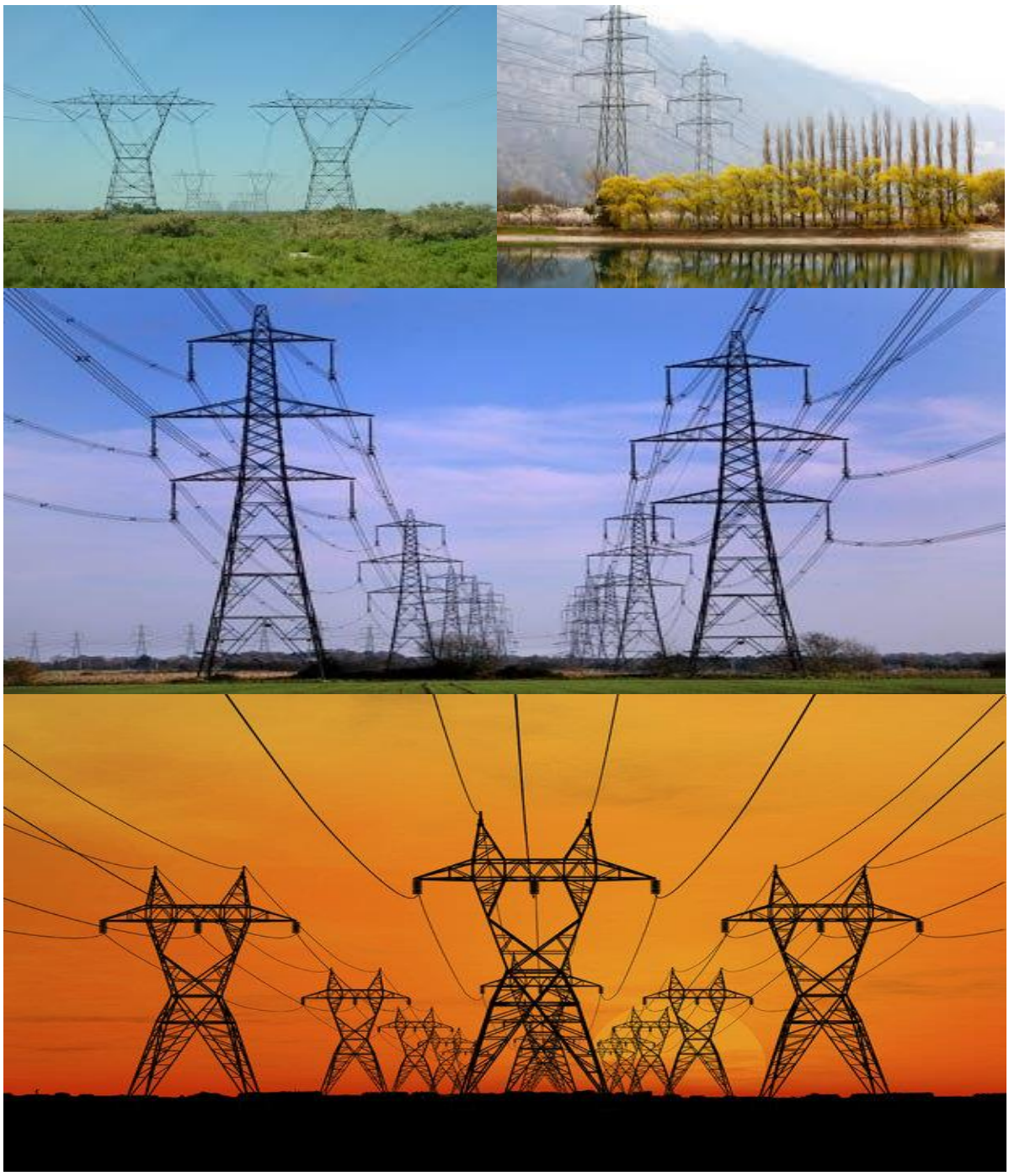
APPENDIX 1
GENERIC ENVIRONMENTAL MANAGEMENT PROGRAMME (EMPr) FOR THE DEVELOPMENT AND EXPANSION FOR OVERHEAD ELECTRICITY TRANSMISSION AND DISTRIBUTION INFRASTRUCTURE



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INTRODUCTION

1. Background

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

2. Purpose

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

3. Objective

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

4. Scope

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

5. Structure of this document

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

PART A – GENERAL INFORMATION

1. DEFINITIONS

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

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

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

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

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

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

The method statement must cover applicable details with regard to:

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

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

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

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

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

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

2. ACRONYMS and ABBREVIATIONS

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

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

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

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

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

Responsible Person (s)	Role and Responsibilities
	is responsible for the day to day implementation of the EMPr and for ensuring the compliance of all contractors with the conditions and requirements stipulated in the EMPr. Responsibilities - Ensure that all contractors identify a contractor's Environmental Officer (cEO); - Must be fully conversant with the conditions of the EA. Oversees site works, liaison with Contractor, DPM and ECO; - Must ensure that all landowners have the relevant contact details of the site staff, ECO and cEO; - Issuing of site instructions to the Contractor for corrective actions required; - Will issue all non-compliances to contractors; and - Ratify the Monthly Environmental Report.
Environmental Control Officer (ECO)	Role The ECO should have appropriate training and experience in the implementation of environmental management specifications. The primary role of the ECO is to act as an independent quality controller and monitoring agent regarding all environmental concerns and associated environmental impacts. In this respect, the ECO is to conduct periodic site inspections, attend regular site meetings, pre-empt problems and suggest mitigation and be available to advise on incidental issues that arise. The ECO is also required to conduct compliance audits, verifying the monitoring reports submitted by the cEO. The ECO provides feedback to the DSS and Project Manager regarding all environmental matters. The Contractor, cEO and dEO are answerable to the Environmental Control Officer for non- compliance with the Performance Specifications as set out in the EA and EMPr. The ECO provides feedback to the DSS and Project Manager, who in turn reports back to the Contractor and potential and Registered Interested &Affected Parties' (RI&AP's), as required. Issues of non-compliance raised by the ECO must be taken up by the Project Manager, and resolved with the Contractor as per the conditions of his contract. Decisions regarding environmental procedures, specifications and requirements which have a cost implication (i.e. those that are deemed to be a variation, not allowed for in the Performance Specification) must be endorsed by the Project Manager. The ECO must also, as specified by the EA, report to the relevant CA as and when required. Responsibilities

Responsible Person (s)	Role and Responsibilities
	The responsibilities of the ECO will include the following: - Be aware of the findings and conclusions of all EA related to the development; - Be familiar with the recommendations and mitigation measures of this EMPr; - Be conversant with relevant environmental legislation, policies and procedures, and ensure compliance with them; - Undertake regular and comprehensive site inspections / audits of the construction site according to the generic EMPr and applicable licenses in order to monitor compliance as required; - Educate the construction team about the management measures contained in the EMPr and environmental licenses; - Compilation and administration of an environmental monitoring plan to ensure that the environmental management measures are implemented and are effective; - Monitoring the performance of the Contractors and ensuring compliance with the EMPr and associated Method Statements; - In consultation with the Developer Site Supervisor order the removal of person(s) and/or equipment which are in contravention of the specifications of the EMPr and/or environmental licenses; - Liaison between the DPM, Contractors, authorities and other lead stakeholders on all environmental concerns; - Compile a regular environmental audit report highlighting any non-compliance issues as well as satisfactory or exceptional compliance with the EMPr; - Validating the regular site inspection reports, which are to be prepared by the contractor Environmental Officer (cEO); - Checking the cEO's record of environmental incidents (spills, impacts, legal transgressions etc) as well as corrective and preventive actions taken; - Checking the cEO's public complaints register in which all complaints are recorded, as well as action taken; - Assisting in the resolution of conflicts; - Facilitate training for all personnel on the site – this may range from carrying out the training, to reviewing the training programmes of the Contractor; - In case of non-compliances, the ECO must first communicate this to the Senior Site Supervisor, who has the power to ensure this matter is addressed. Should no action or insufficient action be taken, the ECO may report this matter to the authorities as non-compliance; - Maintenance, update and review of the EMPr; - Communication of all modifications to the EMPr to the relevant stakeholders.
developer Environmental Officer	Role

