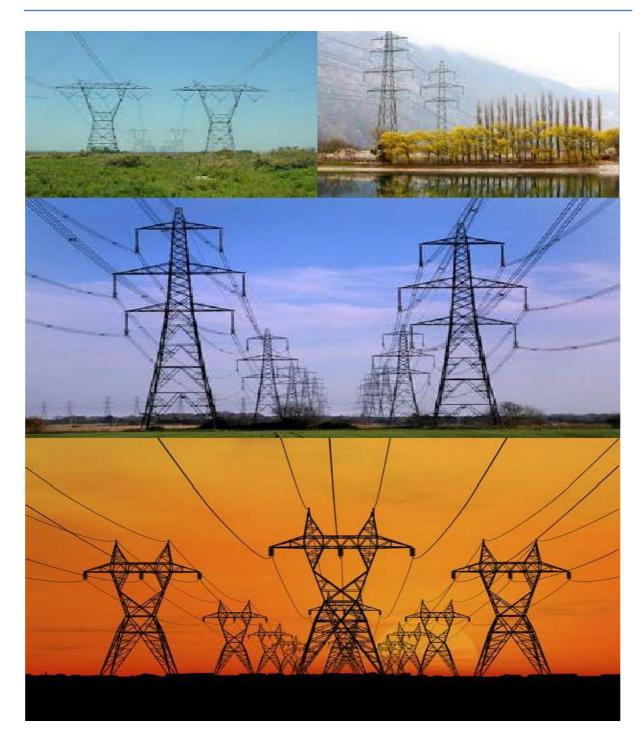
GENERIC ENVIRONMENTAL MANAGEMENT PROGRAMME (EMPr) FOR THE DEVELOPMENT AND EXPANSION OF INFRASTRUCTURE FOR THE OVERHEAD TRANSMISSION AND DISTRIBUTION OF ELECTRICITY





environmental affairs

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 has been identified as the environmental instrument to be utilised as the basis for a decision on an application for environmental authorisation (EA). The content of an EMPr must either contain the information set out in Appendix 4 of the Environmental Impact Assessment Regulations, 2014, 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 environmental authorisation, 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.

2. Purpose

This document constitutes a generic EMPr relevant to applications for EA for overhead electricity transmission and distribution infrastructure, and their expansion including all listed and specified activities necessary for the realisation of such infrastructure.

3. Objective

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

4. Scope

The scope of this generic EMPr applies to overhead electricity transmission and distribution infrastructure requiring environmental authorization 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 environmental authorization, mainly activity 11 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 and expansion of such infrastructure. It contains impact management outcomes and actions aimed at avoidance, management and mitigation of impacts and risks associated with the development and expansion of overhead electricity transmission and distribution infrastructure.

The general impact management outcomes and actions included in this generic EMPr does not cover situations where specific site environmental attributes are present and for which specific environmental impact management outcomes and actions are required.

5. Structure of this document

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

Part	Section	Heading	Content
A		Provides general guidance and information and is not legally binding	Definitions, acronyms, roles & responsibilities and documentation and reporting.
В	1	Pre-approved generic EMPr template	Contains generally accepted impact management outcomes and actions required for the avoidance, management and mitigation of impacts and risks associated with the development and expansion of infrastructure for the overhead transmission and distribution of electricity, which are presented in the form of a template that has been pre-approved.
			The template in this section is to be completed by the contractor, with each completed page signed and dated by both the contractor and the holder of the EA prior to commencement of the activity.
			Once completed and signed, the template represents the EMPr for the development approved by the EA and is legally binding. The template is not to be submitted to the competent authority and does not need approval. Once the generic EMPr is gazetted for implementation, it has been approved by the NEMA competent authority.
			To allow interested and affected parties access to the pre-approved EMPr template for consideration through the authorisation process, the applicant/proponent or the applicants/proponents EAP on behalf of the applicant/proponent must make the location of the document known to the interested and affected parties. Should an interested and affected parties not have access to electronic media, the applicant or the applicants EAP must make a hard copy available at a public location.
	2	Site specific information	Contains preliminary infrastructure layout and a declaration that the applicant/holder of the

Part	Section	Heading	Content
			environmental authorisation will comply with the pre-approved generic EMPr template contained in Part B: Section 1, and understands that the impact management outcomes and actions are binding. The preliminary infrastructure layout must be finalized before commencement, ensuring that all management actions and activities have been either pre-approved or approved in terms of Part C.
			This section must be submitted to the competent authority for approval with the final documentation for environmental authorisation. The information submitted for environmental authorisation will be considered to be incomplete should a signed copy of Part B: section 2 not be submitted. Once approved, this section forms part of the EMPr for the development as approved through an EA.
С		Site specific sensitivities/ attributes	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 must include impact management outcomes and actions. These specific impact management outcomes and actions must be presented in the format of the pre-approved generic EMPr template (Part B: section 1)
			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. This section will not be required should the site contain no specific environmental sensitivities or attributes. If Part C is applicable to the site, it is required to be submitted to the competent authority for approval prior to commencement of the activity. Once approved, Part C forms part of the EMPr for the site and is legally binding.

Part	Section	Heading	Content
			This section applies only to additional impact management outcomes and actions that are necessary for the avoidance, management
			and mitigation of impacts and risks associated with the specific development and which are not already included in Part B: section 1.
Appendix 1			Contains the method statements to be prepared prior to commencement of the activity. The method statements are not required to be submitted to the competent authority. The method statements, once signed, form part of the generic EMPr for the development and are legally binding. Method statements may be amended.

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 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 be signed and dated on each page by the contactor and the holder of the EA. This template once signed and dated is legally binding. The holder of the EA will remain responsible for its implementation.

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

Once the activity has commenced a holder of an EA may make amendments to the environmental management controls in the following manner:

• Amendment of the environmental management outcome – in line with regulation 37 of the Environmental Impact Assessment Regulation, 2014

• Amendment of the environmental management activity – in line with regulation 36 of the Environmental Impact Assessment 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 2 requires a map to be produced.

Sub-section one contains the project name, the applicants name and details, the site information which includes coordinates of the corridor in which the proposed electricity transmission and distribution infrastructure is proposed as well as the 21-digit Surveyor General code of each cadastral land parcel and where available the farm name.

Sub-section 2 is to be prepared by an EAP, and must contain his/her name and expertise including a curriculum vita. 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.

Sub-section 3 is the declaration that the applicant/proponent or holder of the EA in the case of a change of ownership must complete which confirms that the applicant/holder will comply with the 'generic EMPr' in Section 1 and understands that the management outcomes and activities are 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 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 site and the EMPr becomes legally binding to the new EA holder.

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 –

<u>Clearing</u> means the clearing and removal of vegetation, whether partially or in whole, including trees and shrubs, as specified;

<u>Contractor</u> - 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.

<u>Construction camp</u> 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;

<u>Method Statement</u> 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.

<u>Hazardous Substances</u> is a substance governed by the <u>Hazardous Substances Act, 1973 (Act No. 15</u> of 1973) as well as the Hazardous Chemical and Substances Regulations, 1995; <u>Slope</u> means the inclination of a surface expressed as one unit of rise or fall for so many horizontal units;

<u>Solid waste</u> 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);

<u>Spoil</u> 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

CA	Competent Authority	
cEO	Contractors Environmental Officer	
dEO	Developer Environmental Officer	
DPM	Developer Project Manager	
DSS	Developer Site Supervisor	
ECA	Environmental Conservation Act No. 73 of	
	1989	
ECO	Environmental Control Officer	
EA	Environmental Authorisation	
EIA	Environmental Impact Assessment	
ERAP	Emergency Response Action Plan	
EMPr	Environmental Management Programme	
	Report	
EAP	Environmental Assessment Practitioner	
FPA	Fire Protection Agency	
HCS	Hazardous chemical Substance	
RI&AP'	Registered Interested and affected parties	
S		
MSDS	Material Safety Data Sheet	

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 generic EMPr gives guidance to the various environmental roles and reporting lines.

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

Function	Role and Responsibilities
Developer's Project Manager (DPM)	Role The Project Developer is accountable for ensuring compliance with the generic 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 generic 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.
	 Responsibilities Be fully conversant with the conditions of the EA; Ensure that all stipulations within the generic EMPr are communicated and adhered to by the Developer and its Contractor(s); Monitor the implementation of the generic EMPr throughout the project by means of site inspections and meetings. Overall management of the project and generic EMPr implementation; and Ensure that periodic environmental performance audits are undertaken on the project implementation.
Developer Site Supervisor (DSS)	Role The Developer Site Supervisor reports directly to the Developer Project Manager, oversees site works, liaises with the contractor(s) and the ECO. The Developer Site Supervisor is responsible for the day to day

Function	Role and Responsibilities
	implementation of the generic EMPr and for ensuring the compliance of all contractors with the conditions and requirements stipulated in the generic EMPr.
Environmental Control Officer (ECO)	Responsibilities - Ensure that all contractors identify a contractor's Environmental Officer (cEO); - Must be fully conversant with the conditions of the EA. Oversees site works, liaison with Contractor, DPM and ECO; - Must ensure that all landowners have the relevant contact details of the site staff, ECO and cEO; - Will issue all non-compliances to contractors; and - Ratify the Monthly Environmental Report. Role
	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 Environmental Control Officer 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 Developer Site Supervisor 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 environmental authorisation and generic EMPr.
	The Environmental Control Officer provides feedback to the Developer Site Supervisor and Project Manager, who in turn reports back to the Implementing Agent and potential and Registered Interested &Affected Partie's (RI&AP's), as required. Issues of non-compliance raised by the ECO must be taken up

Function	Role and Responsibilities
	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 Environmental Authorisation, report to the relevant competent authority as and when required.
	R <u>esponsibilities</u> The responsibilities of the ECO will include the following:
	 Be aware of the findings and conclusions of all environmental authorisations related to the development; Be familiar with the recommendations and mitigation measures of this generic EMPr; Be conversant with relevant environmental legislation, policies and procedures, and ensure compliance with them; Undertake regular and comprehensive site inspections / audits of the construction site according to the generic EMPr and applicable licenses in order to monitor compliance as required; Educate the construction team about the management measures contained in the generic EMPr and environmental licenses; Compilation and administration of an environmental monitoring plan to ensure that the environmental management measures are implemented and are effective; Monitoring the performance of the Contractors and ensuring compliance with the generic EMPr and associated Method Statements; In consultation with the Developer Site Supervisor order the removal of person(s) and/or equipment which are in contravention of the specifications of the generic EMPr and/or environmentallicenses; Liaison between the Developer Project Manager, Contractors, authorities and other lead stakeholders on all environmental concerns;

Function	Role and Responsibilities
	 Issuing of site instructions to the Contractor for corrective actions required; Compile a regular environmental audit report highlighting any non-compliance issues as well as satisfactory or exceptional compliance with the generic EMPr; Validating the regular site inspection reports, which are to be prepared by the contractor Environmental Officer (cEO); Checking the cEO's record of environmental incidents (spills, impacts, legal transgressions etc) as well as corrective and preventive actions taken; Checking the cEO's public complaints register in which all complaints are recorded, as well as action taken; Assisting in the resolution of conflicts; Facilitate training for all personnel on the site – this may range from carrying out the training, to reviewing the training programmes of the Contractor and/or sub-contractors; In case of non-compliances, the ECO must first communicate this to the Senior Site Supervisor, who has the power to ensure this matter is addressed. Should no action or insufficient action be taken, the ECO may report this matter to the authorities as non-compliance; Maintenance, update and review of the generic EMPr; Communication of all modifications to the generic EMPr to the relevant stakeholders.
developer Environmental Officer (dEO)	R <u>ole</u> The dEOs will report to the Project Manager and are responsible for implementation of the generic EMPr, environmental monitoring and reporting, providing environmental input to the Project Manager and Contractor's Manager, liaising with contractors and the landowners as well as a range of environmental coordination responsibilities.
	 Responsibilities Be fully conversant with the generic EMPr; Be familiar with the recommendations and mitigation measures of this generic EMPr, and implement these measures;

Function	Role and Responsibilities
	 Ensure that all stipulations within the generic EMPr are communicated and adhered to by the Employees, Contractor(s) and its sub-contractor(s); Confine the development site to the demarcated area; Conduct environmental internal audits with regards to generic EMPr and authorisation compliance (on cEO); Assist the contractors in addressing environmental challenges on site; Assist in incident management: Reporting environmental incidents to developer and ensuring that corrective action is taken, and lessons learnt shared; Assist the contractor in investigating environmental incidents and compile investigation reports; Follow-up on pre-warnings, defects, non-conformance reports; Measure and communicate environmental performance to the Contractor; Conduct environmental awareness training on site together with ECO and cEO; Ensure that the necessary legal permits and / or licenses are in place and up to date; Acting as Developer's Environmental Representative on site and work together with the ECO and contractor; Audit carried out by an independent auditor/consultant.
Contractor	Role The Contractor appoints the cEO and has overall responsibility for ensuring that all work, activities, and actions linked to the delivery of the contract are in line with the generic EMPr and that Method Statements are implemented as described. External contractors must ensure compliance with this draft 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 generic EMPr will be implemented during the development of overhead transmission and distribution electricity infrastructure activities. Responsibilities - project delivery and quality control for the construction services as per appointment; - employ a suitably qualified person to monitor and report to the Project Developer's appointed person on the daily activities on-site during the construction period;

Function	Role and Responsibilities
	- ensure that safe, environmentally acceptable working methods and practices are implemented and that equipment is properly operated and maintained, to facilitate proper access and enable any operation to be carried out safely;
	 attend on site meeting(s) prior to the commencement of construction activities to confirm the construction procedure and designated activity zones;
	 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 the Environmental Management Programme, to the satisfaction of the ECO.
contractor Environmental Officer (cEO)	R <u>ole</u>
	Each Contractor affected by the EMPr should appoint a contractor Environmental Officer, who is responsible for the on-site implementation of the generic EMPr (or relevant sections of the generic 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:
	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. Contractor performance will, amongst others, be assessed on health, safety and environmental management criteria Their primary role is to coordinate the environmental management activities of the Contractor on site.
	R <u>esponsibilities</u> - Be on site throughout the duration of the project and be dedicated to the project; - Ensure all their staff are aware of the environmental requirements, conditions and constraints with respect to all of their activities on site;

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

4. ENVIRONMENTAL DOCUMENTATION REPORTING AND COMPLIANCE

To ensure accountable and demonstrated implementation of the generic EMPr, a number of reporting systems, documentation controls and compliance mechanisms must be in place for all overhead transmission and distribution electricity 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 generic EMPr file. At a minimum, all documentation detailed below will be stored in the g e n e r i c 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 Developer's Site Supervisor (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 generic EMPr file must be made available at all times on request by the Competent Authority (in terms of NEMA EIA regulation) or other relevant authorities. The generic EMPr file will form part of any environmental audits undertaken as prescribed in the 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 environmental authorisation from the competent authority in terms of NEMA, granting approval for the development;
- 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 generic EMPr file and submit a copy of the completed checklist to the Developer's Site Supervisor 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 Regulation. The ECOs will report on the week's "highs and lows" to the Senior Site Representative on a weekly basis.

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 generic 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 generic 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 programmed commencement date of the subject works or 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 palaeontology management.

The ECOs shall ensure that the contractors perform in accordance with these method statements. Completed and authorised 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 generic 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 generic 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 generic 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 environmental audit report.

4.7 Non-compliance

A non-compliance notice will be issued to the responsible contractor by the ECOs via the Developer's Site Supervisor or Project Manager. The non-compliance notice will be issued in writing; a copy filed in the generic 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 environmentalimpact.

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 Developer's Site Supervisor, 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 noncompliance notice in the EMPr file. A corrective action is considered complete once the report 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, construction 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; and
- 12. All areas before, during and post rehabilitation.
- 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 (4.13) 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 (9.12) 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 Developer's Project Manager, 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 construction phase and implementation of the EMPr will be undertaken by the ECO and are a legal requirement in terms of NEMA once an EA is issued and as long as the EMPr is valid. The findings and outcomes of these audits will be recorded in the EMPr file. The environmental audits and associated reports must be conducted and submitted to the competent authority at intervals as indicated in the environmental authorisation.

The ECOs shall prepare a monthly Environmental Audit Report. 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 environmental authorisation, the ECOs shall submit the monthly reports to the Competent Authority 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 development Phase, the ECOs are required to prepare a final environmental audit report. The report is to be submitted to the competent authority for acceptance and approval. The environmental report must comply with Appendix 7 of the Environmental impact Assessment 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 Competent Authority;
- 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 environmental authorisation, 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 environmental audit report;
- A summary and copies of any comments that were received during any consultation process; and
- Any other information requested by the Competent Authority.

Submission of the final environmental audit report to the competent authority will indicate the end of the development phase.

PART B: SECTION 1

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 activities identified for the development of overhead electricity transmission and distribution infrastructure, and for each activity 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 particular construction related activities.

The template provided below is to be completed by providing the information under each headings 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 contactor and the holder of the EA. This template once signed and dated is legally binding. The holder of the EA will remain responsible for its implementation.

5.1 Environmental awareness training

mpact Management Actions	Implementati	on		Monitoring			
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence o compliance	
 All staff must receive environmental awareness training; The Contractor must allow for sufficient sessions to train all personnel with no more than 20 personnel attending each course; The template is to be completed by providing the following information for each environmental management action: All new staff coming onto site must receive environmental awareness training; Refresher environmental awareness training is available as and when required; All staff are aware of the conditions and controls linked to the Environmental Authorisation and within the EMPr; The responsible operator of equipment must have the required training to make use of the spill kit in emergency situations; All staff are made aware of their individual roles and responsibilities in achieving compliance with the environmental authorisation and EMPr; The Contractor must erect and maintain information posters at key locations on site; Environmental awareness training should include as a minimum the following: 							

	ر ا			
a) Description of significant environmental impacts,				
actual or potential, related to their work activities;				
b) Mitigation measures to be implemented when				
carrying out specific activities;				
c) Emergency preparedness and response				
procedures;				
d) Emergency procedures;				
e) Procedures to be followed when working near or				
within sensitive areas:				
f) Wastewater management procedures;				
g) Water usage and conservation;				
h) Solid waste management procedures;				
,				
i) Sanitation procedures; and				
j) Disease prevention;				
A record of all any ironmontal averances training courses				
 A record of all environmental awareness training courses undertaken as part of the EMPr must be gwallable; 				
undertaken as part of the EMPr must be available;				
 Educate workers on the dangers of open and/or unattended 				
fires;				
 A staff attendance register of all staff to have received 				
environmental awareness training must be available.				
 Course material must be available and presented in all 				
appropriate languages.				

5.2 Site Establishment development

Management outcome: Impacts on the environment are minimised when constructing new infrastructure and the development footprint are kept to demarcated construction area.

Impact Management Actions	gement Actions Implementation Monitoring					
 A Method Statement must be provided by the contractor prior to any onsite activity that includes the layout of the 	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
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; 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; Sites should be located where possible on previously disturbed areas; 						
 The camp must be fenced in accordance with Section 5.5: Fencing and gate installation; and The use of existing accommodation for contractor staff, where possible, is encouraged. 						

5.3 No-Go areas

Impact Management Actions	anagement Actions Implementation Monitoring					
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence c compliance
 Identification of No-Go areas is to be informed by the environmental assessment, site walk through and any additional areas identified during development; Erect, demarcate and maintain a temporary fence around the perimeter of any No-Go area; Fencing of No-Go areas is to be undertaken in accordance with Section 5.5: Fencing and gate installation; and Unauthorised access and development related activity inside No-Go areas is prohibited. 						

5.4 Access roads

Management outcome: Minimise impact to the environment through the planned and restricted movement of vehicles on site.

Impact Management Actions	Implementati	Implementation				
 Access to the servitude and tower positions must be negotiated with the relevant landowner and must fall within the assessed and authorised area; 	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
 An access agreement must be formalised and signed by the Development Project Manager, Contractor and landowner before commencing with construction activities; The access roads to tower positions must be signposted after access has been negotiated and before the commencement of construction activities; Any access route deviation from that in the written agreement must be closed and re-vegetated immediately, at the contractor's expense; Maximum use of both existing servitudes and existing roads must be made; In circumstances where private roads must be used, the 						
condition of the said roads must be recorded in accordance with section 6.9: photographic record ; prior to use and the condition thereof agreed by the landowner, the Development Project Manager, landowner and the contractor;						

- 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;			
- Access is to be established by vehicles passing over the			
same track on natural ground, multiple tracks are not			
permitted. Access roads must only be developed where			
necessary at watercourses, on steep slopes or where			
boulders prohibit vehicular traffic (refer to Appendix A for			
requirements when developing a new access road and			
Section 8.9 Protection of watercourses for controls when			
seeking access in proximity to a water course or water			
body);			
 Upon completion of development, only roads as indicated 			
by the Development Project Manager must be closed.		 	

5.5 Fencing and Gate installation

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 Impleme		Implementation A				
					-	F : 1 C
	Responsible	Method of	Timeframe for	Responsible	Frequency	Evidence of
	person	implementation	implementation	person		compliance

 Use existing gates provided to gain access to all parts of the defined Working Area, where possible; Existing and new gates to be recorded and documented in accordance with section 6.9: photographic record; All gates must be fitted with locks and be kept locked at all times during the construction phase, unless otherwise agreed with the landowner; At points where the line crosses a fence in which there is no suitable gate within the extent of the line servitude, on the instruction of the Development Project Manager, a gate must be installed at the approval of the landowner; Care must be taken that the gates must be so erected that there is a gap of no more than 100 mm between the bottom of the gate and the ground; Where gates are installed in jackal proof fencing, a suitable reinforced concrete sill must be provided beneath the gate;
 Existing and new gates to be recorded and documented in accordance with section 6.9: photographic record; All gates must be fitted with locks and be kept locked at all times during the construction phase, unless otherwise agreed with the landowner; At points where the line crosses a fence in which there is no suitable gate within the extent of the line servitude, on the instruction of the Development Project Manager, a gate must be installed at the approval of the landowner; Care must be taken that the gates must be so erected that there is a gap of no more than 100 mm between the bottom of the gate and the ground; Where gates are installed in jackal proof fencing, a suitable
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of the gate and the ground; – Where gates are installed in jackal proof fencing, a suitable
 Where gates are installed in jackal proof fencing, a suitable
 Original tension must be maintained in the fence wires;
 All gates installed in electrified fencing must be re-electrified;
 All demarcation fencing and barriers must be maintained in
good working order for the duration of overhead
transmission and distribution electricity infrastructure
development activities;
– Fencing must be erected around the camp, batching
plants, hazardous storage areas, and all designated no-go
areas, where applicable;
 All fencing must be developed of high quality material
bearing the SABS mark;
 The use of razor wire as fencing must be avoided;
 Fenced areas with gate access will remain locked after
hours, during weekends and on holidays if staff is away from
site. Site security will be required at all times;

 On completion of the project all temporary fences are to be removed and where possible re-used by the contractor at new projects; 			
new projects;			
- The contractor will ensure that all fence uprights are			
appropriately removed, ensuring that no uprights are cut at			
ground level but rather removed completely.			

5.6 Water Supply Management

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
 Should water abstraction be required and the necessary authorisation from DWS and permission from the landowner has been received, the Contractor must ensure the following: The vehicle abstracting water from a river does not enter or cross it and does not operate from within the river; No damage occurs to the river bed or banks and that the abstraction of water does not entail stream diversion activities; and All reasonable measures to limit pollution or sedimentation of the downstream watercourse are implemented. 						

 Ensure water conservation is being practiced by: 			
a. Minimising water use during cleaning of equipment;			
b. Undertaking regular audits of water systems; and			
c. Including a discussion on water usage and conservation			
during environmental awareness training.			

5.7 Storm and waste water management

Management outcome: An effective system of storm water run-off control is implemented, where required and impacts to the environment caused by storm water and wastewater discharges during construction are avoided.

Impact Management Actions	Implementati	on	Monitoring			
	Responsible	Method of	Timeframe for	Responsible	Frequency	Evidence of
	person	implementation	implementation	person		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;						
- Runoff from the cement/ concrete batching areas must be						
strictly controlled, and contaminated water must be						
collected, stored and either treated or disposed of off-site,						
at a location approved by the Project Manager;						
- All spillage of oil onto concrete surfaces must be controlled						
by the use of an approved absorbent material and the used						
absorbent material disposed of at an appropriate waste						
disposal facility;						
– Natural storm water runoff not contaminated by						
development operations and clean water can be						
discharged directly to watercourses and water bodies,						
subject to the Project Manager's approval and support by						

the ECO;			
 Water that has been contaminated with suspended solids, 			
such as soils and silt, may be released into watercourses or			
water bodies only once all suspended solids have been			
removed from the water by settling out these solids in			
settlement ponds. The release of settled water back into the			
environment must be subject to the Project Manager's			
approval and support by the ECO.			

5.8 Solid waste management

Management outcome: Wastes are appropriately stored, handled o	and safely disp	osed of at a license	ed waste facility.			
Impact Management Actions	Implementati	ion	Monitoring			
	Responsible	Method of	Timeframe for	Responsible	Frequency	Evidence of
	person	implementation	implementation	person		compliance
 All measures regarding waste management must be undertaken using an integrated waste management approach; Sufficient, covered waste collection bins (scavenger and weatherproof) must be provided; 						
 A suitably positioned and clearly demarcated waste collection site must be identified and provided; The waste collection site must be maintained in a clean and orderly fashion; 						

				1
 Waste must be segregated into separate bins and clearly 				
marked for each waste type;				
 Staff must be trained in waste segregation; 				
 Bins must be emptied regularly; 				
- General waste produced onsite must be disposed of at				
recognised and licenced waste disposal sites/ recycling				
company;				
- Hazardous waste must be disposed of at a registered waste				
disposal site;				
 Certificates of safe disposal for general, hazardous and 				
recycled waste must be maintained.				

5.9 Protection of watercourses

Management outcome: Pollution and contamination of the watercourse environment as well as potential erosion are prevented.

Impact Management Actions	Implementati	Implementation				
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
 All watercourses and water bodies 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; 						

- In the event of a spill, prompt action must be taken to clear			
the polluted or affected areas;			
- Where possible, no development equipment must traverse			
any seasonal or permanent wetland;			
- Development of permanent watercourse crossing must only			
be undertaken where no alternative access to tower			
position is available;			
- When working in or near any watercourse or wetland, the			
following environmental controls and consideration must be			
taken:			
a) River levels during the period of construction;			
b) Development within flowing water is to be minimised. All			
diversions must be in place, water diverted away from the			
Working Area and the area properly stabilised prior to			
excavations commencing;			
c) When working in flowing water, downstream			
sedimentation must be controlled by installing and			
maintaining the necessary temporary sedimentation			
barriers, e.g. geotextile silt curtains or sedimentation weirs			
developed out of suitably secured straw bales.			
Sedimentation barriers must be a maximum of 25 m			
downstream of the construction activities;			
d) 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;			
e) Where earthwork is being undertaken in close proximity			
to any watercourse, slopes must be stabilised using suitable			
materials, i.e. sandbags or geotextile fabric, to prevent sand			
and rock from entering the channel; and			
f) Appropriate rehabilitation and re-vegetation measures			

for the river banks must be implemented timeously. In this		
regard, the banks should be appropriately and		
incrementally stabilised as soon as development allows.		

5.10 Vegetation clearing

Management outcome: Vegetation clearing is restricted to the authorised development footprint of the proposed infrastructure.

Impact Management Actions	Implementati	on		Monitoring		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
 General: Indigenous vegetation which does not interfere with the safe development and operation of the power line must be left undisturbed; Protected or endangered species may occur on or near the development site. Special care should be taken not to damage such species; Search, rescue and replanting of all protected and endangered species likely to be damaged during project development must be identified by the Botanical Specialist and completed prior to any development or clearing; 						

-				
	Competent Authority prior to the cutting or clearing the			
	affected species, and they must be filed;			
-	The Final Environmental Report must confirm that all			
	identified species have been rescued and replanted;			
_	Trees felled due to construction must be monitored and			
	listed in the Audit Environmental Report;			
_	Rivers, watercourses and other water bodies must be kept			
	clear of felled trees, vegetation cuttings and debris. Integrity			
	of the riverbanks must be maintained by only trimming parts			
	of trees directly affecting the safe operation of the overhead			
	transmission and distribution infrastructure;			
_	Only a registered pest control operator may apply			
	herbicides on a commercial basis and commercial			
	application must be carried out under the supervision of a			
	registered pest control operator, supervision of a registered			
	pest control operator or is appropriately trained;			
_	A daily register must be kept of all relevant details of			
	herbicide usage as stipulated in Act 36 of 1947;			
_	Trees, shrubs, grass, natural features and topsoil which are			
	not removed during vegetation clearance shall be			
	protected from damage during operation of the overhead			
	transmission and distribution infrastructure. Disturbance of the			
	surface of the earth shall be allowed for access purposes			
	only;			
-	All protected species and sensitive vegetation not removed			
	must be clearly marked and such areas fenced off if			
	required in accordance with No-Go procedure in Section			
	8.3: No-Go areas. When working in or near any watercourse			
	or wetland, the following environmental controls and			
	consideration shall be taken.			

Servitude:

- Vegetation that does not grow high enough to cause interference with overhead 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;
- Where clearing for access purposes is essential, the maximum width to be cleared within the servitude must be in accordance to the specifications
- 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 licenced waste disposal facility;
- Vegetation should be trimmed where it is likely to intrude on the minimum vegetation clearance distance (MVCD) or will intrude on this distance before the next scheduled clearance. MVCD is determined from SANS 10280;
- Trees growing to a height in excess of the horizontal distance of that tree from the nearest conductor which are identified as being a risk to safe operation of the overhead transmission and distribution infrastructure must be treated and prevented from growing in a manner as to endanger the line should they fall;
- Debris resulting from clearing and pruning must be disposed of at a licenced waste disposal facility, unless the landowners wish to retain the cut vegetation;
- Deep valleys and environmentally sensitive areas that restrict vehicle access, or legally protected areas, must not be cleared of vegetation provided that the vegetation poses no threat to the safe operation and reliability of the

overhead transmission and distribution infrastructure. In the			
case of the development of new overhead transmission and			
distribution infrastructures, a one metre "trace-line" must be			
cut through the vegetation for stringing purposes only and			
no vehicle access must be cleared along the "trace-line".			
Alternative methods of stringing which limit impact to the			
environment must always be considered.			

5.11 Protection of fauna

Management outcome: minimise disturbance to fauna.

Impact Management Actions	Implementati	on		Monitoring		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
 No interference with livestock must occur without the landowner's written consent and with the landowner or a person representing the landowner being present; The breeding sites of raptors and other wild birds species must be taken into consideration during the planning of the development programme; Breeding sites must be kept intact and disturbance to breeding birds must be avoided. Special care must be taken where nestlings or fledglings are present; Nesting sites on existing parallel lines must documented; Special recommendations of the avian specialist must be 						

adhered to at all times to prevent unnecessary disturbance			
of birds;			
- Bird guards and diverters must be installed on the new line as			
per the recommendations of the specialist;			
 No poaching must be tolerated under any circumstances. 			
All animal dens in close proximity to the works areas must be			
marked as No-Go areas.			

5.12 Protection of heritage resources

Management outcome: impact to heritage resources is minimised.

Impact Management Actions	Implementati	on		Monitoring		
	Responsible	Method of	Timeframe for	Responsible	Frequency	Evidence of
	person	implementation	implementation	person		compliance
 Identify, demarcate and prevent impact to all known sensitive heritage features on site in accordance with the No-Go procedure in Section 5.3: No-Go areas; Carry out general monitoring of excavations for potential fossils, artefacts and material of heritage importance; All work must cease immediately, if any human remains and/or other archaeological, palaeontological and historical material are uncovered. Such material, if exposed, must be reported to the nearest museum, archaeologist/ palaeontologist (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 before development recommences. 						

Management outcome: all precautions are taken where possible to minimise the risk of injury, harm or complaints.

Impact Management Actions	Implementati	on		Monitoring			
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance	
 Identify fire hazards, demarcate and restrict public access to these areas as well as notify the local authority of any potential threats e.g. large brush stockpiles, fuels etc.; All unattended open excavations must be adequately fenced or demarcated; Adequate protective measures must be implemented to prevent unauthorised access to and climbing of partly constructed towers and protective scaffolding; Ensure structures vulnerable to high winds are secured; Maintain an incidents and complaints register in which all incidents or complaints involving the public are logged. 							

5.14 Sanitation

Management outcome: clean and well maintained toilet facilities are available to all staff in an effort to minimise the risk of disease and impact to the environment.

Impact Management Actions	Implementat	ion		Monitoring		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
 Mobile chemical toilets are installed onsite if no other ablution facilities are available; The use of ablution facilities and or mobile toilets must be used at all times and no indiscriminate use of the veld for the purposes of ablutions must be permitted under any circumstances; Where mobile chemical toilets are required, the following must be ensured: a) Toilets are located no closer than 100 m to any watercourse or water body; b) Toilets are secured to the ground to prevent them from toppling due to wind or any other cause; c) No spillage occurs when the toilets are cleaned or emptied and the contents are managed in accordance with the EMPr; d) Toilets have an external closing mechanism and are closed and secured from the outside when not in use to prevent toilet paper from being blown out; e) Toilets are serviced regularly and the ECO must inspect toilets to ensure compliance to health standards; 						

5.15 Prevention of disease

Management outcome: All necessary precautions linked to the spread of disease are taken.

Impact Management Actions	Implementati	on	Monitoring			
				D 111	-	
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
 Undertake environmentally-friendly pest control in the camp area; Ensure that the workforce is sensitised to the effects of sexually transmitted diseases, especially HIV AIDS; The Contractor must ensure that information posters on AIDS are displayed in the Contractor Camp area; Information and education relating to sexually transmitted diseases to be made available to both construction workers and local community, where applicable; Free condoms will be made available to all staff on site at central points; Medical support must be made available; Provide access to Voluntary HIV Testing and Counselling Services. 						

5.16 Emergency procedures

Management outcome: emergency procedures are in place to enable a rapid and effective response to all types of environmental emergencies.									
Impact Management Actions	Implementati	ion	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; The Emergency Plan must deal with accidents, potential spillages and fires in line with relevant legislation; All staff must be made aware of emergency procedures as part of environmental awareness training; The relevant local authority must be made aware of a fire as soon as it starts; In the event of emergency necessary mitigation measures to contain the spill or leak must be implemented (see Hazardous Substances section 5.17). 									

5.17 Hazardous substances

Management outcome: safe storage, handling, use and disposal of hazardous substances.

		••		Monitoring		
Impact Management Actions	Implementati	on		Monitoring		
	Responsible	Method of	Timeframe for	Responsible	Frequency	Evidence of
	person	implementation	implementation	person		compliance
– The use and storage of hazardous substances to be						
minimised and non-hazardous and non-toxic alternatives						
 substituted where possible; All hazardous substances will be stored in suitable containers 						
as defined in the Method Statement;						
 Containers will be clearly marked to indicate contents, quantities and safety requirements; 						
- All storage areas will be bunded. The bunded area will be of						
sufficient capacity to contain a spill / leak from the stored containers;						
– An Alphabetical Hazardous Chemical Substance (HCS)						
control sheet will be drawn up and kept up to date on a continuous basis;						
- All hazardous chemicals that will be used on site will have						
Material Safety Data Sheets (MSDS);						
- All employees working with HCS will be trained in the safe						
use of the substance and according to the safety data						

sheet;

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

- An appropriately sized spill kit kept onsite relevant to the			
scale of the activity/s involving the use of hazardous			
substance must be available at all times;			
- The responsible operator must have the required training to			
make use of the spill kit in emergency situations;			
- In the event of a spill, contaminated soil must be collected in			
containers and stored in a central location and disposed of			
according to the National Environmental Management:			
Waste Act 59 of 2008. Refer to Section 5.7 for procedures			
concerning waste water management and 5.8 for solid			
waste management.			

5.18 Workshop, equipment maintenance and storage

Management outcome: Soil, surface water and groundwater contamination is minimized.									
Impact Management Actions	Implementation Monitoring								
	Responsible	Method of	Timeframe for	Responsible	Frequency	Evidence of			
	person	implementation	implementation	person		compliance			
 Where possible and practical all maintenance of vehicles and equipment must take place in the workshop area; During servicing of vehicles or equipment, especially where emergency repairs are effected outside the workshop area, a suitable drip tray must be used to prevent spills onto the 									
soil. The relevant local authority must be made aware of a									

fire as soon as it starts;			
 Leaking equipment must be repaired immediately or be removed from site to facilitate repair; Workshop areas must be monitored for oil and fuel spills; Appropriately sized spill kit kept onsite relevant to the scale 			
 of the activity taking place must be available; The workshop area must have a bunded concrete slab that is sloped to facilitate runoff into a collection sump or suitable oil / water separator where maintenance work on vehicles 			
 and equipment can be performed; Water drainage from the workshop must be contained and managed in accordance Section 5.7: Waste water 			
management.			

5.19 Batching plants

Management outcome: To control concrete and cement batching activities in order to minimise spillages and contamination of soil, surface water and groundwater

Impact Management Actions	Implementati	on	Monitoring			
	Responsible	Method of	Timeframe for	Responsible	Frequency	Evidence of
	person	implementation	implementation	person		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;					
- 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;					
- Bagged cement must be stored in an appropriate facility					
and at least 10 m away from any water courses, gullies and					
drains;					
- A washout facility must be provided for washing of concrete					
associated equipment. Water used for washing must be					
restricted;					
 Hardened concrete from the washout facility or concrete 					
mixer can either be reused or disposed of at an appropriate					
licenced disposal facility;					
 Empty cement bags must be secured with adequate 					
binding material if these will be temporarily stored on site;					
 Sand and aggregates containing cement must be kept 					
damp to prevent the generation of dust (Refer to Section					
5.20: Dust emissions)					
- Any excess sand, stone and cement must be removed or					
reused from site on completion of construction period and					
disposed at a registered disposal facility;					
- Temporary fencing must be erected around batching plants					
in accordance with Section 5.5: Fencing and gate					
installation.					
			1	1	

5.20 Dust emissions

Impact Management Actions	Implementati	on		Monitoring		
	Responsible	Method of	Timeframe for	Responsible	Frequency	Evidence of
	person	implementation	implementation	person		compliance
 Take all reasonable measures to minimise the generation of dust as a result of project development activities to the satisfaction of the ECO; Removal of vegetation must be avoided until such time as soil stripping is required and similarly exposed surfaces must be re- vegetated or stabilised as soon as is practically possible; Excavation, handling and transport of erodible materials must be avoided under high wind conditions or when a visible dust plume is present; During high wind conditions, the ECO will 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; 						
 Where possible, soil stockpiles must be located in sheltered areas where they are not exposed to the erosive effects of the wind; 						
 the wind; Where erosion of stockpiles becomes a problem, erosion control measures must be implemented at the discretion of the ECO; Vehicle speeds must not exceed 40km/h along dust roads or 						

20km/h when traversing unconsolidated and non-vegetated			
areas;			
– 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 stabilising measures (e.g. chemical soil binders,			
straw, brush packs, chipping);			
– Straw stabilisation must be applied at a rate of one			
bale/10m ² and harrowed into the top 100 mm of top			
material, for all completed earthworks;			
– For significant areas of excavation or exposed ground, spray			
water or wet areas using trucks to minimise the spread of			
dust.			

5.21 Blasting

Management outcome: impact to the environment is minimised through a safe and healthy blasting practice.

Impact Management Actions	Implementati	on	Monitoring			
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
 Any blasting to be done after informing local public; Any blasting activity must be conducted by a suitably licensed blasting contractor; 						

- Notification of surrounding landowners, emergency services			
site personnel of blasting activity 24 hours prior to such			
activity taking place on Site.			

5.22 Noise

Management outcome: To prevent unnecessary noise to the enviro	nment by ensu	ring that noise from	construction activi	ty is mitigated.		
Impact Management Actions	Implementati	on		Monitoring		
	Responsible	Method of	Timeframe for	Responsible	Frequency	Evidence of
	person	implementation	implementation	person		compliance
 Operating hours as determined by the environmental authorisation are adhered to during the development phase. Where not defined, development must be limited to daylight hours. 						

5.23 Fire prevention

Management outcome: Prevention of uncontrollable fires.	
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Impact Management Actions	Implementation /			Actions Implementation Monitoring			
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance	
 Designate smoking areas where the fire hazard could be regarded as insignificant; Firefighting equipment must be available on all vehicles located on site; The local Fire Protection Agency (FPA) must be informed of construction activities; Contact numbers for the FPA and emergency services must be communicated in environmental awareness training and displayed at a central location on site; Two way swop of contact details between ECO and FPA. 							

5.24 Stockpiling and stockpile areas

Management outcome: To reduce erosion and sedimentation as a	result of stockpiling	
Impact Management Actions	Implementation	Monitoring

	Responsible	Method of	Timeframe for	Responsible Frequen	cy Evidence of
	person	implementation	implementation	person	compliance
 All material that is excavated during the project development phase (either during piling (if required) or earthworks) must be stored appropriately on site in order to minimise impacts to watercourses, wetlands and water bodies; All stockpiled material must be maintained and kept clear of weeds and alien vegetation growth by undertaking regular weeding and control methods; Stockpiles must not exceed 2 m in height; During periods of strong winds and heavy rain, the stockpiles should be covered with appropriate material (e.g. cloth, tarpaulin etc.); Where possible, sandbags (or similar) should be placed at the bases of the stockpiled material in order to prevent erosion of the material. 					

5.25 Finalising tower positions

Management outcome: No environmental degradation occurs as a result of the survey and pegging operations.										
Impact Management Actions	Implementation	on		Monitoring						
	Responsible Method of Timeframe for Responsible Frequency Evidence of									
	person	implementation	implementation	person		compliance				

- No vegetation clearing must occur during survey and			
pegging operations;			
- No new access roads must be developed to facilitate			
access for survey and pegging purposes;			
– Project manager, botanical specialist and contractor to			
agree on final tower positions based on survey within			
assessed and approved areas;			
- The surveyor is to demarcate (peg) access roads/tracks in			
consultation with ECO. No deviations will be allowed without			
the prior written consent from the ECO.			

5.26 Installation of foundations

Management outcome: No environmental degradation occurs as a result of the survey and pegging operations.									
Impact Management Actions	Implementati	on		Monitoring					
	Responsible	Method of	Timeframe for	Responsible	Frequency	Evidence of			
	person	implementation	implementation	person		compliance			
 Batching of cement to be undertaken in accordance with 									
Section 5.19 : Batching;									
 Residual cement must be disposed of in accordance with 									
Section 5.8: Solid Waste Management.									

5.27 Assembly and erecting towers

Management outcome: No environmental degradation occurs as a result of assembly and erecting of towers.

Impact Management Actions	Implementati	on	Monitoring			
					I _	
	Responsible	Method of	Timeframe for	Responsible	Frequency	Evidence of
	person	implementation	implementation	person		compliance
 Prior to erection, assembled towers and tower sections must be stored on elevated surface (suggest wooden blocks) to minimise damage to the underlying vegetation; In sensitive areas, tower assembly must take place off-site or away from sensitive positions; The crane used for tower assembly must be operated in a manner which minimises impact to the environment; The number of crane trips to each site must be minimised; Wheeled cranes must be utilised in preference to 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; Access to tower positions to be undertaken in accordance with access requirements in specified in Section 8.4: Access Roads; Vegetation clearance to be undertaken in accordance with general vegetation clearance requirements specified in Section 8.10: Vegetation clearing; 						

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0	es must be permitted unless				
	opment Project Manager or				
Developer Site Supervisor;					
 Topsoil must be removed se 	parately and stored for later use				
during rehabilitation of such	tower sites;				
 Topsoil must be stored in hec 	ips not higher than 1m to				
prevent destruction of the se	ed bank within the topsoil;				
 Excavated slopes must be no 	o greater that 1:3, but where this				
is unavoidable, appropriate	measures must be undertaken				
to stabilise the slopes;					
- Fly rock from blasting activ	ity must be minimised and any				
pieces greater than 150 m	nm falling beyond the Working				
Area, must be collected and	l removed;				
 Only existing disturbed areas 	are utilised as spoil areas;				
 Drainage is provided to cont 	rol groundwater exit gradient				
with the spill areas such that	migration of fines is kept to a				
minimum;					
– Surface water runoff is appro	priately channeled through or				
around spoil areas;					
- During backfilling operation	ns, care must be taken not to				
dump the topsoil at the bot	tom of the foundation and then				
put spoil on top of that;					
- The surface of the spoil is	appropriately rehabilitated in				
accordance with the requ	irements specified in Section				
5.29: Landscaping and rehal	pilitation;				
- 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				
-	e site is complete. Spreading of				
	en at the beginning of the dry				
season.					

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 No-Go areas and other sensitive areas; The winch and tensioner station must be equipped with drip trays in order to contain any fuel, hydraulic fuel or oil spills and leaks; Refueling of the winch and tensioner stations must be undertaken in accordance with Section 5.17: Hazardous substances; In the case of the development of overhead transmission and distribution infrastructure, a one metre "trace-line" may be cut through the vegetation for stringing purposes only and no vehicle access must be undertaken by hand, using 									

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	chainsaws and hand held implements, with vegetation				
	being cut off at ground level. No tracked or wheeled				
	mechanised 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;				
_ '	Where the stringing operation crosses a public or private				
	road or railway line, the necessary scaffolding/ protection				
	measures must be installed to facilitate access. If, for any				
	reason, such access has to be closed for any period(s)				
	during development, the persons affected must be given				
	reasonable notice, in writing;				
	No services (electrical distribution lines, telephone lines,				
	roads, 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;				
	Where stringing operations cross cultivated land, damage to				
	crops is restricted to the minimum required to conduct				
	stringing operations, and reasonable notice (10 work days				
	minimum), in writing, must be provided to the landowner;				
	Necessary scaffolding protection measures must be installed				
	to prevent damage to the structures supporting certain high				
	value agricultural areas such as vineyards, orchards,				
	nurseries.				

5.29 Temporary closure of site

Impact Management Actions	Implementati	on		Monitoring		
	Responsible	Method of	Timeframe for	Responsible	Frequency	Evidence o
	person	implementation	implementation	person		compliance
 Bunds must be emptied (where applicable); 						
 Hazardous storage areas must be well ventilated; 						
- Fire extinguishers must be serviced and accessible. Service						
records to be filed and audited at last service;						
 Emergency and contact details displayed must be displayed; 						
- Security personnel must be briefed and have the facilities to						
contact or be contacted by relevant management and emergency personnel;						
 Night hazards such as reflectors, lighting, traffic signage etc. must have been checked; 						
 Fire hazards identified and the local authority must have 						
been notified of any potential threats e.g. large brush						
stockpiles, fuels etc.;						
 Structures vulnerable to high winds must be secured; 						
 Wind and dust mitigation must be implemented; 						
 Cement and materials stores must have been secured; 						
- Toilets must have been emptied and secured;						
 Refuse bins must have been emptied and secured; 						
 Drip trays must have been emptied and secured. 						

5.30 Landscaping and rehabilitation

Management outcome: No environmental degradation occurs as a result of the survey and pegging operations.

Impact Management Actions	Implementati	on	Monitoring			
	Responsible	Method of	Timeframe for	Responsible	Frequency	Evidence of
	person	implementation	implementation	person		compliance
 All areas disturbed by construction activities must be subject to landscaping and rehabilitation; All spoil and waste will be disposed to a registered waste site and certificates of disposal provided; All slopes in excess of 2% (1:50) must be contoured in accordance with the Conservation of Agricultural Resources Act, No 43 of 1983; 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; Berms that have been created should have a slope of 1:4 and be replanted with indigenous species and grasses; Where new access roads have crossed cultivated farmlands, that lands must be rehabilitated by ripping to a minimum depth of 600 mm; Rehabilitation of tower sites and access roads outside of farmland; 						

 Indigenous species will be used for replanting; 			
 Stockpiled topsoil must be used for rehabilitation (refer to 			
Section 5.23: Stockpiling and stockpiled areas);			
 Stockpiled topsoil will be evenly spread so as to facilitate 			
seeding and minimise loss of soil due to erosion;			
 Before placing topsoil, all visible weeds from the placement 			
area and from the topsoil must be removed;			
 Subsoil must be ripped before topsoil is placed; 			
 The project must be timed so that rehabilitation can take 			
place at the optimal time for vegetation establishment;			
 Where impacted through construction related activity, all 			
sloped areas must be stabilised to ensure proper			
rehabilitation is effected and erosion is controlled as per the			
instruction from the ECO;			
 Sloped areas stabilised using design structures or vegetation 			
as specified in the design to prevent erosion of			
embankments. The contract design specifications must be			
adhered to and implemented strictly;			
 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:			
a) Annual and perennial plants are chosen;			
b) Pioneer species are included;			
c) Species chosen must grow in the area feasible to grow;			
d) Root systems must have a binding effect on the soil;			
e) The final product should not cause an ecological			
imbalance in the area			

6 ACCESS TO THE GENERIC EMPr

Once completed and signed, to allow the public access to the generic EMPr, the holder of the EA must make the EMPr available to the public in accordance with 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: Eskom Holdings SOC Ltd, Limpopo Operating Unit

Ms Tshifhiwa Matamela

Tel No: +27 15 230 1489

Email: matamete@eskom.co.za

Postal Address: PO Box 3499, Polokwane, 0700

Physical Address: 92 Hans van Rensburg, Polokwane

7.1.2 Details and expertise of the EAP:

Name of applicant: Setala Environmental

Tel No: +27 82 568 6344

Fax No: +27 86 675 4026

E-mail address: ria@setalaenvironmental.co.za

Expertise of the EAP (Curriculum Vitae included)

7.1.3 Project name: Vergenoeg Mining Company 132kV Power Lines And 132/22kV Substation Project

7.1.4 Description of the project:

The Vergenoeg Mining Project is located in the Gauteng Province approximately 85 km north of Pretoria and 15 km south of the town of Rust de Winter. Bulk electricity supply infrastructure is needed to augment the existing supply to the above-mentioned mining project on the Farm Kromdraai 209 J.R., City of Tshwane Metropolitan Municipality. In addition to the Vergenoeg mine, this project will also supply electricity to other Eskom users. The communities that will benefit from the Electrification program are, amongst others, Matimpule, Katjibane, Loding, Marapjane, Masobe, Phake Thabeng. These communities are in the Rust De Winter Area. Eskom will utilise their Standard MV network which will operate on 22 kV, built with single wood pole structures. The 22kV network is below the threshold and the development thereof is therefore not a listed activity. Specific routes for the MV lines will be determined, with inputs from land owners and affected communities, by Engineering Surveyors after the project is raised.

An approximately 1km Eskom 132 kV overhead loop-in-loop-out power line is proposed to be constructed from the authorised Eskom Nokeng - Rust de Winter 132kV overhead powerline to connect to the proposed Eskom Vergenoeg Mine Substation.

7.1.5 Project location:

ſ	NO	FARM NAME(if	FARM NUMBER(if	PORTION	PORTION	LATITUDE	LONGITUDE
		applicable)	applicable)	NAME	NUMBER		
Ī	1	Kromdraai	209 J.R.		0	25°15'14.02"S	28°35'33.96"E

7.16 Preliminary technical specification of the overhead transmission and distribution:

- Length of powerline: 938 metres
- Tower parameters (to be advised by Eskom)
- Number and types of towers
- Tower spacing (mean and maximum)
- Tower height (lowest, mean and height)
- Conductor attachment height (mean)
- Minimum ground clearance

Coordinates

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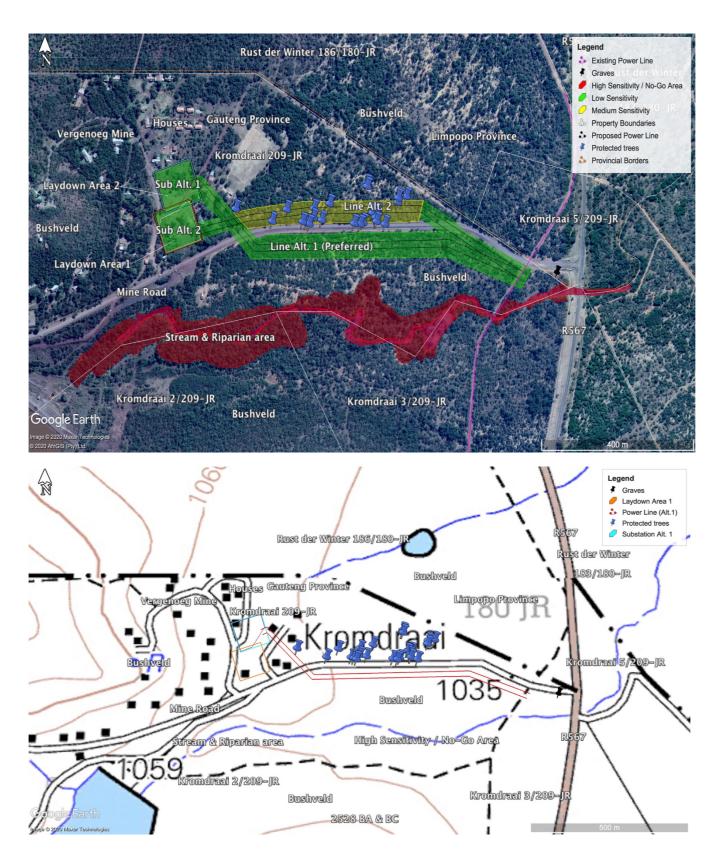
The GPS coordinates of the main landmarks within the project area are as follows:

- Power Line (Alternative 1):
 - Length: 938m.
 - Starting Point (T-off existing line): 25°15'14.51"S; 28°36'6.43"E.
 - Middle Point: 25°15'12.27"S; 28°35'50.03"E.
 - End Point at Substation site: 25°15'7.51"S; 28°35'36.03"E.
- Power Line (Alternative 2):
 - Length: 892m.
 - Starting Point (T-off existing line): 25°15'14.51"S; 28°36'6.43"E.
 - Middle Point: 25°15'9.60"S; 28°35'51.78"E.
- End Point at Substation site: 25°15'11.17"S; 28°35'36.29"E.
- Centre of Substation Site (Alternative 1): 25°15'7.94"S; 28°35'34.21"E.
- Centre of Substation Site (Alternative 2): 25°15'11.11"S; 28°35'34.32"E.

GPS Coordinates along power lines - every 250m

Power Line Alternative 1	
0m (From T-Off point)	25°15'14.51"S; 28°36'6.43"E.
250m	25°15'12.45"S; 28°35'57.77"E
500m	25°15'12.52"S; 28°35'48.79"E
750m	25°15'11.66"S; 28°35'40.40"E
938m (At substation Alt. 1)	25°15'7.51"S; 28°35'36.03"E.
Power Line Alternative 2	
0m (From T-Off point)	25°15'14.51"S; 28°36'6.43"E.
250m	25°15'10.61"S; 28°35'58.65"E
500m	25°15'9.89"S; 28°35'49.91"E
750m	25°15'10.34"S; 28°35'41.08"E
892m (At substation Alt.2)	25°15'11.17"S; 28°35'36.29"E.

7.2 Sub-section 2: Development footprint site map



7.3 Sub-section 3: Declaration

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

Signature Proponent/applicant/ holder of EA

Date:

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

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

Protection of heritage resources

Impact management outcome: Impact to heritage resources is minimised.

Impact Management Actions	Implementation			Monitoring			
	Responsible	Method of	Timeframe for	Responsible	Frequency	Evidence of	
	person	implementation	implementation	person		compliance	
 Identify, demarcate and prevent impact to all known sensitive heritage features on site in accordance with the No- Go procedure in Section 5.3: Access restricted areas; 							
- Graves are identified at least 100 m away from any of the alternatives							
and will therefore not be impacted on. GPS: 25°15'14.63"S; 28°36'9.87"E.							
However, as a mitigatory measure, it should be fenced in and a							
management plan be drafted to ensure the sustainable preservation							
thereof.							
- The construction teams should be inducted on the significance of							
archaeological resources that may be encountered during subsurface							
construction work before they work on the area in order to ensure							
appropriate treatment and course of action is afforded to any							
chance finds.							
 If archaeological materials are uncovered, work should cease 							
immediately and the SAHRA be notified and activity should not							
resume until appropriate management provisions are in place.							
 Should any objects of archaeological remains be found during 							
construction activities, work must immediately stop in that area and							
the Environmental Control Officer (ECO) must be informed.							
- If any evidence of archaeological sites or remains (eg, remnants of							
stone-made structures, indigenous ceramics, bones, stone artefacts,							
ostrich eggshell fragments, marine shell and charcoal/ash							

	concentrations), unmarked human burials, or other categories of
	heritage resources are found during the proposed activities, SAHRA
	APM Unit (021 462 4502) must be alerted immediately, and a
	professional archaeologist, depending on the nature of the finds, must
	be contacted as soon as possible to inspect the findings. If the newly
	discovered heritage resources prove to be of archaeological
	significance, a Phase 2 rescue operation might be necessary.
_	The following 'Chance find Procedure' should be followed:
0	Upon finding any archaeological or historical material all work at the
	affected area must cease.
0	The area should be demarcated in order to prevent any further work
	there until an investigation has been completed.
0	An archaeologist should be contacted immediately to provide
	advice on the matter.
0	Should it be a minor issue, the archaeologist will decide on future
	action. Depending on the nature of the find, it may include a site visit.
0	SAHRA's APM Unit may also be notified.
0	If needed the necessary permit will be applied for with SAHRA. This will
	be done in conjunction with the appointed archaeologist.
0	The removal of such archaeological material will be done by the
	archaeologist in lieu of the approval given by SAHRA, including any
	conditions stipulated by the latter.
0	
	agreed to such a matter.

Impact management outcome: Impact to Palaeontological resources is minimised.

Impact Management Actions	Implementatio	'n		Monitoring		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
 The following monitoring protocol must be adopted and implemented during earth moving activities: The following procedure is only required if fossils are seen on the surface and when excavations commence. When excavations begin the rocks and must be given a cursory inspection by the environmental officer or designated person. Any fossiliferous material (plants, insects, bone, coal) should be put aside in a suitably protected place. This way the construction activities will not be interrupted. Photographs of similar fossil plants must be provided to the developer to assist in recognizing the fossil plants in the shales and mudstones (for example see Figure 4). This information will be built into the EMP's training and awareness plan and procedures. Photographs of the putative fossils can be sent to the palaeontologist for a preliminary assessment. Fossil plants or vertebrates that are considered to be of good quality or scientific interest by the palaeontologist must be removed, catalogued and housed in a suitable institution where they can be made available for further study. Before the fossils are removed from the site a SAHRA permit must be obtained. Annual 			implementation	person		compliance
 reports must be submitted to SAHRA as required by the relevant permits. If no good fossil material is recovered then no site inspections by the palaeontologist would be required. 						
 If no fossils are found and the excavations have finished then no further monitoring is required 						

Protection of protected trees

Impact Management Actions	Implementation	Monitoring

	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
 The following protected tree species were identified during field investigations in the study area and surrounding area. This includes nationally and provincially protected species: Shepherd's tree (Boscia albitrunca) 						
 A few trees of Boscia albitrunca (Shepherd's tree), which is a nationally protected tree, are found north of the tar road in the area of alternative 2 for the power line. 						
 No other nationally or provincially protected tree species were observed in the study area during field investigations. The trees are not found south of the road (in the area of power line alternative 1). It is mainly for this reason that Alternative 2 is not recommended. 						
 Should Alternative 2 be constructed then a tree permit will be required for the removal or cutting of this species within the power line corridor. 						

Protection of avifauna

Impact Management Actions	Implementatio	n	Monitoring			
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
 It is recommended that BFDs be installed across the entire length of the power line. Although the line is not within a high collision danger zone, it is short and the BFDs are inexpensive enough to be justified. There is always the potential danger across any power line and the BFDs will further help reduce potential negative impacts on birds in the project area. BFDs should be installed on the top wire at 5m intervals and alternating between black and white coloured diverters. Eskom and Vergenoeg Mine will use the latest structure designs that further help reduce bird collisions and electrocutions. No temporary accommodation or temporary storage facilities may be setup within 100m of the any watercourse, including drainage lines and farm dams. No temporary laydown areas or facilities to be set up in the power line servitude area. Temporary laydown and site office areas have been demarcated in the area of the proposed substation and these must be used. If at all possible, only existing access roads to be used by vehicles during the construction phase. No interaction is allowed with any birds, even common species. 						
 Should a nest be found during the construction phase, work in that particular spot must be halted and a bird specialist consulted. Any nesting sites found should be 						

 cordoned off with tape and signs and declared a 'no-go' zone. If the nest is within the actual servitude it might be able to be relocated, depending on the species and the advice from the bird specialist. Maintenance access roads to be limited to car tracks or small gravel roads. 			
 Access roads to be maintained and any erosion gullies to be rehabilitated as part of the maintenance programme on the power lines. Strict control should be maintained over all activities during construction, in particular heavy machinery and vehicle movements, and staff. It is difficult to mitigate properly for this as some habitat destruction is inevitable. Any dead birds found in the power line servitudes to be photographed, position 			
recorded and reported to Eskom.			

Measures to Protect Hydrological Features

Impact Management Actions	Implementatio	n	Monitoring			
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
 The study area is situated within the primary drainage area (PDA) of B, and the quaternary drainage area (QDA) of B31D. The area is within the Olifants Water Management Area (WMA 2) and under the jurisdiction of the Olifants Catchment Management Agency (CMA 2). There are no watercourses, including wetlands, in the study area. However, there is a small seasonal and highly ephemeral (short-lived) stream south of the study site. The proposed project, including the recommended power line servitude alternative (Alternative), is situated outside of the stream, riparian area and 32m buffer areas. The power line will have no measurable negative impact on the watercourse. No heavy vehicles are allowed to drive through any watercourse, unless on existing gravel and farm roads. Access roads to be maintained at all times. No temporary facilities or portable toilets to be setup within 100m of the watercourse and associated riparian zone and floodplains, including streams, drainage lines and wetlands. No temporary accommodation or temporary storage facilities may be setup within 100m of the watercourse. No temporary laydown areas may be established in the power line servitude, but only within the demarcated area near the substation site. The temporary laydown area and temporary access roads (if constructed) need to be rehabilitated. 						

 Disturbed surface areas in the construction phase to be rehabilitated. 				
- No open trenches to be left. No mounds of soils created during construction to b	2			
left.				

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.

7.1 Sub-section 3: Declaration

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

Signature Proponent/applicant/ holder of EA

Date:

21-20-02-12

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

Should the EA be transferred to a new holder, <u>Part B: Section 2</u> must be completed by the new holder and submitted with the application for an amendment of the EA in terms of Regulations

29 or 31 of the EIA Regulations, whichever applies. The information submitted for an amendment to an environmental authorisation will be considered to be incomplete should a signed copy of <u>Part B: Section 2</u> not be submitted. Once approved, <u>Part B: Section 2</u> forms part of the EMPr for the development and the EMPr becomes legally binding to the new EA holder.