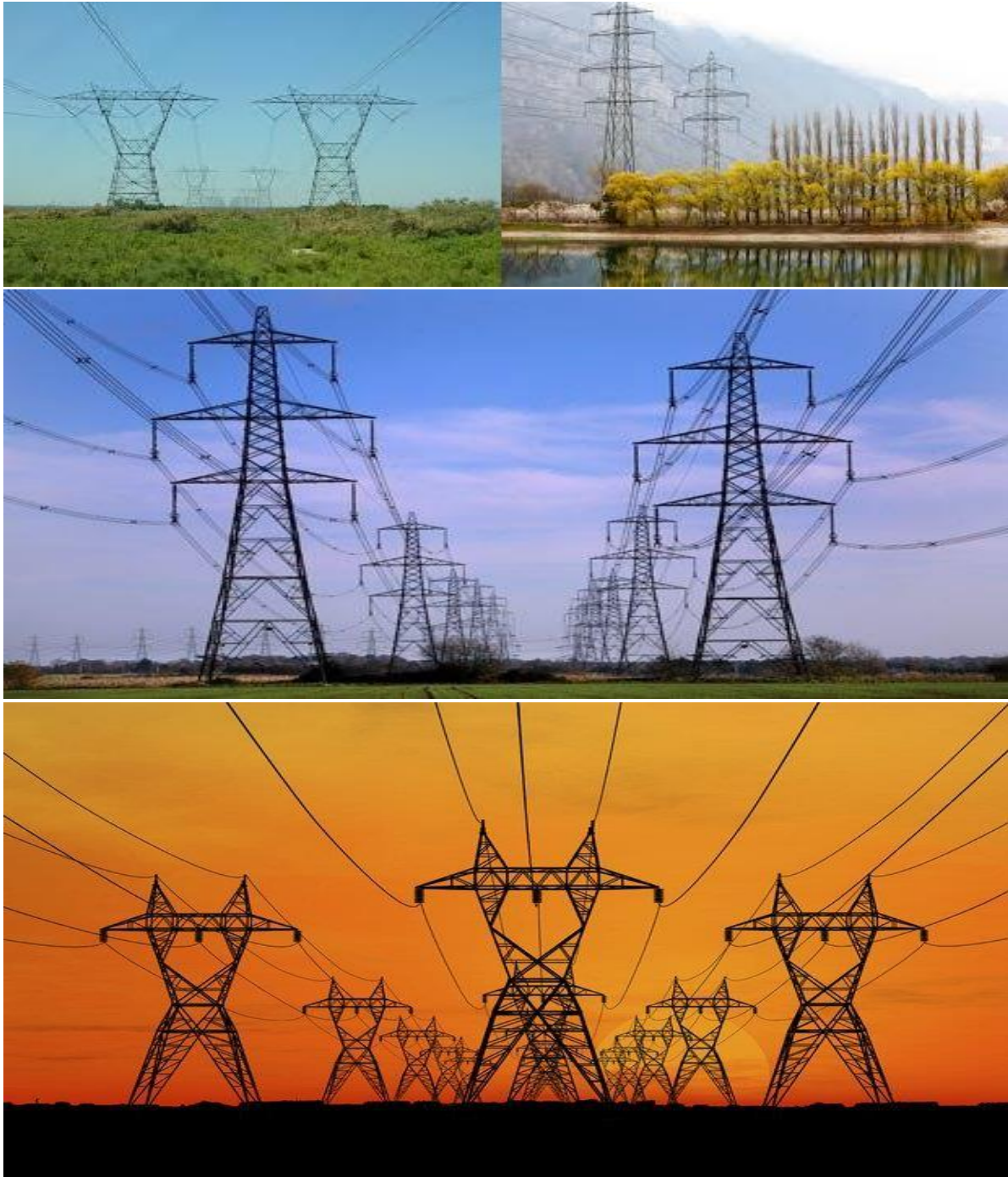


APPENDIX 1  
GENERIC ENVIRONMENTAL MANAGEMENT PROGRAMME (EMPr) FOR  
THE DEVELOPMENT AND EXPANSION FOR OVERHEAD ELECTRICITY  
TRANSMISSION AND DISTRIBUTION INFRASTRUCTURE

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**environmental affairs**

Department:  
Environmental Affairs  
REPUBLIC OF SOUTH AFRICA

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## **INTRODUCTION**

### **1. Background**

The National Environmental Management Act 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 utilized as the basis for a decision on an application for environmental authorization (EA). The content of an EMPr must either contain the information set out in Appendix 4 of the EIA Regulations, 2014, 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 for overhead electricity transmission and distribution infrastructure, and all listed and specified activities necessary for the realization of such infrastructure.

### **3. Objective**

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

### **4. Scope**

The scope of this generic EMPr applies to the development or expansion overhead electricity transmission and distribution infrastructure requiring EA in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), i.e. with a capacity of 33 kilovolts or more. This generic EMPr applies to activities requiring EA, mainly activity 11 and 47 of the Environmental Impact Assessment Regulations Listing Notice 1 of 2014 and activity 9 of the Environmental Impact Assessment Regulations Listing Notice 2 of 2014, and all associated listed or specified activities necessary for the realization 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 are <b>not legally binding</b>	Definitions, acronyms, roles & responsibilities and documentation and reporting.
B	1	Pre-approved generic EMPr template	<p>Contains generally accepted impact management outcomes and actions required for the avoidance, management and mitigation of impacts and risks associated with the development or expansion overhead electricity transmission and distribution infrastructure, which are presented in the form of a template that has been pre-approved.</p> <p>The template in this section is to be completed by the contractor, with each completed page signed and dated by the holder of the EA prior to commencement of the activity.</p> <p>Once completed and signed, the template represents the EMPr for the activity approved by the CA and is legally binding. The template <b>is not required</b> to be submitted to the CA and <b>does not</b> need approval. Once the generic EMPr is gazetted for implementation, it has been approved by the CA.</p> <p>To allow interested and affected parties access to the pre-approved EMPr template for consideration through the authorization process, the applicant(s)/proponent(s) or the EAP on behalf of the applicant (s)/proponent (s) must make the location of the document known to the potential registered interested and affected parties. Should the</p>

		potential registered interested and affected parties not have access to electronic media, the applicant(s) or the EAP must make a hard copy available at a public location.
2	Site specific information	<p>Contains preliminary infrastructure layout and a declaration that the applicant/holder of the EA will comply with the pre-approved generic EMPr template contained in <u>Part B: Section 1</u>, and understands that the impact management outcomes and actions are legally binding. The preliminary infrastructure layout must be finalized to inform final EMPr that is to be submitted with BAR or EIAR before commencement, ensuring that all impact management outcomes and actions have been either pre-approved or approved in terms of <u>Part C</u>.</p> <p>This section <b>must be</b> submitted to the CA as part of the BAR or EIAR, for consideration of, and decision on, the application for EA. The information submitted for EA will be considered to be incomplete should a signed copy of <u>Part B: section 2</u> not be submitted. Once approved, this Section forms part of the EMPr for the site and is legally binding.</p>

Part	Section	Heading	Content
C		Site specific sensitivities/ attributes	<p>If any specific environmental sensitivities/ attributes are present on the site which require site specific impact management outcomes and actions not included in the pre-approved generic EMPr to manage impacts, these specific impact management outcomes and actions must be included in this section. These specific environmental attributes must be referenced spatially, and impact management outcomes and actions must be provided. These specific impact management outcomes and actions must be presented in the format of the pre-approved EMPr template (<u>Part B: section 1</u>)</p> <p>If <u>Part C</u> is applicable to the site, it is <b>required</b> to be submitted as part of 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.</p> <p>This section applies only <b>to additional</b> impact management outcomes and actions that are necessary for the avoidance, management and mitigation of impacts and risks associated with the specific development or expansion and which are not already included in <u>Part B: section 1</u>.</p> <p>This section will <b>not be required</b> should the site contain no specific environmental sensitivities or attributes.</p>



Part	Section	Heading	Content
			and which are not already included in <u>Part B:section 1</u> .  This section will not be required should the site contain no specific environmental sensitivities or attributes.
		Appendix 1	Contains the method statements to be prepared prior to commencement of the activity. The method statements are <b>not required</b> to be submitted to the competent authority.

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

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

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

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

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

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

- Amendment of the impact management outcomes – in line with regulation 37 of the EIA Regulation, 2014
- Amendment of the impact management actions – in line with regulation 36 of

the EIA Regulations, 2014

**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 applicants 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 or an applicant in the case of exemption and must contain his/her name and expertise including a curriculum vitae. This sub-section must include a map of the site sensitivity overlaid with the preliminary infrastructure layout. Once the web-based screening tool identified in regulation 16(1)(v) of the EIA Regulations, 2014 is available, the sensitivity map must be prepared from this system. The map is to indicate areas/features of sensitivity based on the findings of the assessment and illustrated according to four tiers, Very High, High, Medium or Low. The sensitivity map shall also 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.

Sub-section 3 is the declaration that the applicant (s)/proponent (s) 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 'generic EMPr' in Section 1 and understands that the impact management outcomes and actions are legally binding.

**(i) 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 amendment of the EA in terms of regulations 29 or 31 of the EIA Regulations, 2014. The information submitted 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 site and the EMPr becomes legally binding to the new EA holder once the amendment process has been concluded.

## PART A – GENERAL INFORMATION

### 1. DEFINITIONS

In these EMPr any word or expression to which a meaning has been assigned in the NEMA or EIA 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;

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

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

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

The Method Statement shall cover applicable details with regard to:

- (i) Construction procedures;
- (ii) Plant, materials and equipment to be used;
- (iii) Transporting the equipment to and from site;
- (iv) How the plant/ material/ equipment will be moved while on site;
- (v) How and where the plant/ material/ equipment will be stored;
- (vi) The containment (or action to be taken if containment is not possible) of leaks or spills of any liquid or material that may occur;
- (vii) Timing and location of activities;
- (viii) Compliance/ non-compliance; and
- (ix) Any other information deemed necessary by the Project Manager.

**Hazardous Substances** 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;

**Slope** means the inclination of a surface expressed as one unit of rise or fall for so many horizontal units;

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

**Spoil** means excavated material which is unsuitable for use as material in the construction works or is material which is surplus to the requirements of the construction works;

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

Works means the Works to be executed in terms of the Contract

## 2. ACRONYMS and ABBREVIATIONS

<b>CA</b>	Competent Authority
<b>cEO</b>	Contractors Environmental Officer
<b>dEO</b>	Developer Environmental Officer
<b>DPM</b>	Developer Project Manager
<b>DSS</b>	Developer Site Supervisor
<b>ECA</b>	Environmental Conservation Act No. 73 of 1989
<b>ECO</b>	Environmental Control Officer
<b>EA</b>	Environmental Authorization
<b>EIA</b>	Environmental Impact Assessment
<b>ERAP</b>	Emergency Response Action Plan
<b>EMPr</b>	Environmental Management Programme Report
<b>EAP</b>	Environmental Assessment Practitioner
<b>FPA</b>	Fire Protection Agency
<b>HCS</b>	Hazardous chemical Substance
<b>NEMA</b>	National Environmental Management Act, 1998 (Act No. 107 of 1998)
<b>MSDS</b>	Material Safety Data Sheet
<b>RI&amp;AP's</b>	Registered Interested and affected parties

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

The effective implementation of this generic EMPr is dependent on established and clear roles, responsibilities and reporting lines within an institutional framework. This section of the EMPr gives guidance to the various environmental roles and reporting lines.

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

Function	Role and Responsibilities
Developer's Project Manager (DPM)	<p><u>Role</u> The Project Developer is accountable for ensuring compliance with the EMPr and any conditions of approval from the competent authority (CA). An independent environmental control officer (ECO) must be contracted by the Project Developer to objectively monitor the implementation of the EMPr according to relevant environmental legislation, and the conditions of environmental authorization (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.</p> <p><u>Responsibilities</u></p> <ul style="list-style-type: none"> <li>- Be fully conversant with the conditions of the EA;</li> <li>- Ensure that all stipulations within the EMPr are communicated and adhered to by the Developer and its Contractor(s);</li> <li>- Monitor the implementation of the EMPr throughout the project by means of site inspections and meetings. Overall management of the project and EMPr implementation; and</li> <li>- Ensure that periodic environmental performance audits are undertaken on the project implementation.</li> </ul>
Developer Site Supervisor (DSS)	<p><u>Role</u> 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</p>

	<p>contractors with the conditions and requirements stipulated in the EMPr.</p> <p><u>Responsibilities</u></p> <ul style="list-style-type: none"><li>- Ensure that all contractors identify a contractor's Environmental Officer (cEO);</li><li>- Must be fully conversant with the conditions of the EA. Oversees site works, liaison with Contractor, DPM and ECO;</li><li>- Must ensure that all landowners have the relevant contact details of the site staff, ECO and cEO;</li><li>- Will issue all non-compliances to contractors; and</li></ul> <p>Ratify the Monthly Environmental Report.</p>
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Function	Role and Responsibilities
<p>Environmental Control Officer (ECO)</p>	<p><u>Role</u></p> <p>The ECO should be employed by the developer for the duration of the project. The ECO should have appropriate training and experience in the implementation of environmental management specifications. The primary role of the ECO is to act as an independent quality controller and monitoring agent regarding all environmental concerns and associated environmental impacts. In this respect, the ECO is to conduct periodic site inspections, attend regular site meetings, pre-empt problems and suggest mitigation and be available to advise on incidental issues that arise. The ECO is also required to conduct compliance audits, verifying the monitoring reports submitted by the cEO. The ECO provides feedback to the DSS and Project Manager regarding all environmental matters. The Contractor, cEO and dEO are answerable to the Environmental Control Officer for non-compliance with the Performance Specifications as set out in the EA and EMPr.</p> <p>The ECO provides feedback to the DSS and Project Manager, who in turn reports back to the Implementing Agent and potential and Registered Interested &amp; Affected Parties' (RI&amp;AP's), as required. Issues of non-compliance raised by the ECO must be taken up by the Project Manager and resolved with the Contractor as per the conditions of his contract. Decisions regarding environmental procedures, specifications and requirements 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.</p> <p><u>Responsibilities</u></p> <p>The responsibilities of the ECO will include the following:</p> <ul style="list-style-type: none"> <li>- Be aware of the findings and conclusions of all EA related to the development;</li> <li>- Be familiar with the recommendations and mitigation measures of this EMPr;</li> <li>- Be conversant with relevant environmental legislation, policies and procedures, and ensure compliance with them;</li> </ul>

	<ul style="list-style-type: none"> <li>- 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;</li> <li>- Educate the construction team about the management measures contained in the EMPr and environmental licenses;</li> <li>- Compilation and administration of an environmental monitoring plan to ensure that the environmental management measures are implemented and are effective;</li> <li>- Monitoring the performance of the Contractors and ensuring compliance with the EMPr and associated Method Statements;</li> <li>- 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;</li> <li>- Liaison between the DPM, Contractors, authorities and other lead stakeholders on all environmental concerns;</li> <li>- Issuing of site instructions to the Contractor for corrective actions required;</li> <li>- Compile a regular environmental audit report highlighting any non-compliance issues as well as satisfactory or exceptional compliance with the EMPr;</li> <li>- Validating the regular site inspection reports, which are to be prepared by the contractor Environmental Officer (cEO);</li> <li>- Checking the cEO's record of environmental incidents (spills, impacts, legal transgressions etc) as well as corrective and preventive actions taken;</li> <li>- Checking the cEO's public complaints register in which all complaints are recorded, as well as action taken;</li> <li>- Assisting in the resolution of conflicts;</li> <li>- Facilitate training for all personnel on the site – this may range from carrying out the training, to reviewing the training programmes of the Contractor and/or sub-contractors;</li> <li>- In case of non-compliances, the ECO must first communicate this to the Senior Site Supervisor, who has the power to ensure this matter is addressed. Should no action or insufficient action be taken, the ECO may report this matter to the authorities as non-compliance;</li> </ul>
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	<ul style="list-style-type: none"><li>- Maintenance, update and review of the EMPr;</li><li>- Communication of all modifications to the EMPr to the relevant stakeholders.</li></ul>
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Function	Role and Responsibilities
<p>developer Environmental Officer (dEO)</p>	<p><b>Role</b></p> <p>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.</p> <p><b>Responsibilities</b></p> <ul style="list-style-type: none"> <li>- Be fully conversant with the EMPr;</li> <li>- Be familiar with the recommendations and mitigation measures of this EMPr, and implement these measures;</li> <li>- Ensure that all stipulations within the EMPr are communicated and adhered to by the Employees, Contractor(s) and its sub-contractor(s);</li> <li>- Confine the development site to the demarcated area;</li> <li>- Conduct environmental internal audits with regards to EMPr and authorization compliance (on cEO);</li> <li>- Assist the contractors in addressing environmental challenges on site;</li> <li>- Assist in incident management:</li> <li>- Reporting environmental incidents to developer and ensuring that corrective action is taken, and lessons learnt shared;</li> <li>- Assist the contractor in investigating environmental incidents and compile investigation reports;</li> <li>- Follow-up on pre-warnings, defects, non-conformance reports;</li> <li>- Measure and communicate environmental performance to the Contractor;</li> <li>- Conduct environmental awareness training on site together with ECO and cEO;</li> <li>- Ensure that the necessary legal permits and / or licenses are in place and up to date;</li> </ul>

Function	Role and Responsibilities
	<ul style="list-style-type: none"> <li>- Acting as Developer’s Environmental Representative on site and work together with the ECO and contractor;</li> <li>- Audit carried out by an independent auditor/consultant.</li> </ul>
Contractor	<p><u>Role</u> The Contractor appoints the cEO and has overall responsibility for ensuring that all work, activities, and actions linked to the delivery of the contract are in line with the EMPr and that Method Statements are implemented as described. External contractors must ensure compliance with this EMPr while performing the onsite activities as per their contract with the Project Developer. The contractors are required, where specified, to provide Method Statements setting out in detail how the management actions contained in the EMPr will be implemented during the development or expansion for overhead electricity transmission and distribution infrastructure activities.</p> <p><u>Responsibilities</u></p> <ul style="list-style-type: none"> <li>- project delivery and quality control for the development services as per appointment;</li> <li>- 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;</li> <li>- 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;</li> <li>- attend on site meeting(s) prior to the commencement of activities to confirm the procedure and designated activity zones;</li> <li>- ensure that contractors’ staff (or sub-contractors) 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.</li> </ul>

Function	Role and Responsibilities
contractor Environmental Officer (cEO)	<p><u>Role</u> 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:</p> <p>The cEO ensures that all Sub-contractors working under the Contractor abide by the requirements of the generic EMPr. The Contractor is answerable to the Project Manager for all environmental issues associated with the project.</p> <p><u>Responsibilities</u></p> <ul style="list-style-type: none"> <li>- Be on site throughout the duration of the project and be dedicated to the project;</li> <li>- Ensure all their staff are aware of the environmental requirements, conditions and constraints with respect to all of their activities on site;</li> <li>- Implementing the environmental conditions, guidelines and requirements as stipulated within the EA, EMPr and Method Statements;</li> <li>- Attend the Environmental Site Meeting;</li> <li>- Undertaking corrective actions where non-compliances are registered within the stipulated timeframes;</li> <li>- Report back formally on the completion of corrective actions;</li> <li>- Assist the ECO in maintaining all the site documentation;</li> <li>- Prepare the site inspection reports and corrective action reports for submission to the ECO;</li> <li>- Assist the ECO with the preparing of the monthly report; and</li> </ul>

	Where more than one Contractor is undertaking work on site, each company appointed as a Contractor will appoint a cEO representing that company.
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## **4. ENVIRONMENTAL DOCUMENTATION REPORTING AND COMPLIANCE**

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

### **4.1 Document control/Filing system**

The holder of the EA is solely responsible for the upkeep and management of the EMPr file. At a minimum, all documentation detailed below will be stored in the EMPr file. A hard copy of all documentation shall be filed, while an electronic copy may be kept where relevant. A duplicate file will be maintained in the office of the DSS (where applicable). This duplicate file will be the responsibility of the ECOs and 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 (in terms of NEMA EIA regulation) or other relevant authorities. The EMPr file will form part of any environmental audits undertaken as prescribed in the EIA Regulations.

### **4.2 Documentation to be available**

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

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

### **4.3 Weekly Environmental Checklist**

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

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

completed checklists will be attached as Annexures to the Environmental Audit Report as required in terms of the EIA regulations, 2014.

#### **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 shall cover applicable details with regard to:

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

Unless indicated otherwise by the Project Manager, the Contractor shall provide the following method statements to the Project Manager no less than 14 days prior to the commencement date of the activity:

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

- Dust and noise management methodologies;
- Fauna interaction and risk management – only if the risk was identified – wildlife interaction especially on game farms; and
- Heritage and paleontology management.

The ECOs shall ensure that the contractors perform in accordance with these method statements. Completed and authorized method statements shall be captured in Appendix 1.



#### 4.6 Environmental Incident Log (Diary)

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

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

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

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

The Environmental Incident Log will be captured in the EAR.

#### 4.7 Non-compliance

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

- Time and date of the non-compliance;
  - Name of the contractor responsible;
  - Nature and description of the non-compliance;
  - Recommended / required corrective action; and
  - Date by which the corrective action to be completed.
- The contractors shall act immediately when a notice of non-compliance is received and correct whatever is the cause for the issuing of the notice. Complaints received regarding activities on the development site pertaining

to the environment shall be recorded in a dedicated register and the response noted with the date and action taken. The ECO should be made aware of any complaints. Any non-compliance with the agreed procedures of the EMPr is a transgression of the various statutes and laws that define the manner by which the environment is managed. Failure to redress the cause shall be reported to the relevant CA for them to deal with the transgression, as it deems fit. The contractor is deemed not to have complied with the EMPr if, inter alia, There is a deviation from the environmental conditions, management outcomes and actions activities, as approved in generic and site specific EMPr as relevant as set out in the EMPr, which deviation has, or may cause, an environmental impact.

#### **4.8 Corrective action records**

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

#### **4.9 Photographic record**

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

The Contractor shall:

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

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

1. Pictures of all areas designated as work areas, camp areas, development sites and storage areas taken before these areas are set up;
2. All bunding and fencing;
3. Road conditions and road verges;
4. Condition of all farm fences;
5. Topsoil storage areas;
6. All areas to be cordoned off during construction;
7. Waste management sites;
8. Ablution facilities (inside and out);
9. Any non-conformances deemed to be "significant";
10. All completed corrective actions for non-compliances;

11. All required signage;
12. All areas before, during and post rehabilitation; and
13. Include relevant photographs in the Final Environmental Audit Report.

#### **4.10 Complaints register**

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

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

#### **4.11 Claims for damages**

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

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

#### **4.12 Interactions with affected parties**

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

The ECOs shall:

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

#### **4.13 Environmental audits**

Internal Environmental Audits of the activity and implementation of the EMPr will be undertaken by the ECO. The findings and outcomes of these audits will be recorded in then EMPr file. The environmental audits and associated reports must be conducted and submitted to the CA at intervals as indicated in the EA.

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

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

#### **4.14 Final environmental audits**

On final completion of the entire activity, the ECOs are required to prepare a final EAR. The report is to be submitted to the CA for acceptance and approval. The environmental report must comply with Appendix 7 of the EIA Regulations, 2014.

- Details of the independent person who prepared the report;
- Details of the expertise of independent person that compiled the report;
- A declaration that the independent auditor is independent in a form as may be specified by the CA;
- An indication of the scope of, and the purpose for which, the environmental audit report was prepared;
- A description of the methodology adopted in preparing the environmental audit report;

- An indication of the ability of the EMPr, and where applicable, the closure plan to-
  - Sufficiently provide for the avoidance, management and mitigation of environmental impacts associated with the undertaking of the activity on an on-going basis;
  - Sufficiently provide for the avoidance, management and mitigation of environmental impacts associated with the closure of the facility; and
  - Ensure compliance with the provisions of EA, EMPr, and where applicable, the closure plan;
- A description of any assumptions made, and any uncertainties or gaps in knowledge;
- A description of any consultation process that was undertaken during the course of carrying out the EAR;
- A summary and copies of any comments that were received during any consultation process; and
- Any other information requested by the CA.

Submission of the final EAR to the CA will indicate the end of the entire activity.

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

### **5. IMPACT MANAGEMENT OUTCOMES AND ACTIONS**

This section provides a pre-approved generic EMPr template with activities that are common to the development of overhead electricity transmission and distribution infrastructure. There are 30 doings identified for the development or expansion of overhead electricity transmission and distribution infrastructure, and for each doing a set of prescribed impact management outcomes and associated management actions have been identified. Holders of EAs are responsible to ensure the implementation of these controls for all projects as a minimum requirement for mitigating the impact of activities 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 management action:

The completed template must be signed and dated on each page by both the contractor and the holder of the EA prior to commencement of the activity. The method statements prepared and agreed to by the holder of the EA must be appended to the template as Appendix 1. Each method statement must also be duly signed and dated on each page by the contractor 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

<b>Impact management outcome:</b> All onsite staff are aware and understands the individual responsibilities in terms of this EMPr.						
<b>Impact Management Actions</b>	<b>Implementation</b>			<b>Monitoring</b>		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
All staff must receive environmental awareness training prior to commencement of the activities;	ECO / cEO / dEO	Hold environmental awareness training workshops	Pre-construction Construction	ECO dEO	Monthly and as and when required	Attendance registers 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 registers 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 registers and training minutes / notes for the Record

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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 registers and training minutes / notes for the record
The Contractor must erect and maintain information posters at key locations on site;	Contractor	Develop and place appropriate posters at key locations	Pre-construction Construction	ECO dEO cEO	Monthly	Photographic record
Environmental awareness training should include as a minimum the following: Description of significant environmental impacts, actual or potential, related to their work activities; Mitigation measures to be implemented when carrying out specific activities; Emergency preparedness and response procedures; Emergency procedures; Procedures to be followed when working near or within sensitive areas; Wastewater management procedures; Water usage and conservation; Solid waste management procedures; Sanitation procedures; and Disease prevention.	cEO / dEO in consultation with the ECO	Develop environmental awareness training material which covers the minimum requirements	Pre-construction Construction	ECO dEO	Prior to the commencement of the environmental awareness training	Environmental awareness training material requirements checklist



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A record of all environmental awareness training courses undertaken as part of the EMPR must be available;	ECO / cEO / dEO	Filing system including all proof of training (i.e., attendance register and training minutes / notes for the record)	During the construction phase	ECO dEO	Monthly	Completed and up to date filing system with proof of training
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.	cEO / dEO in consultation with the ECO	Provide an attendance register for staff to sign	Pre-constructing	ECO, dEO	After the commencement of the environmental awareness training	Staff attendance register signed by all staff who received environmental awareness training
Course material must be available and presented in appropriate languages.	cEO / dEO in consultation with the ECO	Course material made available and presented to all staff in all appropriate languages	Pre-construction	ECO, dEO	After the commencement of the environmental awareness training	Staff is familiar with the course material and understand the presented material.

## 5.2 Site Establishment development

Impact management outcome: Impacts on the environment are minimised when developing new infrastructure 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

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Location of camps must be within approved area to ensure that the site does not impact on sensitive areas identified in the environmental assessment or site walk through;	DPM / contractor	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 should be located where possible on previously disturbed areas;	DPM / contractor	Place site Outside of sensitive areas and within previously disturbed areas identified in the BA Report	Pre-construction	ECO dEO	Once, prior to construction	Availability of a layout and sensitivity map indicating avoidance of sensitive areas and placement within disturbed Areas
The camp must be fenced in accordance with <b>Section 5.5:</b> Fencing and gate installation; and	DPM / contractor	Fence around the camp and install a gate. This must be undertaken as per the requirements listed in section 9.5	Pre-construction	ECO dEO	Once, prior to construction	Photographic evidence and notes of compliance that camp has been fenced and gate is installed in accordance with <b>section 5.5</b>
The use of existing accommodation for contractor staff, where possible, is encouraged.	DPM	Accommodation allocated to contractor and staff if needed	Pre-construction	DSS	Once, prior to construction	Availability of accommodation for the use by staff and contractor, if needed

### 5.3 No-Go areas

Impact management outcome: Access to No go areas prevented.						
Impact Management Actions	Implementation			Monitoring		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
Identification of No-Go 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 fence around the perimeter of any No-Go area;	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
Fencing of No-Go areas is to be undertaken in accordance with <b>Section 5.5: Fencing and gate installation</b> ; and	Contractor / dEO / cEO	Erect appropriate fencing surrounding No-Go areas as stipulated in <b>section 5.5</b> .	At the commencement and for the duration of the construction phase	ECO	Monthly	Photographic evidence and notes of compliance of the condition of the private roads in accordance with <b>section 5.5</b> .
Unauthorized access and development related activity inside No-Go 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 unauthorized access or activities has taken place within the access restricted areas

## 5.4 Access roads

Impact management outcome: Minimise impact to the environment through the planned and restricted movement of vehicles on site.						
Impact Management Actions	Implementation			Monitoring		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
Access to the servitude and tower positions must be negotiated with the relevant landowner and must fall within the assessed and authorized area;	DPM / Contractor	Develop access agreements with the relevant landowner. Ensure that the agreements are signed and access fall within the assessed and authorized area.	During the Construction Phase	dEO / ECO	Once, prior to construction	Availability of approved and signed negotiations
An access agreement must be formalized and signed by the DPM, Contractor and landowner before commencing with the activities;	DPM / Contractor	Develop access agreements with the affected landowners. Ensure that agreements are approved and signed	Pre-construction	dEO / ECO	Once, prior to construction	Availability of approved and signed negotiations
The access roads to tower positions must be signposted after access has been negotiated and before the commencement of the activities;	Contractor	Erect signposts for access roads.	Pre-construction	dEO / ECO	Once, prior to construction	Photographic record and GPS coordinates of signposts erected.
Any access route deviation from that in the written agreement must be closed and re-vegetated immediately, at the contractor's expense;	Contractor	All access routes developed that are not in-line with the access route agreements must be closed and re-habilitated to the pre-disturbance state	Construction and Rehabilitation	ECO	Bi-weekly (every two weeks)	Photographic record of the closure of Access roads and re-vegetation
Maximum use of both existing servitudes and existing roads must be made;	Contractor	Identify and inform all relevant staff of the existing servitudes and roads to be used.	Construction	ECO	Bi-weekly (every two weeks)	Photographic record of the existing servitudes and existing roads

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In circumstances where private roads must be used, the condition of the said roads must be recorded in accordance with <b>section 6.9</b> : photographic record; prior to use and the condition thereof agreed by the landowner, the DPM, and the contractor;	DPM / Contractor	Identify and record all private roads which will be used and the condition thereof in accordance with <b>section 6.9</b>	Pre-construction	ECO	Bi-weekly (every two weeks)	Photographic evidence and notes of compliance of the condition of the private roads in accordance with <b>section 6.9</b> .
All private roads used for access to the servitude must be maintained and upon completion of the works, be left in at least the original condition. As far as possible, access roads must follow the contours in hilly areas, as opposed to winding down steep slopes;	DPM / Contractor CA	Develop a maintenance plan for all private roads with the consent of the competent authority for the use of these roads	Pre-construction Construction Post-construction	dEO / ECO	Monthly until completion of works and once thereafter	Photographic evidence of the service of the roads and the finishing of the works where road is left in at least the original condition
Access is to be established by vehicles passing over the same track on natural ground, multiple tracks are not permitted.	dEO / cEO / contractor	Develop a map illustrating all access roads and erect a signpost indicating that multiple tracks are prohibited.	Pre-construction and during the Construction Phase	dEO / ECO	Monthly until completion of works.	Access roads Map readily available and photographic evidence of signposts erected.
Access roads must only be developed where necessary at watercourses, on steep slopes or where boulders prohibit vehicular traffic; and	dEO / cEO / contractor	Develop a map illustrating all access routes associated with the project and present and provide the map to all contractors	Pre-construction Construction	ECO	Once, prior to construction	Access routes Map readily available
Upon completion of development, only roads as indicated by the DPM must be closed.	dEO / DPM / contractor	Identify and record all private roads which will be closed.	Construction and Post-construction	ECO	Once, post-construction	Roads identified by the DPM is closed -off so no access can be obtained.

## 5.5 Fencing and Gate installation

Impact management outcome: To 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 defined Working Area, where possible;	Contractor	Identify and inform all relevant staff of the existing gates to be used.	Pre-construction & Construction	dEO	Monthly	Existing gates are utilized on a frequent basis and only limited
At points where the line crosses a fence in which there is no suitable gate within the extent of the line servitude, on the instruction of the DPM, a gate must be installed at the approval of the landowner;	Contractor / DPM	Install gate where line crosses a fence, if needed in accordance with landowner approval	During the construction phase	ECO	Once construction	Implementation of approved gate installation
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 (and Eskom maintenance staff where relevant to operation)	Ensure all relevant gates are fitted with locks and are always locked	Construction and Operation	ECO Operation and maintenance team	Bi-weekly (every second week)	All gates are locked and no complaints from landowners are received in this Regard.
Existing and new gates to be recorded and documented in accordance with <b>section 4.9: photographic record</b> ;	Contractor	Identify existing gates and document new gates in accordance with <b>section 4.9</b>	Pre-construction & Construction	dEO	Monthly	Photographic record of existing and new gates in accordance with <b>section 4.9</b>
Care must be taken that the gates must be so erected that there is a gap of no more than 100 mm between the bottom of the gate and the ground;	Contractor/ DPM	Ensure that there is a gap no more than 100mm between the bottom of the gate and the ground when gate is installed	During the construction phase	ECO	Once-construction	Gate is built ensuring that the gap between the bottom of the gate and the ground does not exceed 100mm

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Where gates are installed in jackal proof fencing, a suitable reinforced concrete sill must be provided beneath the gate;	Contractor	Ensure that all gates installed in jackal proof fencing is reinforced with a concrete sill beneath the gate	During the construction phase	ECO / cEO / dEO	Once-construction	Photographic record of reinforced concrete sill beneath gates installed in jackal proof fencing
Original tension must be maintained in the fence wires;	Contractor and relevant maintenance staff	Relevant maintenance staff must ensure that the tension in the fence wire is upheld	During the construction phase	dEO / cEO	Monthly	Ensure the maintenance staff complies by upholding the tension in the fence wire on a regular basis
All gates installed in electrified fencing must be re-electrified;	Contractor	Re-electrify electrified fencing where gates are installed	During the construction phase	dEO / cEO	To be monitored as gates are installed during the construction phase	Ensure that electrified fencing where gates are installed, are re-electrified
All demarcation fencing and barriers must be maintained in good working order for the duration of overhead transmission and distribution electricity infrastructure development activities;	Contractor	Undertake maintenance activities on fences and barriers	During the construction phase	ECO	Monthly	Photographic record of maintained fences and barriers.
Fencing must be erected around the camp, batching plants, hazardous storage areas, and all designated no-go areas, where applicable;	Contractor / DPM	Erect fences around the camp, batching plants, hazardous storage areas, and all designated access restricted areas, where applicable	Pre-construction and construction	ECO	To be monitored as fencing is erected during the construction phase	Photographic evidence and notes of compliance of correct fencing around the camp, batching plants, hazardous storage areas, and all designated access restricted areas, where applicable
All fencing must be developed of high-quality material bearing the SABS mark;	Contractor	Fencing must be developed using high quality material which bears the SABS mark	During the construction phase	ECO	To be monitored as fencing is erected during the construction phase	Fences are developed of high-quality material and bears the SABS mark
The use of razor wire as fencing must be avoided;	Contractor	Razor wire must not be sourced or used for the erection of fencing	During the construction phase	ECO / dEO	To be monitored as fencing is erected during	Fences erected do not make use of razor wire



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					the construction phase	
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## 5.6 Water Supply Management

Impact management outcome: Undertake responsible water usage.						
Impact Management Actions	Implementation			Monitoring		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
All abstraction points or bore holes must be registered with the DWS and suitable water meters installed to ensure that the abstracted volumes are measured daily;	DPM/ Contractor dEO / cEO in consultation with the ECO	The onsite borehole must be registered with the DWS prior to commencement of activities	Prior to commencement , during construction and operational phase	ECO / dEO	Registration of borehole once off prior commencement of construction and monitoring of abstraction volumes daily during construction and during operation.	Proof of registration of borehole from DWS and proof of daily records of abstraction volumes to be attached to monthly audit reports.
Should water abstraction be required and the necessary authorization from DWS and permission from the landowner has been received, the Contractor must ensure the following: a) The vehicle abstracting water from a river does not enter or cross it and does not operate from within the river; b) No damage occurs to the riverbed or banks and that the abstraction of water does not entail stream diversion activities; and c) All reasonable measures to	Contractor	Implement the required processes following the abstraction of water from a river throughout the construction on site process.	During the construction phase	ECO / dEO	Bi-weekly (every two weeks)	The vehicle that abstracts water from a river must not enter or cross it and should not operate from within the river. Damage to the riverbed or bank is prevented and stream diversion activities are prevented. Measures are implemented to limit pollution or sedimentation of the downstream watercourse

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<p>limit pollution or sedimentation of the downstream watercourse are implemented.</p>						
<p>Ensure water conservation is being practiced by:                  a) Minimizing water use during cleaning of equipment;                  b) Undertaking regular audits of water systems; and Including a discussion on water usage and conservation during environmental awareness training.</p>	<p>Contractor / dEO / cEO in consultation with the ECO</p>	<p>Implement the required water conservation measures throughout on-site construction processes</p>	<p>During the construction phase</p>	<p>ECO</p>	<p>Monthly, and as and when required</p>	<p>Successful implementation of water conservation</p>

## 5.7 Storm and waste water management

Impact management outcome: Impacts to the environment caused by storm water and wastewater discharges during construction are avoided.						
Impact Management Actions	Implementation			Monitoring		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
Appropriate pollution control facilities necessary to prevent discharge of water containing polluting matter or visible suspended materials into watercourses or water bodies must be designed and implemented;	Contractor / dEO	Develop an appropriate facility to prevent pollution of watercourses or water bodies.	During the Construction Phase	ECO	Monthly	An appropriate facility is erected which receives water containing polluting matter or visible suspended materials.
Water that has been contaminated with suspended solids, such as soils and silt, may be released into watercourses or water bodies only once all suspended solids have been removed from the water by settling out these solids in settlement ponds. The release of settled water back into the environment must be subject to the Project Manager's approval and support by the ECO.	DPM / dEO / ECO	Ensure measures are in place for the removal of all suspended solids from contaminated water before releasing the water back into the environment	During the Construction Phase	ECO / DPM / dEO	Bi-weekly (every two weeks)	Contaminated water is treated with settlement ponds which removes all suspended solids before releasing the settled water into the environment, subject to the Project Manager's approval and support by the ECO
Runoff from the cement/ concrete batching areas must be strictly controlled, and contaminated water must be collected, stored and either treated or disposed of	Contractor / dEO	Implement measures for the control and management of runoff	During the construction phase	ECO / dEO	Weekly	No mismanagement of runoff or contaminated water due to the temporary concrete batching plant

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off-site, at a location approved by the project manager;						
All spillage of oil onto concrete surfaces must be controlled by the use of an approved absorbent material and the used absorbent material disposed of at an appropriate waste disposal facility;	Contractor and cEO	Obtain approved absorbent material and make use of Licensed waste	During the Construction Phase	ECO/ dEO	Monthly	Availability of approved absorbent material at the construction site and proof of
Natural storm water runoff not contaminated during the development and clean water can be discharged directly to watercourses and water bodies, subject to the Project Manager's approval and support by the ECO;	DPM / dEO / ECO	Implement measures for the discharge of non-contaminated storm water runoff clean water directly to watercourses and water bodies in accordance with the Project Manager's approval	During the construction phase	ECO / DPM / dEO	Bi-weekly (every two weeks)	Water discharged directly to watercourses and water bodies are not contaminated during the development and in accordance with the approval of the Project Manager and the support by the ECO.

## 5.8 Solid waste management

Impact management outcome: Wastes are 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 / dEO	Monthly	Implementation of the waste management plan and proof of waste management through proof of responsible disposal
Sufficient, covered waste collection bins (scavenger and weatherproof) must be provided;	Contractor	Provision of appropriate waste collection bins which are strategically placed throughout the site	During the construction phase	ECO / dEO	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	Design and Construction Phase	ECO / dEO	Once, prior to the commencement of construction	A waste collection site is appropriately placed and demarcated
The waste collection site must be maintained in a clean and orderly manner;	Contractor	Regular collection of waste and maintenance of the area must be undertaken as per the waste requirements for the project during construction	During the Construction Phase	ECO / dEO	Weekly	The waste collection site is maintained and clean
Waste must be segregated into separate bins and clearly marked for each waste type;	Contractor	Provide separate and marked bins for the different waste types associated with the construction phase	During the Construction Phase	cEO / ECO	Weekly	Separate waste bins are available on site and waste generated is separated into the relevant bins
Staff must be trained in waste segregation;	Contractor	Training to be provided to inform staff about waste segregation.	Prior to the Construction Phase	cEO / ECO	Once, prior to commencement of construction	Availability of training documents and attendance register

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					and as required thereafter.	signed by all participants.
Bins must be emptied regularly;	Contractor	Dispose of the contents of the bin on a regular basis	During the construction phase	cEO / dEO	Weekly	Empty bin contents into separate waste bins
General waste produced onsite must be disposed of at recognized waste disposal sites/ recycling company;	Contractor	Disposal of general waste at licensed waste disposal facilities must be undertaken as per the waste management plan	During the construction phase	ECO	Monthly	Disposal certificates of disposal at licensed facilities to be provided
Hazardous waste must be disposed of at a registered waste disposal site;	Contractor	Disposal of hazardous waste at licensed waste disposal facilities must be undertaken as per the waste management plan	During the construction phase	dEO/ cEO/ ECO	Monthly	Disposal certificates of disposal at licensed facilities to be provided
Certificates of safe disposal for general, hazardous and	Contractor	Safe disposal of general, hazardous and recycled waste certificates at licensed waste disposal facilities must be maintained as per the waste management plan	Pre-construction and during the construction phase	cEO / ECO	Monthly	Safe disposal for general, hazardous, and recycled certificate to be maintained and filed
Recycled waste must be maintained.	Contractor	Provide separate and marked bins for the different recycled waste types associated with the construction phase	During the Construction Phase	cEO / ECO	Weekly	Separate waste bins are available on site and recycled waste generated is separated into the relevant bins

## 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 spills of pollutants outside of watercourses	During the construction phase	dEO/ cEO ECO	Weekly	No incidents reported of spillage of pollutants into watercourses
In the event of a spill, prompt action must be taken to clear the polluted or affected areas;	Contractor and cEO	Develop a management plan or process for implementation should a spill take place	During the construction phase	dEO/ cEO ECO	Weekly	Feedback reports should indicate the efficacy of cleanups. Photographs should also be taken.
Where possible, no development equipment must traverse any seasonal or permanent wetland;	Contractor and cEO	Layout should be informed by the environmental sensitivities as determined by the BAR and specialist studies.	During the construction phase	dEO/ cEO ECO	Once off, review that the layout used is the approved layout.	Confirmation reports if equipment traversed such streams. The ECO should be consulted prior to equipment mobilization. No damage to natural water bodies observed.
Development of permanent watercourse crossing must only be undertaken where no alternative access to tower position is available;	Contractor and cEO	Identify existing crossings if available and implement development plan in accordance with the recommendations of freshwater aquatic	During the construction phase	ECO / cEO	During the development of the crossing	Implement and comply with development plan of the crossing



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		specialist					
<p>When working in or near any watercourse or wetland, the following environmental controls and consideration must be taken:</p> <p>River levels during the period of construction;</p> <p>During the execution of the Works, appropriate measures to prevent pollution and contamination of the riverine environment must be implemented e.g. including ensuring that construction equipment is well maintained;</p> <p>Where earthwork is being undertaken in close proximity to any watercourse, slopes must be stabilized using suitable materials, i.e. sandbags or geotextile fabric, to prevent sand and rock from entering the channel; and</p> <p>Appropriate rehabilitation and re-vegetation measures for the riverbanks must be implemented timeously. In this regard, the banks should be appropriately and incrementally stabilized as soon as development allows.</p>	Contractor	Activities undertaken near watercourses must be in line with and consider the specified environmental controls. The ECO should be consulted prior.	During construction phase	dEO/ ECO	cEO	Monthly and or when required	No alteration, degradation or disturbance of watercourses. No such incidences 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
<b>General:</b> Indigenous vegetation which does not interfere with the development must be left undisturbed;	cEO, Contractor (and Eskom maintenance staff where relevant to operation)	Demarcate areas of indigenous vegetation to be avoided before clearance is undertaken	Construction and operation (i.e. for maintenance purposes)	ECO Operation and maintenance team/ dEO/ cEO	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	dEO/ cEO /ECO	Weekly, and as and when required	No clearance of protected or endangered species other than those permitted to be removed
Search, rescue and replanting of all protected and endangered species likely to be damaged during project development must be identified by the relevant specialist and completed prior to any development or clearing;	Relevant specialist in consultation with the Contractor	Develop and implement a Plant Search and Rescue Plan	Pre-construction & Construction	ECO / appointed specialist. dEO/ cEO should also attend these operations.	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
Permits for removal must be obtained from the relevant CA prior to the cutting or clearing of the affected species, and they must be filed;	DPM	Undertake the permitting process in order to obtain the relevant permits for the removal of protected species. Permits	Pre-construction	ECO	Once, prior to the commencement of the construction phase and removal of the protected species	Permits on file

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The Environmental Report must confirm that all identified species have been rescued and replanted;	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 / dEO/ cEO	Once off or as and when required	ECO confirmed rescued and replanted programme implemented correctly.
Trees felled due to construction must be monitored and listed in the Audit Environmental Report;	ECO	Ensure that the audit report documents the details of trees felled	During the Construction Phase and following the completion of the Construction Phase	CA permits on file	Trees felled due to construction must be documented and form part of the Environmental Audit Report;	ECO
Rivers and watercourses must be kept clear of felled trees, vegetation cuttings and debris;	Contractor	Felled trees, vegetation cutting, and debris must be disposed of at a licensed waste disposal facility	During the Construction Phase	ECO / dEO/ cEO	Monthly	No felled trees, vegetation cuttings and debris are dumped in inappropriate locations and disposal certificates are available as proof of
Only a registered pest control operator may apply herbicides on a commercial basis and commercial application must be carried out under the supervision of a registered pest control operator, supervision of a registered pest control operator or is appropriately trained;	Registered pest control operator / on site EO if applicable	Ensure that only the registered pest control operator may apply herbicides or under registered pest control operator or appropriately trained person	During the Construction Phase	ECO	Only applied when	Apply herbicides on a commercial basis under supervision of registered pest control operator
A daily register must be kept of all relevant details of herbicide usage;	Registered pest control operator / on-site EO if applicable	A register is provided for the daily record of herbicide usage	During the Construction Phase and following the completion of construction	ECO / Registered pest control operator / on-site EO if applicable	Daily	Herbicide usage is recorded daily
All protected species and	Contractor / DPM	Identifying protected and sensitive species which are	During the Construction	ECO / dEO/ cEO	Monthly / Weekly	Photographic record and notes of

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sensitive vegetation not removed must be clearly marked and such areas fenced off if required in accordance with No-Go procedure in <b>Section 5.3: No-Go areas</b> . When working in or near any watercourse or wetland, the following environmental controls and consideration shall be taken.		not removed and marked, identify invasive vegetation which must be removed and disposed of at a licensed waste management facility	Phase and following the completion of construction			compliance of marked protected and sensitive species in accordance with <b>section 5.3</b> , and the removal of alien invasive plants and correct disposal management measures
<b>Servitude:</b> Vegetation that does not grow high enough to cause interference with overhead transmission and distribution infrastructures, or cause a fire hazard to any plantation, should 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 / DPM	Staff should be informed of this requirement and areas should be identified by the Project Manager should be noted.	During the Construction Phase	ECO / cEO / dEO	Monthly / Weekly	Notes of compliance and photographic record
Where clearing for access purposes is essential, the maximum width to be cleared within the servitude must be in accordance with the specifications	Contractor	Specifications to be provided and followed in accordance thereof.	During the Construction Phase	ECO	Monthly	Specifications are available on site and staff are informed and follow the requirements thereof.
Alien invasive vegetation should be removed according to a plan (in line with relevant municipal and provincial procedures, guidelines and recommendations) and disposed of at a recognized waste disposal facility;	Contractor	Develop a plan for the removal of alien vegetation and identify a relevant recognized waste disposal facility where it can be disposed of.	During the Construction Phase	ECO / cEO	Monthly / Weekly	Plan is available on site at all times. Notes on compliance and photographic records.
Vegetation should be trimmed where it is likely to intrude on the minimum vegetation clearance distance (MVCD) or will intrude on	Contractor	Activities concerning the trimming of vegetation should be implemented in accordance with SANS	During the Construction Phase	ECO / cEO	Monthly	Notes of compliance and photographic record of trimmed vegetation areas in

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this distance before the next scheduled clearance. MVCD is determined from SANS 10280;		10280.				accordance with SANS 10280.
Debris resulting from clearing and pruning must be disposed of at a recognized waste disposal facility, unless the landowners wish to retain the cut vegetation;	Contractor	Identify recognized waste disposal facility or confirm with landowners if they wish to retain the cut vegetation.	During the Construction Phase	ECO / cEO	Monthly / Weekly	Vegetation debris is disposed of at recognized waste disposal facility or if applicable, retained by landowners.

## 5.11 Protection of fauna

Impact management outcome: minimise disturbance to fauna.						
Impact Management Actions	Implementation			Monitoring		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
No interference with livestock must occur without the landowner's written consent and with the landowner or a person representing the landowner being present;	dEO / cEO Contractor	Develop a procedure for dealing with livestock within the affected properties	Pre-construction and during the construction phase	ECO /dEO/cEO	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
The breeding sites of raptors and other wild bird species must be taken into consideration during the planning of the development programme;	dEO / cEO in consultation with the Contractor	Ensure that the planning and development programme considers breeding sites for wild bird species	Pre-construction & Construction	ECO	Once, prior to the commencement of construction and as and when required	The planning and development programme which includes the consideration of breeding sites for wild bird species
Breeding sites must be kept intact and disturbance to breeding birds must be avoided. Special care must be taken where nestlings or fledglings are present;	dEO / cEO in consultation with the Contractor (and Eskom maintenance staff where relevant to operation).	Avoid breeding sites and ensure that special care is taken in the presence of nestlings and fledglings	During the Construction Phase Operation Phase	ECO Operation and maintenance team	Weekly, and as and when required during the construction.	Photographic record of intact breeding sites.
Nesting sites on existing parallel lines must be documented;	dEO / cEO in consultation with the Contractor	Possible nesting sites to be investigated and suitably identified to be documented.	Pre-construction	ECO	Once, prior to commencement of construction	Photographic record and documentation made available to staff.
Special recommendations of the avian specialist must be adhered to at all times to prevent unnecessary disturbance of birds;	dEO / cEO in consultation with the Contractor (and Eskom	All mitigation measures recommended by the avifauna specialist must be implemented	During the Construction Phase Operation Phase	ECO Operation and maintenance team	Weekly during construction and monthly during operation	Photographic record of compliance and successful implementation of the recommended

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	maintenance staff where relevant to operation)					measures
Bird guards and diverters must be installed on the new line as per the recommendations of the specialist;	dEO / cEO in consultation with the Contractor	Bird guards and diverters to be suitably identified to be installed on the pylons	Pre-construction and during the construction phase	ECO / dEO/ cEO	Annually	Photographic record and notes of compliance of the implementation of bird guards and diverters
No poaching must be tolerated under any circumstances. All animal dens in close proximity to the works areas must be marked as No-Go areas.	dEO / cEO in consultation with the Contractor	All site staff must be informed of this requirement during the Environmental Awareness Training and the consequences of not adhering to the requirement. These areas must be demarcated as Access Restricted Areas	During the Construction Phase	ECO/ dEO/ cEO	Monthly, and as and when required	Mortality register to be kept on site

## 5.12 Protection of heritage resources

Impact management outcome: impact to heritage resources is minimised.						
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 <b>Section 5.3: No-Go areas</b> ;	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 Walk-through Report and as per the requirements of <b>section 5.3</b>	Pre-construction	ECO / dEO/ cEO/ appointed archaeologist	Once, prior to the commencement of construction	Proof of avoidance of sensitive heritage features through details of avoidance and photographic records
Carry out general monitoring of excavations for potential fossils, artefacts and material of heritage importance;	Suitably qualified specialist in consultation with the ECO	Appoint a suitably qualified specialist to carry out the monitoring of excavations for fossils, artefacts and important heritage material	During the Construction Phase	ECO / appointed archaeologist	During the undertaking of excavations of fossils, artefacts and heritage material	Proof of appointment of a suitably qualified specialist and photographic record of required monitoring by the specialist
All work must cease immediately, if any human remains and/or other archaeological, paleontological and historical material are uncovered. Such material, if exposed, must be reported to the nearest museum, archaeologist/ paleontologist (or the South African Police Services), so that a systematic and professional investigation can be undertaken. Sufficient time should be allowed to remove/collect such material	dEO / cEO in consultation with the Contractor and ECO	Develop and implement procedures for situations where human remains, archaeological, palaeontological or historical material is uncovered.	During the Construction Phase	ECO / appointed archaeologist / appointed archaeologist /cEO/ dEO	Weekly, during the construction phase and as required	Proof of work ceased, and the required procedures followed in cases where material is discovered.



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before recommences.	development						
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### 5.13 Safety of the public

<b>Impact management outcome:</b> All precautions are taken to minimise the risk of injury, harm or complaints.						
<b>Impact Management Actions</b>	<b>Implementation</b>			<b>Monitoring</b>		
	<b>Responsible person</b>	<b>Method of implementation</b>	<b>Timeframe for implementation</b>	<b>Responsible person</b>	<b>Frequency</b>	<b>Evidence of compliance</b>
Identify fire hazards, demarcate and restrict public access to these areas as well as notify the local authority of any potential threats e.g., large brush stockpiles, fuels etc.;	cEO in consultation with the Contractor	Develop an Emergency Preparedness, Response and Fire Management Plan specific to the project	Pre-construction Construction	ECO/cEO/dEO	Once, prior to the commencement of construction and weekly during the construction phase	Compliance with the Emergency Preparedness, Response and Fire Management Plan
All unattended open excavations must be adequately fenced or demarcated;	Contractor	Ensure that all excavations undertaken is fenced and demarcated within a reasonable timeframe and in instances where excavations will be open for long-periods of time	During the Construction Phase	ECO/cEO/dEO	Weekly	Excavations are fenced where required and photographic proof can be provided
Adequate protective measures must be implemented to prevent unauthorized access to and climbing of partly constructed infrastructure and protective scaffolding;	Contractor	All staff must be easily identifiable, and the climbing of infrastructure and scaffolding must be undertaken by authorised personnel as managed by the Contractor	During the construction phase	ECO/cEO/dEO	Monthly, and as and when required	No incidents of unauthorized climbing are reported
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	ECO/cEO/dEO	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 are complete and provides all the required details

## 5.14 Sanitation

<b>Impact management outcome:</b> 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.						
<b>Impact Management Actions</b>	<b>Implementation</b>			<b>Monitoring</b>		
	<b>Responsible person</b>	<b>Method of implementation</b>	<b>Timeframe for implementation</b>	<b>Responsible person</b>	<b>Frequency</b>	<b>Evidence of compliance</b>
Mobile chemical toilets are installed onsite if no other ablution facilities are available;	Contractor	Mobile chemical toilets must be placed appropriately and in areas which avoid environmental sensitivities	During the Construction Phase	ECO/cEO/dEO/ HSO	Weekly	Mobile toilets are installed and avoid environmental sensitivities
The use of ablution facilities and or mobile toilets must be used at all times and no indiscriminate use of the veld for the purposes of ablutions must be permitted under any circumstances;	Contractor in consultation with the cEO	All site staff must be informed of this requirement during the Environmental Awareness Training and the consequences of not adhering to the requirement.	Pre-construction & Construction	ECO/cEO/dEO / HSO	Monthly, and as and when required	No evidence of non-compliance identified
Where mobile chemical toilets are required, the following must be ensured: <ul style="list-style-type: none"> <li>Toilets are located no closer than 100 m to any watercourse or water body.</li> <li>Toilets are secured to the ground to prevent them from toppling due to wind or any other cause;</li> <li>No spillage occurs when the toilets are cleaned or emptied, and the contents are managed in</li> </ul>	Contractor in consultation with the cEO	The installation of the toilets by the Contractor must be as per the listed requirements	During the Construction Phase	ECO/cEO/dEO/ HSO	Weekly	No evidence of non-compliance identified

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<p>accordance with the EMPr;</p> <ul style="list-style-type: none"> <li>• 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</li> <li>• Toilets are emptied before long weekends and workers holidays and must be locked after working hours.</li> <li>• Toilets are serviced regularly, and the ECO must inspect toilets to ensure compliance to health standards</li> </ul>						
<p>A copy of the waste disposal certificates must be maintained.</p>	<p>Contractor</p>	<p>Certificates obtained from the licensed waste disposal facility with the emptying of the toilets must be kept on file</p>	<p>During the Construction Phase</p>	<p>ECO</p>	<p>Monthly, and as and when required</p>	<p>Certificates for waste disposal from the licensed waste disposal facility</p>

## 5.15 Prevention of disease

<b>Impact Management outcome:</b> All necessary precautions linked to the spread of disease are taken.						
<b>Impact Management Actions</b>	<b>Implementation</b>			<b>Monitoring</b>		
	<b>Responsible person</b>	<b>Method of implementation</b>	<b>Timeframe for implementation</b>	<b>Responsible person</b>	<b>Frequency</b>	<b>Evidence of compliance</b>
Undertake environmentally friendly pest control in the camp area;	Contractor	Only environmentally-friendly pest control must be used, when required	During the Construction Phase	ECO	As and when pest control is required for the project	Contractor to provide proof of pest control used being environmentally-friendly
Ensure that the workforce is sensitized 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/ HSO	Once, prior to the commencement of construction and monthly during construction	Environmental awareness training material requirements checklist
The Contractor must ensure that information posters on HIV/ AIDS are displayed in the Contractor Camp area;	Contractor	Develop and place information posters on HIV/ AIDS	During the Construction Phase	ECO/ HSO	Weekly	Photographic evidence of poster placement
Information and education relating to sexually transmitted diseases to be made available to both construction workers and local community, where applicable;	cEO / Contractor in consultation with the ECO	Information and education of sexually transmitted diseases must be covered in the Environmental Awareness Training.	Pre-construction & Construction	ECO/ HSO	Monthly	Environmental awareness training material requirements checklist
Free condoms must be made available to all staff on site at central points;	Contractor	Placement of free condoms in mobile toilets and at the construction camps	During the Construction Phase	ECO/cEO/ dEO/ HSO	Monthly	Proof of placement of free condoms by the contractor to be provided
Medical support must be made available;	dEO / cEO in consultation Contractor (and Eskom maintenance	Ensure that designated personnel with first aid training are available on site and that first aid kit to provide medical support is	Construction and Operations	ECO/cEO/ dEO/ HSO	Monthly	Check the availability of first aid trained personnel and medical kits (including if these are complete in terms

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	staff where relevant to operation)	readily available				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/cEO/dEO/ HSO	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/ HSO	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/ HSO	Once, prior to the commencement of construction	Emergency Preparedness, Response and Fire Management Plan includes required specifications
All staff must be made aware of emergency procedures as part of environmental awareness training;	cEO / dEO in consultation with the ECO	Develop environmental awareness training material which covers the relevant emergency procedures	Pre-construction	ECO/ HSO	Prior to the commencement 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 and Fire Management Plan for the event of a fire and the procedure to be followed for informing the local authority	Construction	ECO	As and when a fire occurs	The local authority was informed as per the relevant procedure set out in the Emergency Preparedness, Response and Fire Management Plan
In the event of emergency necessary mitigation measures to contain the spill or leak must be implemented (see Hazardous	Contractor (and Eskom maintenance staff where relevant to	Implement the required mitigation measures in the event of a spill or leak as per the requirements of Section 5.17.	Construction and Operations	ECO/ HSO	As and when a spill or leak occurs	The mitigation measures included under Section 5.17 have been adhered to

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Substances <b>section 5.17).</b>	operation)					
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## 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 minimized and non-hazardous and non-toxic alternatives substituted where possible;	cEO in consultation with the Contractor	Develop a strategy of how hazardous substances can be and should be minimized	Pre-construction & Construction	ECO / cEO / dEO / HSO	Once, prior to the commencement of construction and daily during the construction phase	Contractor to provide evidence of substances used for proof of compliance
All hazardous substances must be stored in suitable containers as defined in the Method Statement;	Contractor	Develop a Method Statement for the storage of hazardous substances in suitable containers	Pre-construction & Construction	ECO / cEO / dEO / HSO	Once, prior to the commencement of construction and monthly during the construction phase	Photographic proof that hazardous substances are stored in suitable containers per the requirements of the relevant Method Statements
Containers must be clearly marked to indicate contents, quantities and safety requirements;	Contractor	Where hazardous waste is stored, these must be clearly marked indicating the required details of the contents	During the Construction Phase	ECO / cEO / dEO / HSO	Monthly	Photographic proof that containers are marked as per the requirements
All storage areas must be bunded. The bunded area must be of sufficient capacity to contain a spill / leak from the stored containers;	Contractor	Ensure that storage areas are sufficiently bunded which are of sufficient capacity to contain a spill / leak from the stored containers	During the Construction Phase	ECO / cEO / dEO	Monthly during the Construction Phase	Photographic proof that storage areas are bunded and proof that the bund areas are of sufficient capacity to contain a spill / leak from the stored containers
Bunded areas to be suitably lined with a SABS approved liner;	Contractor	Ensure that bunded storage areas are suitably	During the Construction	ECO	Once, during the Construction	Photographic proof that bunded storage

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		lined	Phase		Phase	areas are suitably lined
An Alphabetical Hazardous Chemical Substance (HCS) control sheet must be drawn up and kept up to date on a continuous basis;	cEO Contractor /	Compile and update an Alphabetical Hazardous Chemical Substance (HCS) control sheet specific to the project	During the Construction Phase	ECO/cEO/d EO/HSO	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 must have Material Safety Data Sheets (MSDS);	cEO Contractor /	Keep a record of all hazardous chemicals and the respective MSDS	During the Construction Phase	ECO	Monthly, and as and when required	Record of hazardous chemicals and the respective MSDS
All employees working with HCS must be trained in the safe use of the substance and according to the safety data sheet;	cEO Contractor /	Provide training for personnel working with HCS	Pre-construction	ECO	Once, prior to the commencement of construction and as and when required	Record of training provided to personnel working with HCS
Employees handling hazardous substances / materials must be aware of the potential impacts and follow appropriate safety measures. Appropriate personal protective equipment must be made available;	cEO Contractor /	Develop environmental awareness training material which covers the relevant impacts and safety measures. Provide appropriate training and personal protective equipment for the relevant personnel handling hazardous substances and materials	Pre-construction & Construction	ECO/cEO/d EO/HSO	Prior to the commencement of the environmental awareness training and monthly during the construction phase for personal protective equipment	Environmental awareness training material requirements checklist and all relevant personnel have undergone appropriate training and have access to personal protective equipment
The Contractor must ensure that diesel and other liquid fuel, oil and hydraulic fluid is stored in appropriate storage tanks or in bowzers;	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/cEO/d EO	Monthly, and as and when required	Storage tanks for the project are appropriate and no incidents are reported in this regard
The tanks/ bowzers must be	Contractor	Appropriate storage	During the	ECO/cEO/d EO/HSO	Monthly, and as	Storage areas for the tanks/ bowzers for

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situated on a smooth impermeable surface (concrete) with a permanent bund. The impermeable lining must extend to the crest of the bund and the volume inside the bund must be 130% of the total capacity of all the storage tanks/ bowsers (110% statutory requirement plus an allowance for rainfall);		facilities must be constructed or obtained for tanks as per the requirements listed	Construction Phase		and when required	the project are appropriate and no incidents are reported in this regard
The floor of the bund must be sloped, draining to an oil separator;	Contractor	Appropriate storage facilities must be constructed as per the requirements listed	During the Construction Phase	ECO	Once, during construction	Bunded storage areas are constructed according to the requirements
Provision must be made for refueling at the storage area 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 refueling facility must be developed as per the requirements. Drip trays must be provided for use	During the Construction Phase	ECO cEO	Monthly Weekly	Soils at the refueling facility are protected as required and drip trays are provided and used
All empty externally dirty drums must be stored on a drip tray or within a bunded area;	Contractor	Ensure that empty dirty drums are stored appropriately as per the requirements	During the Construction Phase	ECO cEO	Monthly Weekly	Drip trays or bunded areas are used for the storage of dirty drums
No unauthorized access into the hazardous substances' storage areas must be permitted;	Contractor	Ensure through the implementation of procedures that no unauthorized access is undertaken into the storage areas	During the Construction Phase	ECO/cEO/d EO/HSO	Monthly	Proof of the implementation of the relevant procedure must be provided by the contractor

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No smoking must be allowed within the vicinity of the hazardous storage areas;	Contractor	Inform all employees of the requirement and develop and place relevant signage in the relevant areas	During the Construction Phase	ECO cEO	Monthly Weekly	Photographic record of the signage placed must be provided
Adequate fire-fighting equipment must be made available at all hazardous storage areas;	Contractor	Hazardous storage areas must be fitted with adequate fire-fighting equipment	During the Construction Phase	ECO/cEO/dEO/HSO	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 be used. 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/cEO/dEO	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/cEO/dEO	Monthly, and as and when required	Appropriate spill kits are available for use
The responsible operator must have the required training to make use of the spill kit in emergency situations;	cEO and Contractor	Provide training on the use of spill kits to the relevant employees	Pre-construction	ECO / cEO / dEO / HSO	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 / cEO / dEO	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 <b>Section 5.7</b> for	cEO and Contractor	Storage and disposal of contaminated soil must be in accordance with the National Environmental Management: Waste Act and <b>sections 5.7 and 5.8</b> 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

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<i>procedures concerning storm and wastewater management and 5.8 for solid and hazardous waste management.</i>						waste disposal facilities must be provided
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### 5.18 Workshop, equipment maintenance and storage

Impact management outcome: Soil, surface water and groundwater contamination is minimised.						
Impact Management Actions	Implementation			Monitoring		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
Where possible and practical all maintenance of vehicles and equipment must take place in the workshop area;	Contractor	Demarcate specific areas for the maintenance of vehicles and equipment	During the Construction Phase	ECO	Monthly	A dedicated area for the maintenance of vehicles and machinery is used.
During servicing of vehicles or equipment, especially where emergency repairs are affected outside the workshop area, a suitable drip tray must be used to prevent spills onto the soil.	Contractor	Ensure that a drip tray is available for an	During the Construction Phase	ECO/cEO/dEO	Monthly	Contractor to provide evidence of drip
Leaking equipment must be repaired immediately or be removed from site to facilitate repair;	Contractor	Ensure that where leaking equipment is identified it is repaired immediately or removed from site for repairs	During the Construction Phase	ECO/ cEO	Monthly	Contractor to provide details of equipment repaired or removed from site
Workshop areas must be monitored for oil and fuel spills;	cEO/ dEO	Undertake regular inspection of the workshop areas for oil and fuel spills and keep an updated register of inspection on site	During the Construction Phase	ECO/ cEO/ dEO	Monthly	Register of inspection
Appropriately sized spill kit kept onsite relevant to the scale of the activity taking place must be available;	Contractor	Provide an appropriate spill kit for the project	During the Construction Phase	ECO/ cEO/ dEO	Monthly, and as and when required	Appropriate spill kits are available for use
The workshop area must have a bunded concrete slab that is sloped to facilitate runoff into a collection sump or suitable oil / water separator where	Contractor	Ensure that the workshop area is sufficiently bunded in accordance with the required specification	During the Construction Phase	ECO/ cEO/ dEO	Once, during the Construction Phase and as and when	Workshop area is bunded in accordance with the required specification

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maintenance work on vehicles and equipment can be performed;					required	
Water drainage from the workshop must be contained and managed in accordance <b>Section 5.7: Storm and wastewater management.</b>	Contractor	Ensure that water drainage from workshop area is managed as per the requirements of <b>section 5.7</b>	During the Construction Phase	ECO/ cEO/ dEO	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 (such as on boards and/or within a bunded area with an impermeable surface) or make a hard surface and remove when done;	Contractor	Provide impermeable surface for the mixing of concrete	During the Construction Phase	ECO/ cEO/ dEO	Weekly	No concrete mixing is undertaken on open ground
Hardened concrete from the washout facility or concrete 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
Concrete mixing areas must be fitted with a containment facility for the collection of cement laden water. This facility must be impervious to prevent soil and groundwater contamination;	Contractor	An impervious containment facility to be built for mixing cement.	During the Construction Phase	ECO	Monthly	No cement laden water is released into the environment. Photographic record of containment facility provided by the contractor.
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	ECO/ cEO/ dEO	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	ECO	Weekly	No cement laden water is released into the environment. Only minimal water is used for washing



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<p>Empty cement bags must be secured with adequate binding material if these will be temporarily stored on site; Sand and aggregates containing cement must be kept damp to prevent the generation of dust (Refer to <b>Section 5.20: Dust emissions</b>)</p>	<p>Contractor</p>	<p>Bind empty cement bags and temporarily store it in an appropriate area on site</p>	<p>During the Construction Phase</p>	<p>ECO/ cEO/ dEO</p>	<p>Monthly</p>	<p>Proof of binding of empty cement bags and storage in an appropriate area on site to be provided by the Contractor</p>
<p>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;</p>	<p>Contractor</p>	<p>Ensure that all excess sand, stone and cement is removed or reused</p>	<p>At the completion of the Construction Phase</p>	<p>ECO/ cEO/ dEO</p>	<p>Once, with the completion of construction</p>	<p>Certificates for the disposal of sand, stone and cement at licensed waste disposal facilities or proof of reuse must be provided</p>
<p>Temporary fencing must be erected around batching plants in accordance with <b>Section 5.5: Fencing and gate installation.</b></p>	<p>N/A, no batching plants will be developed.</p>					

## 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 minimize the generation of dust as a result of project development activities to the satisfaction of the ECO;	Contractor	Apply appropriate dust suppressant	During the Construction Phase	ECO/ cEO/ dEO	Weekly	Contractor to provide proof of use of appropriate dust suppressants
Removal of vegetation must be avoided until such time as soil stripping is required and similarly exposed surfaces must be re-vegetated or stabilized as soon as is practically possible;	Contractor	Proper planning for vegetation removal must be undertaken as well as for the associated rehabilitation	During the Construction Phase and Rehabilitation	ECO/ cEO/ dEO	Weekly	Plan for implementation must be provided by the Contractor
Excavation, handling and transport of erodible materials must be avoided under high wind conditions or when a visible dust plume is present;	Contractor	Ensure that specific limitations are placed on the transport and handling of erodible materials during high wind conditions or when a visible dust plume is present	During the Construction Phase	ECO/ cEO/ dEO	Bi-weekly (every second week)	No complaints submitted in this regard
During high wind conditions, the ECO must evaluate the situation and make recommendations as to whether dust-damping measures are adequate, or whether working will cease altogether until the wind speed drops to an acceptable level;	ECO	ECO to provide adequate recommendations	During the Construction Phase	ECO/ cEO/ dEO	When needed	Construction not taking place within extreme windy conditions. No extreme dust pollution.
Where possible, soil stockpiles must be located in sheltered areas where they are not	Contractor	Place soil stockpiles in areas less affected by wind	During the Construction Phase	ECO	Bi-weekly (every second week)	Soil stockpiles are not exposed to wind and have not been eroded

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exposed to the erosive effects of the wind;						
Where erosion of stockpiles becomes a problem, erosion control measures must be implemented at the discretion of the ECO;	Contractor in consultation with the ECO	Contractor to implement erosion control measures as recommended and agreed with the ECO	During the Construction Phase	ECO	Weekly, until erosion is no longer a problem	Recommendations made by the ECO have been implemented by the Contractor
Vehicle speeds must not exceed 40 km/h along dust roads or 20 km/h when traversing unconsolidated and non-vegetated areas:	cEO / dEO / contractor (and Eskom maintenance staff where relevant to operation)	Inform all drivers of speed limits and place appropriate signage along the relevant roads	During the Construction Phase Operation Phase	ECO Operation and Maintenance team// cEO/ dEO	Monthly	No complaints from community members are submitted
Appropriate dust suppression measures must be used when dust generation is unavoidable, e.g. dampening with water; particularly during prolonged periods of dry weather in summer. Such measures must also include the use of temporary stabilizing measures (e.g. chemical soil binders, straw, brush packs, chipping);	Contractor in consultation with the ECO	Develop appropriate measures that is specific to the proposed development which will suppress dust emission.	During the Construction Phase	ECO	Daily	Recommendations made by the ECO have been implemented by the Contractor
Straw stabilization must be applied at a rate of one bale/10 m <sup>2</sup> and harrowed into the top 100 mm of top material, for all completed earthworks:	Contractor	Ensure that straw stabilisation is undertaken as per the listed requirements	During the Construction Phase	ECO/ cEO/ dEO	Monthly	Photographic record of all straw stabilization undertaken
For significant areas of excavation or exposed ground, dust suppression measures must be used to minimize the spread of dust.	Contractor	Appropriate dust suppressant measures are implemented	During the Construction Phase	ECO/ cEO/ dEO	Weekly	Photographic record of measures being implemented and the results thereof

## 5.21 Blasting

Impact management outcome: impact to the environment is minimised through a safe blasting practice.						
Impact Management Actions	Implementation			Monitoring		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
Any blasting activity must be conducted by a suitably licensed blasting contractor; and	Not Applicable – no blasting proposed					
Notification of surrounding landowners, emergency services site personnel of blasting activity 24 hours prior to such activity taking place on Site.	Not Applicable – no blasting proposed					

## 5.22 Noise

Management outcome: To prevent unnecessary noise to the environment by ensuring that noise from development activity is mitigated.						
Impact Management Actions	Implementation			Monitoring		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
Operating hours as determined by the environmental authorization are adhered to during the development phase. Where not defined, development must be limited to daylight hours.	cEO and Contractor in consultation with the ECO	Compile a Code of Conduct for staff. Appropriate operating hours must be identified for the project.	Pre-construction and Construction	ECO	Once, prior to the commencement of construction	No complaints registered in this regard.

### 5.23 Fire prevention

Impact management outcome: Prevention of uncontrollable fires.						
Impact Management Actions	Implementation			Monitoring		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence compliance of
Designate smoking areas where the fire hazard could be regarded as insignificant;	cEO / Contractor	Identify and demarcate through signage for designated smoking areas	Pre-construction & Construction	ECO	Monthly	Photographic record designated smoking area of
Firefighting equipment must be available on vehicles located on site; all	cEO / dEO in consultation with the Contractor	Provide all vehicles with firefighting equipment	Construction	ECO/ cEO/ dEO/ HSO	Monthly	All vehicles are fitted with firefighting equipment and the details thereof are provided by the cEO
The local Fire Protection Agency (FPA) must be informed 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 material which covers the contact numbers for the FPA and emergency services. Place the contact numbers for the FPA and emergency services at a visible and central location	Pre-construction & Construction	ECO	Prior to the commencement of the environmental awareness training and once during the construction phase	Environmental awareness training material requirements checklist and photographic record of contact numbers on display

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Two-way swop of contact details between ECO and FPA.	ECO	Consultation between the ECO and FPA in order to exchange contact details	Pre-construction	Not Applicable
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### 5.24 Stockpiling and stockpile areas

Impact management outcome: To reduce erosion and sedimentation as a result of stockpiling						
Impact Management Actions	Implementation			Monitoring		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
All material that is excavated during the project development phase (either during piling (if required) or earthworks) must be stored appropriately on site in order to minimize impacts to watercourses, wetlands and water bodies;	Contractor	Identify and demarcate an appropriate location for the storage of excavated materials	Pre-construction & Construction	ECO/ cEO/ dEO	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	ECO/ cEO/ dEO	Bi-monthly (every second month)	Stockpiled material is maintained sufficiently and is clear of weeds and alien vegetation
Stockpiles must not exceed 2 m in height;	Contractor	Contractor must ensure that stockpile heights are controlled and kept below 2 m in height.	During the Construction Phase	ECO / cEO / dEO	Bi-Monthly (every second month)	Stockpiles do not exceed 2 m in height and height is measured during monitoring.

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During periods of strong winds and heavy rain, the stockpiles should 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/ cEO/ dEO	Monthly	Contractor to provide proof of availability of appropriate material to cover stockpiles when required
Where possible, sandbags (or similar) should be placed at the bases of the stockpiled material in order to prevent erosion of the material.	Contractor	Sandbags must be provided in order to prevent erosion of stockpiled materials	During the Construction Phase	ECO/ cEO/ dEO	Monthly	Contractor to provide proof of availability of sandbags to prevent erosion of stockpiled materials



## 5.25 Finalising tower positions

Impact management outcome: No environmental degradation occurs as a result of the survey and pegging operations.						
Impact Management Actions	Implementation			Monitoring		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
No vegetation clearing must occur during survey and pegging operations;	Contractor	Inform staff that vegetation should not be cut / damaged / removed during the survey and pegging operation	During the Construction phase.	ECO	During specific activities stipulated	Photographic record of vegetation before and after the commencement of surveys and pegging operations
No new access roads must be developed to facilitate access for survey and pegging purposes;	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	During the Construction phase.	ECO	During specific activities stipulated	New access roads are closed and re-habilitated to the pre-disturbance state.
Project manager, botanical specialist and contractor to agree on final tower positions based on survey within assessed and approved areas;	Contractor / DPM	Final tower positions to be identified in accordance with the agreements of the project manager, botanical specialist and contractor.	Once, prior to construction	ECO / cEO / dEO	During the Construction Phase	Photographic record and coordinates of tower positions to be made available at all times.
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.	Contractor / ECO	Identify and inform all relevant staff of the access roads/tracks to be used and erect signposts to notify that no deviations are permitted.	Once, prior to construction	ECO	Prior to commencement of construction, during the Construction Phase	Access roads/tracks Map readily available and any deviated roads closed, unless written consent have been granted by the ECO.

## 5.26 Installation of foundations

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
Batching of cement to be undertaken in accordance with <b>Section 5.19: Batching;</b>	Contractor	Undertake the batching of cement as per the requirements of <b>section 5.19</b>	During the Construction Phase	ECO/ cEO/ dEO	Monthly	Management of batching cement is undertaken in line with the requirements of <b>section 5.19</b>
Residual cement must be disposed of in accordance with <b>Section 5.8: Solid Waste Management.</b>	Contractor	Undertake the disposal of solid waste as per the requirements of <b>section 5.8</b>	During the Construction Phase	ECO/ cEO/ dEO	Monthly	The disposal of solid waste is undertaken in line with <b>section 5.8.</b>

## 5.27 Assembly and erecting towers\*

Impact management outcome: No environmental degradation occurs as a result of assembly and erecting of towers.						
Impact Management Actions	Implementation			Monitoring		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
Prior to erection, assembled towers and tower sections must be stored on elevated surface (suggest wooden blocks) to minimize damage to the underlying vegetation;	Contractor / DPM	Materials for storage towers and tower sections to be provided and installed.	During the Construction Phase	ECO	Monthly	Areas are allocated and storage of towers and tower sections are installed and used.

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In sensitive areas, tower assembly must take place off-site or away from sensitive positions;	Contractor	Sensitive areas to be identified and marked off.	During the Construction Phase	ECO / cEO	Monthly / Weekly	Photographic records of sensitive areas marked off and no tower assembling activities occur in sensitive areas.
The crane used for tower assembly must be operated in a manner which minimizes impact to the environment;	Contractor	Crane operations should be implemented in accordance with the requirements	During the Construction Phase	ECO / cEO	Monthly / Weekly	Compliance notes and photographic records are available
The number of crane trips to each site must be minimized;	Contractor	Development of a crane route-trip plan	During the Construction Phase	ECO	Monthly / Weekly	Route-trip plan implemented and followed
Wheeled cranes must be utilized in preference to tracked cranes;	Contractor	Preferences of tracked cranes should be identified and implemented	During the Construction Phase	ECO	Monthly / Weekly	Wheeled cranes are operated in accordance with preferences regarding tracked cranes
Consideration must be given to erecting towers by helicopter or by hand where it is warranted to limit the extent of environmental impact;	Contractor / DPM	Appropriate requirements to be provided and consideration agreements should take place between the Project Manager and Contractor	Prior to the Construction Phase	ECO	Once, Prior to construction	Consideration agreements are available
Access to tower positions to be undertaken in accordance with access requirements in specified in <b>Section 8.4: Access Roads</b> ;	Contractor	Undertake the requirements for access to tower positions as per the requirements of <b>section 8.4</b>	During the Construction Phase	ECO / cEO	Monthly / Weekly	Access to tower positions is undertaken in line with the requirements of <b>section 8.4</b>
Vegetation clearance to be undertaken in accordance with general vegetation clearance requirements specified in <b>Section 8.10: Vegetation clearing</b> ;	Contractor	Undertake the requirements for vegetation clearance as per the requirements of <b>section 8.10</b>	During the Construction Phase	ECO	Monthly / Weekly	Vegetation clearance is undertaken in line with the requirements of <b>section 8.10</b>
No levelling at tower sites must be permitted unless approved by the Development Project Manager or Developer Site Supervisor;	DPM / DSS	Inform staff of this requirement and if applicable, provide written consent of approval by the DPM or DSS	During the Construction Phase	ECO	Monthly / Weekly	Any levelling at tower sites approved by the DPM or DSS and written consent available on site.

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Topsoil must be removed separately and stored for later use during rehabilitation of such tower sites;	Contractor	Remove and store topsoil.	During the Construction Phase	ECO	Monthly / Weekly	Topsoil is removed and stored for later use.
Topsoil must be stored in heaps not higher than 1m to prevent destruction of the seed bank within the topsoil;	Contractor	Store topsoil in heaps which do not exceed 1 m in height.	During the Construction Phase	ECO	Monthly / Weekly	Topsoil is stored in heaps lower than 1 m in height.
Excavated slopes must be no greater than 1:3, but where this is unavoidable, appropriate measures must be undertaken to stabilize the slopes;	Contractor	Excavated slopes should not exceed the 1:3 ratio and if applicable appropriate measures should be identified and implemented to stabilize slopes.	During the Construction Phase	ECO	Monthly	Excavated slopes do not exceed the 1:3 ratio and where applicable appropriate measures are implemented to stabilize slopes.
Fly rock from blasting activity must be minimized and any pieces greater than 150 mm falling beyond the Working Area, must be collected and removed;	Contractor	Fly rock exceeding 150 mm should be collected and removed	During the Construction Phase	ECO	Monthly	Fly rock is collected and removed beyond the Working Area
Only existing disturbed areas are utilized as spoil areas;	Contractor	Identify already disturbed areas which can be used as spoil areas	During the Construction Phase	ECO	Monthly	Only existing 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;	Contractor	Provide drainage for groundwater exit	During the Construction Phase	ECO	Monthly	Drainage is provided and groundwater exit is controlled.
Surface water runoff is appropriately channeled through or around spoil areas;	Contractor	Channels should be designed and implemented to appropriately disperse surface runoff through or around spoil areas	During the Construction Phase	ECO	Monthly	Channels are implemented to appropriately disperse surface runoff through or around spoil areas
During backfilling operations, care must be taken not to dump the topsoil at the bottom of the foundation and then put spoil on top of that;	Contractor	Backfilling activities should be in line with the listed requirements.	During the Construction Phase	ECO	Monthly	During backfilling, topsoil is not dumped at the bottom of the foundation with spoil on top.

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The surface of the spoil is appropriately rehabilitated in accordance with the requirements specified in <b>Section 5.29: Landscaping and rehabilitation;</b>	Contractor	Ensure that the surface of the spoil is appropriately rehabilitated in line with the requirements in <b>section 5.29</b>	During the Construction Phase	ECO	Monthly	Surface of the spoil is rehabilitated in line with the requirements in <b>section 5.29</b>
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 at the beginning of the dry season.	Contractor	Spread topsoil over areas in need of rehabilitation and not during the dry season	Post Construction	ECO	Once, post-construction	Topsoil is appropriately spread over areas that require rehabilitation and allocated outside of the dry season.

*\*Towers refer to pylons*

## 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 <b>No-Go areas</b> and other sensitive areas;	Contractor	Identify previously disturbed areas to be used as siting of winch and tensioner stations. <b>No-Go areas</b> and sensitive areas should be closed off or signposts erected to inform staff.	During the Construction Phase	ECO	Monthly	Proof of avoidance of <b>No-Go</b> and sensitive areas through details of avoidance and photographic record.
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	Drip trays must be provided for use.	During the Construction Phase	ECO / cEO	Monthly / Weekly	Drip trays are provided and used.
Refueling of the winch and tensioner stations must be undertaken in accordance with <b>Section 5.17: Hazardous substances</b> ;	Contractor	Undertake the refueling activity of hazardous substances and associated spills as per the requirements of <b>section 5.17</b>	During the Construction Phase	ECO/ cEO/ dEO	Monthly	Management of hazardous substances and associated spills is undertaken in line with the requirements of <b>section 5.17</b>
In the case of the development of overhead transmission and distribution infrastructure, a one meter "trace-line" may be cut through the vegetation for stringing purposes only and no vehicle access must be cleared along "trace-lines". Vegetation	Contractor	Identify one meter area for stringing purposes and provide handheld implements to be used for the clearing of vegetation.	During the Construction Phase	ECO / cEO	Monthly / Weekly	Proof of vegetation removal by hand through photographic record of "trace-line". Proof of compliance of the requirements through photographic evidence and notes.

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clearing must be undertaken by hand, using chainsaws and handheld implements, with vegetation being cut off at ground level. No tracked or wheeled mechanized equipment must be used;						
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 access alternative methods of stringing and an agreement document should be signed by the contractor, DPM and ECO upon agreement if any alternatives are agreed upon.	Prior to commencement of Construction	ECO / cEO	Prior to construction and Post Construction	Notes of compliance and photographic record of alternatives considered, and alternatives agreed upon, if applicable.
Where the stringing operation crosses a public or private road or railway line, the necessary scaffolding/ protection measures must be installed to facilitate access. If, for any reason, such access has to be closed for any period(s) during development, the persons affected must be given reasonable notice, in writing;	Contractor / DPM	Provide necessary scaffolding / protection measures to facilitate access. If applicable, access closure notices to be compiled and distributed to affected parties.	During the Construction Phase	ECO / cEO / dEO	Monthly	Scaffolding and protection measures are correctly implemented, and access closure notices are available on site and affected parties are notified.
No services (electrical distribution lines, telephone lines, roads, railways lines, pipelines fences etc.) must be damaged because of stringing operations. Where disruption to services is unavoidable, persons affected must be given reasonable notice, in writing;	Contractor	Implement the required processes following the appropriate stringing operations throughout the construction on site process. If applicable, provide a reasonable written notice to affected parties of possible disruptions.	During the Construction Phase	ECO / cEO	Monthly / Weekly	The correct stringing operation process is followed and where applicable, written notices are available and affected parties are informed of possible disruptions.
Where stringing operations cross cultivated land, damage to crops is restricted to the minimum required	Contractor	Implement the required processes following the appropriate stringing	During the Construction Phase	ECO / cEO	Monthly / Weekly	The correct stringing operation process is followed and where

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to conduct stringing operations, and reasonable notice (10 work days minimum), in writing, must be provided to the landowner;		operations throughout the construction on site process to avoid damage to crops. If applicable, provide a written notice to the landowner.				applicable, written notices are available and affected parties are informed of possible damage to crops.
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	Scaffolding protection to be provided and installed when construction falls in areas where supporting structures in high value agricultural areas are present.	During the Construction Phase		Monthly / Weekly	Scaffolding is installed and notes of compliance is provided accompanied by photographic records.



## 5.29 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);	Contractor	Regular emptying of the bunds must be undertaken.	During the Construction Phase	ECO/ cEO/ dEO	Prior to site closure for more than 05 days	Bunds are emptied as per the requirements
Hazardous storage areas must be well ventilated;	Contractor	Install appropriate ventilation in all hazardous storage areas	During the construction phase	ECO/ cEO/ dEO	Prior to site closure for more than 05 days	Effective ventilation is installed in hazardous storage areas
Fire extinguishers must be serviced and accessible. Service records to be filed and audited at last service;	Contractor / cEO	Ensure fire extinguishers are serviced, as required and are easily accessible with appropriate signage indicating location. Ensure service records are kept up to date and filed	During the Construction Phase	ECO/ cEO/ dEO/ HSO	Prior to site closure for more than 05 days	Signage placed indicating location of fire extinguishers and service records
Emergency and contact details displayed must be displayed;	Contractor / cEO	Place emergency and contact details which are readily available and easily accessible	During the Construction Phase	ECO/ cEO/ dEO/ HSO	Prior to site closure for more than 05 days	Photographic proof of contact details on display
Security personnel must be briefed and have the facilities to contact or be contacted by relevant management and emergency personnel;	Contractor in consultation with the ECO	Hold a workshop with all security personnel to provide a brief of the project and security requirements. Provide facilities in order to contact management and emergency personnel	Pre-construction & construction	ECO/ cEO/ dEO/ HSO	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/ cEO/ dEO/ HSO	Prior to site closure for more than 05 days	Proof of checks of night hazards must be provided by the contractor
Fire hazards identified and the local authority must have been	Contractor / cEO	Ensure fire extinguishers are serviced, as required and are easily accessible	During the Construction Phase	ECO/ cEO/ dEO/ HSO	Prior to site closure for more than 05 days	Signage placed indicating location of fire extinguishers and

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notified of any potential threats e.g. large brush stockpiles, fuels etc.;		with appropriate signage indicating location. Ensure service records are kept up to date and filed				service records
Structures vulnerable to high winds must be secured;	Contractor	Ensure structures vulnerable to wind is secure prior to site closure	During the Construction Phase	ECO/ cEO/ dEO/ HSO	Prior to site closure for more than 05 days	Structures vulnerable to wind is 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/ cEO/ dEO	Prior to site closure for more than 05 days	Wind and dust mitigation is implemented prior to site closure
Cement and materials stores must have been secured;	Contractor	Ensure cement and material stores are secured prior to site closure	During the Construction Phase	ECO/ cEO/ dEO	Prior to site closure for more than 05 days	Cement and material stores are secured prior to site closure
Toilets must have been emptied and secured;	Contractor	Ensure toilets are emptied and secured prior to site closure	During the Construction Phase	ECO/ cEO/ dEO	Prior to site closure for more than 05 days	Toilets are emptied and secured prior to site closure
Refuse bins must have been emptied and secured;	Contractor	Ensure refuse bins are emptied and secured prior to site closure	During the Construction Phase	ECO/ cEO/ dEO	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/ cEO/ dEO	Prior to site closure for more than 05 days	Drip trays are emptied and secured prior to site closure

### 5.30 Landscaping and rehabilitation

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
All areas disturbed by construction activities must be subject to landscaping and rehabilitation;	Contractor	Develop and implement a rehabilitation plan for the rehabilitation of all disturbed areas. Only native species may be used for landscaping purposes	Pre-construction & Rehabilitation	ECO	Weekly	Rehabilitation of the disturbed areas is undertaken as per the rehabilitation plan. All certificates of waste disposal at licensed facilities are available.
All spoil and waste will be disposed to a registered waste site and certificates of disposal provided;	Contractor	Dispose of all spoil and waste at a licensed waste disposal facility. Apply for appropriate certificate and manage disposal activities in accordance with the certificate.	Pre-construction & Rehabilitation	ECO	Weekly	No spoil and waste are present on site and properly disposed at the registered waste site. Certificates should be made available on site at all times.
All slopes in excess of 2% (1:50) must be contoured 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	ECO	Weekly	All slopes are assessed and contoured as required
All slopes in excess of 12% (1:8.3) must be terraced 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	ECO	Weekly	All slopes are assessed and terraced as required
Berms that have been created should have a slope of 1:4 and be replanted with indigenous species and grasses;	Contractor	Ensure all berms have a slope of 1:4 and is replanted with indigenous species and grasses	Rehabilitation	ECO	Weekly	All berms have a slope of 1:4 and is replanted with indigenous species and grasses

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Where new access roads have crossed cultivated farmlands, that lands must be rehabilitated by ripping to a minimum depth of 600 mm;	Not Applicable					
Rehabilitation of tower sites and access roads outside of farmland;	Not Applicable					
Indigenous species will be used for replanting;	Contractor appointed landscaper	/ Make use of indigenous species for rehabilitation. No exotic species may be used.	Rehabilitation	ECO	Weekly	Indigenous species are used for rehabilitation
Stockpiled topsoil must be used for rehabilitation (refer to <b>Section 5.23: Stockpiling and stockpiled areas</b> );	Contractor	Ensure stockpiled topsoil is used as per the requirements listed under <b>section 5.23</b>	Rehabilitation	ECO	Weekly	Stockpiled topsoil is used as per the requirements listed under <b>section 5.23</b>
Stockpiled topsoil will be evenly spread so as to facilitate seeding and minimize loss of soil due to erosion;	Contractor	Ensure that topsoil is spread evenly	Rehabilitation	ECO	Weekly	Topsoil is spread evenly
Before placing topsoil, all visible weeds from the placement area and from the topsoil must be removed;	Contractor	Remove all visible weeds from placement area and topsoil before spreading the topsoil	Rehabilitation	ECO	Weekly	No weeds are visible in the placement area or the topsoil
Subsoil must be ripped before topsoil is placed;	Contractor	Undertake the ripping of subsoil prior to the spreading of topsoil	Rehabilitation	ECO	Weekly	Subsoil is ripped before topsoil is placed
The project 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 the correct timeframe	Rehabilitation is undertaken during the optimal time
Where impacted through construction related activity, all sloped areas must be stabilized to ensure proper rehabilitation is	Contractor	All disturbed slope areas must be stabilized	Rehabilitation	ECO	Weekly	Disturbed slopes are stabilized sufficiently

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affected and erosion is controlled as per the instruction from the ECO;						
Sloped areas stabilized using design structures or vegetation as specified in the design to prevent erosion of embankments. The contract design specifications must be adhered to and implemented strictly;	Contractor	Stabilize slopes as per the design specifications	Pre-construction & Rehabilitation	ECO	Weekly	Slopes are stabilized as per the design specifications
Where required, re-vegetation 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: Annual and perennial plants are chosen; Pioneer species are included; Species chosen must grow in the area feasible to grow; Root systems must have a binding effect on the soil; The final product should not cause an ecological imbalance in the area	Contractor in consultation with a suitably qualified specialist / appointed landscaper	Make use of a suitable vegetation seed mixture should enhancement be required	Rehabilitation	ECO	As and when required	Use of a suitable vegetation seed mixture if required

**6 ACCESS TO THE GENERIC EMPr**

Once completed and signed, to allow the public access to the generic EMPr, the holder of the EA must make the EMPr available to the public in accordance with regulation 26 (h) of the Environmental Impact Assessment Regulations, 2014.

**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:

Name of applicant:	Ricardo Humphreys
Tel no:	0788245253 / 0723432218 / 073 0211755
Fax no:	-
Postal address:	PO BOX 198, Upington. 8801
Physical address:	25 Bain Street, Upington

7.1.2 Details and expertise of the EAP

Name of EAP:	Mr. SE van Rooyen
Tel No:	27 51 412 6350/ 083 678 3032
Fax No:	-
E-mail address:	svr@envmgrp.com
Expertise of the EAP (Curriculum Vitae included):	Director, and Senior Environmental Assessment Practitioner EAPASA: 2019/309; SACNASP: 116554; IAIA 5901

7.1.3 Project name:

132 Kv Grid Connection Transmission Line Between the Orange River Solar Facility 1 and Eskom’s High Voltage Groblershoop Substation, Northern Cape Province.

7.1.4 Description of the project:

Environmental Management Group (Pty) Ltd is applying for an Environmental Authorisation on behalf of the Orange River Solar Facility 1 (Pty) Ltd.

Orange River Solar Facility 1 (PTY) Ltd has introduced the process for the construction of a 132 kV sub-transmission line which will connect the proposed solar facility to Eskom’s high voltage substation. The proposed 132 kV sub-transmission line development will connect the Orange River Solar facility 1 to the Eskom high voltage sub-station, which is located north-west of Groblershoop in the !Kheis local municipality (Northern Cape Province) and falls within the ZF Magcawu District Municipality. The properties to be affected by the proposed development include the following: (Figure 2).

Boegoeberg Settlement	(In Kenhardt) parcel nr 2642
Boegoeberg Settlement	(In Kenhardt) parcel nr 2024
Boegoeberg Settlement	(In Kenhardt) parcel nr 1315
Boegoeberg Settlement	(In Kenhardt) parcel nr 707
Boegoeberg Settlement	(In Kenhardt) parcel nr 1316
Rooisand 384	Portion 18

Approximately 3.5 km long, the proposed transmission line will connect the proposed photovoltaic solar facility to the national grid through the selected Eskom sub-station.

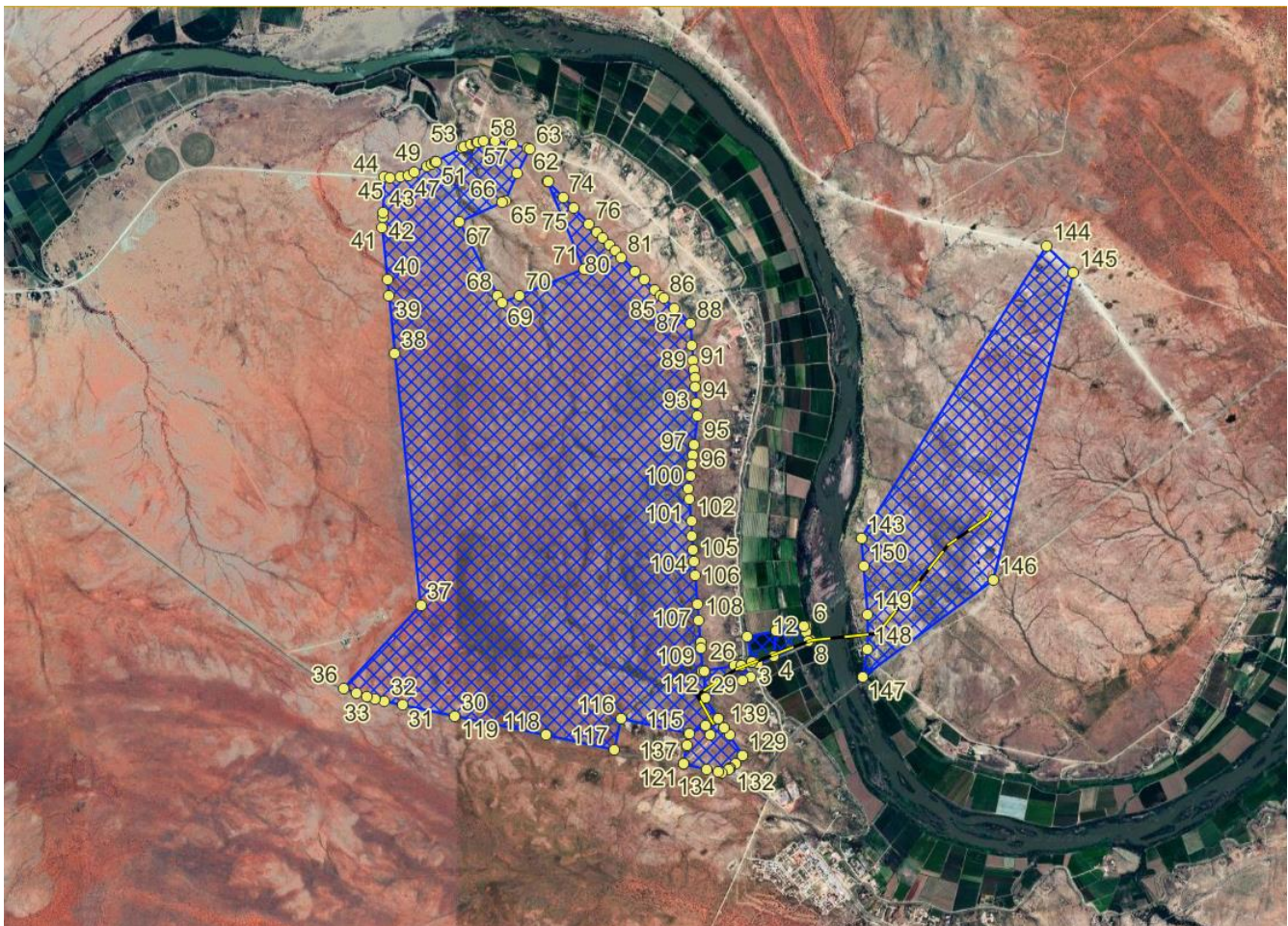
Approximately 2.6 km North of Groblershoop, the entrance to the farm Rooisand and Destination River Resort can be found to the left of the N8, a little past the Orange River bridge. Development of the proposed transmission line will affect the vegetation of a roughly 100 m wide servitude footprint area underneath the



transmission line (10x10 m2 on around the foot of the transmission line pylons). Transmission lines require service roads, which would increase the actual area that would be influenced by the proposed development. However, the presence of an existing high voltage transmission line running near parallel to the proposed transmission line has an existing service road. Although existing roads can be used, which lowers the actual area that will be influenced by the proposed development, the development of a service road is still required for the new proposed powerline. The northern sections of the transmission line will occur on steeply to gently undulating hillsides. Gently inclining floodplains along the orange river mark the southern areas of the transmission line, which experiences less undulating topography.

7.1.5 Project location:

NO	FARM NAME (if applicable)	FARM NUMBER (if applicable)	PORTION NAME	PORTION NUMBER	ERF NUMBER
1	Boegoeberg Settlement	N/A	Kenhardt	0	2642
2	Boegoeberg Settlement	N/A	Kenhardt	0	2024
3	Boegoeberg Settlement	N/A	Kenhardt	0	1315
4	Boegoeberg Settlement	N/A	Kenhardt	0	707
5	Boegoeberg Settlement	N/A	Kenhardt	0	708
6	Rooisand	384	N/A	18	N/A



Name	Folders	Lat	Lon	ID
1315	Erven	28° 52' 33.67" S	21° 58' 46.22" E	1
1315	Erven	28° 52' 35.96" S	21° 58' 39.95" E	2
1315	Erven	28° 52' 35.44" S	21° 58' 38.09" E	3

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1315	Erven	28° 52' 33.67" S	21° 58' 46.22" E	4
1316	Erven	28° 52' 23.89" S	21° 58' 57.71" E	5
1316	Erven	28° 52' 24.12" S	21° 58' 58.42" E	6
1316	Erven	28° 52' 28.46" S	21° 58' 59.45" E	7
1316	Erven	28° 52' 28.70" S	21° 58' 58.85" E	8
1316	Erven	28° 52' 25.75" S	21° 58' 57.74" E	9
1316	Erven	28° 52' 24.00" S	21° 58' 57.01" E	10
1316	Erven	28° 52' 23.89" S	21° 58' 57.71" E	11
707	Erven	28° 52' 24.00" S	21° 58' 57.01" E	12
707	Erven	28° 52' 25.75" S	21° 58' 57.74" E	13
707	Erven	28° 52' 28.70" S	21° 58' 58.85" E	14
707	Erven	28° 52' 33.67" S	21° 58' 46.22" E	15
707	Erven	28° 52' 25.66" S	21° 58' 46.70" E	16
707	Erven	28° 52' 24.00" S	21° 58' 57.01" E	17
708	Erven	28° 52' 25.66" S	21° 58' 46.70" E	18
708	Erven	28° 52' 33.67" S	21° 58' 46.22" E	19
708	Erven	28° 52' 35.44" S	21° 58' 38.09" E	20
708	Erven	28° 52' 27.34" S	21° 58' 36.56" E	21
708	Erven	28° 52' 25.66" S	21° 58' 46.70" E	22
2024	Erven	28° 52' 46.98" S	21° 58' 21.10" E	23
2024	Erven	28° 52' 38.20" S	21° 58' 20.61" E	24
2024	Erven	28° 52' 36.71" S	21° 58' 31.85" E	25
2024	Erven	28° 52' 36.39" S	21° 58' 34.26" E	26
2024	Erven	28° 52' 40.08" S	21° 58' 37.74" E	27
2024	Erven	28° 52' 41.49" S	21° 58' 34.47" E	28
2024	Erven	28° 52' 46.98" S	21° 58' 21.10" E	29
RE/2642	Erven	28° 52' 52.64" S	21° 56' 50.03" E	30
RE/2642	Erven	28° 52' 49.10" S	21° 56' 30.91" E	31
RE/2642	Erven	28° 52' 47.87" S	21° 56' 24.36" E	32
RE/2642	Erven	28° 52' 47.18" S	21° 56' 21.10" E	33
RE/2642	Erven	28° 52' 46.44" S	21° 56' 18.16" E	34
RE/2642	Erven	28° 52' 45.32" S	21° 56' 14.25" E	35
RE/2642	Erven	28° 52' 43.72" S	21° 56' 9.62" E	36
RE/2642	Erven	28° 52' 17.40" S	21° 56' 37.57" E	37
RE/2642	Erven	28° 50' 56.97" S	21° 56' 28.26" E	38
RE/2642	Erven	28° 50' 38.60" S	21° 56' 26.13" E	39
RE/2642	Erven	28° 50' 33.66" S	21° 56' 25.56" E	40
RE/2642	Erven	28° 50' 16.81" S	21° 56' 23.61" E	41
RE/2642	Erven	28° 50' 13.59" S	21° 56' 23.77" E	42
RE/2642	Erven	28° 50' 12.14" S	21° 56' 23.85" E	43
RE/2642	Erven	28° 50' 0.89" S	21° 56' 24.43" E	44
RE/2642	Erven	28° 50' 0.99" S	21° 56' 26.32" E	45
RE/2642	Erven	28° 50' 0.83" S	21° 56' 30.05" E	46
RE/2642	Erven	28° 50' 0.23" S	21° 56' 33.13" E	47
RE/2642	Erven	28° 49' 59.39" S	21° 56' 35.26" E	48
RE/2642	Erven	28° 49' 57.31" S	21° 56' 39.87" E	49
RE/2642	Erven	28° 49' 56.62" S	21° 56' 41.39" E	50
RE/2642	Erven	28° 49' 56.00" S	21° 56' 42.75" E	51
RE/2642	Erven	28° 49' 55.83" S	21° 56' 43.13" E	52
RE/2642	Erven	28° 49' 51.55" S	21° 56' 52.59" E	53
RE/2642	Erven	28° 49' 51.21" S	21° 56' 53.35" E	54
RE/2642	Erven	28° 49' 50.38" S	21° 56' 55.84" E	55
RE/2642	Erven	28° 49' 49.72" S	21° 56' 57.82" E	56
RE/2642	Erven	28° 49' 49.69" S	21° 56' 58.20" E	57



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RE/2642	Erven	28° 49' 49.47" S	21° 57' 0.67" E	58
RE/2642	Erven	28° 49' 49.40" S	21° 57' 4.63" E	59
RE/2642	Erven	28° 49' 50.11" S	21° 57' 10.09" E	60
RE/2642	Erven	28° 49' 50.30" S	21° 57' 10.84" E	61
RE/2642	Erven	28° 49' 51.64" S	21° 57' 16.35" E	62
RE/2642	Erven	28° 49' 51.85" S	21° 57' 17.22" E	63
RE/2642	Erven	28° 49' 59.64" S	21° 57' 12.74" E	64
RE/2642	Erven	28° 50' 8.50" S	21° 57' 8.26" E	65
RE/2642	Erven	28° 50' 8.94" S	21° 57' 7.16" E	66
RE/2642	Erven	28° 50' 15.16" S	21° 56' 51.63" E	67
RE/2642	Erven	28° 50' 38.62" S	21° 57' 5.62" E	68
RE/2642	Erven	28° 50' 40.94" S	21° 57' 7.01" E	69
RE/2642	Erven	28° 50' 38.62" S	21° 57' 13.43" E	70
RE/2642	Erven	28° 50' 30.13" S	21° 57' 36.95" E	71
RE/2642	Erven	28° 50' 2.30" S	21° 57' 23.74" E	72
RE/2642	Erven	28° 50' 2.38" S	21° 57' 23.83" E	73
RE/2642	Erven	28° 50' 7.24" S	21° 57' 29.38" E	74
RE/2642	Erven	28° 50' 10.67" S	21° 57' 33.19" E	75
RE/2642	Erven	28° 50' 15.70" S	21° 57' 38.78" E	76
RE/2642	Erven	28° 50' 18.30" S	21° 57' 41.67" E	77
RE/2642	Erven	28° 50' 20.17" S	21° 57' 43.74" E	78
RE/2642	Erven	28° 50' 22.50" S	21° 57' 46.33" E	79
RE/2642	Erven	28° 50' 24.48" S	21° 57' 48.53" E	80
RE/2642	Erven	28° 50' 26.43" S	21° 57' 50.69" E	81
RE/2642	Erven	28° 50' 30.76" S	21° 57' 55.50" E	82
RE/2642	Erven	28° 50' 33.58" S	21° 57' 58.83" E	83
RE/2642	Erven	28° 50' 36.90" S	21° 58' 2.87" E	84
RE/2642	Erven	28° 50' 38.65" S	21° 58' 5.01" E	85
RE/2642	Erven	28° 50' 39.40" S	21° 58' 5.92" E	86
RE/2642	Erven	28° 50' 42.79" S	21° 58' 10.05" E	87
RE/2642	Erven	28° 50' 47.42" S	21° 58' 15.71" E	88
RE/2642	Erven	28° 50' 54.55" S	21° 58' 16.34" E	89
RE/2642	Erven	28° 50' 59.22" S	21° 58' 16.76" E	90
RE/2642	Erven	28° 51' 2.15" S	21° 58' 17.02" E	91
RE/2642	Erven	28° 51' 4.85" S	21° 58' 17.26" E	92
RE/2642	Erven	28° 51' 7.63" S	21° 58' 17.50" E	93
RE/2642	Erven	28° 51' 13.04" S	21° 58' 18.02" E	94
RE/2642	Erven	28° 51' 16.98" S	21° 58' 18.38" E	95
RE/2642	Erven	28° 51' 26.19" S	21° 58' 17.07" E	96
RE/2642	Erven	28° 51' 29.39" S	21° 58' 16.61" E	97
RE/2642	Erven	28° 51' 32.53" S	21° 58' 16.16" E	98
RE/2642	Erven	28° 51' 36.09" S	21° 58' 15.66" E	99
RE/2642	Erven	28° 51' 40.28" S	21° 58' 15.05" E	100
RE/2642	Erven	28° 51' 43.58" S	21° 58' 15.35" E	101
RE/2642	Erven	28° 51' 50.49" S	21° 58' 15.96" E	102
RE/2642	Erven	28° 51' 55.17" S	21° 58' 16.38" E	103
RE/2642	Erven	28° 51' 59.65" S	21° 58' 16.77" E	104
RE/2642	Erven	28° 52' 3.46" S	21° 58' 17.11" E	105
RE/2642	Erven	28° 52' 7.84" S	21° 58' 17.49" E	106
RE/2642	Erven	28° 52' 17.14" S	21° 58' 18.30" E	107
RE/2642	Erven	28° 52' 22.16" S	21° 58' 18.73" E	108
RE/2642	Erven	28° 52' 29.26" S	21° 58' 19.35" E	109
RE/2642	Erven	28° 52' 31.14" S	21° 58' 19.52" E	110
RE/2642	Erven	28° 52' 38.26" S	21° 58' 20.14" E	111

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RE/2642	Erven	28° 52' 38.20" S	21° 58' 20.61" E	112
RE/2642	Erven	28° 52' 46.98" S	21° 58' 21.10" E	113
RE/2642	Erven	28° 52' 53.31" S	21° 58' 25.82" E	114
RE/2642	Erven	28° 52' 58.16" S	21° 58' 15.10" E	115
RE/2642	Erven	28° 52' 53.53" S	21° 57' 50.44" E	116
RE/2642	Erven	28° 53' 3.38" S	21° 57' 48.05" E	117
RE/2642	Erven	28° 52' 58.76" S	21° 57' 23.05" E	118
RE/2642	Erven	28° 52' 52.64" S	21° 56' 50.03" E	119
RE/2642	Erven	28° 53' 8.00" S	21° 58' 13.02" E	120
RE/2642	Erven	28° 53' 8.00" S	21° 58' 13.02" E	121
RE/2642	Erven	28° 53' 2.41" S	21° 58' 14.36" E	122
RE/2642	Erven	28° 53' 2.00" S	21° 58' 14.45" E	123
RE/2642	Erven	28° 52' 58.39" S	21° 58' 15.31" E	124
RE/2642	Erven	28° 52' 55.78" S	21° 58' 21.09" E	125
RE/2642	Erven	28° 52' 58.67" S	21° 58' 22.77" E	126
RE/2642	Erven	28° 52' 56.29" S	21° 58' 28.05" E	127
RE/2642	Erven	28° 52' 58.71" S	21° 58' 29.85" E	128
RE/2642	Erven	28° 53' 5.31" S	21° 58' 34.78" E	129
RE/2642	Erven	28° 53' 7.82" S	21° 58' 32.02" E	130
RE/2642	Erven	28° 53' 9.23" S	21° 58' 30.18" E	131
RE/2642	Erven	28° 53' 9.31" S	21° 58' 30.07" E	132
RE/2642	Erven	28° 53' 9.61" S	21° 58' 29.69" E	133
RE/2642	Erven	28° 53' 10.88" S	21° 58' 27.11" E	134
RE/2642	Erven	28° 53' 10.47" S	21° 58' 25.68" E	135
RE/2642	Erven	28° 53' 9.61" S	21° 58' 21.76" E	136
RE/2642	Erven	28° 53' 8.00" S	21° 58' 13.02" E	137
2952	Erven	28° 52' 53.56" S	21° 58' 26.01" E	138
2952	Erven	28° 52' 56.29" S	21° 58' 28.05" E	139
2952	Erven	28° 52' 58.67" S	21° 58' 22.77" E	140
2952	Erven	28° 52' 55.78" S	21° 58' 21.09" E	141
2952	Erven	28° 52' 53.56" S	21° 58' 26.01" E	142
18/387	Farm portions	28° 51' 55.93" S	21° 59' 17.81" E	143
18/387	Farm portions	28° 50' 22.87" S	22° 0' 25.24" E	144
18/387	Farm portions	28° 50' 31.20" S	22° 0' 35.06" E	145
18/387	Farm portions	28° 52' 9.35" S	22° 0' 5.83" E	146
18/387	Farm portions	28° 52' 40.31" S	21° 59' 18.23" E	147
18/387	Farm portions	28° 52' 31.24" S	21° 59' 20.29" E	148
18/387	Farm portions	28° 52' 20.23" S	21° 59' 20.19" E	149
18/387	Farm portions	28° 52' 4.77" S	21° 59' 18.70" E	150
18/387	Farm portions	28° 51' 55.93" S	21° 59' 17.81" E	151

7.1.6 Preliminary technical specification of the overhead transmission and distribution:

- Length
- Tower parameters
  - Number and types of towers
  - Tower spacing (mean and maximum)
  - Tower height (lowest, mean and height)
  - Conductor attachment height (mean)
  - Minimum ground clearance

## 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. Once the web-based screening tool identified in regulation 16(1) (v) of the Environmental Impact Assessment Regulations, 2014 is available, the sensitivity map must be prepared from this system. The map is to indicate areas/features of sensitivity based on the findings of the assessment and illustrated according to four tiers, Very High, High, Medium or Low. The sensitivity map shall also identify the nature of each sensitive feature e.g. raptor nest, threatened plant species, archaeological site, etc. Sensitivity maps shall identify features both within the planned working area and any known sensitive features in the surrounding landscape. The overhead transmission and distribution profile shall be illustrated at an appropriate resolution to enable fine scale interrogation. It is recommended that <20 km of overhead transmission and distribution length is illustrated per page in A3 landscape format. Where considered appropriate, photographs of sensitive features in the context of tower positions shall be used.

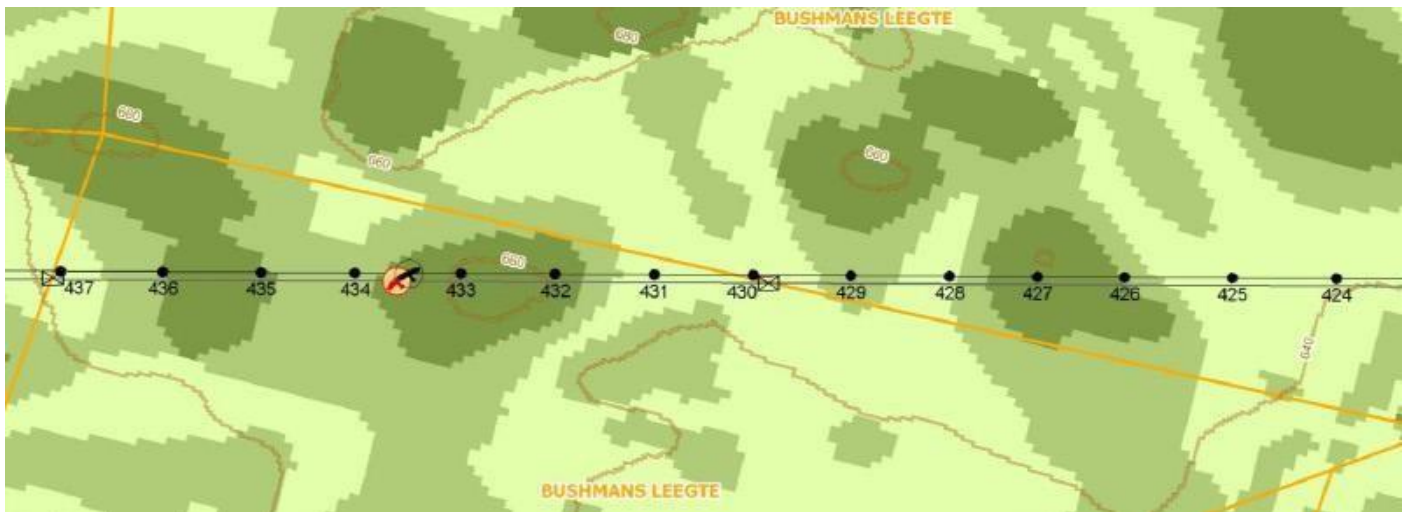


Figure 1: Example of an environmental sensitivity map in the context of a final overhead transmission and distribution profile

**7.3 Sub-section 3: Declaration**

The proponent or applicant or holder of EA affirms that they will abide and comply with the prescribed impact management outcomes and actions as stipulated in part B: section 1 of the generic EMPr and have the understanding that the impact management outcomes and actions are legally binding.

Signature Proponent/applicant/ holder of EA

Date: 08/11/2022



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

Should the EA be transferred, Part B: Section 2 must be completed by the new applicant and submitted with the application for amendment of the EA in terms of regulations 29 or 31 of the Environmental Impact Assessment Regulations, 2014. The information submitted for an amendment to an environmental authorization 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 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 actions. The management controls including impact management outcomes and actions must be presented in the format of the pre-approved generic EMPr template. This applies only to additional impact management outcomes and actions that are necessary.

If Part C is applicable to the site, it is required to be submitted to the CA for approval prior to commencement of the activity. 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.

## 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.