Responsible Person (s)	Role and Responsibilities
(dEO)	The dEOs will report to the Project Manager and are responsible for implementation of the EMPr, environmental monitoring and reporting, providing environmental input to the Project Manager and Contractor's Manager, liaising with contractors and the landowners as well as a range of environmental coordination responsibilities. <u>Responsibilities</u> - Be fully conversant with the EMPr; - Be familiar with the recommendations and mitigation measures of this EMPr, and implement these measures; - Ensure that all stipulations within the EMPr are communicated and adhered to by the Employees, Contractor(s) ; - Confine the development site to the demarcated area; - Conduct environmental internal audits with regards to EMPr and authorisation compliance (on cEO); - Assist the contractors in addressing environmental challenges on site; - Assist in incident management: - 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;
Contractor	<u>Role</u> The Contractor appoints the cEO and has overall responsibility for ensuring that all work, activities, and actions linked to the delivery of the contract are in line with the EMPr and that Method Statements are implemented as described. External contractors must ensure compliance with this EMPr while performing the onsite activities as per their contract with the Project Developer. The contractors are required, where

Responsible Person (s)	Role and Responsibilities
	specified, to provide Method Statements setting out in detail how the impact management actions contained in the EMPr will be implemented during the development or expansion for overhead electricity transmission and distribution infrastructure activities. Responsibilities - project delivery and quality control for the development services as per appointment; - employ a suitably qualified person to monitor and report to the Project Developer's appointed person on the daily activities on-site during the construction period; - ensure that safe, environmentally acceptable working methods and practices are implemented and that equipment is properly operated and maintained, to facilitate proper access and enable any operation to be carried out safely; - attend on site meeting(s) prior to the commencement of activities to confirm the procedure and designated activity zones; - ensure that contractors' staff repair, at their own cost, any environmental damage as a result of a contravention of the specifications contained in EMPr, to the satisfaction of the ECO.
contractor Environmental Officer (cEO)	Role Each Contractor affected by the EMPr should appoint a cEO, who is responsible for the on-site implementation of the EMPr (or relevant sections of the EMPr). The Contractor's representative can be the site agent; site engineer; a dedicated environmental officer; or an independent consultant. The Contractor must ensure that the Contractor's Representative is suitably qualified to perform the necessary tasks and is appointed at a level such that she/he can interact effectively with other site Contractors, labourers, the Environmental Control Officer and the public. As a minimum the cEO shall meet the following criteria: Responsibilities - Be on site throughout the duration of the project and be dedicated to the project; - Ensure all their staff are aware of the environmental requirements, conditions and constraints with respect to all of their activities on site; - Implementing the environmental conditions, guidelines and requirements as stipulated within the EA,

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

4. ENVIRONMENTAL DOCUMENTATION REPORTING AND COMPLIANCE

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

4.1 Document control/Filing system

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

4.2 Documentation to be available

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

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

4.3 Weekly Environmental Checklist

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

The checklists will form the basis for the Monthly Environmental Reports. Copies of all completed checklists will be attached as Annexures to the Environmental Audit Report as required in terms of the EIA Regulations.

4.4 Environmental site meetings

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

4.5 Required Method Statements

The method statement will be done in such detail that the ECOs are enabled to assess whether the contractor's proposal is in accordance with the EMPr.

The method statement must cover applicable details with regard to:

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

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

- Site establishment – Camps, Lay-down or storage areas, satellite camps, infrastructure;
- Batch plants;
- Workshop or plant servicing;
- Handling, transport and storage of Hazardous Chemical 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 monitor and ensure that the contractors perform in accordance with these method statements. Completed and agreed method statements between the holder of the EA and the contractor shall be captured in Appendix 1.

4.6 Environmental Incident Log (Diary)

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

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

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

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

The Environmental Incident Log will be captured in the EAR.

4.7 Non-compliance

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

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

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

4.8 Corrective action records

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

4.9 Photographic record

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

The Contractor shall:

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

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

1. Pictures of all areas designated as work areas, camp areas, development sites and storage areas taken before these areas are set up;
2. All bunding and fencing;
3. Road conditions and road verges;
4. Condition of all farm fences;
5. Topsoil storage areas;
6. All areas to be cordoned off during construction;
7. Waste management sites;
8. Ablution facilities (inside and out);
9. Any non-conformances deemed to be "significant";
10. All completed corrective actions for non-compliances;
11. All required signage;
12. Photographic recordings of incidents;
13. All areas before, during and post rehabilitation; and
14. Include relevant photographs in the Final Environmental Audit Report.

4.10 Complaints register

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

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

4.11 Claims for damages

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

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

4.12 Interactions with affected parties

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

The ECOs shall:

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

4.13 Environmental audits

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

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

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

4.14 Final environmental audits

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

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

5. IMPACT MANAGEMENT OUTCOMES AND IMPACT MANAGEMENT ACTIONS

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

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

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

5.1 Environmental awareness training

Impact management outcome: All onsite staff are aware and understands the individual responsibilities in terms of this EMPr.						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
– All staff must receive environmental awareness training prior to commencement of the activities	ECO / dEO / cEO	Environmental awareness training	Pre-Construction	ECO / dEO	Monthly and as and when required	Attendance register
– The Contractor must allow for sufficient sessions to train all personnel with no more than 20 personnel attending each course;	Contractor / DPM	Scheduling of sufficient sessions through consultation with the ECO / cEO / dEO	Construction	ECO / dEO	Monthly and as and when required	Attendance register
– Refresher environmental awareness training is available as and when required;	ECO / dEO / cEO	Refresher environmental awareness training	Construction	ECO / dEO	Monthly and as and when required	Attendance register
– All staff are aware of the conditions and controls linked to the EA and within the EMPr and made aware of their individual roles and responsibilities in achieving compliance with the EA and EMPr;	ECO / dEO / cEO	Ensure that the EA and EMPr is readily available, EA and EMPr awareness	Construction	ECO / dEO	Monthly and as and when required	Attendance register
– The Contractor must erect and maintain information posters at key locations on site, and the posters must include the following information as a minimum:	Contractor	Place appropriate posters at key locations	Construction	ECO / dEO	Monthly and as and when required	Visual inspection and Photographic records

– a) Safety notifications; and – b) No littering.						
– Environmental awareness training must include as a minimum the following: a) Description of significant environmental impacts, actual or potential, related to their work activities; b) Mitigation measures to be implemented when carrying out specific activities; c) Emergency preparedness and response procedures; d) Emergency procedures; e) Procedures to be followed when working near or within sensitive areas; f) Wastewater management procedures; g) Water usage and conservation; h) Solid waste management procedures; i) Sanitation procedures; j)Fire prevention; and k) Disease prevention.	ECO / dEO / cEO	Environmental awareness training material	Construction	ECO / dEO	Monthly and as and when required	Environmental awareness training material requirements checklist
– A record of all environmental awareness training courses undertaken as part of the EMPr must be available;	dEO / cEO / ECO	Filing system including all proof of training	Construction	ECO / dEO	Monthly and as and when required	File with proof of training
– Educate workers on the dangers of open and/or unattended fires;	ECO / dEO / cEO	Environmental awareness training	Construction	ECO / dEO	Monthly and as and when	Environmental awareness

		material			required	training material requirements checklist
– A staff attendance register of all staff to have received environmental awareness training must be available.	dEO / cEO / ECO	Filing system including all proof of training	Construction	ECO / dEO	Monthly and as and when required	File with proof of training
– Course material must be available and presented in appropriate languages that all staff can understand.	ECO / dEO / cEO	Environmental awareness training material in the required languages	Construction	ECO / dEO	Monthly and as and when required	File with proof of training in appropriate languages

5.2 Site Establishment development

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

Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
– A method statement must be provided by the contractor prior to any onsite activity that	Contractor	Development of a method statement	Pre-Construction	ECO / dEO	Once prior to construction	Method statement

includes the layout of the construction camp in the form of a plan showing the location of key infrastructure and services (where applicable), including but not limited to offices, overnight vehicle parking areas, stores, the workshop, stockpile and lay down areas, hazardous materials storage areas (including fuels), the batching plant (if one is located at the construction camp), designated access routes, equipment cleaning areas and the placement of staff accommodation, cooking and ablution facilities, waste and wastewater management;						which complies with the minimum requirements listed
– 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;	Contractor DPM in consultation with dEO	Place construction camps outside of sensitive areas	Pre-Construction	ECO / dEO	Once prior to construction	Layout and sensitivity map indicating avoidance of sensitive areas
– Sites must be located where possible on previously disturbed areas;	Contractor DPM	Place sites within previously disturbed areas where possible	Pre-Construction	ECO / dEO	Once prior to construction	Layout and sensitivity map indicating avoidance of sensitive areas
– The camp must be fenced in accordance with *Section 5.5: Fencing and gate installation*; and	Contractor DPM	Fencing as per the requirements of Section 5.5 of this EMPr	Pre-Construction	ECO / dEO	Once prior to construction	Camp is fenced in accordance with Section 5.5 of this EMPr

– The use of existing accommodation for contractor staff, where possible, is encouraged.	Not Applicable - No existing accommodation.					

5.3 Access restricted areas

Impact management outcome: Access to restricted areas prevented.

Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
– Identification of access restricted areas is to be informed by the environmental assessment, site walk through and any additional areas identified during development;	Contractor, dEO & DPM	Demarcate access restricted areas	Commencement and for the duration of the construction phase	ECO / dEO	Monthly	Visual inspection and Photographic records
– Erect, demarcate and maintain a temporary barrier with clear signage around the perimeter of any access restricted area, colour coding could be used if appropriate; and	Contractor, dEO & DPM	Erect appropriate temporary barriers around access restricted areas	Commencement and for the duration of the construction phase	ECO / dEO	Monthly	Visual inspection and Photographic records
– Unauthorised access and development related activity inside access restricted areas is prohibited.	ECO /dEO / Contractor / DPM / DSS	Erect appropriate temporary barriers around access	Commencement and for the duration of the	ECO / dEO	Monthly	Visual inspection and Photographic

		restricted areas	construction phase			records

5.4 Access roads

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

Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
– Access to the servitude and tower positions must be negotiated with the relevant landowner and must fall within the assessed and authorised area;	Contractor, DPM	Negotiations to utilize access routes with the relevant landowners	Pre-Construction	ECO / dEO	Monthly	Written agreements signed by the landowners
– An access agreement must be formalised and signed by the DPM, Contractor and landowner before commencing with the activities;	Contractor, DPM, dEO	Access agreements with the affected landowners	Pre-Construction	ECO / dEO	Monthly	Written agreements signed by the DPM, Contractor and landowners
– The access roads to tower positions must be signposted after access has been negotiated and before the commencement	Contractor	Placing of road signs on the access roads to	Construction	ECO / dEO	Monthly	Photographic records of road signs placed

of the activities;		tower positions				on the access roads
– All private roads used for access to the servitude must be maintained and upon completion of the works, be left in at least the original condition	Contractor	Undertake maintenance activities on private roads used for construction	Construction	ECO / dEO	Monthly	Photographic record of access roads tracking condition
– All contractors must be made aware of all these access routes.	Contractor	Provide a map showing all access routes associated with the project	Pre-Construction Construction Operation	ECO / dEO	Monthly	Access routes map
– Any access route deviation from that in the written agreement must be closed and re-vegetated immediately, at the contractor's expense;	Contractor	All access routes developed that are not in-line with the access route agreements must be closed and rehabilitated	Construction	ECO / dEO	Monthly	Photographic records of the closure of access roads and revegetation
– Maximum use of both existing servitudes and existing roads must be made to minimize further disturbance through the development of new roads;	Contractor	Existing access routes to be used must be specified and the development of new roads must be avoided	Pre-Construction Construction Operation	ECO / dEO	Monthly	Approved layout, Visual inspection and Photographic records
– In circumstances where private roads must be used, the condition of the said roads must be recorded in accordance with section 4.9: photographic record; prior to use and the condition thereof agreed by the landowner, the DPM, and the contractor;	Contractor, DPM, dEO, ECO	Record the conditions of private roads to be used as per the requirements of section 4.9 and agree on the required condition of	Construction	ECO / dEO	Monthly	Photographic record of the road conditions

		the roads with the landowner, DPM and contractor				
– Access roads in flattish areas must follow fence lines and tree belts to avoid fragmentation of vegetated areas or croplands	Contractor, DPM	Design access roads to follow fence lines and avoid vegetated areas	Pre-Construction	ECO / dEO	Monthly	Visual inspection and Photographic records
– Access roads must only be developed on pre-planned and approved roads.	Contractor	Construction of access roads only on pre-planned and approved roads	Construction	ECO / dEO	Monthly	Approved layout, Visual inspection and Photographic records

5.5 Fencing and Gate installation

Impact management outcome: Minimise impact to the environment and ensure safe and controlled access to the site through the erection of fencing and gates where required.						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
– Use existing gates provided to gain access to all parts of the area authorised for development, where possible;	Contractor DPM	Identify and inform all relevant staff of the existing gates to be	Pre-Construction & Construction	ECO / dEO	Monthly	File with proof of awareness/trai

		used.				ning and photographic record of the existing and new gates.
– Existing and new gates to be recorded and documented in accordance with section 4.9: photographic record;	Contractor dEO	Existing and new gates will be recorded and documented as per the requirements of section 4.9	Construction	ECO / dEO	Monthly	Photographic record of the existing and new gates as per the requirements of section4.9
– All gates must be fitted with locks and be kept locked at all times during the development phase, unless otherwise agreed with the landowner;	Contractor	Ensure all relevant gates are fitted with locks and are always locked	Construction and Operation	ECO / dEO	Monthly	Photographic record of all gates fitted with locks
– At points where the line crosses a fence in which there is no suitable gate within the extent of the line servitude, on the instruction of the DPM, a gate must be installed at the approval of the landowner;	Not applicable - No gate will be installed on the line.					
– Care must be taken that the gates must be so erected that there is a gap of no more than 100 mm between the bottom of the gate and the ground;	Contractor	Install gates in a manner so that there is a gap of no more than 100mm between the bottom of the gate and the ground	Construction	ECO / dEO	Monthly	Photographic record of all new gates installed as per the requirement if any

– Where gates are installed in jackal proof fencing, a suitable reinforced concrete sill must be provided beneath the gate;	Contractor	Implement a reinforced concrete sill beneath gates installed for jackal proofing	Construction	ECO / dEO	Monthly	Photographic records of new gates installed as per the requirement
– Original tension must be maintained in the fence wires; –	Contractor	Maintain original tension of fences through required activities	Construction	ECO / dEO	Monthly	No tension reduction on fence wires
– All gates installed in electrified fencing must be re-electrified;	Not applicable - No electrified fence					
– All demarcation fencing and barriers must be maintained in good working order for the duration of overhead transmission and distribution electricity infrastructure development activities;	Contractor	Undertake maintenance activities on fences and barriers	Construction	ECO / dEO	Monthly	Photographic record of fences erected
– Fencing must be erected around the camp, batching plants, hazardous storage areas, and or demarcating of all designated access restricted areas, where appropriate and would not cause harm to the sensitive flora;	Contractor	Fence construction camps, batching plants, hazardous storage areas and or demarcate access restricted areas. Avoid causing harm to the sensitive flora	Construction	ECO / dEO	Monthly	Photographic record of fences erected
– Any temporary fencing to restrict the movement of life-stock must only be erected with the permission of the land owner.	Contractor	Obtain written approval from the relevant landowner where temporary fencing is	Construction	ECO / dEO	Monthly	Written agreements signed by the

		required to restrict livestock movement				landowners
– All fencing must be developed of high quality material bearing the SABS mark;	Contractor	Make use of high-quality materials approved by SABS	Construction	ECO / dEO	Monthly	Visual inspection
– The use of razor wire as fencing must be avoided;		Make use of high-quality materials approved by SABS	Construction	ECO / dEO	Monthly	Visual inspection and Photographic records
– Fenced areas with gate access must remain locked after hours, during weekends and on holidays if staff is away from site. Site security will be required at all times;	DSS and Contractor	Ensure fenced areas are locked as required through the implementation of a formalised process. Appoint a security company	Construction	ECO / dEO	Monthly	Visual inspection and Photographic records
– On completion of the development phase all temporary fences are to be removed;	Contractor	Removal of all temporary fences	Construction	ECO / dEO	Monthly	Visual inspection and Photographic records
– The contractor must ensure that all fence uprights are appropriately removed, ensuring that no uprights are cut at ground level but rather removed completely	Contractor	Appropriate removal of all fence uprights	Construction	ECO / dEO	Monthly	Visual inspection and Photographic records

5.6 Water Supply Management

Impact management outcome: Undertake responsible water usage.						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
– All abstraction points or bore holes must be registered with the DWS and suitable water meters installed to ensure that the abstracted volumes are measured on a daily basis;	Not applicable					
– The Contractor must ensure the following: a. The vehicle abstracting water from a river does not enter or cross it and does not operate from within the river; b. No damage occurs to the river bed or banks and that the abstraction of water does not entail stream diversion activities; and c. All reasonable measures to limit pollution or sedimentation of the downstream watercourse are implemented.	Not applicable					
– Ensure water conservation is being practiced by: a. Minimising water use during cleaning of equipment;	Contractor / dEO /cEO in consultation	Implement the required water conservation measures throughout on-site construction	During the construction phase	ECO / dEO	Monthly	Visual inspection of implementation of water

b. Undertaking regular audits of water systems; and c. Including a discussion on water usage and conservation during environmental awareness training. d. The use of grey water is encouraged.	with the ECO	processes				conservation measures

5.7 Storm and waste water management

Impact management outcome: Impacts to the environment caused by storm water and wastewater discharges during construction are avoided.

Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
– Runoff from the cement/ concrete batching areas must be strictly controlled, and contaminated water must be collected, stored and either treated or disposed of off-site, at a location approved by the project manager;	Contractor	Implement measures for the control and management of runoff	Construction	ECO / dEO	Monthly	Visual inspection and Photographic records
– All spillage of oil onto concrete surfaces must be controlled by the use of an approved absorbent material and the used absorbent material disposed of at an appropriate waste disposal facility;	Contractor in consultation with the dEO	Obtain approved absorbent material and make use of licensed waste disposal facilities for disposal of oil	Construction	ECO / dEO	Monthly	Hazardous / oil waste disposal certificate from licenced disposal facilities
– Natural storm water runoff not contaminated during the development and clean water can be discharged	DPM in consultation with the	Consultation between the DPM and the ECO to determine if water	Construction	ECO / dEO	Monthly	Proof of consultation between the

directly to watercourses and water bodies, subject to the Project Manager's approval and support by the ECO;	ECO and dEO	can be discharged directly into water bodies (where present). The necessary water quality testing must be undertaken prior to discharge				DPM and ECO and the outcomes thereof to be provided. Proof of water quality testing and the results thereof.
– Water that has been contaminated with suspended solids, such as soils and silt, may be released into watercourses or water bodies only once all suspended solids have been removed from the water by settling out these solids in settlement ponds. The release of settled water back into the environment must be subject to the Project Manager's approval and support by the ECO.	DPM in consultation with the ECO and dEO	Consultation between the DPM and the ECO to determine if water can be discharged directly into water bodies (where present). The necessary water quality testing must be undertaken prior to discharge	Construction	ECO / dEO	Monthly	Proof of consultation between the DPM and ECO and the outcomes thereof to be provided. Proof of water quality testing and the results thereof.

5.8 Solid and hazardous waste management

Impact management outcome: Waste is appropriately stored, handled and safely disposed of at a recognised waste facility.						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
– All measures regarding waste management must be undertaken using an integrated waste management approach;	Contractor, DPM, dEO	Develop and implement a waste management plan	Construction	ECO / dEO	Monthly	Waste management plan
– Sufficient, covered waste collection bins (scavenger and weatherproof) must be provided;	Contractor	Provision of appropriate waste collection bins on site	Construction	ECO / dEO	Monthly	Visual inspection and Photographic records
– A suitably positioned and clearly demarcated waste collection site must be identified and provided;	DPM and Contractor in consultation with the dEO	Identify an appropriate location for the waste collection site. site to be clearly demarcated marked with danger tapes and temporarily fenced if identified outside the site camp.	Construction	ECO / dEO	Monthly	Visual inspection and Photographic records
– The waste collection site must be maintained in a clean and orderly manner;	Contractor	Regular collection of waste and maintenance of the	Construction	ECO / dEO	Monthly	Visual inspection and Photographic

		area must be undertaken as per the waste requirements for the project during construction				records Waste disposal certificates from the licenced waste disposal facilities
– Waste must be segregated into separate bins and clearly marked for each waste type for recycling and safe disposal;	Contractor	Provide separate and marked bins for the different waste types associated with the construction phase	Construction	ECO / dEO	Monthly	Visual inspection and Photographic records
– Staff must be trained in waste segregation;	Contractor in consultation with the dEO	Include waste segregation as part of the environmental awareness training material.	Construction	ECO / dEO	Monthly	Environmental awareness training material requirements checklist
– Bins must be emptied regularly;	Contractor	Bins must be emptied before reaching total capacity and on a regular basis as required for the project	Construction	ECO / dEO	Monthly	Waste disposal certificates from the licenced waste disposal facilities
– General waste produced onsite must be disposed of at registered waste disposal sites/ recycling company;	Contractor	Disposal of general waste at licensed waste disposal facilities must be undertaken as per	Construction	ECO / dEO	Monthly	Waste disposal certificates from the licenced waste

		the waste management plan				disposal facilities
– Hazardous waste must be disposed of at a registered waste disposal site;	Contractor	Disposal of hazardous waste at licensed waste disposal facilities must be undertaken as per the waste management plan	Construction	ECO / dEO	Monthly	Hazardous Waste disposal certificates from the licenced waste disposal facilities
– Certificates of safe disposal for general, hazardous and recycled waste must be maintained.	Contractor	Obtain certificates for safe disposal of waste	Construction	ECO / dEO	Monthly	Waste disposal certificates from the licenced waste disposal facilities

5.9 Protection of watercourses and estuaries

Impact management outcome: Pollution and contamination of the watercourse environment and or estuary erosion are prevented.						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
– All watercourses must be protected from direct or indirect spills of pollutants such as solid waste, sewage, cement, oils, fuels, chemicals, aggregate tailings, wash and	Contractor	Contractor to undertake activities which can cause spills of pollutants outside of	Construction	ECO / dEO	Monthly	Visual inspections of watercourses within

contaminated water or organic material resulting from the Contractor's activities;		watercourses.				powerline corridors and photographic records
– In the event of a spill, prompt action must be taken to clear the polluted or affected areas;	Contractor	Rehabilitation Method Statement to include watercourses within powerline corridors	Construction	ECO / dEO	Monthly	Visual inspections of watercourses within powerline corridors and photographic records
– Where possible, no development equipment must traverse any seasonal or permanent wetland	Contractor	Develop a Method statement on how to traverse any seasonal or permanent wetland	Construction	ECO / dEO	Monthly	Approved method statement
– No return flow into the estuaries must be allowed and no disturbance of the Estuarine Functional Zone should occur;	Not applicable					
– Development of permanent watercourse or estuary crossing must only be undertaken where no alternative access to tower position is available;	Not applicable - Permanent watercourse or estuary crossing access roads not required.					
– There must not be any impact on the long term morphological dynamics of watercourses or estuaries;	Contractor DPM	Develop a management plan or process for implementation should there be any impact on	Construction	ECO / dEO	Monthly	Method statement, Photographic evidence, and Incident

		the morphological dynamics of watercourses or estuaries				register
– Existing crossing points must be favored over the creation of new crossings (including temporary access)	Contractor DPM	As defined	Pre-Construction and construction	ECO / dEO	Monthly	Visual inspection and Photographic records
– When working in or near any watercourse or estuary, the following environmental controls and consideration must be taken: a) Water levels during the period of construction; No altering of the bed, banks, course or characteristics of a watercourse b) During the execution of the works, appropriate measures to prevent pollution and contamination of the riparian environment must be implemented e.g. including ensuring that construction equipment is well maintained; c) Where earthwork is being undertaken in close proximity to any watercourse, slopes must be stabilised using suitable materials, i.e. sandbags or geotextile fabric, to prevent sand and rock from entering the channel; and d) Appropriate rehabilitation and re-vegetation measures for the watercourse banks must be implemented timeously. In	Contractor & cEO	Activities undertaken near watercourses must be in-line with and consider the specified environmental controls	Pre-Construction and construction	ECO / dEO	Monthly	Site inspections and Environmental audit reports

this regard, the banks should be appropriately and incrementally stabilised as soon as development allows.						

5.10 Vegetation clearing

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

Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
General: – Indigenous vegetation which does not interfere with the development must be left undisturbed;	Contractor	Demarcate areas of indigenous vegetation to be avoided before clearance is undertaken	Construction and operation (i.e. for maintenance purposes)	ECO / dEO	Monthly	Visual inspection and Photographic records
– Protected or endangered species may occur on or near the development site. Special care should be taken not to damage such species;	Contractor	Demarcate areas containing protected or endangered species to be avoided by construction activities	Construction	ECO / dEO	Monthly	Visual inspection and Photographic records
– Search, rescue and replanting of all protected and endangered species likely to be damaged during project development must be identified by the relevant specialist and completed prior to any development or	Botanical specialist in consultation with the	Conduct a walkthrough to Search, rescue and replanting of all protected and endangered species	Pre-Construction	N/A	Monthly	Botanical Specialist walkthrough report

clearing;	dEO	likely to be damaged during project development				
– Permits for removal must be obtained from the Department of Agriculture, Forestry and Fisheries prior to the cutting or clearing of the affected species, and they must be filed;	Not applicable - No protected species were found on the alignment.					
– The Environmental Audit Report must confirm that all identified species have been rescued and replanted and that the location of replanting is compliant with conditions of approvals;	Not applicable - No protected species were found on the alignment.					
– Trees felled due to construction must be documented and form part of the Environmental Audit Report;	Not applicable - There are no trees to be cut on the alignment.					
– Rivers and watercourses must be kept clear of felled trees, vegetation cuttings and debris;	Not applicable - There are no trees to be cut on the alignment.					
– 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;	DPM and Contractor	A suitably qualified and registered pest control operator to be utilise if and when required	Construction and Operation	ECO / dEO	Monthly	Proof of control operators' registration
– No herbicides must be used in estuaries;	Not applicable					
– All protected species and sensitive vegetation not removed must be clearly marked and such areas fenced off in	Contractor in consultation	Spatially demarcate protected species and sensitive vegetation	Construction	ECO / dEO	Monthly	Visual inspection and Photographic

accordance to ***Section 5.3: Access restricted areas***.	with the cEO	and implement appropriate fencing where required as per section 5.3				records
Servitude:						
– Vegetation that does not grow high enough to cause interference with overhead transmission and distribution infrastructures, or cause a fire hazard to any plantation, must not be cut or trimmed unless it is growing in the road access area, and then only at the discretion of the Project Manager;	Contractor DPM	The Contractor must ensure that Vegetation that does not have potential impact on the powerlines is not cut or destroyed unless it is growing in the access road	Construction and Operation	ECO / dEO	Monthly	Visual inspection and Photographic records
– Where clearing for access purposes is essential, the maximum width to be cleared within the servitude must be in accordance to distance as agreed between the land owner and the EA holder	Contractor DPM	Only existing access roads must be used for construction of the Reabetswe overhead powerlines	Construction	ECO / dEO	Monthly	Visual inspection and Photographic records, site layout
– Alien invasive vegetation must be removed according to a plan (in line with relevant municipal and provincial procedures, guidelines and recommendations) and disposed of at a recognised waste disposal facility;	Contractor	Ensure alien invasive vegetation is removed whenever it grows on the development site and disposed of at a recognised waste disposal site	Construction and Operation	ECO / dEO	Monthly	Photographic evidence and disposal certificates
– Vegetation must be trimmed where it is likely to intrude on the minimum vegetation clearance distance (MVCD) or will intrude	Not applicable,					

on this distance before the next scheduled clearance. MVCD is determined from SANS 10280;	- There are no trees to be trimmed on the alignment
– Debris resulting from clearing and pruning must be disposed of at a recognised waste disposal facility, unless the landowners wish to retain the cut vegetation;	Not applicable, - There are no trees to be cleared or pruned on the alignment
– 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.	Not applicable

5.11 Protection of fauna

Impact management outcome: Minimise disturbance to fauna.

Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
– No interference with livestock must occur without the landowner's written consent and with the landowner or a person representing the landowner being present;	dEO / cEO Contractor	Develop a procedure for dealing with livestock within the affected properties	Pre-Construction & Construction	ECO / dEO	Monthly	Written consent provided by the landowner and proof of representation

						of the landowner during interference
– The breeding sites of raptors and other wild birds species must be taken into consideration during the planning of the development programme;	dEO / cEO in consultation with the Contractor	Ensure that the planning and development programme considers breeding sites for wild bird species	Pre-Construction & Construction	ECO / dEO	Monthly	The planning and development programme includes the consideration of breeding sites for wild bird species
– Breeding sites must be kept intact and disturbance to breeding birds must be avoided. Special care must be taken where nestlings or fledglings are present;	dEO / cEO in consultation with the Contractor	Avoid breeding sites and ensure that special care is taken in the presence of nestlings and fledglings	Construction and Operation	ECO / dEO	Monthly	Photographic record of intact breeding sites
– Nesting sites on existing parallel lines must documented;	dEO / cEO in consultation with the ECO	Walk-downs of the existing lines located parallel to the project must be undertaken and nests and the details thereo	Construction and Operation	ECO / dEO	Monthly	Details of walkdowns report, photographic records of nesting sites if found.
– Special recommendations of the avian specialist must be adhered to at all times to prevent unnecessary disturbance of birds;	dEO / cEO in consultation	All mitigation measures recommended by the avifauna specialist must	Construction and Operation	ECO / dEO	Monthly	Photographic record of compliance

	with the ECO	be implemented				and successful implementation of the recommended measures
– Bird guards and diverters must be installed on the new line as per the recommendations of the specialist;	dEO / cEO in consultation with the Contractor	Recommendations made by the specialist for the installation of bird guards and diverters must be adhered to and implemented as appropriate. Bird guards and diverters must be maintained	Construction and Operation	ECO / dEO	Monthly	Photographic record of bird guards and diverters
– No poaching must be tolerated under any circumstances. All animal dens in close proximity to the works areas must be marked as Access restricted areas;	dEO / cEO in consultation with the Contractor	All site staff must be informed of this requirement during the Environmental Awareness Training and the consequences of not adhering to the requirement. These areas must be demarcated as Access Restricted Areas	Construction	ECO / dEO	Monthly	Visual inspection and Photographic records, Environmental Awareness Training material checklist
– No deliberate or intentional killing of fauna is allowed;	dEO / cEO in consultation	Inform all employee to not interfere or kill animals at or near the	Construction and Operation	ECO / dEO	Monthly	Environmental Awareness Training

	with the Contractor	development site.				material checklist
– In areas where snakes are abundant, snake deterrents to be deployed on the pylons to prevent snakes climbing up, being electrocuted and causing power outages; and	Not applicable					
– No Threatened or Protected species (ToPs) and/or protected fauna as listed according NEMBA (Act No. 10 of 2004) and relevant provincial ordinances may be removed and/or relocated without appropriate authorisations/permits.	DPM in consultation with the dEO	Undertake a permitting process to obtain the required permits if any required	Preconstruction	ECO / dEO	Monthly	Permits for removal and/relocation

5.12 Protection of heritage resources

Impact management outcome: Minimise impact to heritage resources.

Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
– Identify, demarcate and prevent impact to all known sensitive heritage features on site in accordance with the No-Go procedure in ***Section 5.3: Access restricted areas***;	Contractor, DPM, dEO, ECO	Identify and demarcate areas of heritage significance as per the Heritage Impact and as per the requirements of	Pre-Construction	ECO / dEO	Monthly	Visual inspection and Photographic records

		section 5.3				
– Carry out general monitoring of excavations for potential fossils, artefacts and material of heritage importance;	ECO / dEO / DSS	Monitoring of excavations for potential fossils, artefacts and important heritage material	Construction	ECO / dEO	Monthly	Visual inspection and Photographic records
– All work must cease immediately, if any human remains and/or other archaeological, palaeontological and historical material are uncovered. Such material, if exposed, must be reported to the nearest museum, archaeologist/ palaeontologist (or the South African Police Services), so that a systematic and professional investigation can be undertaken. Sufficient time must be allowed to remove/collect such material before development recommences.	dEO / cEO in consultation with the Contractor and ECO	Develop and implement procedures for situations where human remains, archaeological, palaeontological or historical material are uncovered	Construction	ECO / dEO	Monthly	Proof of work ceased, and the required procedures followed in cases where material is discovered.

5.13 Safety of the public

Impact management outcome: All precautions are taken to minimise the risk of injury, harm or complaints.

Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
– Identify fire hazards, demarcate and restrict public access to these areas as well as notify the local authority of any potential threats	Contractor, DPM, dEO	Develop an Emergency Preparedness, Response and Fire	Pre-Construction & Construction	ECO / dEO	Monthly	Emergency Preparedness, Response and

e.g. large brush stockpiles, fuels etc.;		Management Plan specific to the project				Fire Management Plan
– All unattended open excavations must be adequately fenced or demarcated;	Contractor	Ensure that all excavations undertaken is fenced or demarcated within a reasonable timeframe and in instances where excavations will be open for long-periods of time	Construction	ECO / dEO	Monthly	Visual inspection and Photographic records
– Adequate protective measures must be implemented to prevent unauthorised access to and climbing of partly constructed towers and protective scaffolding;	Contractor	All staff must be easily identifiable and the climbing of towers and scaffolding must be undertaken by authorized personnel as managed by the Contractor	Construction	ECO / dEO	Monthly	Visual inspection
– Ensure structures vulnerable to high winds are secured;	Contractor	Ensure that sufficient stabilisation measures are implemented to secure structures vulnerable to high winds	Construction	ECO / dEO	Monthly	Visual inspection
– Maintain an incidents and complaints register in which all incidents or complaints	Contractor	Compile and regularly update as incidents	Construction	ECO / dEO	Monthly	Incidents and complaints

involving the public are logged.		and complaints are submitted from the public and indicate the actions taken to resolve the complaint				register

5.14 Sanitation

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

Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
– Mobile chemical toilets are installed onsite if no other ablution facilities are available;	Contractor	Mobile chemical toilets must be placed appropriately and in areas that avoid environmental sensitivities	Pre-Construction & Construction	ECO / dEO	Monthly	Visual inspection and Photographic records
– The use of ablution facilities and or mobile toilets must be used at all times and no indiscriminate use of the veld for the purposes of ablutions must be permitted under any circumstances;	Contractor, DPM, dEO, ECO	All site staff must be informed of this requirement during the Environmental Awareness Training and the consequences of	Pre-Construction & Construction	ECO / dEO	Monthly	Environmental Awareness Training material

		not adhering to the requirement.				
– 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 emptied before long weekends and workers holidays, and must be locked after working hours; f) Toilets are serviced regularly and the ECO must inspect toilets to ensure compliance to health standards;	Contractor in consultation with the cEO/dEO	• The installation of the toilets by the Contractor must be as per the listed requirements • The contractor must have a Schedule for cleaning toilets • The contractor must have a Service agreement with sanitation service providers	Construction	ECO/dEO	Monthly	Visual inspection and Photographic records Cleaning schedule and Waste disposal certificates
– A copy of the waste disposal certificates must be maintained.	Contractor	Certificates obtained from the licensed waste disposal facility with the emptying of the toilets must be kept on file	Construction	ECO / dEO	Monthly	Waste disposal certificates from the licensed waste disposal facility

5.15 Prevention of disease

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

Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
– Undertake environmentally-friendly pest control in the camp area;	Contractor	Only environmentally friendly pest control will be used, when required	Construction	ECO / dEO	Monthly	Proof of pest control used
– Ensure that the workforce is sensitised to the effects of sexually transmitted diseases, especially HIV AIDS;	Contractor in consultation with the dEO / ECO	The effects of sexually transmitted diseases and HIV/ AIDS must be covered in the Environmental Awareness Training	Pre-Construction	ECO / dEO	Monthly	Environmental awareness training material
– The Contractor must ensure that information posters on AIDS are displayed in the Contractor Camp area;	Contractor	Develop and place information posters on HIV/ AIDS	Construction and Operations	ECO / dEO	Monthly	Photographic evidence of poster placement
– Information and education relating to sexually transmitted diseases to be made available to both construction workers and	Contractor in consultation	Information and education of sexually transmitted diseases	Pre-Construction & Construction	ECO / dEO	Monthly	Environmental awareness training

local community, where applicable;	with the dEO / ECO	must be covered in the Environmental Awareness Training.				material
– Free condoms must be made available to all staff on site at central points;	Contractor	Placement of free condoms in mobile toilets and at the construction camps	During the Construction Phase	ECO / dEO	Monthly	Proof of placement of free condoms by the contractor
– Medical support must be made available;	Contractor in consultation with the dEO / cEO	Ensure that designated personnel with first aid training are available on site and that first aid kits to provide medical support is readily available	Construction and Operations	ECO / dEO	Monthly	First aid trained personnel and medical kits
– Provide access to Voluntary HIV Testing and Counselling Services.	Contractor	As defined	Construction	ECO / dEO	Monthly	Voluntary testing schedules and proof of counselling (where undertaken)

5.16 Emergency procedures

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

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

	with the dEO / ECO	the relevant emergency procedures				material requirements checklist
– The relevant local authority must be made aware of a fire as soon as it starts;	Contractor	Notify the relevant local authority of a fire as soon as it starts	Construction	ECO / dEO	Monthly	Proof of notification
– In the event of emergency necessary mitigation measures to contain the spill or leak must be implemented (see ***Hazardous Substances section 5.17***).	Contractor in consultation with the dEO / ECO	Implement the required mitigation measures in the event of a spill or leak as per the requirements of Section 5.17.	Construction and Operations	ECO / dEO	A Monthly	The mitigation measures included under Section 5.17 have been adhered to

5.17 Hazardous substances

Impact management outcome: Safe storage, handling, use and disposal of hazardous substances.

Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
– The use and storage of hazardous substances to be minimised and non-hazardous and non-toxic alternatives substituted where possible;	Contractor in consultation with the dEO	Develop a strategy of how hazardous substances can be and should be minimised	Pre-Construction & Construction	ECO / dEO	Monthly	Evidence of substances used

– All hazardous substances must be stored in suitable containers as defined in the Method Statement;	Contractor	Develop a Method Statement for the storage of hazardous substances in suitable containers	Pre-Construction & Construction	ECO / dEO	Monthly	Visual inspection and Photographic records
– Containers must be clearly marked to indicate contents, quantities and safety requirements;	Contractor	As defined	Pre-Construction & Construction	ECO / dEO	Monthly	Visual inspection and Photographic records
– All storage areas must be bunded. The bunded area must be of sufficient capacity to contain a spill / leak from the stored containers;	Contractor	As defined	During the Construction Phase	ECO / dEO	Monthly	Visual inspection and Photographic records
– Bunded areas to be suitably lined with a SABS approved liner;	Contractor	As defined	Construction	ECO / dEO	Monthly	Visual inspection and Photographic records
– An Alphabetical Hazardous Chemical Substance (HCS) control sheet must be drawn up and kept up to date on a continuous basis;	Contractor	Compile and update an Alphabetical Hazardous Chemical Substance (HCS) control sheet specific to the project	Construction	ECO / dEO	Monthly	Complete and up to date HCS control sheet provided by the Contractor
– All hazardous chemicals that will be used on site must have Material Safety Data Sheets (MSDS);	Contractor	Keep a record of all hazardous chemicals and the respective MSDS	Construction	ECO / dEO	Monthly	Record of hazardous chemicals and the respective

						MSDS
– All employees working with HCS must be trained in the safe use of the substance and according to the safety data sheet;	Contractor	Provide training for personnel working with HCS	Pre-Construction	ECO / dEO	Monthly	Record of training provided to personnel working with HCS
– Employees handling hazardous substances / materials must be aware of the potential impacts and follow appropriate safety measures. Appropriate personal protective equipment must be made available;	Contractor	Create awareness training about handling of hazardous substances.	Pre-Construction & Construction	ECO / dEO	Monthly	Environmental awareness training material
– The Contractor must ensure that diesel and other liquid fuel, oil and hydraulic fluid is stored in appropriate storage tanks or in bowsers;	Contractor	As defined	Construction	ECO / dEO	Monthly	Visual inspection.
– The tanks/ bowsers must be situated on a smooth impermeable surface (concrete) with a permanent bund. The impermeable lining must extend to the crest of the bund and the volume inside the bund must be 130% of the total capacity of all the storage tanks/ bowsers (110% statutory requirement plus an allowance for rainfall);	Contractor	Appropriate storage facilities must be constructed or obtained for tanks as per the requirements listed	Construction	ECO / dEO	Monthly	Visual inspection and Photographic records
– The floor of the bund must be sloped, draining to an oil separator;	Contractor	Appropriate storage facilities must be constructed as per the requirements listed	Construction	ECO / dEO	Monthly	Visual inspection and Photographic records

– Provision must be made for refueling at the storage area by protecting the soil with an impermeable groundcover. Where dispensing equipment is used, a drip tray must be used to ensure small spills are contained;	Contractor	Appropriately constructed refueling facility must be developed as per the requirements. Drip trays must be provided for use	Construction	ECO / dEO	Monthly	Visual inspection and Photographic records
– All empty externally dirty drums must be stored on a drip tray or within a bunded area;	Contractor	As defined	Construction	ECO / dEO	Monthly	Visual inspection and Photographic records
– No unauthorised access into the hazardous substances storage areas must be permitted;	Contractor	As defined	Construction	ECO / dEO	Monthly	Photographic record of the signage placed prohibiting unauthorised entry
– No smoking must be allowed within the vicinity of the hazardous storage areas;	Contractor	Inform all employees of the requirement and develop and place relevant signage in the relevant areas	Construction	ECO / dEO	Monthly	Photographic record of the signage placed must be provided
– Adequate fire-fighting equipment must be made available at all hazardous storage areas;	Contractor	Hazardous storage areas must be fitted with adequate fire-fighting equipment	Construction	ECO / dEO	Monthly	Visual inspection and Photographic records

– Where refueling away from the dedicated refueling station is required, a mobile refueling unit must be used. Appropriate ground protection such as drip trays must be used;	Contractor	Provide a mobile refueling unit as well as suitable ground protection, where required	Construction	ECO / dEO	Monthly	Visual inspection and Photographic records
– An appropriately sized spill kit kept onsite relevant to the scale of the activity/s involving the use of hazardous substance must be available at all times;	Contractor	Provide an appropriate spill kit for the project for the use of hazardous substances	Construction	ECO / dEO	Monthly	Visual inspection and Photographic records 0f spill kit.
– The responsible operator must have the required training to make use of the spill kit in emergency situations;	Contractor	Provide training on the use of spill kits to the relevant employees	Pre-Construction	ECO / dEO	Monthly	Proof of training to be provided by the contractor
– An appropriate number of spill kits must be available and must be located in all areas where activities are being undertaken;	Contractor	Provide an appropriate number of spill kits in relevant areas	Construction	ECO / dEO	Monthly	Proof of appropriate number of spill kits in appropriate areas to be provided by the contractor
– In the event of a spill, contaminated soil must be collected in containers and stored in a central location and disposed of according to the National Environmental Management: Waste Act 59 of 2008. Refer to ***Section 5.7*** for procedures concerning	Contractor	Storage and disposal of contaminated soil must be in accordance with the National Environmental Management: Waste	During the Construction Phase	ECO / dEO	Monthly	Proof of storage and disposal in terms of the National Environmental

storm and waste water management and ***5.8*** for ***solid and hazardous waste management.***		Act and sections 5.7 and 5.8 of this EMPr				Management: Waste Act must be provided. Certificates of disposal at licensed waste disposal facilities must be provided

5.18 Workshop, equipment maintenance and storage

Impact management outcome: Soil, surface water and groundwater contamination is minimised.						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
– Where possible and practical all maintenance of vehicles and equipment must take place in the workshop area;	Contractor, DPM	Demarcate specific areas for the maintenance of vehicles and equipment	Construction	ECO / dEO	Monthly	Visual inspection and Photographic records of a dedicated area for the maintenance of vehicles.

– 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;	Contractor	Ensure that a drip tray is available for an emergency repairs required	Construction	ECO / dEO	Monthly	Visual inspection and Photographic records repairs
– Leaking equipment must be repaired immediately or be removed from site to facilitate repair;	Contractor	Ensure that where leaking equipment is identified it is repaired immediately or removed from site for repairs	Construction	ECO / dEO	Monthly	Contractor to provide details of equipment repaired or removed from site
– Workshop areas must be monitored for oil and fuel spills;	Contractor	Undertake regular inspections of the workshop areas for oil and fuel spills and keep an updated register of inspection on site	Construction	ECO / dEO	Monthly	Register of inspection
– Appropriately sized spill kit kept onsite relevant to the scale of the activity taking place must be available;	Contractor	Provide an appropriate spill kit for the project	Construction	ECO / dEO	Monthly	Visual inspection and Photographic records
– The workshop area must have a bunded concrete slab that is sloped to facilitate runoff into a collection sump or suitable oil / water separator where maintenance work on vehicles and equipment can be performed;	Contractor	Ensure that the workshop area is sufficiently bunded in accordance with the required specification	Construction	ECO / dEO	Monthly	Visual inspection and Photographic records

– Water drainage from the workshop must be contained and managed in accordance ***Section 5.7: storm and waste water management***.	Contractor	Ensure that water drainage from workshop area is managed as per the requirements of section 5.7	Construction	ECO / dEO	Monthly	Visual inspection and

5.19 Batching plants

Impact management outcome: Minimise spillages and contamination of soil, surface water and groundwater.						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
– Concrete mixing must be carried out on an impermeable surface;	Contractor	Ready mix concrete must be utilised. Where concrete mixing is done onsite it must be carried out on an impermeable surface	Construction	ECO / dEO	Monthly	Visual inspection and Photographic records
– Batching plants areas must be fitted with a containment facility for the collection of cement laden water.	Not applicable - Batching plant not allowed on the construction site.					
– Dirty water from the batching plant must be						

contained to prevent soil and groundwater contamination						
– Bagged cement must be stored in an appropriate facility and at least 10 m away from any water courses, gullies and drains;	Contractor	Demarcate and provide a storage area for bagged cement in-line with the listed requirements	Construction	ECO / dEO	Monthly	Photographic proof of bagged cement stored within the demarcated area
– A washout facility must be provided for washing of concrete associated equipment. Water used for washing must be restricted;	Contractor	Provide a washout facility for the washing of concrete associated equipment. No cement laden water must be released into the environment.	Construction	ECO / dEO	Monthly	Visual inspection
– Hardened concrete from the washout facility or concrete mixer can either be reused or disposed of at an appropriate licenced disposal facility;	Contractor	As defined	Construction	ECO / dEO	Monthly	Disposal certificates of concrete waste at a licensed waste disposal facility
– Empty cement bags must be secured with adequate binding material if these will be temporarily stored on site;	Contractor	Bind empty cement bags and temporarily store it in an appropriate area on site	Construction	ECO / dEO	Monthly	Visual inspection and Photographic records
– Sand and aggregates containing cement	Contractor	Ensure that sand and	Construction	ECO / dEO	Monthly	Visual

must be kept damp to prevent the generation of dust (Refer to ***Section 5.20: Dust emissions***)		aggregates are kept damp or otherwise protected from dust generation				inspection and Photographic records
– Any excess sand, stone and cement must be removed or reused from site on completion of construction period and disposed at a registered disposal facility;	Contractor	Ensure that all excess sand, stone and cement is removed or reused	Construction	ECO / dEO	Monthly	Disposal certificates or proof of reuse must be provided
– Temporary fencing must be erected around batching plants in accordance with ***Section 5.5: Fencing and gate installation***.	Not applicable Batching plant not allowed on the construction site.					

5.20 Dust emissions

Impact management outcome: Dust prevention measures are applied to minimise the generation of dust.

Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
– Take all reasonable measures to minimise the generation of dust as a result of project development activities to the satisfaction of the ECO;	Contractor,	Apply dust suppressant if excessive dust is produced.	Construction	ECO / dEO	Monthly	Dust suppression schedule
– Removal of vegetation must be avoided until such time as soil stripping is required	Contractor	Proper planning for vegetation removal	Construction and	ECO / dEO	Monthly	Visual

and similarly exposed surfaces must be re-vegetated or stabilised as soon as is practically possible;		must be undertaken as well as for the associated rehabilitation	Rehabilitation			inspection
– Excavation, handling and transport of erodible materials must be avoided under high wind conditions or when a visible dust plume is present;	Contractor	As defined	Construction	ECO / dEO	Monthly	Visual inspection
– During high wind conditions, the ECO must evaluate the situation and make recommendations as to whether dust-damping measures are adequate, or whether working will cease altogether until the wind speed drops to an acceptable level;	ECO	ECO to provide adequate recommendation	Construction	ECO / dEO	Monthly	Visual inspection
– Where possible, soil stockpiles must be located in sheltered areas where they are not exposed to the erosive effects of the wind;	Contractor	Place soil stockpiles in areas less affected by wind	Construction	ECO / dEO	Monthly	Photographic record
– Where erosion of stockpiles becomes a problem, erosion control measures must be implemented at the discretion of the ECO;	Contractor in consultation with the ECO	Contractor to implement erosion control measures as recommended and agreed with the ECO	Construction	ECO / dEO	Monthly	Visual inspection
– Vehicle speeds must not exceed 40 km/h along dust roads or 20 km/h when traversing unconsolidated and non-vegetated areas;	Contractor / dEO / DPM	Inform all drivers of speed limits and place appropriate signage along the relevant roads	Construction	ECO / dEO	Monthly	Road signage

– Straw stabilisation must be applied at a rate of one bale/10 m² and harrowed into the top 100 mm of top material, for all completed earthworks;	Contractor	Ensure that straw stabilisation is undertaken as per the listed requirements	Construction	ECO / dEO	Monthly	Photographic record of all straw stabilisation undertaken
– For significant areas of excavation or exposed ground, dust suppression measures must be used to minimise the spread of dust.	Contractor	Appropriate dust suppressant measures are implemented	Construction	ECO / dEO	Monthly	Visual inspection and Photographic records

5.21 Blasting

Impact management outcome: Impact to the environment is minimised through a safe blasting practice.

Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
– Any blasting activity must be conducted by a suitably licensed blasting contractor; and – Notification of surrounding landowners, emergency services site personnel of blasting activity 24 hours prior to such activity taking place on Site.	Not Applicable					

5.22 Noise

Impact Management outcome: Unnecessary noise is prevented by ensuring that noise from construction activities is mitigated.

Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
– The Contractor must keep noise level within acceptable limits, Restrict the use of sound amplification equipment for communication and emergency only;	Contractor	Ensure that noise limits do not exceed acceptable limits and avoid the use of amplification communication	Construction	ECO / dEO	Monthly	Noise monitoring results
– All vehicles and machinery must be fitted with appropriate silencing technology and must be properly maintained;	Contractor	Provide and implement silencing technology	Construction	ECO / dEO	Monthly	Visual inspection
– Any complaints received by the Contractor regarding noise must be recorded and communicated. Where possible or applicable, provide transport to and from the site on a daily basis for construction workers;	Contractor	Update complaints register. Provide daily transport to and from site for employees	Construction	ECO / dEO	Monthly	Related entries into Public Complaints Register
– Develop a Code of Conduct for the construction phase in terms of behaviour of construction staff. Operating hours as determined by the environmental authorisation are adhered to during the development phase. Where not	Contractor in consultation with	Compile a Code of Conduct for staff. Appropriate operating hours must be identified	Pre-Construction	ECO / dEO	Monthly	Training

defined, it must be ensured that development activities must still meet the impact management outcome related to noise management.	dEO/ECO	for the project.				

5.23 Fire prevention

Impact management outcome: Prevention of uncontrollable fires.

Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
– Designate smoking areas where the fire hazard could be regarded as insignificant;	Contractor	Identify and demarcate through signage designated smoking areas	Pre-Construction & Construction	ECO / dEO	Monthly	Photographic record of designated smoking area
– Firefighting equipment must be available on all vehicles located on site;	Contractor DPM	Provide all vehicles with firefighting equipment	Construction	ECO / dEO	Monthly	Photographic records

– The local Fire Protection Agency (FPA) must be informed of construction activities;	Contractor DPM	Undertake formal consultation to inform the local FPA of the associated construction activities	Pre-Construction	ECO / dEO	Monthly	Proof of consultation with the FPA
– Contact numbers for the FPA and emergency services must be communicated in environmental awareness training and displayed at a central location on site;	Contractor in consultation with the ECO/dEO.	Environmental awareness training material must covers the contact numbers for the FPA and emergency services. Place the contact numbers for the FPA and emergency services at a visible and central location	Pre-Construction & Construction	ECO / dEO	Monthly	Environmental awareness training material
– Two way swop of contact details between ECO and FPA.	ECO	Consultation between the ECO and FPA in order to exchange contact details	Pre-Construction & Construction	N/A	N/A	N/A

5.24 Stockpiling and stockpile areas

Impact management outcome: Erosion and sedimentation as a result of stockpiling are reduced.						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
– All material that is excavated during the project development phase (either during piling (if required) or earthworks) must be stored appropriately on site in order to minimise impacts to watercourses, watercourses and water bodies;	Contractor	Identify and demarcate an appropriate location for the storage of excavated materials	Construction	ECO / dEO	Monthly	Visual inspection and Photographic records
– All stockpiled material must be maintained and kept clear of weeds and alien vegetation growth by undertaking regular weeding and control methods;	Contractor	Implement appropriate and sufficient maintenance on stockpiled material regularly	Construction	ECO / dEO	Monthly	Visual inspection and Photographic records
– Topsoil stockpiles must not exceed 2 m in height;	Contractor	Enforce limitations for the height of topsoil stockpiles	Construction	ECO / dEO	Monthly	Photographic records
– During periods of strong winds and heavy rain, the stockpiles must be covered with appropriate material (e.g. cloth, tarpaulin etc.);	Contractor	Appropriate material must be provided in order to cover stockpiles when	Construction	ECO / dEO	Monthly	Photographic records of appropriate material used

		required				to cover stockpiles
– Where possible, sandbags (or similar) must be placed at the bases of the stockpiled material in order to prevent erosion of the material.	Contractor	Sandbags must be provided in order to prevent erosion of stockpiled materials	Construction	ECO / dEO	Monthly	Photographic records of sandbags used to prevent erosion of stockpiled materials

5.25 Finalising tower positions

Impact management outcome: No environmental degradation occurs as a result of the survey and pegging operations.						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
– No vegetation clearing must occur during survey and pegging operations;	DPM	Ensure no vegetation clearing during survey and pegging operations must occur	Pre-Construction	N/A	N/A	N/A
– No new access roads must be developed to facilitate access for survey and pegging purposes;	DPM	Ensure no new access roads are to be developed to facilitate access for survey and	Pre-Construction & Construction	N/A	N/A	N/A

		pegging purposes				
– Project manager, botanical specialist and contractor to agree on final tower positions based on survey within assessed and approved areas;	DPM Contractor dEO	Botanical specialist recommendations must be covered in the development lay-out	Pre-Construction & Construction	ECO / dEO	Monthly	Specialist reports and development lay-out
– 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.	Not applicable Existing access roads/track are to be utilized and are clearly visible					

5.26 Excavation and Installation of foundations

Impact management outcome: No environmental degradation occurs as a result of excavation or installation of foundations.

Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
– All excess spoil generated during foundation excavation must be disposed of in an appropriate manner and at a recognised disposal site, if not used for backfilling purposes;	Contractor	Use a licensed waste disposal facility for the disposal of excess spoil	Construction Rehabilitation	ECO / dEO	Monthly	Obtained certificates for the disposal of excess spoil at a licensed waste disposal

						facility
– Spoil can however be used for landscaping purposes and must be covered with a layer of 150 mm topsoil for rehabilitation purposes;	Contractor	Spoil used for landscaping must be applied as per the listed requirements	Construction Rehabilitation	ECO / dEO	Monthly	Photographic record of spoil used for landscaping purposes
– Management of equipment for excavation purposes must be undertaken in accordance with ***Section 5.18: Workshop equipment maintenance and storage***; and	Contractor	Undertake the management of equipment for excavation as per the requirements of section 5.18	Construction Rehabilitation	ECO / dEO	Monthly	Visual inspections
– Hazardous substances spills from equipment must be managed in accordance with ***Section 5.17: Hazardous substances***.	Contractor	Undertake the management of hazardous substances spills from equipment as per the requirements of section 5.17	Construction Rehabilitation	ECO / dEO	Monthly	Visual inspections
– Batching of cement to be undertaken in accordance with **Section *5.19 : Batching plants***;	Contractor	Undertake the batching of cement as per the requirements of section 5.19	Construction Rehabilitation	ECO / dEO	Monthly	Visual inspections (photographic records)
– Residual cement must be disposed of in accordance with **Section *5.8: Solid and hazardous waste management***.	Contractor	Undertake the disposal of solid waste as per the requirements of section 5.8	Construction Rehabilitation	ECO / dEO	Monthly	Disposal records

5.27 Assembly and erecting towers

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

Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
– Prior to erection, assembled towers and tower sections must be stored on elevated surface (suggest wooden blocks) to minimise damage to the underlying vegetation;	DPM	Store towers as defined or must be stored on the area already disturbed and without vegetation	Construction	ECO / dEO	Monthly	Visual inspections (photographic records)
– 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;	Contractor	As defined	Construction	ECO / dEO	Monthly	Visual inspections
– Consideration must be given to erecting towers by helicopter or by hand where it is warranted to limit the extent of environmental impact;	Contractor DPM	Towers will be erected as per construction method statement	Construction	ECO / dEO	Monthly	Visual inspections Method

						statement
– Access to tower positions to be undertaken in accordance with access requirements in specified in Section 5.4: Access Roads;	Contractor	No unauthorized access to private properties.	Pre-Construction & Construction	ECO / dEO	Monthly	Access agreement with landowners
– Vegetation clearance to be undertaken in accordance with general vegetation clearance requirements specified in Section 5.10: Vegetation clearing; – No levelling at tower sites must be permitted unless approved by the Development Project Manager or Developer Site Supervisor;	Contractor	As defined	Construction	ECO / dEO	Monthly	Visual inspections
– Topsoil must be removed separately from subsoil material and stored for later use during rehabilitation of such tower sites;	Contractor	Topsoil and subsoil must not be mixed. Subsoil will be used for back-filling while the topsoil will be used to rehabilitate the tower site.	Construction	ECO / dEO	Monthly	Visual inspections (photographic records)
– Topsoil must be stored in heaps not higher than 1m to prevent destruction of the seed bank within the topsoil; – Excavated slopes must be no greater that 1:3, but where this is unavoidable, appropriate measures must be undertaken to stabilise the slopes;	Contractor	As defined	Construction	ECO / dEO	Monthly	Visual inspections (photographic records)

– