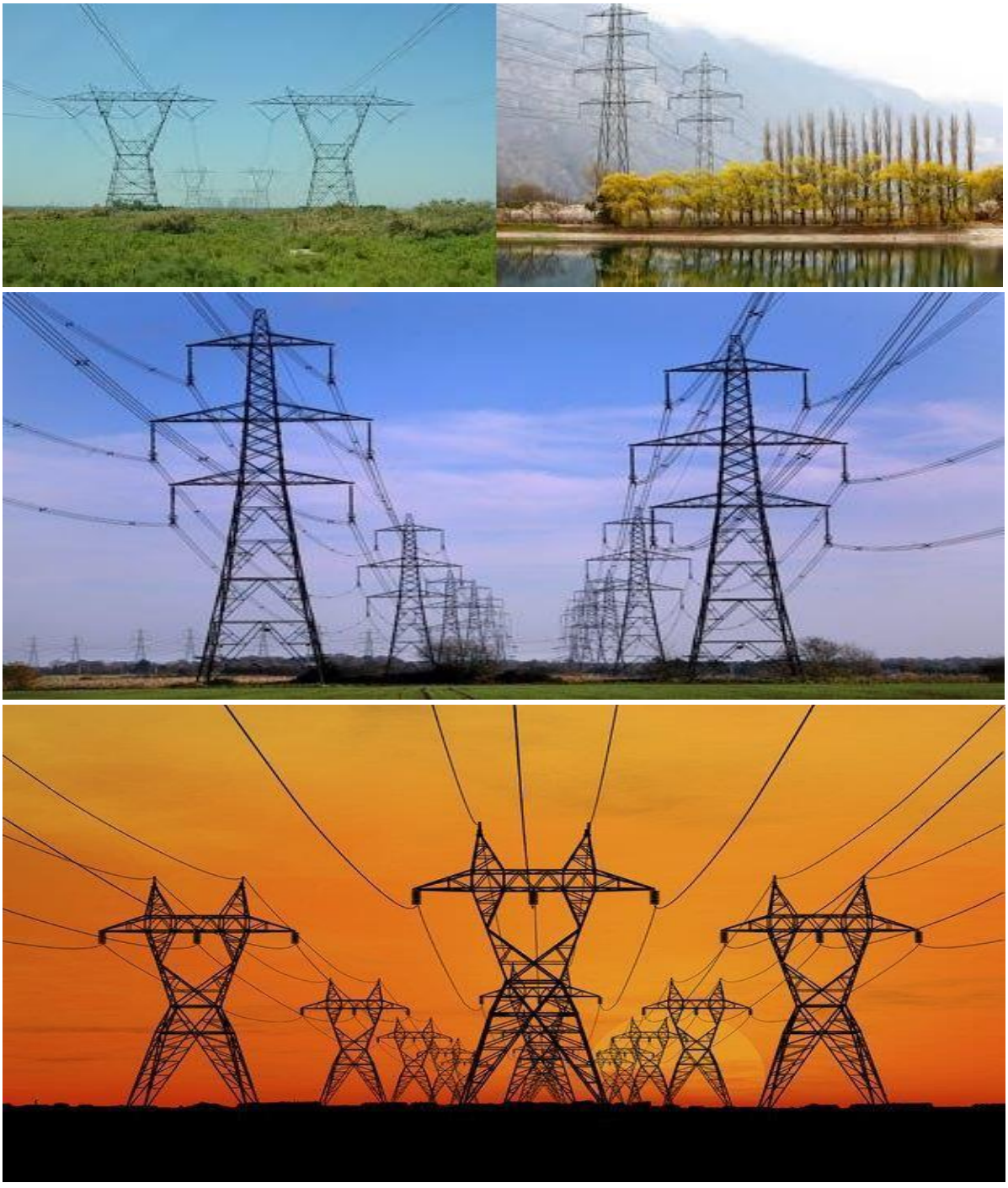
tel: +27 21 701 5228
fax: +27 86 558 1213
mobile: +27 82 575 3800

email: info@terramanzi.co.za
website: www.terramanzi.co.za

postal: postnet suite 211, private bag X26, tokai, 7966

APPENDIX 1

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



environmental affairs
Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

TABLE OF CONTENTS

PAGE

List of figures

List of tables

INTRODUCTION

1. Background

The National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA) requires that an environmental management programme (EMPr) be submitted where an environmental impact assessment (EIA) has been identified as the environmental instrument to be utilised as the basis for a decision on an application for environmental authorisation(EA). The content of an EMPr must either contain the information set out in Appendix 4 of the Environmental Impact Assessment Regulations, 2014, as amended, (EIA Regulations) or 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.

This EMPr has been developed for the construction and operation of the Proposed Development of The **Virginia 132kv Powerline** which will connect the Virginia 1, 2 And 3 Solar Parks to the Eskom Theseus Substation, Located within the Matjhabeng and Masilonyana Local Municipalities, Lejweleputswa District Municipality, Free State Province.

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 prepareand 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, mainlyactivity 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 ofa 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 tocommencement 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, ithas been approved by the CA. To allow interested and affected parties accessto 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.

Part	Section	Heading	Content
	2	Site specific information	Contains preliminary infrastructure layout and a declaration that the applicant/holder of the EA will comply with the pre-approved generic EMPrtemplate 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 beeneither pre-approved or approved in terms of PartC. 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 forthe 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 sitecontain no specific environmental sensitivities orattributes. However, if Part C is applicable to thesite, 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 expertise including a curriculum vitae. Once approved, Part C forms part of the EMPr for thesite and is legally binding.

Part	Section	Heading	Content
			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 thefollowing 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 statementmust be signed and dated on each page by the holder of the EA. This template, once signed and dated, is legally binding. The holder of the EA will remain responsible for its implementation.

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

Once the activity has commenced, a holder of an EA may make amendments to the 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 overlaidwith 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 developmentfootprint. 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 EIARegulations 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 andwastewater management;

"contractor" - The Contractor has overall responsibility for ensuring that all work, activities, andactions 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 toassess whether the Contractor's proposal is in accordance with this specification and/or willproduce 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 spillsof 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 manyhorizontal units;

"solid waste" means all solid waste, including construction debris, hazardous waste, excess cement/ concrete, wrapping materials, timber, cans, drums, wire, nails, food and domesticwaste (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 aninstitutional 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)	Role 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 EMPraccording 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. Responsibilities - Be fully conversant with the conditions of the EA; - Ensure that all stipulations within the EMPr are communicated and adhered to by the Developerand 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 andmeetings. Overall management of the project and EMPr implementation; and - Ensure that periodic environmental performance audits are undertaken on the projectimplementation.

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); - Mustbefullyconversant with theconditions ofthe EA. Oversees siteworks, liaisonwith 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 and dEO. 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 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.

Responsible Person (s)	Role and Responsibilities
	Responsibilities The responsibilities of the ECO will include the following: - Be aware of the findings and conclusions of all EA related to the development; - Be familiar with the recommendations and mitigation measures of this EMPr; - Be conversant with relevant environmental legislation, policies and procedures, and ensure compliance with them; - Undertake regular and comprehensive site inspections / audits of the construction site according to the generic EMPr and applicable licenses in order to monitor compliance as required; - Educate the construction team about the management measures contained in the EMPr and environmental licenses; - Compilation and administration of an environmental monitoring plan to ensure that the environmental management measures are implemented and are effective; - Monitoring the performance of the Contractors and ensuring compliance with the EMPr and associated Method Statements; - In consultation with the Developer Site Supervisor order the removal of person(s) and/or equipment 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; - A suitably qualified ESCO must be appointed by the Holder of the EA to monitor the project compliance onsite on a full time basis. - Responsibilities of the ESCO include: • Be fully conversant with the BAR, the conditions of EA and the EMPr;

	• Be fully conversant with all relevant environmental legislation and ensure compliance thereof; • Approve method statements (co-approval with Site Manager); • Remain employed until the completion of the construction activities; and • Report to the Project Manager, including all findings identified onsite. - In addition, the ESCO will: • Undertake monthly inspections of the site and surrounding areas to audit compliance with the EMPr and conditions of the environmental authorisation; • Take appropriate action if the specifications contained in the EMPr and conditions of the environmental authorisation are not followed; • Monitor and verify that environmental impacts are kept to a minimum, as far as possible; and - Ensure that activities onsite comply with all relevant environmental legislation.
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, toreviewing 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 actionbe 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)	Role 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. Responsibilities - Be fully conversant with the EMPr; - Be familiar with the recommendations and mitigation measures of this EMPr, and implementthese measures; - Ensure that all stipulations within the EMPr are communicated and adhered to by theEmployees, Contractor(s) ; - Confine the development site to the demarcated area; - Conduct environmental internal audits with regards to EMPr and authorisation compliance (oncEO); - Assist the contractors in addressing environmental challenges on site; - Assist in incident management: - Reporting environmental incidents to developer and ensuring that corrective action is taken,and lessons learnt shared;
Responsible Person (s)	**Role and Responsibilities**
	- 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 ECOand contractor;

Contractor	Role The Contractor appoints the cEO and has overall responsibility for ensuring that all work, activities, and actions linked to the delivery of the contract are in line with the EMPr and that Method Statements are implemented as described. External contractors must ensure compliance with this EMPr while performing the onsite activities as per their contract with the Project Developer. Thecontractors 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. Responsibilities - project delivery and quality control for the development services as per appointment; - employ a suitably qualified person to monitor and report to the Project Developer's appointed person on the daily activities on-site during the construction period; - ensure that safe, environmentally acceptable working methods and practices are implemented and that equipment is properly operated and maintained, to facilitate proper access and enable any operation to be carried out safely; - attend on site meeting(s) prior to the commencement of activities to confirm the procedure and designated activity zones; - ensure that contractors' staff repair, at their own cost, any environmental damage as a result of a contravention of the specifications contained in EMPr, to the satisfaction of the ECO.
Responsible Person (s)	**Role and Responsibilities**
Environmental Onsite Compliance Officer (ESCO)	- A suitably qualified ESCO must be appointed by the Holder of the EA to monitor the project compliance onsite on a full-time basis. - Responsibilities of the ESCO include: o Be fully conversant with the BAR, the conditions of EA and the EMPr; o Be fully conversant with all relevant environmental legislation and ensure compliance thereof; o Approve method statements (co-approval with Site Manager); o Remain employed until the completion of the construction activities; and o Report to the Project Manager, including all findings identified onsite.

	- In addition, the ESCO will: o Undertake monthly inspections of the site and surrounding areas to audit compliance with the EMPr and conditions of the environmental authorisation; o Take appropriate action if the specifications contained in the EMPr and conditions of the environmental authorisation are not followed; o Monitor and verify that environmental impacts are kept to a minimum, as far as possible; and o Ensure that activities onsite comply with all relevant environmental legislation
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 constraintswith 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 stipulatedtimeframes; - 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 aContractor 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 copyof all documentation shall be filed, while an electronic copy may be kept where relevant. Aduplicate 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 auditsundertaken 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 EAfrom the CAin terms of NEMA, granting approval for thedevelopment or expansion;
- Copy of the generic and site specific EMPr as well as any amendments thereof;
- Copy of declaration of implementing generic EMPr and subsequent approval ofsite specific EMPr and amendments thereof;
- All method statements;
- Completed environmentalchecklists;
- 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 insuch 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 asrequired 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 leaksor spills of any liquid or material that may occur;
- timing and location of activities;
- compliance/ non-compliance with the EMPr; and
- any other information deemed necessary by the ECOs.

Unless indicated otherwise by the Project Manager, the Contractor shall provide the 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 wastestreams);
- Social interaction – complaints management, compensation claims, access toproperties etc.;
- Water – use (source, abstraction and disposal), access and all related information,crossings and mitigation;
- Emergency preparedness – Spills, training, other environmental emergencies;
- Dust and noise management methodologies;
- Fauna interaction and risk management – only if the risk was identified – wildlifeinteraction especially on game farms; and
- Heritage and 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 theEA 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 EMPrwhich 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 theEMPr file and at a minimum the following will be recorded for each environmental incident:

- The dateand time of the incident;
- Descriptionof the incident;
- The name of the Contractor responsible;
- The incident must be listed as significant or minor;
- If the incident is listed as significant, a non-compliance notice must be issued, andrecorded in the log;
- Remedial or corrective action taken to mitigatethe 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 actiontaken. 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 redressthe 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 maycause, 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. Ifsatisfied 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 andpost rehabilitation evidence of theproject 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 andstorage 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. Photographicrecordings 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. TheComplaints Record shall:

1. Record the name and contact details of the complainant;
2. Record the time and date of the complaint;
3. Contain a detailed description of the complaint;
4. Where relevant and appropriate, contain photographic evidence of the complaintor 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 issuedby 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 theEMPr file.

4.12 Interactions with affected parties

Open, transparent and good relations with affected landowners, communities and regionalstaff 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 arecord of the agreement kept in the EMPr file;
3. Ensure that a complaints telephone numbers are made available to alllandowners and affected parties; and
4. Ensure that contact with affected parties is courteous at all times;

4.13 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 submittedto 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 themonthly 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 correctiveactions;
- 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 commonto 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 bythe 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 and Operations	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

Impact Management Actions	Implementation			Monitoring		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
– The Contractor must erect and maintain information posters at key locations on site, and the posters must include the following information as a minimum: a) Safety notifications; and b) No littering.	Contractor	Develop and place appropriate posters at key locations	Pre-construction Construction	ECO dEO cEO	Monthly	Photographic record
– 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 t 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	During the construction phase	ECO dEO	Monthly	Completed andup 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
		/ notes for the record)				
– 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 andup 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 materialin 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 ofthe training

5.2 Site Establishment development

Impact management outcome: Impacts on the environment are minimised during site establishment and the development footprint are kept to 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 areato ensurethatthesitedoes 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
Sites must be located where possible on previously disturbed areas;	DPM	Place site outside of	Pre-construction	ECO dEO	Once, prior to construction	Availability of a layout and

Impact Management Actions	Implementation			Monitoring		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
		sensitive areas and within previously disturbed areas identified in the BA Report				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 is not proposed. Staff will be accommodated in neighbouring Towns.					

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 provide clear signage of restricted status	During the construction phase	ECO	Monthly, and as and when required	Photographic evidence and notes of compliance that no unauthorised access or activities has taken place within the

Impact Management Actions	Implementation			Monitoring		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
						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 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	Pre-construction	dEO ECO	Once, prior to construction	Availability of approved and signed agreement/s.

Impact Management Actions	Implementation			Monitoring		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
		agreements are approved and signed				
– 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 accessfor the project	Pre-construction	cEO / ECO	Once, prior to construction	Photographic record of signposted access roads and GPS co-cordinates of where these are placed
– All private roads used for access to the servitude must be maintained and upon completion of the works, beleft in at least the original condition	Contractor	Undertake maintenance activities on Private 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 effectiveness ofmaintenance activities
– All contractors must be made aware of all the accessroutes. As well as a mandatory 40km/h speed limit for construction roads.	dEO / cEO	Develop a map illustrating all access routes associated with the project and present and	Pre-construction Construction	ECO	Once, prior to construction	Access routes map readily available

Impact Management Actions	Implementation			Monitoring		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
		provide the map to all contractors				
– 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	Constructionand Rehabilitation	cEO 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 disturbancethrough the development of new roads;	Contractor (and Eskom maintenance staff where relevant to operation)	Existing access routes to be used must be specified and the development ofnew roads mustbe avoided as far as possible	Construction and operation	cEO Operation and maintenance team	Weekly	Implementationof the approved layout
– 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 thelandowner, 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	During the construction phase	ECO	Prior to the useof private roads	Photographic record and proof ofthe road conditions agreed upon with the relevant parties

Impact Management Actions	Implementation			Monitoring		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
		agree on the required condition of the roads with the landowner, DPM and contractor				
– 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	Implementationof the approved layout
– Access roads mustonly bedeveloped onpre-plannedand approved roads.	Contractor	Construction of access roads only on pre- planned andapproved access roads	During the construction phase	ECO once during the design dEO	Once during the design and weekly during the construction of access roads	Implementationof the approved layout

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 basisand only limited new access gates are developed
– Existing and new gates to be recorded and documented in accordance with section 4.9: photographic record;	ECO	Existing and new gates will be recorded and documented as per the requirements of section 4.9	During the construction phase	ECO	Once, when the construction of all new gates have beencompleted	Photographic record of the existing and new gates as per the requirements of section4.9
– 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 monthly, Operation and maintenance team and cEO	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 inwhich there is no suitable gate within the extent of the	dEO	Install new gates where required with the	During the construction phase	ECO	Once, prior to construction and during the	New gates are installed where

Impact Management Actions	Implementation			Monitoring		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
line servitude, on the instruction of the DPM, a gatemust be installed at the approval of the landowner;		approval of the affected landowner			construction phase, as and when required	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 100 mm betweenthe 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 installed for jackal proofing	During the construction phase	cEO	Once, during the erection of the gates during the construction phase	New gates installed as per the requirement
– 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 iselectrified

Impact Management Actions	Implementation			Monitoring		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
– 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 designatedaccess 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
– 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 fromthe 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 bySABS	During the construction phase	cEO	To be monitored as fencing is erected duringthe construction phase	Use of high quality materials for fencing approved by SABS

Impact Management Actions	Implementation			Monitoring		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
– The use of razor wire as fencing must be avoided as faras 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 duringthe 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 lockedas required through the implementation of a formalised process. Appoint a security company	During the construction phase	cEO	Weekly and as and when required	Fences are locked and no complaints from landowners are received. A security company isappointed
– On completion of the development phase alltemporary 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 constructionphase	No temporary fences associated withthe project is present following the completion ofthe 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 temporary fence uprights associated with the project is present

						following the Completion ofthe 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 toensure that the abstracted volumes are measured ona daily basis;	DMP	Ensure required authorisation has been obtained, and that metering system has been installed	After Construction	ECO	Monthly	Proof of authorisation. Monthly abstraction monitoring records
– The Contractor must ensure the following: a. The vehicle abstracting water from a river does notenter or cross it and does not operate from within the river; b. No damage occurs to the river bed or banks and that the abstraction of water does not entail stream diversion activities; and	Contractor /dEO / cEO in consultation withthe ECO	Implement the required water conservation measures throughout on-site construction processes	During the construction phase	ECO	Monthly, and asand whenrequired	Successful implementation of water conservation

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.	Contractor /dEO / cEO in consultation withthe ECO	Implement the required water conservation measures throughout on-site construction processes	During the construction phase	ECO	Monthly, and asand whenrequired	Successful implementation of water conservation
– 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 waste water 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	cEO	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	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

Impact Management Actions	Implementation			Monitoring		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
		directly into water bodies (where present). The necessary water quality testing must be undertaken prior to discharge				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

Impact Management Actions	Implementation			Monitoring		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
– 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	cEO	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 t 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 the area must be undertaken as per the waste requirements for the project during construction	During the Construction Phase	cEO	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**
– Waste must be segregated into separate bins and clearly marked for each waste type for recycling andsafe 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 intothe relevant bins
– Staff must be trained in waste segregation;	cEO / dEO in consultation with the ECO	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	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 mismanagementt of bins.
– General waste produced onsite must be disposed ofat registered waste disposal sites/ recycling company;	Contractor	Disposal of general waste at licensed waste disposal facilities must be undertaken asper the waste management	During the construction phase	ECO	Monthly	Disposal certificates of disposal at licensed facilities to be provided

		plan				

Impact Management Actions	Implementation			Monitoring		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
– Hazardous waste must be disposed of at a registeredwaste disposal site;	Contractor	Disposal of hazardous wasteat licensed waste disposal facilities must be undertaken asper 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, hazardousand recycled waste must be maintained.	Contractor	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 partof the filing system

5.9 Protection of watercourses

Impact management outcome: Pollution and contamination of the watercourse environment and 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	Contractor to undertake activities which can cause spillsof pollutants outsideof watercourses	During the construction phase	cEO	Weekly	No incidents reported of Spillage of Pollutants into watercourses
– In the event of a spill, prompt action must be taken toclear 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	cEO	Weekly	Feedback mustbe provided bythe contractor interms of how thespill was handledand photographic evidence of the feedback mustbe provided and kept on record
– Where possible, no development equipment must traverse any seasonal or permanent wetland	cEO and Contractor	Ensure layout has been informed by the environmental sensitivities as	ConstructionPhase	ECO	Once off review that the layout used is the approved one	Confirm no development equipment traverses any seasonal or

Impact Management Actions	Implementation			Monitoring		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
		determined bythe basic assessment and specialist studies				permanent wetland as per the authorised layout by reviewing the detailed designs (once-off confirmation).
– Development of permanent watercourse crossing must only be undertaken where no alternative access to tower position is available;	cEO, Contractor	Ensure that permeant crossings (access roads) are provided for access to thegrid connection corridor if no alternative crossing is available.	During the construction phase	cEO	Weekly	Ensure that permeant crossings are Developed if there is no alternative.
– There must not be any impact on the long-term morphological dynamics of watercourses;	cEO, and Constractor	Ensure that no long-term impacts of morphological dynamics of watercourses occur	During construction and operational phases	ECO	Monthly or as and when required.	No degradationof the watercourses – photpgraphic evidence.
– Upgrading of Existing crossing points must be favoured over the creation of new crossings (includingtemporary access)"	N/A					

Impact Management Actions	Implementation			Monitoring		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
– When working in or near any watercourse, the following environmental controls and consideration must be taken: a) Water levels during the period of construction; b) Unless authorised, there should be no altering of the bed, banks, course or characteristics of a watercourse c) 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; d) 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 e) 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	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 degradationof the watercourses and no incidentsof 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 monthly, Operation and maintenance team weekly	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	Demarcate areas containing protected or endangered species to be avoided by construction activities	During the Construction Phase	ECO monthly and Operation and maintenance team weekly	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	cEO	Weekly, and as and when required	Implementation of the Plant Search and Rescue Plan and photographic evidence and notes of the implementation of the plan
Environmental Officer (EO) to provide supervision and oversight of vegetation clearing activities within sensitive areas such as near the drainage lines.	Contractor	Develop and implement a vegetation	Pre-construction & Construction	cEO	Weekly, and as and when required	No excessive clearing of vegetation recorded.

Impact Management Actions	Implementation			Monitoring		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
		clearing method statement				
– Permits for removal must be obtained from the Department of Environment, Forestry and Fisheries (DEFF) prior to the cutting or clearing of the affectedspecies, and they must be filed; and from theDepartment of Agriculture, Environmental Affairs, Rural Development and Land Reform for protected plants	DPM	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	DEFF 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 withconditions 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	ECO	Once off or asand whenrequired	ECO confirmed rescued and replanting programme implemented correctly.
– Trees felled due to construction must be documentedand form part of the Environmental Audit Report;	ECO	Ensure that the audit report documents the	During the Construction Phase and following the	ECO	Once off or asand whenrequired	Documentation in audit report

Impact Management Actions	Implementation			Monitoring		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
		details of trees felled	Completion ofthe Construction Phase			
– Rivers and watercourses must be kept clear of felledtrees, vegetation cuttings and debris;	Contractor	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 qnd Contractor	A suitably qualified pest control operator must be appointed	Construction and Operation	ECO	As and when the use of herbicidesis required	Only registered pest control operators mustbe appointed and proof of their registration must be provided
– A daily register must be kept of all relevant details of herbicide usage;	Contractor	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

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: Accessrestricted areas**.	Contractor in consultation with the cEO	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 anyplantation, 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 in consultation with the DPM	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	Clearing foraccess must be undertaken as per the requirements provided by the	During the construction phase	ECO	Monthly, and as and whenrequired	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 andthe 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	Undertake removal of alien invasive vegetation in accordance with the relevant guideline relevant to theproject area andensure the vegetation is disposed of at a licensed waste disposal facility	Construction and Operation	ECO Operation and maintenance team	Monthly, and as and whenrequired	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 intrudeon the minimum vegetation clearance distance (MVCD) or will intrude on this distance before the nextscheduled clearance. MVCD is determined from SANS 10280;	Contractor	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 whenrequired	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	Dispose of the debris in accordance with the waste	Construction and operation	ECO Operation and maintenance team	Monthly, and as and whenrequired	Proof must be provided that the debris has been disposed of at a licensed

Impact Management Actions	Implementation			Monitoring		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
		management plan				waste disposal facility
– In the case of the development of new overhead transmission and distribution infrastructures, a one metre "trace-line" must be cut through the vegetationfor stringing purposes only and no vehicle access mustbe cleared along the "trace-line". Alternative methods of stringing that limit impact to the environment must always be considered.	Contractor	Develop a procedure for the cutting of vegetation for stringing purposes	Pre-construction& Construction	ECO	Once, prior tothe 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 construction phase	Written consent provided by the landowner and proof of representation of the landowner during interference

Impact Management Actions	Implementation			Monitoring		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
– 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 breedingsites for 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 breedingsites 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	Avoid breeding sites and ensure that specialcare is taken in the presence of nestlings and fledglings	During the Construction Phase Operation Phase	ECO monthly, cEO and Operation and maintenance team weekly	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 be documented;	dEO / cEO in consultation with the ECO	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
– 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	All mitigation measures recommended by the avifauna	During the Construction Phase Operation Phase	ECO Operation and maintenance team	Monthly during construction and monthly during operation	Photographic record of compliance and successful implementation

Impact Management Actions	Implementation			Monitoring		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
		specialist must be implemented				of the recommended measures
– Bird guards and diverters must be installed on the newline as per the recommendations of the specialist;	dEO / cEO in consultation with the Contractor	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 ofbird guards and diverters
– No poaching must be tolerated under any circumstances. All animal dens in close proximity to theworks 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 adheringto the requirement. These areas must be demarcatedas Access Restricted Areas	During the Construction Phase	ECO	Monthly, and as and when required	No instances of poaching is reported

Impact Management Actions	Implementation			Monitoring		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
– 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 adheringto the requirement. These areas must be demarcatedas Access Restricted Areas	During the Construction Phase	ECO	Monthly, and as and when required	No instances of deliberate or intentional killingis reported
– In areas where snakes are abundant, snake deterrentsare to be deployed on the pylons to prevent snakesclimbing up, being electrocuted and causing power outages	dEO / cEO in consultation with the Contractor	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 ofsnake deterrents
– 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 t 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 and ECO	Undertake a Heritage Walk-through Survey Spatially identify and demarcate areas of heritage significance as per the Heritage Impact Assessment and the Heritage Walk-through Report and as per the requirements of section 5.3	Pre-construction	ECO	Once, prior to the commencement t of construction	Proof of Avoidance of sensitive heritage features through details of avoidance and photographic records
– Carry out general monitoring of excavations forpotential fossils, artefacts and material of heritage importance;	dEO (in consultation with specialists if/as required).	Ensure construction staff are adequately informed (via	During the Construction Phase	ECO	Monthly, or as required	Environmental awareness training includes measures

Impact Management Actions	Implementation			Monitoring		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
		environmental awareness training) to carry out monitoring of excavations for fossils, artefacts and important heritage material				relating to monitoring for chance finds
– 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.	dEO / cEO in consultation with the Contractor and ECO	Develop and implement procedures for situations where human remains, archaeological, palaeontolgoical or historical material are uncovered	During the Construction Phase	ECO	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	cEO	Once, prior to the commencemen t of construction and weekly during the constructionphase	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	cEO	Weekly	Excavations are fenced where required and photographic proof can be provided
– 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 andthe climbing oftowers and scaffolding must only be undertaken by	During the construction phase	ECO	Monthly, and as and when required	No incidents of unauthorised climbing is reported

Impact Management Actions	Implementation			Monitoring		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
		authorised personnel as managed by the Contractor				
– Ensure structures vulnerable to high winds are secured;	Contractor	Ensure that sufficient stabilisation measures are implemented to secure structures vulnerable to high winds	During the construction phase	cEO	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 thatavoid environmental sensitivities	During the Construction Phase	cEO	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 theveld 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 adheringto 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 100 m 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	cEO	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 themfrom 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; 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 fromthe licensedwaste 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 available on site

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 thecamp 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 in consultation with the ECO	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 t of construction and monthly during construction	Environmental awareness training material requirements checklist
– The Contractor mustensurethatinformation posters onHIV/ AIDS are displayed in the Contractor Camp area;	Contractor	Develop and place information posters on HIV/ AIDS	During the Construction Phase	cEO	Weekly	Photographic evidence of poster placement
– Information and education relating to sexually transmitted diseases to be made available to both	cEO / Contractor in	Information and education of sexually	Pre-construction& Construction	ECO	Monthly	Environmental awareness training material

Impact Management Actions	Implementation			Monitoring		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
construction workers and local community, where applicable;	consultation with the ECO	transmitted diseases must be covered in the Environmental Awareness Training.				requirements checklist
– Free condoms must be made available to all staff onsite 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;	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

Impact Management Actions	Implementation			Monitoring		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
– All staff must be made aware of emergency procedures as part of environmental awareness training;	cEO / dEO in consultation with the ECO	Develop environmental awareness training materialwhich covers therelevant emergency procedures	Pre-construction	ECO	Prior to the commencement t of the environmental awareness training	Environmental awareness training material requirements checklist
– The relevant local authority must be made aware of a fire as soon as it starts;	Contractor in consultation with the ECO	Develop and include a procedure in the Emergency Preparedness, Response andFire Management Plan for the event of a fireand the procedure to be followed for informing the local authority	Construction	ECO	As and when a fire occurs	The local authority wasinformed as perthe relevant procedure setout in theEmergency 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	Implement the required mitigation measures in theevent of a spill or leak as per the requirements of Section 5.17.	Construction and Operations	ECO	As and when a spill or leakoccurs	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 canbe and shouldbe 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	Pre-construction& Construction	ECO	Once, prior to the commencement t of construction and monthly during the	Photographic proof that hazardous substances are stored in suitable containers as

Impact Management Actions	Implementation			Monitoring		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
		suitable containers			constructionphase	per the requirements of the relevant Method Statements
– Containers must be clearly marked to indicatecontents, quantities and safety requirements;	Contractor	Where hazardous wasteis stored thesemust be clearlymarked indicating the required details of the contents	During the Construction Phase	ECO	Monthly	Photographic proof that containers are marked as perthe requirements
– All storage areas must be bunded. The bunded areamust 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 tocontain a spill / leak from the stored containers
– Bunded areas to be suitably lined with a SABSapproved 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

Impact Management Actions	Implementation			Monitoring		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
– 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
– All hazardous chemicals that will be used on site musthave 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 thesafe use of the substance and according to the safetydata sheet;	cEO / Contractor	Provide training for personnel working withHCS	Pre-construction	ECO	Once, prior to the commencement of construction and as and when required	Record oftraining 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.	Pre-construction& Construction	ECO	Prior to the commencement of the environmental awareness training and monthlyduringthe construction phase for personal	Environmental awareness training material requirements checklist and all relevant personnel have undergone appropriate training

Impact Management Actions	Implementation			Monitoring		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
		Provide appropriate training and personal protective equipment for the relevant personnel handling hazardous substances and materials			protective equipment	have access to personal protective equipment
– 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 crestof the bund and the volume inside the bund must be130% 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 fortanks 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

Impact Management Actions	Implementation			Monitoring		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
– 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 storagearea by protecting the soil with an impermeable groundcover. Where dispensing equipment is used, a drip tray must be used to ensure small spills are contained;	Contractor	Appropriately constructed refuelling facility must be developed as per the requirements. Drip trays mustbe provided for use	During the Construction Phase	ECO cEO	Monthly Weekly	Soils at the refuelling facility are protected as required and drip trays are provided andused
– All empty externally dirty drums must be stored on adrip tray or within a bunded area;	Contractor	Ensure that empty dirtydrums 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	During the Construction Phase	ECO	Monthly	Proof of the implementation of the relevant procedure 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**
		undertaken into the storage areas				
– No smoking must be allowed within the vicinity of the hazardous storage areas;	Contractor	Inform all employees of the requirement and develop and placerelevant signage in the relevant areas	During the Construction Phase	ECO cEO	Monthly Weekly	Photographic record of the signage placed must be provided
– Adequate fire-fighting equipment must be madeavailable 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 refueling away from the dedicated refueling station is required, a mobile refueling unit must beused. Appropriate ground protection such as drip trays must be used;	Contractor	Provide a mobile refueling unit as well as suitable ground protection, where required	During the Construction Phase	ECO	Monthly, and as and when required	A mobile refueling 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

Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
– 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;	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 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 waste water 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 ofvehicles and equipment must take place in theworkshop area;	Contractor	Demarcate specific areas for the maintenance ofvehicles 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, especiallywhere emergency repairs are effected outside the workshop area, a suitable drip tray must be used toprevent spills onto the soil.	Contractor	Ensure that a drip tray is available for an emergency repairs required	During the Construction Phase	ECO	Monthly	Contractor to provide evidence of driptray use for emergency repairs
– Leaking equipment must be repaired immediately orbe 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 fuelspills;	cEO	Undertake regular inspections of the workshop areas for oil andfuel spills and keep an updated registerof inspection on site	During the Construction Phase	ECO	Monthly	Register of inspection
– Appropriately sized spill kit kept onsite relevant to thescale 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 havea bunded concrete slabthat is sloped to facilitate runoff into a collection sump or suitable oil / water separator where maintenancework 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 asand 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: stormand waste water management.	Contractor	Ensure that water drainage from workshoparea 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	cEO	Weekly	No concrete mixing is Undertaken on open ground
– Batching plants areas must be fitted with a containment facility for thecollection ofcement ladenwater.	Contractor	Implement measures for the control and management of cement laden water	During the construction phase	cEO	Weekly	No mismanagementt of laden water due to the temporary concrete batching plant

– Dirty water from the batching plant must be containedto prevent soil and groundwater contamination	Contractor	Implement measures for the control and management of dirty water to prevent soil and groundwater contamination	During the construction phase	cEO	Weekly	No mismanagementt of dirty water due to the temporary concrete batching plantand no/minimalsoil and groundwater contamination

Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
– Bagged cement must be stored in an appropriate facility and at least 10 m away from any water courses, gullies and drains;	Contractor	Demarcate and provide a storage area for bagged cement in-line with the listed requirements	During the Construction Phase	cEO	Weekly	Photographic proof of bagged cement stored within the 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	cEO	Weekly	No cement laden water is released into the environment. Only minimal water is used for washing

– Hardened concrete from the washout facility orconcrete mixer can either be reused or disposed of at an appropriate licensed disposal facility;	Contractor	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	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 are on site to be provided by the Contractor
– Sand and aggregates containing cement must be kept damp to prevent the generation of dust (Refer toSection 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 (oralternative dust suppression) ofsand andaggregates 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;	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 facilitiesor proof of reuse must be provided
– Temporary fencing must be erected around batchingplants in accordance with Section 5.5: Fencing and gate installation.	Contractor	Erect Temporary fencing	During the construction phase	cEO	Weekly	Temporary fencing around batching plants

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	Apply appropriate dust suppressant. No potable water may be used.	During the Construction Phase	cEO	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 exposedsurfaces must be re- vegetated or stabilised as soon asis practically possible;	Contractor	Proper planning for vegetation removal must be undertaken as well as for the associated rehabilitation	During the Construction Phase and Rehabilitation	cEO	Weekly	Plan for implementation must be provided by the Contractor
– Excavation, handling and transport of erodible materials must be avoided under high wind conditionsor when a visible dust plume is present;	Contractor	Ensure that specific limitations are placed on the transport and Handling of erodible materials duringhigh wind conditions or when a visible	During the Construction Phase	cEO	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 towhether 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	Place soil stockpiles in areas less affected by wind	During the Construction Phase	cEO and ECO	Bi-weekly (every second week) Monthly	Soil stockpiles are adequately protected from wind erosion
– 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	cEO	Weekly, until erosion is no longer a problem	Recommendations made by the ECO have been implemented by the Contractor
– Vehicle speeds must not exceed 40 km/h along dustroads or 20 km/h when traversing unconsolidated and non-vegetated areas;	cEO / dEO / contractor	Inform all driversof speed limitsand 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/10 m² and harrowed into the top 100 mm of top material, for all completed earthworks;	Contractor	Ensure that straw stabilisation is undertaken asper 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	cEO	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	N/A					
– Notification of surrounding landowners, emergency services site personnel of blasting activity 24 hours priorto such activity taking place on Site.	N/A					

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 avoidthe 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.

Impact Management Actions	Implementation			Monitoring		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
– All vehicles and machinery must be fitted with appropriate silencing technology and must be properly maintained;	Contractor	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 regardingnoise must be recorded and communicated. Where possible or applicable, provide transport to and fromthe site on a daily basis for construction workers;	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

– 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.	cEO and Contractor in consultation with the ECO	Compile a Codeof Conduct forstaff. Appropriate operating hours must be identified for the project.	Pre-construction and Construction	ECO	Once, prior to the commencemen t 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 couldbe 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 allvehicles 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 provided by the cEO

– The local Fire Protection Agency (FPA) must beinformed of construction activities;	cEO in consultation with the ECO	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 in consultation with the ECO	Develop environmental awareness training materialwhich covers thecontact numbers for the FPA and emergency services. Place the contact numbers for the FPA and emergency services at avisible and central location	Pre-construction& Construction	ECO	Prior to the commencement of the environmental awareness training andonce during theconstruction phase	Environmental awareness training material requirements checklist and photographic record ofcontact numbers on display
– Two-way swop of contact details between ECO andFPA.	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 inorder to minimise impacts to watercourses, wetlands 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 material regularly	During the Construction Phase	cEO ECO	Bi-weekly (every second month) Monthly	Stockpiled material is maintained sufficiently and is clear of weeds and alien vegetation
– Topsoil stockpiles must not exceed 2 m in height;	Contractor	Enforce limitations for theheight of topsoil stockpiles	During the Construction Phase	cEO ECO	Bi-weekly (every second month) Monthly	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

Impact Management Actions	Implementation			Monitoring		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**

						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 mustbe provided inorder to preventerosion ofstockpiled materials	During the Construction Phase	ECO	Monthly	Contractor to provide proof of availability of sandbags to prevent erosionof 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	cEO	Weekly	Contractor to provide photographic proof that no vegetation has been cleared

– No new access roads must be developed to facilitateaccess for survey and pegging purposes;	Contractor	Restrict the development of new access roads for survey and peggingpurposes	Pre- construction	cEO	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 withinassessed 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	cEO	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 usedfor 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 ofexcess spoil at alicensed 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 appliedas per the listed requirements	Constructionand 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 inline 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 substances spills from equipment as per the requirements of section 5.17	During the ConstructionPhase	ECO	Monthly	Management of hazardous substances spills from equipmentis undertaken in line with the requirements of section 5.17
– Batching of cement to be undertaken in accordancewith Section 5.19: Batching plants;	Contractor	Ensure correct batching of cement	During the construction phase	cEO	Weekly	Measures in place to ensure the batching of cement is done in accordance with Section 5.19: Batching plants
– 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 section5.8.

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 sectionsmust 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	cEO	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 and the ECO	Identify sensitive areas to be avoided by tower assembly and ensure that the areas are not infringed upon	Pre-construction& Construction	cEO	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 and the ECO	Ensure that no impact to the environment is imposed during the operation of the crane	Pre-construction& Construction	cEO	Weekly	No environmental damages incurred as a result of the crane.

Impact Management Actions	Implementation			Monitoring		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
– The number of crane trips to each site must be minimised;	Contractor in consultation with the cEO and the ECO	Ensure that the utilisation of the crane is maximised when on site.	Pre-construction& Construction	cEO	Weekly	Few crane trips to each site observed.
– Wheeled cranes must be utilised in preference to tracked cranes. However, Rocky terrain may requiretracked cranes in the project site.	Contractor	Ensure wheeled cranes are utilised, where practical.	Pre-construction& Construction	cEO	Weekly	Wheeled cranes observed on site.
– Consideration must be given to erecting towers by helicopter or by hand where it is warranted to limit theextent 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 towerpositions as perthe requirementsof section 5.4	During the Construction Phase	ECO	Monthly	Access to tower positions are undertaken asper the requirements of section 5.4
– Vegetation clearance to be undertaken inaccordance 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	cEO	Weekly	Vegetation clearance is undertaken as per the requirements of section 5.10

Impact Management Actions	Implementation			Monitoring		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
– 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 the undertakingof any levelling activities	During the Construction Phase	ECO	Monthly, and as and when required	Written permission from the DPM and DSS provided to the Contractor
– 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	Constructionand Rehabilitation	cEO	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	cEO	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	cEO	Weekly	Excavation of Slopes is undertaken as per the listed requirements

Impact Management Actions	Implementation			Monitoring		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
– 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;	cEO / dEO / contractor	Ensure all pieces greater than 150 mm falling beyond the Working Area, are collected and removed and implement measures to try and minimise fly rock from blasting activity	Pre-Construction Phase	ECO/EO	During blasting activities	ECO/EO to confirm necessary measures have been undertaken tominimise fly rockfrom blasting activity and that no pieces greater than 150 mm are beyond the working area.
– Only existing disturbed areas are utilised as spoil areas;	Contractor in consultation with the ECO	Identify, demarcate and use existing disturbed areas for spoil areas	Pre-construction& Construction	cEO	Weekly	Only identified disturbed areas are used as spoil areas
– Drainage is provided to control groundwater exit gradient with the spill areas such that migration of fines is kept to a minimum;	Not Applicable					
– Surface water runoff is appropriately channelledthrough 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

Impact Management Actions	Implementation			Monitoring		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
– 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	cEO	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	cEO	Weekly	Rehabilitation of the surface spoilis 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. Spreading of topsoil must not be undertaken, when possible, at the beginning of the dry season.	Contractor	Ensure that topsoil is spread evenly and compacted appropriately. This must be undertaken outside of the start of the dry season, where possible	Rehabilitation	cEO	Weekly	Proof that topsoil has been spread evenly and compacted correctly must be provided by the Contractor/ cEO. Proof that the activities were undertaken outside of the start of the dry

Impact Management Actions	Implementation			Monitoring		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
						season (or motivation as to why this was not possible) 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 sensitiveareas;	Contractor in consultation with the ECO	Identify and demarcate areas appropriate for the siting of winch and tensioner stations which does not infringe on access restricted areas	Pre-construction& Construction	cEO	Weekly	Winch and tensioner stations are located outsideof identified sensitive areas

Impact Management Actions	Implementation			Monitoring		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
		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	cEO	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 and cEO weekly during stringing	Once, prior to the commencemen t 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	cEO	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 closedfor 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 writtennotice must beprovided 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 toaffected partiesmust be provided by the Contractor

– No services (electrical distribution lines, telephone lines, roads, railways lines, pipelines fences etc.) mustbe 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, DPM and dEO	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
– Where stringing operations cross cultivated land, damage to crops is restricted to the minimum required to conduct stringing operations, and reasonable notice (10 work days minimum), in writing, must be provided to the landowner;	Contractor in consultation with the cEO, DPM and dEO	Agree crop protection requirements with landowner.	During the Construction Phase	ECO	Monthly, and asand whenrequired	No disruption of services occurs. Where disruption occurs proof of written notice to affected parties must be provided by the Contractor
– Necessary scaffolding protection measures must be installed to prevent damage to the structures supporting certain high value agricultural areas such as vineyards, orchards, nurseries.	Contractor in consultation with the cEO, DPM and dEO	Agree required actions with landowner.	During the Construction Phase	ECO	Monthly, and asand whenrequired	No disruption of services occurs. Where disruption occurs proof of written notice to affected parties must be provided by the Contractor

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 commencemen t of construction and monthly during the construction	Communication is undertaken as per the identified strategies and no complaints are submitted regarding communication
– Develop and implement a collaborative and constructive approach to conflict resolution as part of the external stakeholder engagement process;	Contractor	Development and implementa 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

Impact Management Actions	Implementation			Monitoring		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
– Sustain continuous communication and liaison with neighbouring owners and residents	Contractor	Development and implementand Grievance Mechanism 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
– 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 localfarmers.	Contractor	Ensure no workers are permitted to stay over night on the site	Construction	ECO	Throughout construction	No workers remaining on site over night

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 needto 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 thebunds must be undertaken. This must be undertaken as per the requirements listed in sections 5.17 and 5.18	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
– 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 and 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 andcontact detailswhich 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 ondisplay
– Security personnel must be briefed and have the facilities to contact or be contacted by relevant management and emergency personnel;	Contractor in consultation with the ECO	Hold a workshop with all security personnel to provide a brief of the project and security requirements. Provide facilitiesin order to contact management and emergency personnel	Pre-construction& construction	ECO	Prior to site closure for more than 05 days	Proof of the workshop held must be kept on 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

Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
– Fire hazards identified and the local authority must have been notified of any potential threats e.g. large brush stockpiles, fuels etc.;	cEO / Contractor in consultation with the ECO	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 hazardsto the local authority mustbe 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 mitigation prior to site closure	During the Construction Phase	ECO	Prior to site closure for more than 05 days	Wind and dust mitigation is implemented prior to site closure
– Cement andmaterials stores must havebeensecured;	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 storesare 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 ConstructionPhase	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 allspoil and waste at a licensed waste disposal facility	Pre-construction& Rehabilitation	cEO	Weekly	Rehabilitation of the disturbed areas is undertaken asper 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 in consultation with the ECO	Assess all slopes and determine whether contouring is required	Rehabilitation	cEO	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 in consultation with the ECO	Assess all slopes and determine whether terracing is required	Rehabilitation	cEO	Weekly	All slopes are assessed and terraced as required
– 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	cEO	Weekly	All berms have a slope of 1:4 andis replanted with indigenous species and grasses

– Where new access roads have crossed cultivated farmlands, that lands must be rehabilitated by rippingwhich must be agreed to by the holder of the EA and the landowners;	Not applicable					
– Rehabilitation of tower sites and access roads outside of farmland;	Not applicable					
– 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	cEO	Weekly	Indigenous species are used for rehabilitation

Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
– Stockpiled topsoil must be used for rehabilitation (referto **Section 5.24: Stockpiling and stockpiled areas**);	Contractor	Ensure stockpiled topsoil is used as per the requirements listed under section 5.24	Rehabilitation	cEO	Weekly	Stockpiled topsoil is used asper 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	cEO	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	cEO	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 spreading of topsoil	Rehabilitation	cEO	Weekly	Subsoil is ripped before topsoil is placed
– 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 disturbedslope areas must be stabilised	Rehabilitation	cEO	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	cEO	Weekly	Slopes are stabilised as per the design specifications
– Spoil can be used for backfilling or landscaping as longas it is covered by a minimum of 150 mm of topsoil.	Contractor	Spoil used for landscaping must be appliedas per the listed requirements	Rehabilitation	cEO	Weekly	Photographic record of spoil used for landscaping purposes as well as feedback from the contractor

– 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;	Contractor in consultation witha 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
c) Species chosen must be indigenous to the areawith the seeds used coming from the area; d) Root systems must have a binding effect on thesoil; e) The final product must not cause an ecological imbalance in the area						

6 ACCESS TO THE GENERIC EMPr

Once completed and signed, to allow the public access to the generic EMPr, the holder of the EA must make the EMPr available to the 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 Sub-section 1: contact details and description of the project

7.1.1 Details of the applicant

PROJECT APPLICANT DETAILS	
DEVELOPMENT ENTITY	
Applicant Name	Norma Energy (Pty) Ltd
Responsible Person	Mr Matteo Giulio Luigi Brambilla
Address	14th Floor Pier Place Heerengracht Street Foreshore Cape Town 8001
Contact Details	+27 (0)21 418 3940 (T) +27 (0)72 212 1531 (C) Email: m.logan@redrocket.energy

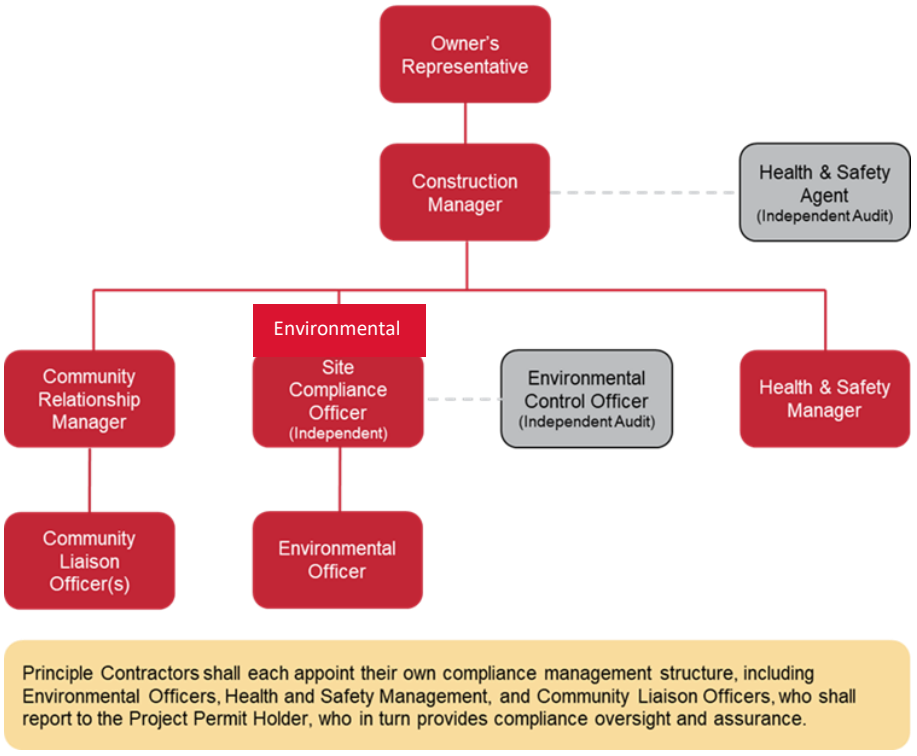


Figure 1: Organogram of the Applicant Company Structure

A suitably qualified ESCO must be appointed by the Applicant to monitor the project compliance onsite on a fulltime basis.

Responsibilities of the ESCO include:

- Be fully conversant with the BAR, the conditions of EA and the EMPr;
- Be fully conversant with all relevant environmental legislation and ensure compliance thereof;
- Approve method statements (co-approval with Site Manager);
- Remain employed until the completion of the construction activities; and
- Report to the Project Manager, including all findings identified onsite.

In addition, the ESCO will:

- Undertake monthly inspections of the site and surrounding areas to audit compliance with the EMPr and conditions of the environmental authorisation;
- Take appropriate action if the specifications contained in the EMPr and conditions of the environmental authorisation are not followed;
- Monitor and verify that environmental impacts are kept to a minimum, as far as possible; and
- Ensure that activities onsite comply with all relevant environmental legislation.

7.1.2 Details and expertise of the EAP:

Details and expertise of the EAP:	
EAP Name	Fabio Venturi - Terramanzi Group (Pty) Ltd
EAP Qualifications	BSc (Hons) Zoology , 20 years' experience as an environmental practitioner
Professional Affiliation/Registration	EAPASA(2021/4088)
Physical Address	16 Bell Crescent, Westlake, Cape Town, 7945
Telephone	021 701 5228
Cellphone	082 575 3800
Email Address	fabio@terramanzi.co.za

The EMPr was authored by: Tarryn Frankland (Terramanzi Group - EAPASA Candidate 2022/6205)
The EMPr was signed off by: Fabio Venturi (Terramanzi Group - EAPASA 2021 / 4088)
The EMPr was reviewed by: Kristen Shaw (Terramanzi Group - EAPASA Candidate 2022/4741), Zandria Jordan (Terramanzi Gorup), Chane Olckers (Terramanzi Group).

7.1.3 Project name:

Proposed Virginia 132kV Powerline to connect the authorised Virginia 1, 2 and 3 Solar Parks to the National Grid via the Eskom Theseus substation.

7.1.4 Description of the project:

Norma Energy (Pty) Ltd is proposing to develop a 132kV Powerline to connect the authorised Virginia 1, 2 and 3 Solar Parks to the national grid via the Theseus Eskom substation. The Eskom Theseus Substation is located on Portion 6 of the Farm Doorn Rivier 330, Theunissen Road 16km northeast of the proposed Virginia 1, 2 and 3 Solar Parks. The geographical coordinates of the alignments of the 132kV Powerline fall within an approved 250m servitude. The coordinates of the OHPL tower alignments were revised and approved during a Part 1 Amendment Process. The project will be built and developed by Norma Energy (Pty) Ltd but will be owned and operated by Eskom Distribution. The Project was awarded Preferred Bidder Status under the 6th Round of the Renewable Independent Power Producer Programme Project (REIPPPP). The facility is a SIP 8 project and that should the Competent Authority decide to authorize this Application that it is imperative that the EMPR Amendment and routing layout amendment be approved as assessed to allow the SIP Project to comply with the requirements of the REIPPPP and reach financial close. Based on the findings of the professional team and the EAP, it is reasonable to suggest that the Competent Authority can approve both the EMPR

Amendment and routing layout amendment.

The approved Layout for the Virginia 132kV Powerline has been amended to incorporate the Heritage features (FIGFURE…) and wetland delineation which were missing from the approved Generic OHPL EMPr

The Virginia 132kV Powerline will be approximately 16 km in length with a 250 m servitude.

The Powerline will traverses 14 land parcels (farm portions) to connect from the Virginia Solar Park cluster to the Theseus Substation as presented in the following table:

Details of the land parcel(s) over which the proposed Virginia 132kV Powerline will traverse

Cadastral Land Parcel	SG Code	Approximate Co-ordinates of OHPL on land portion
Proposed Virginia 132kV Powerline		
Farm Blomskraal 216, Ventersburg RD	F03500000000021600000	-28°13'26.48"S 27° 0'24.48"E
Farm De Dam 27,	F03500000000002700000	-28°12'12.27"S 26°55'52.79"E
Farm Te Vrede 361	F03500000000036100000	-28°13'3.13"S 26°57'36.12"E
Farm Biddulph 329.	F03500000000032900000	-28°12'30.42"S 26°56'39.63"
Remaining Extent of the Farm Le Roux 766, Ventersburg RD	F03500000000076600000	-28°11'6.10"S 26°55'54.77"E
Portion 1 of the Farm Florida 633, Ventersburg RD	F03500000000063300001	-28°10'26.72"S 26°53'53.60"E
Portion 4 of the Farm Florida 633, Ventersburg RD	F03500000000063300004	-28°11'22.24"S 26°53'51.13"E
Remaining extent of Portion 22 (of 7) of the Farm Welgelegen 382 , Theunissen RD	F03300000000038200022	-28°10'29.20"S 26°51'23.45"E
Portion 24 of the Farm Welgelegen 382, Theunissen RD	F03300000000038200024	-28°10'29.20"S 26°51'23.45"E
Remaining Extent of Portion 2 (De Rust) of the Farm Welgelegen 382, Theunissen RD	F03300000000038200002	-28°10'30.70"S 26°52'10.41"E
Portion 3 of the Farm Bloemhoek 509, Theunissen RD	F03300000000050900003	-28°10'7.31"S 26°50'57.91"E
Remaining Extent of Portion 2 of the Farm Bloemhoek 509, Theunissen RD	F03300000000050900002	-28° 9'39.89"S 26°50'5.43"E
Remaining Extent of the Farm Doorn Rivier 330.	F03300000000033000000	-28° 9'34.78"S 26°49'42.26"E
Portion 6 of the Farm Doorn Rivier 330, Theunissen RD	F03300000000033000006	-28° 9'34.78"S 26°49'42.26"E

7.1.5 Project location:

The Virginia 1, 2 and 3 Solar Park Cluster is located on the Farm Blomskraal 216, Ventersburg RD, Matjhabeng Local Municipality, Lejweleputswa District Municipality, Free State Province. The Virginia 132kV Powerline, located within the Matjhabeng and Masilonyana Local Municipalities, Lejweleputswa District Municipality, Free State Province. The powerline is located approximately 6.3 km to the south and southeast of the town Virginia.

The proposed 132kv Powerline will originate within the boundary of the authorised Virginia 1, 2 and 3 Solar Parks and will head northwest towards to the town of Virginia. The Powerline will then connect into the Theseus Eskom substation. The approximate coordinates of the Virginia 132kV Powerline are summarized in the table that follows:

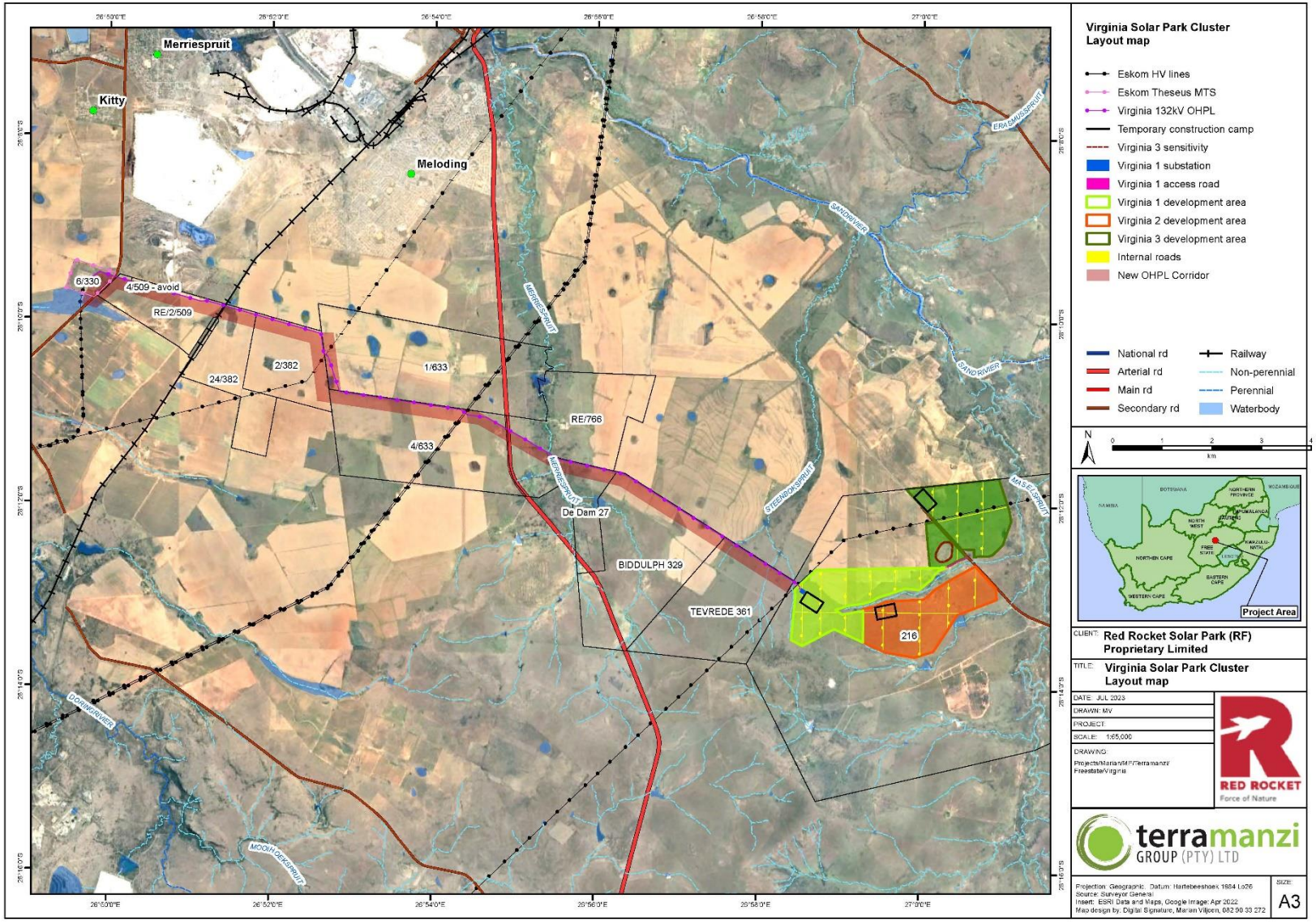


Figure 2: Virginia 132kV Powerline Regional Locality Plan

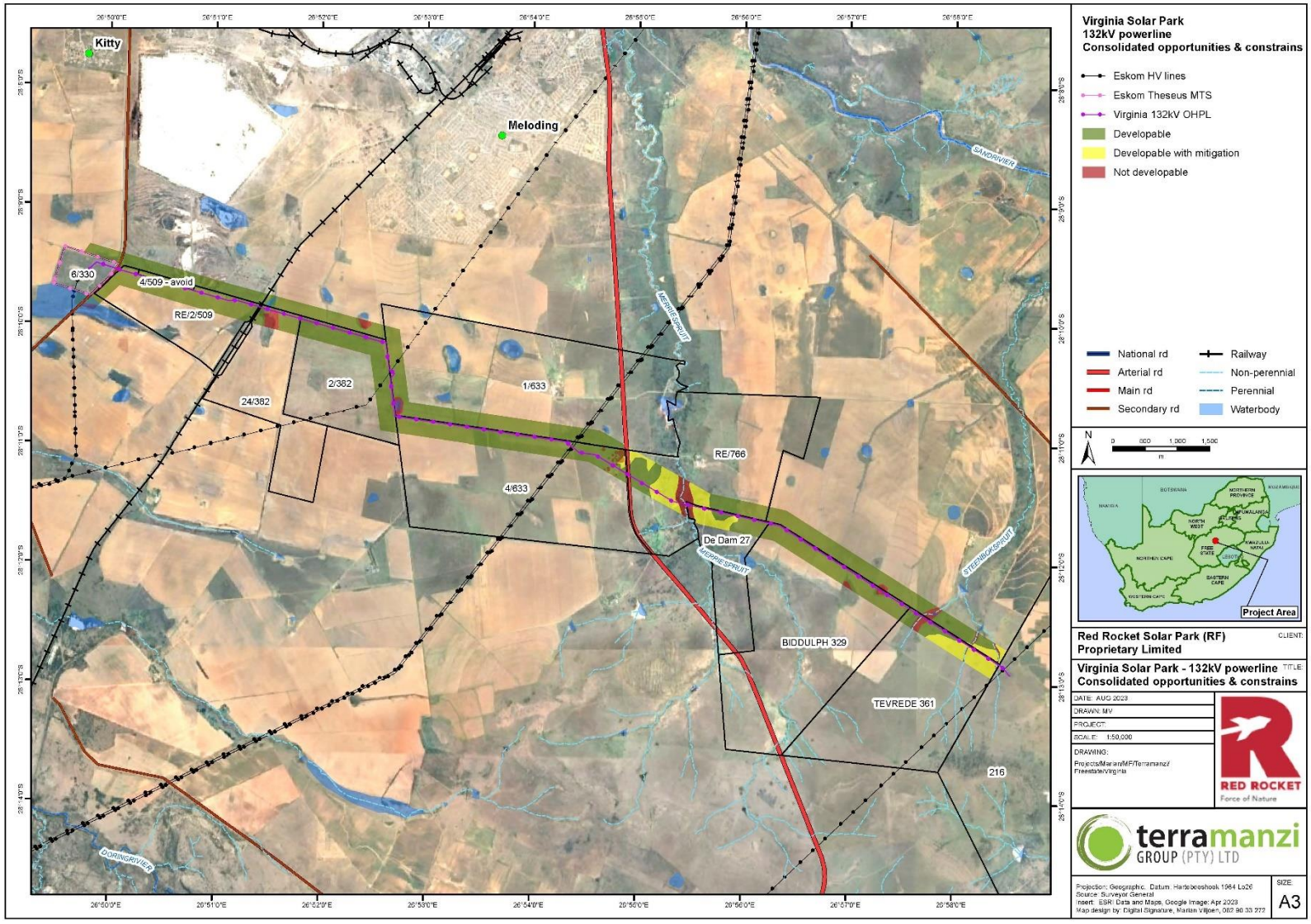


Figure 3: Site sensitivity for the Virginia 132kV Powerline

The final tower positions and Powerline alignment within the above corridor are presented in the following table 2and depicted on Figure 2:

Table 2: The Bend points GPS co-ordinates of the Virginia 132kV Powerline alignment are provided in the table below

Bend Position Name	CO-ORDINATES	
	Y	X
SUB LABEL FDR 5	- 28° 9'35.41"S	26°49'44.25"E
THE-BLO-01	- 28° 9'32.68"S	26°49'48.83"E
THE-BLO-02	- 28° 9'29.98"S	26°49'52.21"E
THE-BLO-03	- 28° 9'32.30"S	26°50'0.43"E
THE-BLO-04	- 28° 9'34.21"S	26°50'7.18"E
THE-BLO-10	- 28° 9'49.05"S	26°51'7.28"E
THE-BLO-11	- 28° 9'48.74"S	26°51'11.48"E
THE-BLO-12	- 28° 9'50.90"S	26°51'20.29"E
THE-BLO-13	- 28° 9'52.31"S	26°51'25.97"E
THE-BLO-14	- 28° 9'53.20"S	26°51'29.58"E
THE-BLO-21	- 28°10'9.73"S	26°52'36.71"E
THE-BLO-22	- 28°10'18.25"S	26°52'38.04"E
THE-BLO-23	- 28°10'23.21"S	26°52'38.82"E
THE-BLO-24	- 28°10'25.05"S	26°52'41.79"E
THE-BLO-25	- 28°10'27.88"S	26°52'39.51"E
THE-BLO-27	- 28°10'36.78"S	26°52'40.81"E
THE-BLO-28	- 28°10'46.57"S	26°52'42.38"E
THE-BLO-39	- 28°10'58.73"S	26°54'19.35"E
THE-BLO-40	- 28°11'3.99"S	26°54'27.02"E
THE-BLO-41	- 28°11'5.08"S	26°54'36.03"E
THE-BLO-47	- 28°11'28.19"S	26°55'20.36"E
THE-BLO-54	- 28°11'39.98"S	26°56'21.25"E
THE-BLO-63	- 28°12'16.44"S	26°57'26.25"E
THE-BLO-71	- 28°12'50.24"S	26°58'27.78"E
THE-BLO-72	- 28°12'52.58"S	26°58'30.32"E
THE-BLO-73	- 28°12'54.26"S	26°58'31.52"E
BLO-GANTRY	- 28°12'54.85"S	26°58'32.43"E

7.16 Preliminary technical specification of the overhead transmission and distribution:

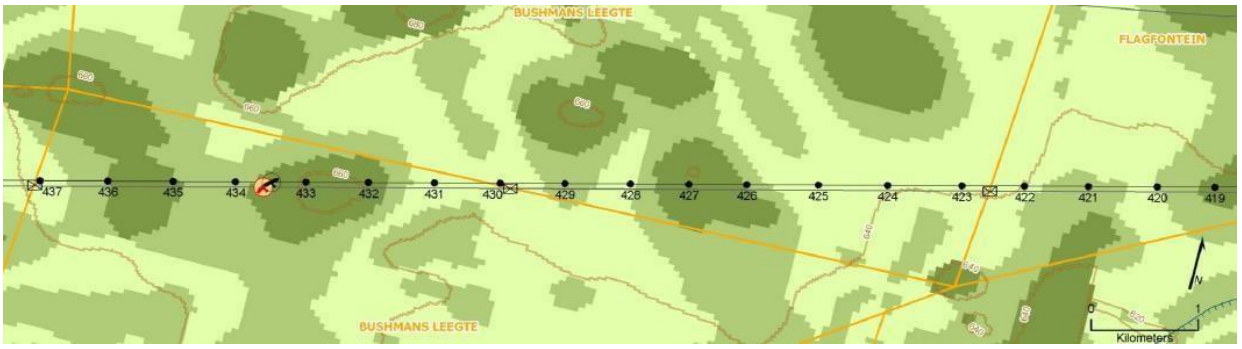
The technical details of the Virginia 132kV Powerline are summarized as follows:

- Length: ±16 km long
- Servitude width: 250 m
- Tower parameters:
    - An access road (dirty road), approximately 4.0 m wide will be constructed within the power line servitude for construction and maintenance activities.
    - In correspondence with the turning points, the road reserve will be up to 14 m in order to allow the transportation of abnormal loads (Steel monopoles).
    - Site preparation will consist of the clearing of the powerline servitude and vegetation removal will be done only within the servitude, for the minimum width required by the installation activities by the Eskom security rules.

It should be noted that Eskom requirements for working or near Eskom servitudes will be adhered to, and all applicable Eskom standards shall be applied.

7.2 Sub-section 2: Development footprint site map

This sub-section must include a map of the site sensitivity overlaid with the preliminary infrastructure layout. The sensitivity map must be prepared from the national web based environmental screening tool, when available for compulsory use at: https://screening.environment.gov.za/screeningtool. The sensitivity map shall identify the nature of each sensitive feature e.g. raptor nest, threatened plant species, archaeological site, etc. Sensitivity maps shall identify features 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.



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

The DFFE Environmental Screening Tool was utilised for this project to initially identify potential environmental sensitivities. The environmental sensitivities were then assessed by specialists. The environmental sensitives confirmed by the specialists are presented as follows

Please note that the EMPr and Layout are already approved. The 132kV powerline routing is approved. The minor adjustment remains within the approved servitude and the assessed farm portions.

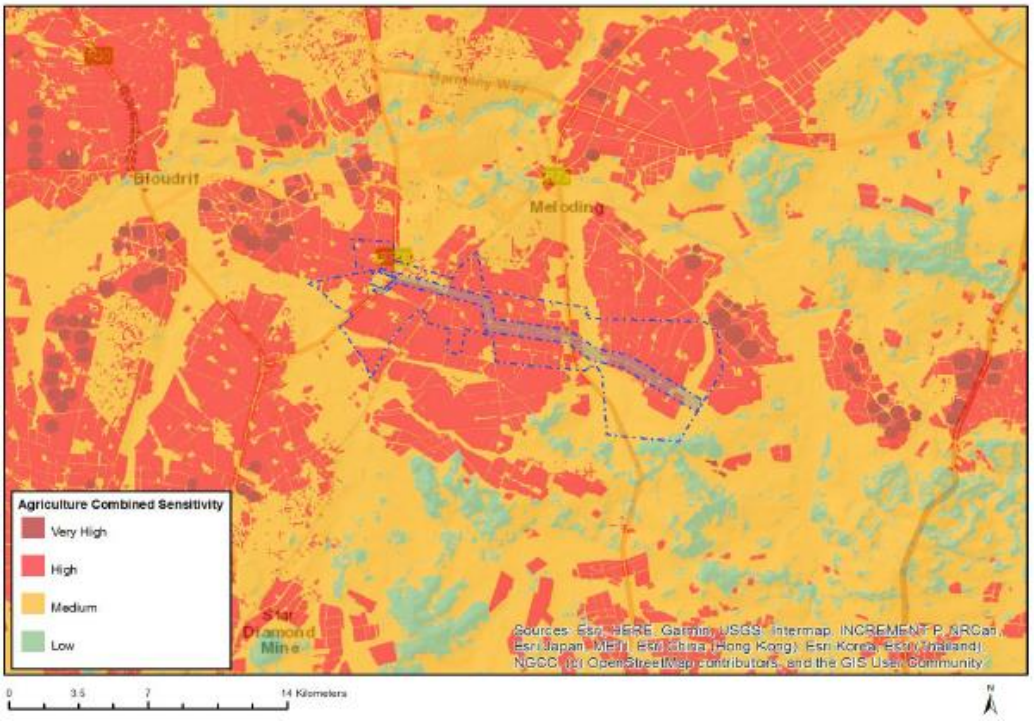


Figure 4: Agricultural DFFE Screening Tool Sensitivity Map

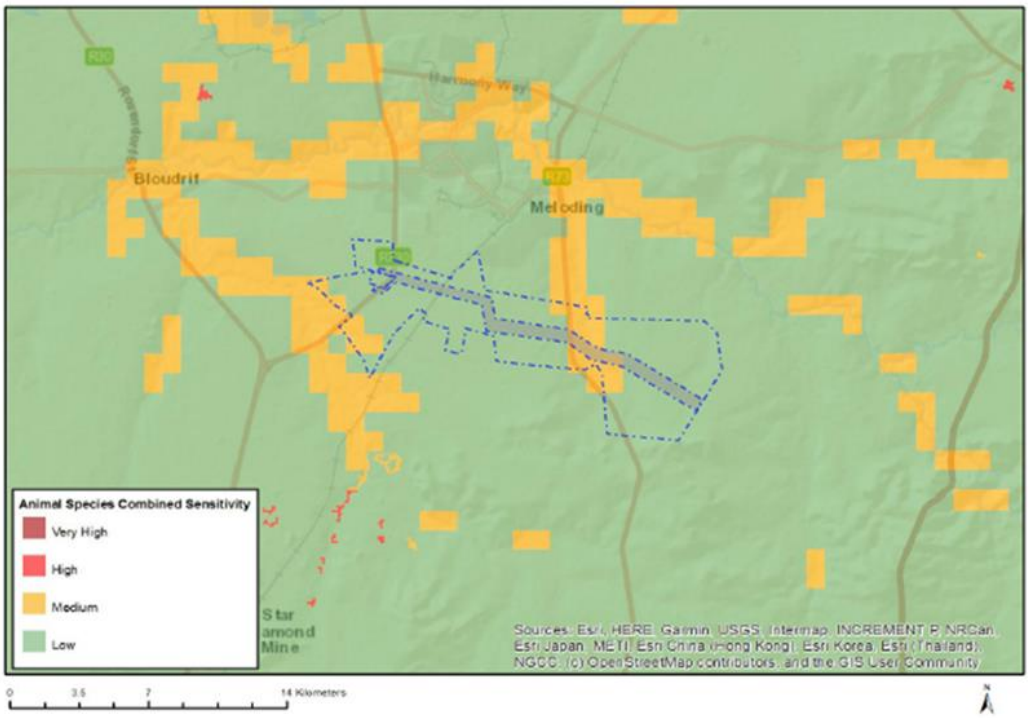


Figure 5: Animal Species DFFE Screening Tool Sensitivity Map

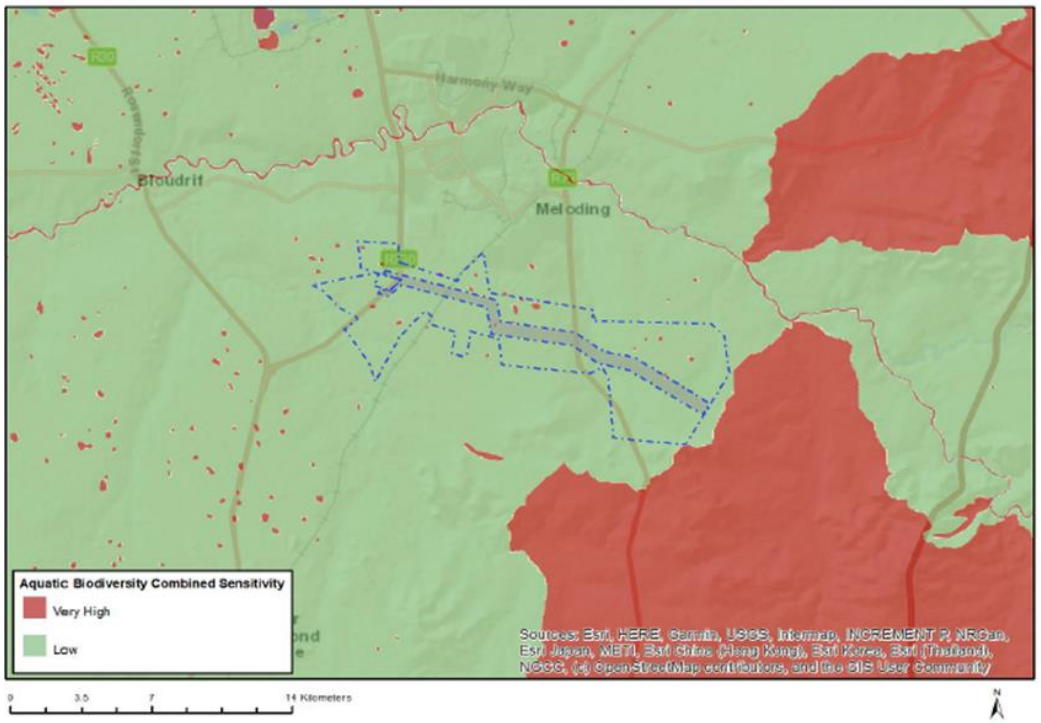


Figure 6: Aquatic Biodiversity DFFE Screening Tool Sensitivity Map

The Screening Tool and Wetland Specialist Report (May 2021) indicate an area of high freshwater importance along the powerline routing, specifically a floodplain River with riparian woodland (light blue area indicated in Figure 7 below).

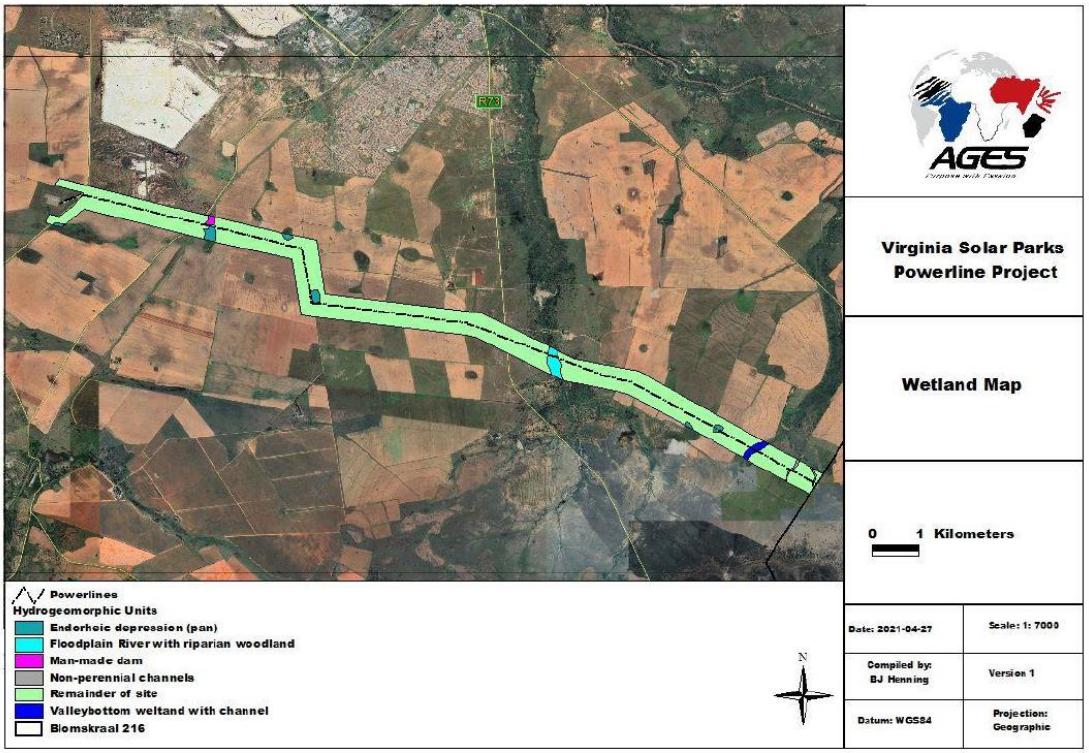


Figure 7: Wetland delineation map from the original Wetland report (May 2021)

The Specialist Verification Letters (July 2023) verified these features and provided additional comment and mitigation measures regarding the routing of the pylong structures. The letter states the following:

"It is acknowledged that the proposed Virginia OHPL has received Environmental Authorisation in terms of the NEMA (DFFE Ref: 14/12/16/3/3//1/2444) which permits the proponent to develop within the 32 m Zone of Regulation, and which also grants authorisation to remove more than 10 cubic metres of soil from watercourses in the event that the powerline cannot span the watercourses. Therefore, whilst it is advisable and aligned to the mitigation hierarchy for development to remain outside of the 32 m Zone of Regulation (recommended by AGES (Pty) Ltd as a buffer) it is acknowledged that engineering constraints may not always allow for spanning of the watercourse and the 32 m Zone of Regulation and provided all other mitigation measures are adhered to, activity within the 32 m ZoR is acceptable."

As well as:

"Where possible taking into consideration associated engineering constraints, the OHPL must span all freshwater ecosystems including the endorheic depression wetlands".

The previous layout did not account for the spanning of the floodplain River with riparian woodland. Figure 8 depicts the final revised layout which spans the wetland features. The OHPL pylons span the wetland features between THE-BLO-47 and THE-BLO-48.

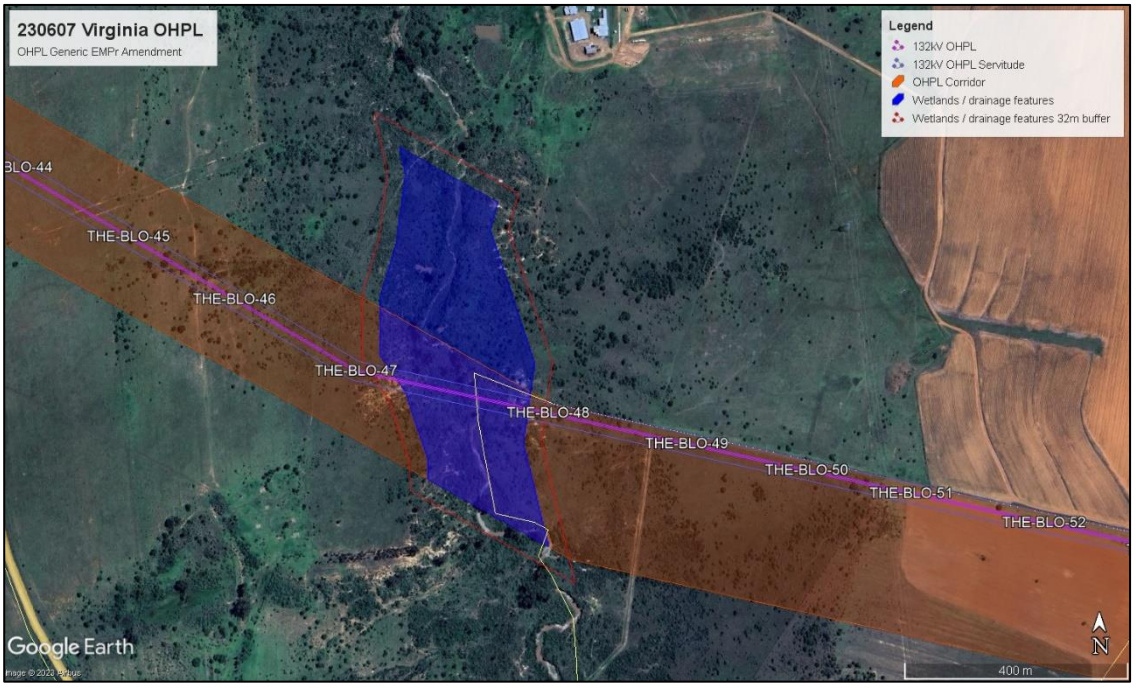


Figure 8: Final Virginia OHPL routing which spans the wetlands areas (August 2023)

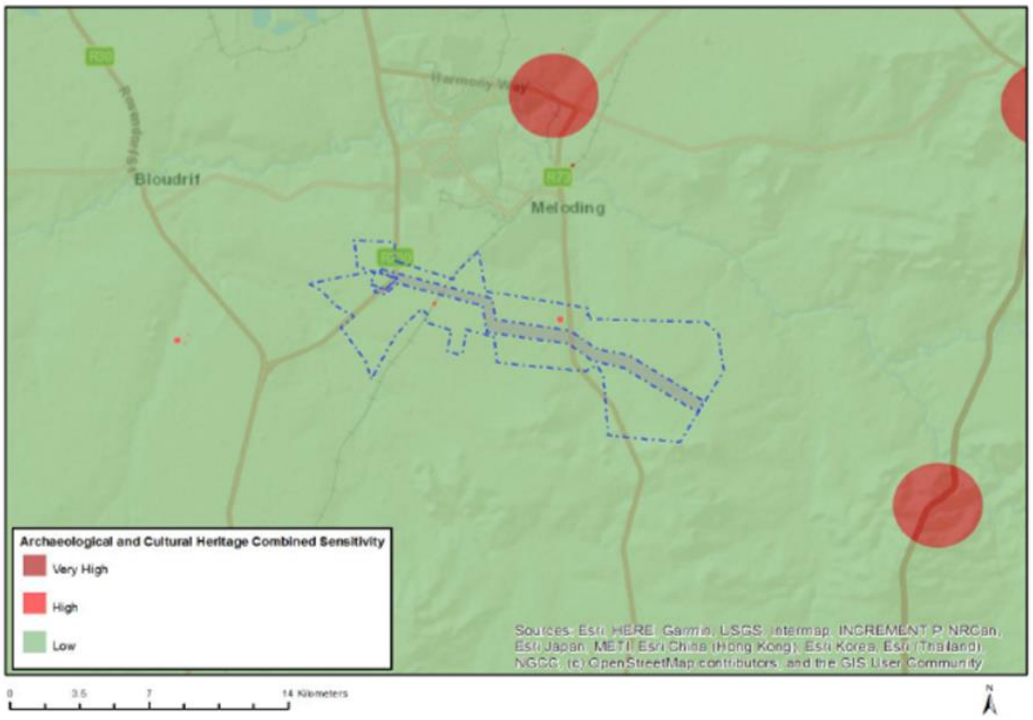


Figure 9: Archaeological and Cultural Heritage DFFE Screening Tool Sensitivity Map

The original Heritage Specialist report (May 2021) delineated a large 'blanket buffer' around heritage features identified in the middle of the OHPL routing (Figure 10 below). The initial report also stated that a 20m should be placed around the heritage features and that as site assessment was required to validate the features. The original OHPL routing was not able to span this distance.

Figure 10: The Archaeological delineation shown by the original Heritage Specialist report (May 2021)

For the purpose of the EMPr amendment, the Heritage specialist conducted a site walk down to delineate the heritage features on 20 July 2023. The Heritage specialist confirmed the heritage features during the site assessment and confirmed that a 10 m buffer must be placed around the heritage features during Construction (Figure 11 below). The red circles depict the 10m buffered heritage features. The OHPL spans the features between THE-BLO-42 and THE-BLOW-43. These buffered zones replace the large 'blanket buffer' placed over the powerline from the original heritage specialist report.

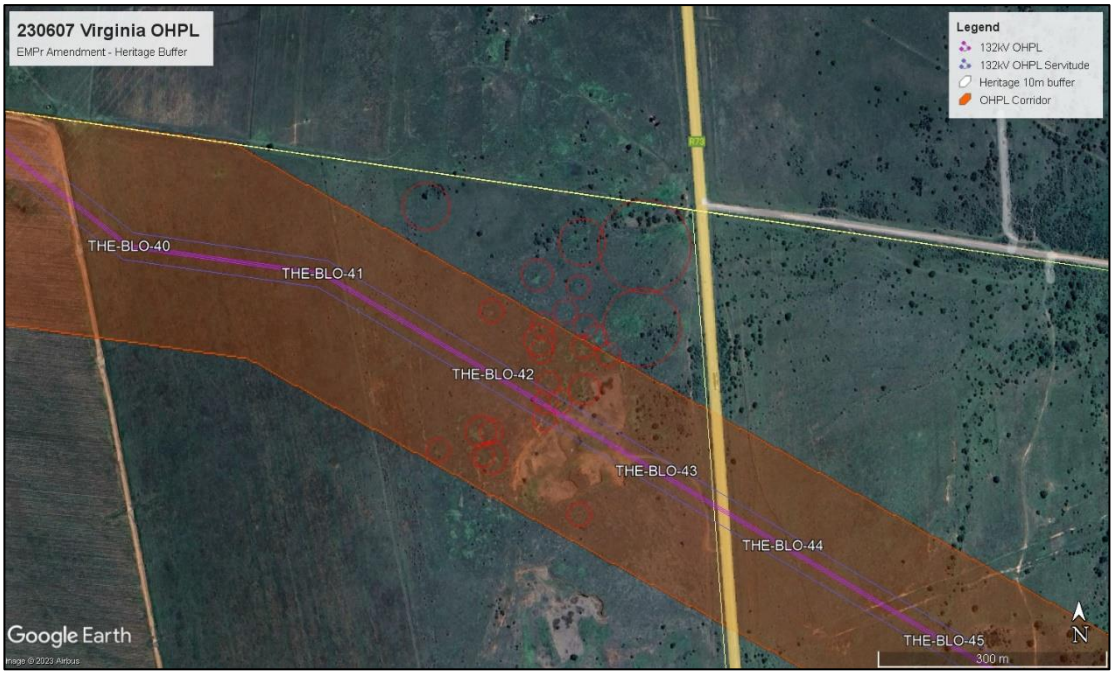


Figure 11: The 10m Archaeological delineation shown by the original Heritage Specialist report (July 2023)

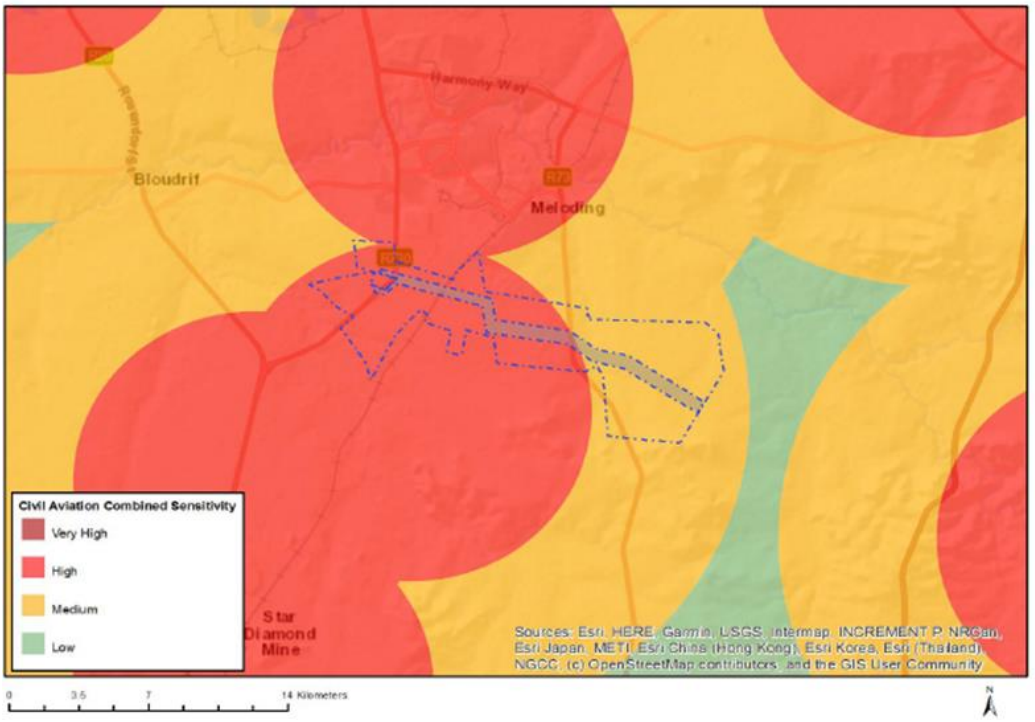


Figure 12: Civil Aviation DFFE Screening Tool Sensitivity Map

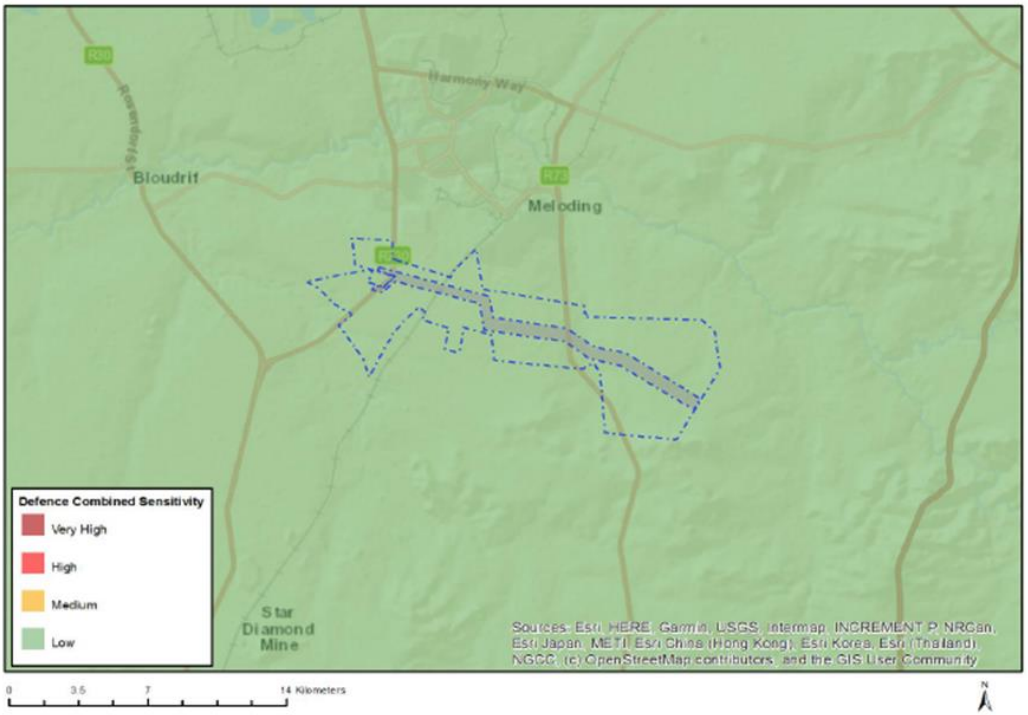


Figure 13: Civil Aviation DFFE Screening Tool Sensitivity Map

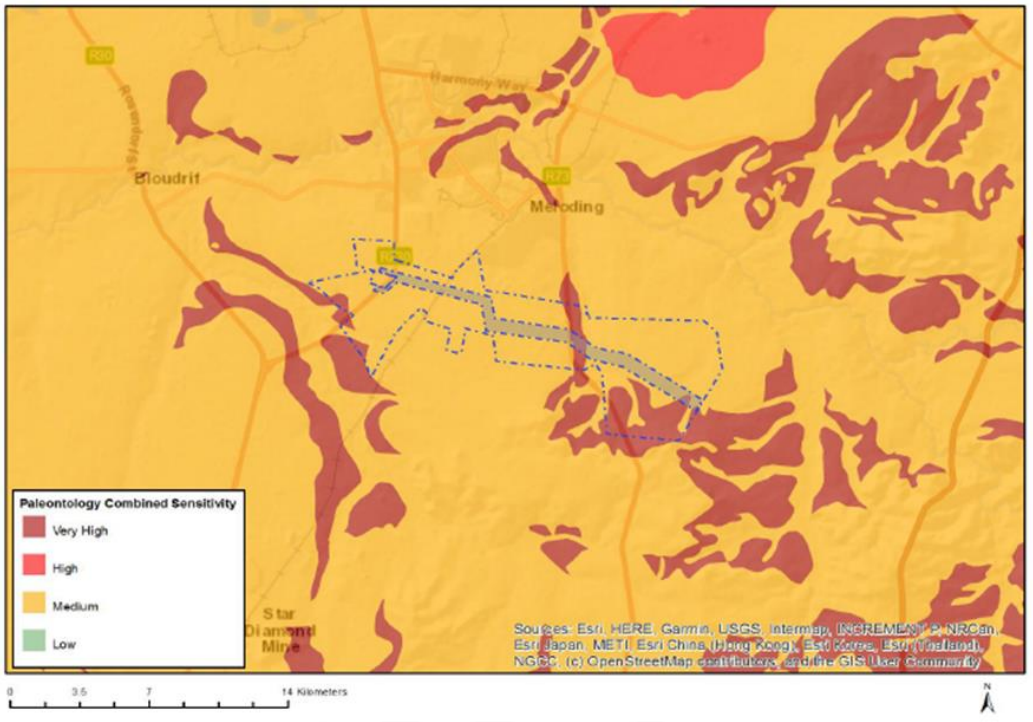


Figure 14: Paleontological DFFE Screening Tool Sensitivity Map

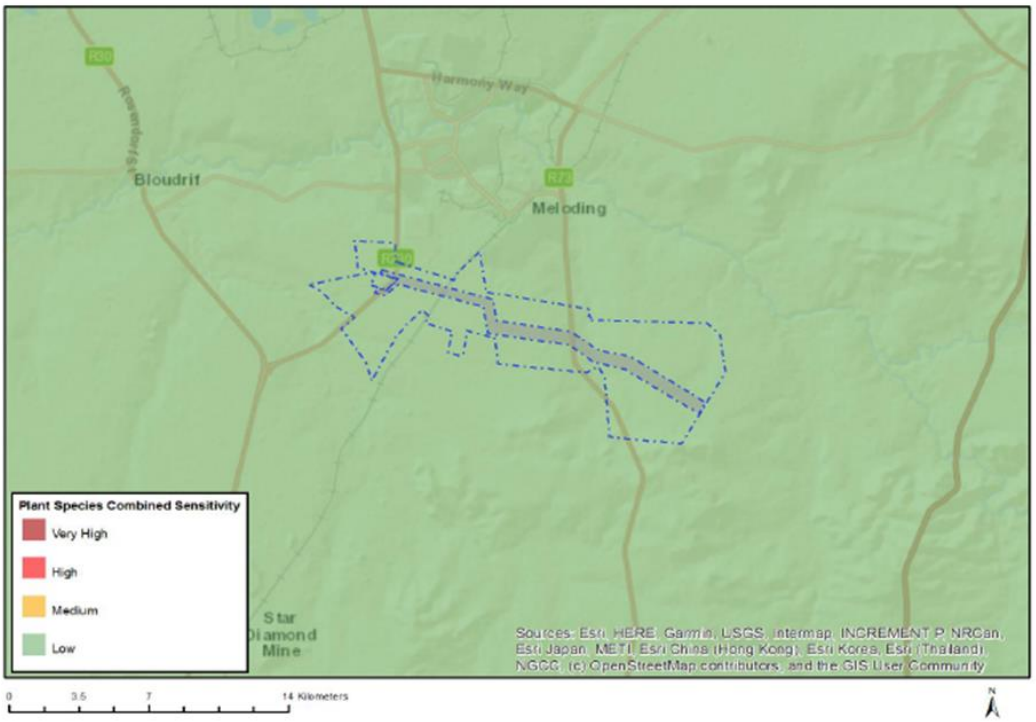


Figure 15: Plant Species DFFE Screening Tool Sensitivity Map

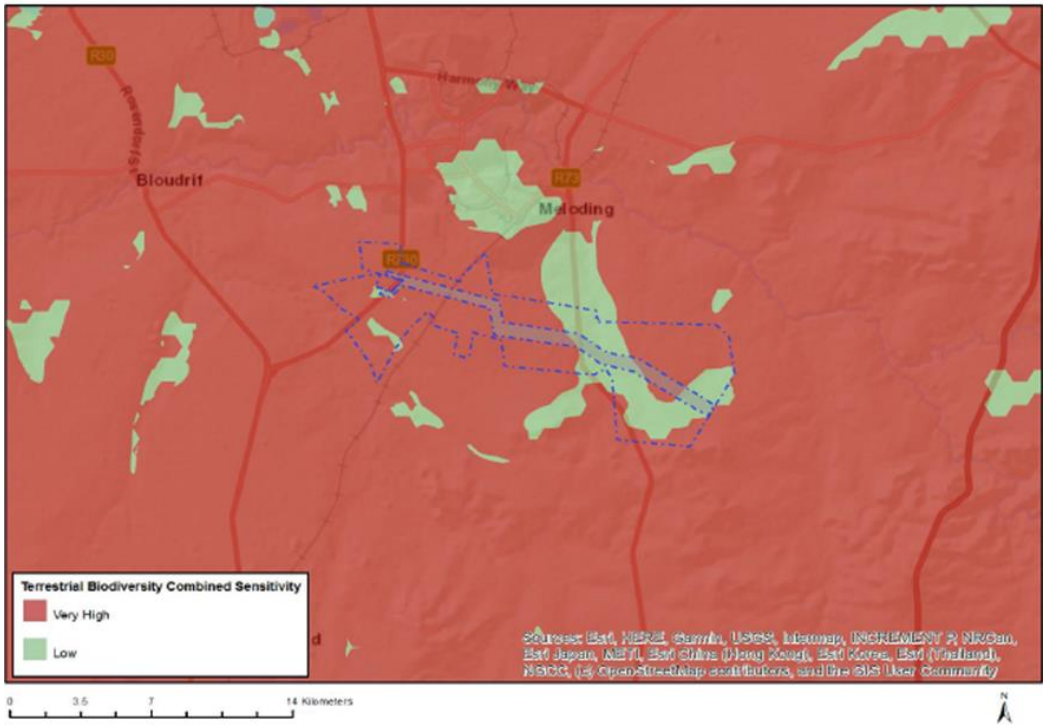


Figure 16: Terrestrial Biodiversity DFFE Screening Tool Sensitivity Map

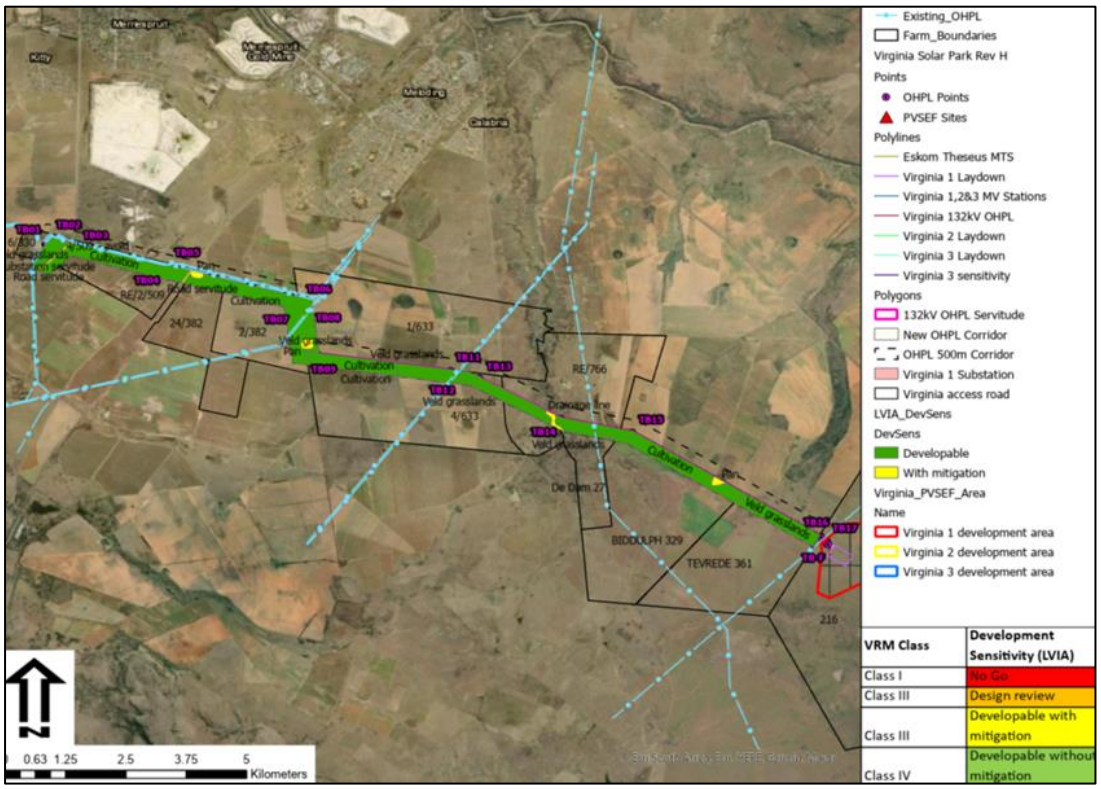
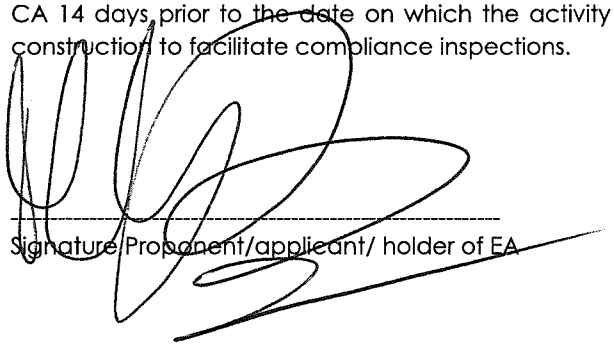


Figure 17: Visual Sensitivity Map (Specialist Verification Letter - 14 July 2023)

7.3 Sub-section 3: Declaration

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



Signature Proponent/applicant/ holder of EA

18 August 2023

Date:

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

Should the EA be transferred to a new holder, Part B: Section 2 must be completed by the new holder and submitted with the application for an amendment of the EA in terms of Regulations 29 or 31 of the EIA Regulations, whichever applies. The information submitted for an amendment to an environmental authorisation will be considered 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.

Impact management outcome: Protection of Biodiversity						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
Management of direct Habitat destruction						
Construction Activities must be restricted to the powerline servitude and pylon positions, as per condition 33 of the Environmental Authorisation (14/12/16/3/3/1/2444/AM1, 26 June 2023).	DPM, Engineer, ECO, dEO, cEO, Specialists	Design and Layout – the final layout will indicate the pylon routing, access roads, and the sensitive areas to be avoided	Planning phase and prior to construction	DPM, Engineer, ECO, ESCO, Specialists	Pre-Construction	Final Design and Layout – the final layout will indicate the pylon routing, access roads, and the sensitive areas to be avoided
The removal of indigenous trees and shrubs should be kept to a minimum. Where protected trees will need to be cleared or pruned, permits should be obtained from the relevant authority. Trim, rather than felling of woody species along the edges of the development site where possible.	dEO, cEO, ECO Biodiversity Specialist	Ecologist/biodiversity specialist to identify protected plant species to be relocated while conducting the site visit to confirm footprints for tower positions. Identified species to be removed from construction footprint and relocated within the servitude.	Planning phase and prior to construction	ECO, ESCO	Pre-Construction / during Construction - Daily checks	Site inspection checklists and ECO audit reports
A two-track service road will follow the OHPL route and run adjacent and in some areas under the OHLP within the approved servitude. The road must not transgress areas outside of the servitude, and must not transgress sensitive areas unless authorised by the ECO /ESCO.	dEO, cEO, ECO, ESCO	Layout plans that includes the sensitive 'no-go' areas and the final track routing within the servitude.	Construction and Operation	ECO, ESCO	Construction phase and Operation Phase	During construction of the OHPL and maintenance thereof, contractors must remain on the two track service road and, unless advised otherwise by the ECO/ESCO.

Impact management outcome: Protection of Biodiversity						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
Peripheral impacts around the development corridors on the surrounding vegetation of the area should be avoided and a monitoring programme should be implemented to ensure the impacts are kept to a minimum.	dEO, cEO, ECO Biodiversity Specialist	Biodiversity Monitoring Programme to be implemented on site	Planning phase and prior to construction	ECO, ESCO	Construction – weekly checks	Site inspection checklists and ECO audit reports
All vehicles and equipment on site must be restricted to the designated routes and roads and must not enter, encroach on or impinge into sensitive habitats, unless authorised by the ECO/ESCO.	dEO, cEO, ECO Biodiversity Specialist	Site Inspections and observations during construction work	Construction	ECO, ESCO	Construction / Operation - Daily checks and weekly training on avoiding ecologically sensitive areas	Toolbox talks registers and site inspection checklists
The ECO should advise the construction team in all relevant matters to ensure minimum destruction and damage to the environment. The ECO should enforce any measures that he/she deem necessary. Regular environmental training should be provided to construction workers to ensure the protection of the habitat, fauna and flora and their sensitivity to conservation.	dEO, cEO, ECO	Toolbox Talks / Environmental Training workshops. Records of such must be kept on file.	Construction	ECO, ESCO	Weekly	Toolbox talks registers and site inspection checklists
Placement of pylons should be outside sensitive vegetation units, outcrops and drainage channel in accordance with Condition 35 of the Environmental Authorisation	DPM, ECO, dEO	Design and layout – pylon placement must account for al sensitivities before construction	Planning phase and prior to construction	ECO, ESCO, Specialists	Design and Planning, preconstruction	Layout designs, Specialist reports & sensitivity maps

Impact management outcome: Protection of Biodiversity						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
(14/12/16/3/3/1/2444/AM1, 26 June 2023).						
Soil should be sampled and analysed prior to replacement during rehabilitation. If necessary, and under advisement from a suitably qualified restoration ecologist, supplemental fertilisation may be necessary.	ECO, dEO, cEO, Soil Scientist, Agricultural specialist	Soil assessment	Post construction / operation / Decommissioning	ECO, ESCO, Soil scientist; Agricultural specialist	Post construction / Decommissioning	Soil assessment
Management of Habitat Fragmentation						
Use existing facilities (e.g., impacted areas) to the extent possible to minimize the amount of new disturbance.	DPM, cEO, ECO, DSS	Layout Design and Site Inspections	Planning phase and construction	cEO, ECO, ESCO	Construction – daily and weekly checks to ensure development stays within the demarcated boundaries and authorised footprint	Site inspection checklist and ECO audits
Construction activities must remain within defined construction areas. No construction / disturbance will occur outside these areas.	ECO, dEO, cEO, DSS	Demarcation and Site inspections	Construction	ECO, ESCO	Construction	Design and layout, site inspection checklist and/or ECO audit report
Management of Faunal Species						

Impact management outcome: Protection of Biodiversity						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
Where holes for poles pose a risk to animal safety, they should be adequately cordoned off to prevent animals falling in and getting trapped and/or injured. This could be prevented by the constant excavating and backfilling during planting of the poles along the lines.	ECO, DSS, dEO, cEO	Implement an 'excavating and backfilling' approach to ensure excavations are closed as quickly as possible	Construction	ECO, ESCO	Daily / When required . Construction – Site inspections during excavation activities (only applicable during excavation activities)	Site Inspections to ensure holes are backfilled as fast as reasonably practicable, a tarpaulin can be placed over the hole temporarily if quick backfilling is not possible, Site Inspections and ECO, ESCO audit report - tape or canvass (material) placed around the holes until the are filled.. ECO audit report.
Poisons for the control of problem animals (rats, mice or other vermin) should only be used after approval from an ecologist.	ECO, dEO, cEO, Ecologist	Pest Control management plan written or signed off by a qualified Ecologist.	Construction / Operation	ECO	Construction/ Operation	MSDS use checklist, contractor can implement a pest control management plan – Implementation can be audited by the ECO and ESCO.
Limit pesticide use to non-persistent, immobile pesticides and apply in accordance with label and application permit directions and stipulations for terrestrial and aquatic applications, and in accordance with the Ecologist requirements.	ECO, dEO, cEO, Ecologist	Pest Control management plan written or signed off by a qualified Ecologist.	Construction / Operation	ECO, ESCO	Daily / Weekly / Monthly – applicable only when Pesticides are required	Pesticide use form to be completed when pesticide is utilized onsite (detailing what pesticide it is, how much and in what area and what it is being used for for example). The Plan can be guided by and ecologist.

Impact management outcome: Protection of Biodiversity						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
The taller (>3m) indigenous trees should be protected as far as possible and be incorporated into the proposed development. The removal of large dead trees is also not advised as these trees also provide smaller habitats for the mentioned bat species as well as rodents.	ECO, dEO, cEO, Ecologist	Ecologist/biodiversity specialist to identify protected plant species to be relocated while conducting the site visit to confirm footprints for tower positions. Identified species to be removed from construction footprint and relocated within the servitude. Delineate Buffer zones and incorporate them into the layout design, follow the required permitting processes to move the trees where required (this can be confirmed by the ecologist)	Construction / Operation	ECO, ESCO, suitably qualified Ecologist (when required)	Pre-construction (site walk down), construction	Biodiversity management plan (including search and rescue of sensitive species)
A monitoring programme needs to be implemented by a specialist to monitoring: 1. If any rare faunal species (page 74 of the Terrestrial Specialist report – August 2021) are confirmed on the property. 2. The impact of construction and the development on the fauna (species carcass counting for example)	ECO, ESCO, dEO, cEO, Ecologist	Faunal monitoring plan – including search and rescue, and rare species & species carcass counting.	Construction / Operation	ECO, ESCO, suitably qualified Ecologist (when required)	Monthly	Faunal monitoring plan Report – including search and rescue incidents, and rare species siting counts; species carcass counting, poaching incidents
Do not feed any wild animals on site.	ECO, dEO, cEO, Ecologist	Faunal monitoring plan – rare species & species carcass counting.	Construction / Operation	ECO, ESCO, Suitably qualified Ecologist	Construction / Operation	Site inspection checklist (check waste containers, eating areas for staff)

Impact management outcome: Protection of Biodiversity						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
Management of Alien Invasive Species						
An Alien Invasive Management Plan must be implemented for the site. Please see the Virginia 1, 2 and 3 PVSEF EMPr Alien Invasive Management Plans which can be incorporated onto the OHPL. In addition, weeds and invader plants will be controlled in the manner prescribed for that category by the Conservation of Agricultural Resources Act (CARA) or in terms of Working for Water guidelines.	ECO, dEO, cEO, Ecologist	Alien Invasive Management Plan & field surveys and site inspections	Pre Construction / Construction, Operation / Decommissioning	ECO, ESCO, Suitably qualified Ecologist	Monthly inspections	Alien Invasive management Plan, ECO audit report, site inspection checklist,
Manage materials brought onto site. Inspect the materials for seeds of noxious plants and take steps taken to eradicate these before transport to the site.	ECO, DSS, dEO, cEO, Ecologist	Alien Invasive Management Plan - Routinely fumigate or spray all materials with appropriate low-residual herbicides prior to transport to or in a quarantine area on site. The contractor is responsible for the control of weeds and invader plants within the construction site for the duration of the construction phase. Alien invasive tree species listed by the CARA regulations should be eradicated.	Construction / Operation / Decommissioning	ECO, DSS; Suitably quaESC), lified Ecologist	Pre-Construction / Construction / Operation / Decommissioning	Daily Inspection of incoming and outgoing vehicles (a checklist can be drawn up for monitoring purposes)

Impact management outcome: Protection of Biodiversity						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
Rehabilitate disturbed areas as quickly as possible to reduce the area where invasive species would be at a strong advantage and most easily able to establish.	ECO, dEO, cEO, Ecologist	Rehabilitation and Revegetation Management Plan	Construction / Decommissioning	ECO, Suitably qualified ecologist	Construction / Decommissioning	ECO audit report, Rehabilitation and Revegetation Management Plan report

Impact management outcome: Management of Soil, Water and Air on site						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
Management of soil and sedimentation						
Protect sloping areas and drainage channel banks that are susceptible to erosion and ensure that there is no undue soil erosion resultant from activities within and adjacent to the construction camp and Work Areas.	DSS, ECO, ESCO, dEO, cEO	Site Inspection	Construction	DSS; ECO, ESCO	Construction (daily) – especially before the storm and rain season	Site inspection
Placement of pylons should be outside sensitive soil types and drainage channels.	DPM, Specialists, ECO, ESCO, dEO, cEO	Design and layout	Design & planning phase	DPM; ECO, ESCO	Pre-Construction. Daily checks during construction to ensure that no activity occurs	Layout design informed by Specialists reports and Opportunities and constraints mapping. Daily checks and observations during construction to

Impact management outcome: Management of Soil, Water and Air on site						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
					with sensitive areas.	ensure that no activity occurs with sensitive areas.
Management of Soil and Water Pollution						
An Integrated waste management approach, as per Condition 37 of the EA (14/12/16/3/3/1/2444/AM1, 26 June 2023) must be implemented that is based on waste minimization and must incorporate reduction, recycling, re-use and disposal where appropriate. Any solid waste must be disposed of at a landfill licensed in terms of Section 20 (b) of the National Environmental Management Wast Act (Act. No 59 of 2008)	ECO, ESCO, DSS, cEO, dEO	Waste management plan	Construction / Operation	ECO, ESCO	Weekly	ECO Audit; Site inspections checklist; waste management report recording waste collection slips
Ensure that all hazardous storage containers and storage areas comply with the relevant SABS standards to prevent leakage.	ECO, ESCO, dEO, cEO	Waste management plan & the utilization of demarcated waste skips on site	Construction / Operation	ECO, ESCO	Daily	SABS checklist, site inspection, ECO Audit
No dumping of waste should take place within the wetland / riparian zone. If any spills occur, they should be immediately cleaned up.	ECO, ESCO, dEO, cEO; DSS	Waste management plan & the utilization of demarcated waste skips on site	Construction / Operation	DSS; maintenance manager; ECO, ESCO	Construction / Operation	Site inspection; ECO Audit, Maintenance checklist; waste management checklist (collection slips)
Implement standard dust control measures, including periodic spraying with non-potable water (frequency will depend on many factors including weather conditions, soil composition and traffic intensity and must thus be	ECO, ESCO, dEO, cEO; DSS	Dust Management Plan	Construction / Operation	DSS; ECO, ESCO	Daily / Weekly (when required – especially during the windy season)	Site inspection of road irrigation and stockpile management

Impact management outcome: Management of Soil, Water and Air on site						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
adapted on an on-going basis) and chemical dust suppressants of construction areas and access roads, and ensure that these are continuously monitored to ensure effective implementation.						
Appropriate sanitary facilities must be provided for the duration of the proposed development and all waste removed to an appropriate waste facility.	ECO, DSS, cEO, dEO	Waste management plan	Construction / Operation	ECO, ESCO, HSE Officer	Daily	ECO Audit; Site inspections; waste management report (record waste collection slips)
A speed limit (preferably 40 km/hour) should be enforced on dirt roads to prevent dust from moving into adjacent freshwater watercourses.	ECO, DSS, cEO, dEO, HSE officer	Speed Control Signs, Security checkpoints, Dust Control Management Plan	Construction	ECO; ESCO, HSE officer	Construction	ECO audit; Speed infringement reports, site observations of speeding
Vehicle traffic should not be allowed on the rehabilitated areas, except on allocated roads, must not be allowed. It will have a negative impact due to the dispersive/compaction characteristics of soils and its implications on the long term. The indiscriminate use of machinery within the in-stream and riparian habitat will lead to compaction of soils and vegetation and must therefore be strictly controlled.	DSS, cEO, dEO, ECO	Site inspections during construction; and Rehabilitation and Revegetation Plan after construction	Construction / Decommissioning	ECO; cEO, ESCO	Construction / Decommissioning	Site inspections during construction; and a walk down of the site by a freshwater specialist and / or ecologist after Rehabilitation and Revegetation after construction
Perform scheduled maintenance to be prepared for storms. Ensure that culverts have their maximum capacity, ditches are cleaned, and that channels are free of debris and brush than can plug structures.	ECO, DSS, cEO, dEO	Storm Water Management Plan	Construction	ECO; DSS, ESCO	Construction – before storms and after storms and during the rainy season	Site preparation before storms and site inspections

Impact management outcome: Management of Human impact						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
Management of the effect of human activities and road mortalities						
Maintain proper firebreaks around entire development footprint.	ECO, dEO, cEO, Fire department	Fire Management Plan – Local Fire Department.	Construction / Operation	ECO; Fire department	Construction / Operation	A report recording when Fire breaks are conducted and their frequency.
Educate construction workers regarding risks and correct disposal of cigarettes.	ECO, dEO, cEO, Fire department	Fire Management Plan & Toolbox talks	Construction / Operation	ECO	Construction / Operation	Toolbox talk records and attendance registers
Travelling at night should be avoided or limited as much as possible.	ECO, dEO, cEO, Health and Safety Officer	Security Checkpoints & Inspections	Construction / Operation	ECO; Health and Safety Officer	Construction / Operation	Toolbox talk records and attendance registers

Impact management outcome: Management of Freshwater Resources						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
General Management of Wetland resources on site						

Impact management outcome: Management of Freshwater Resources						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
As per Condition 35 of the EA (DFFE Ref.: 14/12/16/3/3/1/2444/AM1, dated 26 June 2023), The proposed powerline must avoid sensitive areas such as drainage areas, while also allowing corridors of indigenous grassland and outcrops on areas outside the development footprint to be preserved.	PM, ECO, DSS, ECO	Ensure that during the planning and design phase that the layout delineates sensitive areas.	Planning and design phase and during construction	PM, ECO, ESCO, DSS, ECO	Planning and design phase and observation during the construction phase that boundaries and buffers have been adhered to.	Final layout which delineates the development areas and 'No-Go' areas. Site inspections during the construction phase to ensure that development or construction activities have not encroached outside of the designated areas and into sensitive areas.
Construction within the 32 m regulatory zone should be avoided where reasonably practicable. Where possible taking into consideration associated engineering constraints, the OHPL must span all freshwater ecosystems including the endorheic depression wetlands. Where engineering designs do not allow for this, the mitigation measures indicated in this EMPr must be adhered to reduce all impacts to the freshwater ecosystems and to prevent sediment changes to the channels.	ECO, ESCO, DSS, cEO, dEO, Freshwater Specialist	Planning, design and layout – informed by the freshwater assessment report which delineates the drainage channel extent and to inform how far into the 32m regulatory zone the construction can encroach	Planning and design phase / pre-construction / construction	ECO, ESCO; Freshwater Specialist	Planning and Design, Pre-Construction, During construction – daily checks	Planning, design and layout – informed by the freshwater assessment report which delineates the drainage channel extent and to inform how far into the 32m regulatory zone the construction can encroach
During the operational phase, inspections of structures and the servitude access road (particularly any culverts or bridge crossings) following severe storms must be conducted and required maintenance activities must be undertaken based on the inspection	ECO, ESCO, Engineer, Freshwater specialist (if required) DSS, dEO, cEO	Site inspections post storms	Operation	ECO, ESCO; Engineer, Freshwater specialist (if required)	Operation	Site inspection, ECO, ESCO audit and report on findings of storm damage. A storm damage checklist can be written up

Impact management outcome: Management of Freshwater Resources						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
findings.						
During the operational phase, inspections of structures and the servitude access road (particularly any culverts or bridge crossings) following severe storms must be conducted and required maintenance activities must be undertaken based on the inspection findings.	ECO, ESCO, Engineer, Freshwater specialist (if required) DSS, dEO, cEO	Site inspections post storms	Operation	ECO, ESCO; Engineer, Freshwater specialist (if required)	Operation	Site inspection, ECO, ESCO audit and report on findings of storm damage. A storm damage checklist can be written up
Clearing of vegetation at the crossings for the powerline corridors should be scheduled for the drier winter months and limited to areas immediately needed for construction.	DPM, ECO, dEO, cEO, Freshwater Specialist	Desing & layout	Planning phase and prior to construction	DPM; ECO; Freshwater Specialist	Construction	Design and Final layout which incorporates sensitive freshwater ecosystems
Minimize soil exposure around the Solar PV Modules. Re-vegetate exposed areas surrounding the powerline development and allow a sufficient buffer between the cropland development to prevent sedimentation into the wetlands / rivers.	ECO, ESCO, dEO, cEO, Freshwater Specialist	Rehabilitation and Revegetation plan	Construction / Operation / Decommissioning	ECO, ESCO	Daily Site Inspections, inspections should especially be conducted after rainstorms/periods of high rain and wind	ECO, ESCO audit report and Rehabilitation and Site inspection checklist, Revegetation plan report
The location where the powerline crosses the drainage channels should be the least sensitive area. The site should	DPM, DSS, ECO, dEO, cEO, Freshwater	Planning, design and layout which are informed by the Freshwater Specialist Report and input.	Planning phase and prior to construction	DPM; ECO; ESCO, Freshwater Specialist	Pre-construction	Final design and layout which accounts for freshwater sensitivities and

Impact management outcome: Management of Freshwater Resources						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
be indicated by an ecologist after consultation by the engineers. The following mitigation measures and management actions should be taken to minimize potential impacts of the line crossing drainage channels: - Avoid power line locations in areas of high natural hazard risk, such as landslides, rock-fall areas, steep slopes (over 60-70%), wet areas, saturated soils, etc. - Avoid or minimize construction in narrow canyon bottoms or on flood plains of rivers that will inevitably be inundated during major storm events. - Minimize changes to natural drainage patterns and crossings to drainages. - Scheduled maintenance to be prepared for storms. Insure that culverts have their maximum capacity, ditches are cleaned, and that channels are free of debris and brush than can plug structures. - Keep cut and fill slopes as flat as possible and well covered (stabilized) with vegetation to minimize slumping as well as minimize surface erosion.	Specialist					drainage channel crossings

Impact management outcome: Management of Freshwater Resources						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
- Use deep-rooted vegetation for biotechnical stabilization on slopes. Use a mixture of good ground cover plus deep-rooted vegetative species, preferably native species, to minimize deep-seated mass instability as well as offer surface erosion control protection. - Locate the power line on narrow sections of rivers and in areas of bedrock where possible. Avoid fine, deep alluvial deposits (of fine sand and silt) that are scour susceptible and problematic, or which otherwise require costly foundations. - Ensure that structural designs for the power line crossing the drainage channels include appropriate design criteria and have good foundations to prevent failures during floods. - Place retaining structures, foundations, and slope stabilization measures into bedrock or firm, in-place material with good bearing capacity to minimize undermining, rather than placing these structures on						

Impact management outcome: Management of Freshwater Resources						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
shallow colluvial soil or on loose fill material.						
Rehabilitation of the riparian area affected by development after construction have been completed should be considered a high priority and all areas rehabilitated should be audited after construction has ceased by a suitably qualified environmentalist.	ECO, ESCO, dEO, cEO, Freshwater specialist	Rehabilitation and Revegetation Plan guided by the freshwater specialist	Decommissioning	ECO, ESCO; Freshwater specialist	Decommissioning	Rehabilitation and Revegetation Site walk through and report
Demarcate all riparian boundaries with pegs and danger tape.	ECO, ESCO, dEO, cEO, Freshwater specialist	Planning, design and layout; and Site Inspections during construction	Construction	ECO, ESCO; Freshwater specialist	During the entire Construction Phase	Final design and layout, Site Inspection,
Edge effects of pre-construction and construction activities, including erosion, sedimentation and alien/weed control, need to be strictly managed in wetland areas as well as their associated buffer zones.	DPM, ECO, ESCO, DSS, dEO, cEO	Planning, design and layout – informed by a freshwater assessment report , Site inspections	Pre-construction / Construction	DPM; ECO, ESCO	During the entire Construction Phase	Site Inspection checklist
The following general rehabilitation measures should be implemented in the disturbed riparian zone, where reasonably practicable: - All disturbed surface areas will be re-shaped to resemble the surrounding natural topography. Surfaces will be ripped / scarified, and re-vegetated with indigenous grass species. - Implement concurrent rehabilitation processes to	ECO, ESCO, dEO, cEO, Freshwater specialist	Rehabilitation and Revegetation Plan guided by the Freshwater specialist	Construction / Decommissioning	ECO, ESCO; Freshwater specialist	During the entire Construction / Operation / Decommissioning phases	Rehabilitation and Revegetation Plan report and final site inspection by the freshwater specialist after rehabilitation

Impact management outcome: Management of Freshwater Resources						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
limit degradation of soil biota. - Terrestrial invasive removal programs must be maintained throughout the proposed development as well as in the aftercare and maintenance phases.						

Impact management outcome: Agricultural Impact Management						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
Management of agricultural resources, specifically pertaining to soil, on site						
Vegetation and soil should be retained in position for as long as possible and should only be removed immediately ahead of construction/earthworks in any specific area. Vegetation (grass and small shrubs) should not be cleared from the site prior to construction except if vegetation requires relocation as determined through an ecology assessment). This material is to be stripped together with topsoil as it will supplement the organic and possibly seed content of the topsoil stockpile depending on the time of soil stripping	DSS, ECO, dEO, cEO	Site inspection	Construction	ECO, ESCO	Construction – during excavation and stockpiling activities	Site inspection

Impact management outcome: Agricultural Impact Management						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
(whether plants are in seed or not).						
Soil should be handled when dry during removal and placement to reduce the risk of compaction. During construction, sensitive soils with high risk of compaction (e.g., clayey soils) must be avoided by construction vehicles and equipment, wherever possible, to reduce potential impacts.	DSS, ECO, dEO, cEO	Site inspection to ensure soils are not compacted during construction activities	Construction	ECO, ESCO	Construction – Stockpiling activities	Site inspection
All compacted areas (including temporary access tracks) are to be ripped/scarified (along contour) to a depth of 150 mm prior to the replacement of topsoil.	DSS, ECO, dEO, cEO	Site inspection to ensure soils are not compacted during construction activities	Construction	ECO, ESCO	Construction – after soil compaction has occurred	Site inspection
Management of loss of land capability						
Corridors and servitude widths should be secured around the development footprint areas to ensure the current land use (grazing and agriculture) surrounding the site can continue in a functional way after construction.	ECO, dEO, cEO	Site Inspection to ensure no encroachment occurs into the adjacent areas	Construction / Decommissioning	ECO, ESCO	Construction / Decommissioning	Site Inspection to ensure no encroachment occurs into the adjacent areas
This is a recommendation ont a requirement: Considering that re-growth of grass will take place under the panels as the mounting systems are at least 1m above ground level, the grazing value of the land will still be available to small livestock such as game, goats and sheep. At the end of the lifetime of the	DPM, ECO, DSS, dEO, cEO, Agricultural Specialist	This option must be discussed with the DPM and ECO and Agricultural Specialist after construction	Post construction / Operation	ECO, ESCO, DPM; Agricultural Specialist	Post construction / Operation	This option must be discussed with the DPM and ECO and Agricultural Specialist after construction

Impact management outcome: Agricultural Impact Management						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
solar plant, structures will be removed, and natural vegetation will re-establish naturally. The grazing value of the land can therefore be increased by using planted pasture underneath the solar panel mounts. The nature of the vegetation at the farm is therefore marginal for extensive livestock production. Using planted pasture to supplement livestock production is however possible but this could be constrained by high demand for irrigation.						
Management of Soil destruction and sterilisation						
Topsoil should be handled twice only - once to strip and stockpile, and secondly, to replace, level, shape and scarify.	ECO, ESCO, DSS, dEO, cEO	Stockpile Management	Construction	ECO, ESCO; DSS	During Construction – when Stockpiling activities are applicable	Site inspections
Stockpile topsoil separately from subsoil.	ECO, ESCO, DSS, dEO, cEO	Stockpile Management on Site	Construction	ECO, ESCO; DSS	During Construction – when Stockpiling activities are applicable	Site inspections
Topsoil stockpiles should not exceed 2.0 m in height and should be protected by a mulch cover where possible.	ECO, ESCO, DSS, dEO, cEO	Stockpile Management on Site	Construction	ECO, ESCO; DSS	During Construction – when Stockpiling activities are	Site inspections

Impact management outcome: Agricultural Impact Management						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
					applicable	
Maintain topsoil stockpiles in a weed free condition.	ECO, ESCO, DSS, dEO, cEO	Stockpile Management on Site	Construction	ECO, ESCO; DSS	During Construction – when Stockpiling activities are applicable	Site inspections
Topsoil should not be compacted in any way, nor should any object be placed or stockpiled upon it	ECO, ESCO, DSS, dEO, cEO	Stockpile Management on Site	Construction	ECO, ESCO; DSS	During Construction – when Stockpiling activities are applicable	Site inspections
Stockpile topsoil for the minimum time possible i.e., strip just before the relevant activity commences and replace as soon as it is completed.	ECO, ESCO, DSS, dEO, cEO	Stockpile Management on Site	Construction	ECO, ESCO; DSS	During Construction – when Stockpiling activities are applicable	Site inspections

Impact management outcome: Avifaunal Impact Management						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**

Impact management outcome: Avifaunal Impact Management						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
Reduction and management of bird habitat destruction						
An Avifaunal walkthrough (as per Condition 36 of the Environmental Authorisation 14/12/16/3/3/1/2444/AM1, 26 June 2023).) must be conducted by a suitably qualified Avifaunal Specialist within one month prior to the commencement of construction to identify breeding sites and ground truth the final layout.	DPM, ECO, Avifaunal Specialist	Site walk down by the Avifaunal Specialist	One month prior to construction commencement	ECO; ESCO, Avifaunal Specialist	Pre-Construction	Site walk down Avifaunal Report
A construction and operational avifaunal monitoring plan needs to be implemented that is in line with BirdLife South Africa/Endangered Wildlife Trust's most recent guideline. It would be best practice to consult the Endangered Wildlife Trust's Wildlife and Energy Group for the most up to date recommendations for what approved nocturnal devices are available before construction begins.	ECO, dEO, cEO, Avifaunal Specialist	The construction and operational avifaunal monitoring plan, considering BirdLife South Africa/Endangered Wildlife Trust's – to be determine by the Avifaunal Specialist	Construction / Operation	ECO; ESCO, Avifaunal Specialist	Construction / Operation	Avifaunal monitoring plan report which incorporates the BirdLife South Africa/Endangered Wildlife Trust's most recent guideline. This must be written by and signed of by a suitably qualified Avifaunal Specialist
Any bird nests that are found during the construction period must be reported to the ECO and Avifaunal Specialist. Grass cover should be preserved throughout the servitude to afford terrestrial species the necessary cover. If any of the priority bird species are observed to be roosting and/or breeding in the vicinity, the ECO must be notified and the avifaunal specialist	ECO, cEO, dEO Avifaunal Specialist	The construction and operational avifaunal monitoring plan, considering Birdlife guidelines – to be determine by the Avifaunal Specialist.	Construction / Operation	ECO; ESCO, Avifaunal Specialist	Construction / Operation	Avifaunal monitoring plan report which incorporates the BirdLife South Africa/Endangered Wildlife Trust's most recent guideline. This must be written by and signed of by a suitably qualified

Impact management outcome: Avifaunal Impact Management						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
contacted to guide the procedure to follow.						Avifaunal Specialist
Management of the disturbance to birds during the construction stage						
Where possible, it is strongly suggested that the construction of the power lines be carried out in the winter season when most species are not breeding.	DPM, ECO, Avifaunal Specialist	Planning and Design	Planning and design phase	DPM, ECO, ESCO, Avifaunal Specialist	Pre-Construction Scheduling	Planning and design phase pre-construction to guide and phase construction to account for avifaunal sensitivities as far as reasonably practicable
Should helicopters be used during the construction phase, low-level flying should be restricted to the transmission line corridor only.	DPM, ECO, dEO, cEO, DSS, Avifaunal specialist	Scheduling and Planning – consult the layout for sensitive avifaunal areas and avoid them as far as possible	Planning and Design	DPM; ECO; ESCO, Avifaunal specialist	Planning and Design	The Avifaunal specialist must be contacted prior to use of the helicopter to guide the process and which areas to avoid from an avifaunal persecutive
Reducing and management of bird electrocutions on the proposed power lines						
All high-risk perching surfaces should be fitted with bird guards and perch guards as deterrents (Hunting 2002).	ECO, dEO, cEO, DSS, Avifaunal specialist	Design and Layout. Ensure these requirements are considered during the final design of the powerline	Construction / Operation	ECO; ESCO, Avifaunal specialist	Construction / Operation	Final design and layout that incorporates avifaunal buffers (layout must be approved by the Avifaunal specialist)
On the 132KV line, the steel monopole design with bird perch must be used. This is a safe structure and will mitigate electrocutions on all species. Should a 400KV line be built these are also safe	ECO, dEO, cEO, DSS, Avifaunal specialist	Design and Layout. Ensure these requirements are considered during the final design of the powerline	Construction / Operation	ECO; ESCO, Avifaunal specialist	Construction / Operation	Final design and layout that incorporates avifaunal buffers (layout must be approved by the Avifaunal

Impact management outcome: Avifaunal Impact Management						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
die to the clearances involved and no further recommendation is needed. The above structure will also mitigate the impact of bird induced faulting that was not mentioned in the report, this is a business impact and a further motivation to use the monopole design.						specialist)
Installation of artificial bird space perches and nesting platforms, at a safe distance from energised components (Goudie 2006; Prinsen et al. 2012).	ECO, dEO, cEO, DSS, Avifaunal specialist	Design and Layout. Ensure these requirements are considered during the final design of the powerline	Construction / Operation	ECO; ESCO, Avifaunal specialist	Construction / Operation	Final design and layout that incorporates avifaunal buffers (layout must be approved by the Avifaunal specialist)
Bird collisions with the proposed power lines						
Anti-collision bird flapper devices should be fitted to power line cables particularly along the sections running over the drainage lines, along the Florida farm section where there are seasonal pans present, over the grassland habitats in the far-eastern sections of the route and around the marshland habitats at the far-western end of the route. It would be best practice to consult the Endangered Wildlife Trust's Wildlife and Energy Group for the most up to date recommendations for what approved nocturnal devices are available before construction begins.	ECO, dEO, cEO, DSS, Avifaunal specialist	Design and Layout. Ensure these requirements are considered during the final design of the powerline. Site walkdown	Pre-construction / Construction	ECO; ESCO, Avifaunal specialist	Pre-construction / Construction	Final design and layout that incorporates avifaunal buffers (layout must be approved by the Avifaunal specialist). A final site walk down must be conducted to ensure the correct sections of the lie are marked prior to construction.

Impact management outcome: Avifaunal Impact Management						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
Solar-powered night deterrents should be placed along the lines in the Florida section where night-flying birds such as flamingos are likely to be active.	ECO, dEO, cEO, DSS, Avifaunal specialist, Engineer	Design and Layout. Ensure these requirements are considered during the final design of the powerline	Construction / Operation	ECO; ESCO, Avifaunal specialist	Construction / Operation	Final design and layout that incorporates avifaunal buffers (layout must be approved by the Avifaunal specialist)
General considerations to reduce bird impacts						
All jumpers at transformers, t-offs and strain structures should be insulated and made bird safe (Jenkins 2008).	ECO, dEO, cEO, DSS, Avifaunal specialist, Engineer	Design and Layout. Ensure these requirements are considered during the final design of the powerline	Construction / Operation	ECO; ESCO, DSS; Avifaunal specialist	Construction / Operation	Insulation methods and materials and techniques must be approved by the Avifaunal Specialist
Increase the conspicuousness of the power line cables and earth-wires by fitting them with appropriate devices, e.g. brightly coloured marker balls, thickened wire coils or bird diverters along the high risk areas of the route. It has been proven that bird collision risk can be reduced by 50–60% when power lines are fitted with these devices (Jenkins 2010). In this regard the Eskom Transmission Bird Collision Guideline document by Vosloo and van Rooyen (2008) should be consulted	ECO, dEO, cEO, DSS, Avifaunal specialist, Engineer	Design and Layout. Ensure these requirements are considered during the final design of the powerline	Construction / Operation	ECO; ESCO, DSS; Avifaunal specialist	Construction / Operation	Final design and layout that incorporates avifaunal buffers (layout must be approved by the Avifaunal specialist)

Impact management outcome: Geophysical Impact Management						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
Mitigation of Geophysical Impacts						
The wetting of soil and the discharge of construction greywater into unspoiled soil should be controlled.	ECO, dEO, cEO	Stormwater Control management plan & Waste Management Plan & Site inspections	Construction	ECO, ESCO	Construction – daily: water should be disposed of into a stormwater pond to evaporate.	Site inspections; storm water control management
The soil profile is generally poorly developed therefore it is recommended that the pylons be founded in pre-bored holes drilled with a percussion drilling machine as augers will refuse prematurely.	DPM, DSS, ECO, dEO, cEO	Design and Layout	Pre design and planning	DPM; DSS; ECO, ESCO, ECO	Pre-construction / Construction	Plan the use of appropriate tools to dig the pylon holes

Impact management outcome: Heritage and Palaeontological Impact Management						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**

Impact management outcome: Heritage and Palaeontological Impact Management						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
The site is poorly preserved, of medium-low significance and application should be made for the necessary **destruction permit** from the relevant Heritage Resources Authorities should the site, or parts thereof be impacted on by the construction of monopoles, pylons or other infrastructure. OR Should the site be retained, it is advisable to observe a **10m conservation buffer** around the Heritage site: '**Site Exigo-VSPL-HP01'**.*A site walk down was conducted by the Heritage Specialist on 20 July 2023. The Heritage features were delinated and the original 20 m buffer stipulated in the EA fell away.* • During stringing no vehicle must travel through the site but utilise the rerouted service road. • Guide ropes can be taken through the site on foot during stringing. • If the structures within the sensitive areas cannot be avoided: o A consultation process to investigate the presence of stillborn and unmarked	ECO, ESCO, dEO, cEO, Heritage / Paleo Specialist	Desing and Layout; or if the sites will be destroyed the correct permitting process must be followed and the Heritage Specialist contacted to guide the process	Planning phase and prior to construction	ECO; ESCO, Heritage/ Palaeo Specialist	Construction – Site observations	Desing and Layout; or if the sites will be destroyed the correct permitting process must be followed and the Heritage Specialist contacted to guide the process

Impact management outcome: Heritage and Palaeontological Impact Management						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
graves should be followed; ○ If during the consultation process, it is determined that there are burials present a grave relocation process must be initiated. ○ Upon completion of the relocation process construction can commence. ○ The site must be monitored during construction on the site by an archaeologist to identify and mitigate any potential archaeological finds or previously unidentified burials that can potentially be unearthed during construction work. ○ application should be made for the necessary destruction permit from the relevant Heritage Resources Authorities should the site, or parts thereof be impacted on by the construction of monopoles, pylons or other infrastructure.						

Impact management outcome: Heritage and Palaeontological Impact Management						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
Should any subsurface palaeontological (fossils), archaeological or historical material, or burials be exposed during construction activities, all activities should be suspended and the archaeological specialist and SAHRA should be notified immediately.	ECO, ESCO, dEO, cEO, Heritage / Paleo Specialist	A Chance find Protocol (Please see the Palaeontological Specialist Report Appendix A) must be adhered to. The Heritage and Palaeontological Specialist must be contacted when material is unearthed	Construction	ECO; ESCO, Heritage / Palaeo Specialist	Construction – Site observations during excavation works	A Chance find Protocol (Please see the Palaeontological Specialist Report Appendix A) must be adhered to. The Heritage and Palaeontological Specialist must be contacted when material is unearthed
As the proposed development has the potential to expose fossils we recommend the following mitigation clauses, that the proposed development be constrained to: - The irrigated cropland that covers most of the study area, currently carrying maize/corn, overlying the mapped Quaternary alluvial deposits; - The non-irrigated naturally vegetated grassland, surrounding the Merriespruit River centrally, the Steenbokspruit River in the east, and the grassland immediately West of the R73	ECO, ESCO, dEO, cEO, Heritage / Paleo Specialist	Design and Layout to incorporate the sensitive Palaeonotological and Heritage areas into the layout.	Planning phase and prior to	ECO; ESCO, Heritage / Palaeo Specialist	Construction – Site observations during excavation works	A final layout and design which incorporates the sensitive Palaeonotological and Heritage areas into the layout. This must be approved by the Heritage / Palaeo Specialist
Due to palaeontological sensitivity, we do not recommend development on: - the Merriespruit River, the river edges of exposed;	ECO, ESCO, dEO, cEO, Heritage / Paleo Specialist	Design and Layout to incorporate the sensitive Palaeonotological and Heritage areas into the layout.	Planning phase and prior to	ECO; ESCO; Heritage / Palaeo Specialist	Construction – Site observations during excavation	A final layout and design which incorporates the sensitive Palaeonotological

Impact management outcome: Heritage and Palaeontological Impact Management						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
alluvium and isolated scattered sandstone boulders nearby; - the Steenbokspruit River and its three erosional gullies or tributary streams.					works	and Heritage areas into the layout. This must be approved by the Heritage / Palaeo Specialist

Impact management outcome: Visual Impact Management						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
Management of Visual Impacts						
Implement dust suppressing techniques to reduce dust clouds form construction activities which can limit visibility. These could include the regular wetting of the soil or the application of dust suppressing agents.	DSS, ECO, ESCO, dEO, cEO	Dust Management Plan. Consider Laying asphalt for internal and access roads	All phases	DSS, ECO, ESCO	Daily monitoring	Daily road watering irrigation checklist
During the field work and impact assessment it was noted that the existing vegetation would play a minimal role in screening the proposed project components from VSRs. However, care should still be taken to: - Retain as much of the existing	DSS, ECO, ESCO, dEO, cEO	Rehabilitation and Revegetation Plan. The Visual specialist can be contacted to guide vegetation rehabilitation requirements pertaining to visual impacts specifically	Construction / Decommissioning	DSS, ECO, ESCO	Weekly observations	Rehabilitation and Revegetation Plan. The Visual specialist can be contacted to guide vegetation rehabilitation requirements pertaining to visual impacts

Impact management outcome: Visual Impact Management						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
vegetation as possible. - Where vegetation is cleared, a rehabilitation plan should be implemented. This should be done in conjunction with the Vegetation, Visual Impact and any other relevant specialists. - Where possible and required, careful placement of new or transplanted vegetation should be planted in areas relevant to (Visual Sensitive Receptor) VSR site lines.						specifically
It is assumed that construction activities would be limited to daylight hours. With regards to the construction camp: - Refrain from causing 'light spillage' beyond the construction camp by installing light fixtures with directional illumination. - Keep lighting to a minimum by installing low-level bollard type lights instead of post top lights along walkways between buildings. - Where possible avoid high flood lights, and instead use lower locally lit installations. - In general, lighting should be carefully directed and only be used where absolutely	ECO, ESCO, dEO, cEO, DSS, Visual Specialist	Design guidelines informed by the Visual Impact Assessment and a qualified and suitable Visual Specialist.	Construction / Operation	ECO, ESCO; Visual Specialist	Daily checks of lighting	Design guidelines; Site Inspections; Complaints register rECO, ESCOrding light pollution complaints by neighbours

Impact management outcome: Visual Impact Management						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
necessary. Should construction activities extend during night-time, adhere to the same recommendations as for the construction camp.						
Colour: Where possible use earthy tones to greys with a toned-down hue, instead of whites and creams, as such combinations are recessive to the eye and tend to be slightly less noticed. Do not keep to a uniform colour but break up the components with slightly different colour tones.	DPM, DSS, ECO, ESCO, Visual Specialist	Design and Layout	Planning and design phase; pre-construction; Construction (painting phase)	DSS; ECO, ESCO	Planning and design phase; pre-construction; Construction (painting phase)	Design and Layout

Impact management outcome: Traffic Impact Management						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
Management of Traffic Impacts - Recommendations						

Impact management outcome: Traffic Impact Management						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
The below are recommendations: Intersection of Virginia Road and Proposed Virginia 1, 2 and 3 access points: - Provide 60 meters dedicated right turn lane on the eastern approach of Virginia Road. - Provide 60 meters dedicated right turn lane on the western approach of Virginia Road. - Provide 60 meters dedicated left turn lane on the eastern approach of Virginia Road. - Provide 60 meters dedicated left turn lane on the western approach of Virginia Road. - Provide 60 meters acceleration lane towards the east of Virginia Road. - Provide 60 meters acceleration lane towards the west of Virginia Road. - Provide reflective road studs as part of the proposed intersection to improve visibility of the intersection geometry when it is dark. - Provide relevant road traffic signs and road markings.	DPM, DSS, ECO, ESCO, Traffic Specialist	Design and Layout	Planning phase and prior to construction	DSS; ECO, ESCO; Traffic Specialist	Construction / Operation phases	Final design and layout

Impact management outcome: Traffic Impact Management						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
As part of the construction phase, a dedicated loading and off-loading area on site should be established where workers can safely be loaded and off-loaded by public transport or arranged transport.	DSS, ECO, ESCO	Demarcation of a loading bay	Construction	DSS; ECO, ESCO	Daily checks that the loading bay is being utilized correctly and that offloading or on-loading is not occurring outside of demarked areas	Demarcation using red danger tape during construction
Obtain approval for the position and geometric layout for the proposed access intersection from and to Virginia Road. This approval should be obtained from the Free State Department of Police, Roads and Transport as part of the detailed design phase.	DSS, ECO, ESCO, cEO, dEO, Traffic Specialist	The final layout must be submitted to the Free State Department of Police, Roads and Transport for approval on road access positions	Post construction – if required	DPM; Traffic Specialist; ECO, ESCO	Post construction – if required	The final layout must be submitted to the Free State Department of Police, Roads and Transport for approval on road access positions

Impact management outcome: Social Impact Management						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
Creation of employment and business opportunities, and opportunity for skills development and on-site training.						
Preparation and implementation of a Stakeholder Engagement Plan (SEP) prior to and during the construction phase. - Where reasonable and practical, the proponent should appoint local contractors and implement a 'locals first' policy, especially for semi and low-skilled job categories. - Where feasible, appoint local contactors that are compliant with Broad Based Black ECO, ESCOnomic Empowerment (BBBEE) criteria.	Project Manager, Contractor	Agreements and training	Pre-construction and during construction	Project Manager, Contractor, ECO, ESCO	Pre-construction and during construction	Signed agreements and training rECO, ESCOrds
Impacts associated with the presence of construction workers on local communities						
- Preparation and implementation of a Stakeholder Engagement Plan (SEP) prior to and during the construction phase. - Preparation and implementation of a Community Health, Safety and Security Plan (CHSSP) prior to and during the construction phase. - The SEP and CHSSP should include a Grievance Mechanism that enables stakeholders to report resolve incidents. - The proponent and contractor should develop a Code of Conduct (CoC) for construction workers.	- Project Manager, Contractor	- Stakeholder engagement, security, grievance form, and safety Agreements and training	- Pre-construction and during construction	- Project Manager, Contractor, ECO, ESCO	- Pre-construction and during construction	- Signed agreements and training rECO, ESCOrds

Impact management outcome: Social Impact Management						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
- The proponent and the contractor should implement an HIV/AIDS, COVID-19 and Tuberculosis (TB) awareness programme for all construction workers at the outset of the construction phase. The programmes should form part of the CHSSP.						
Impacts related to the potential influx of job-seekers						
- The proponent should implement a policy that no employment will be available at the gate.	Project Manager, Contractor	Stakeholder engagement, security and safety Agreements and training	Pre-construction and during construction	Project Manager, Contractor, ECO, ESCO	Pre-construction and during construction	Signed agreements, stakeholder engagement registers and documents
Increased risks to livestock and farming infrastructure associated with the construction related activities and presence of construction workers on the site						
- All farm gates must be closed after passing through. - Should damage to farmland occur, a Grievance procedure must be implemented and followed - Contractors appointed by the proponent must ensure that all workers are informed at the outset of the construction phase of the conditions contained in the Code of Conduct, specifically consequences of stock theft and trespassing on adjacent farms.	Project Manager, Contractor	Farmer engagement, live stock management, Agreements and training, Grievance procedure and report	Pre-construction and during construction	Project Manager, Contractor, ECO, ESCO	Pre-construction and during construction	Signed agreements and, live stock management records, Grievance procedure and report

Impact management outcome: Social Impact Management						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
Increased risk of grass fires associated with construction related activities						
- Contractor should ensure that open fires on the site for cooking or heating are not allowed except in designated areas. - Smoking on site should be confined to designated areas. - Contractor should ensure that construction related activities that pose a potential fire risk, such as welding, are properly managed and are confined to areas where the risk of fires has been reduced. Measures to reduce the risk of fires include avoiding working in high wind conditions when the risk of fires is greater. In this regard special care should be taken during the high-risk dry, windy winter months.	Project Manager, Contractor	Farmer engagement, fire department engagement, management, Agreements and training	Pre-construction and during construction	Project Manager, Contractor, ECO, ESCO	During construction	Signed agreements and rECO, ESCOrds, fire management plan
Nuisance impacts, such as noise, dust, and safety, associated with construction related activities and vehicles						
- Establishment of a Grievance Mechanism that provides local farmers and other road users with an effective and efficient mechanism to address issues related to construction related impacts, including damage to local gravel farm roads. - The movement of heavy vehicles	Project Manager, Contractor	Site control signs, establish a grievance mechanism form, dust management plan	Pre-construction, during construction, operation	Project Manager, Contractor, ECO, ESCO	Pre-construction, during construction, operation	Site control signs, establish a grievance mechanism form, dust management plan

Impact management outcome: Social Impact Management						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	**Method of implementation**	**Timeframe for implementation**	**Responsible person**	**Frequency**	**Evidence of compliance**
associated with the construction phase should be timed to avoid times days of the week, such as weekends, when the volume of traffic travelling along the access roads may be higher.						

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: CV OF THE EAP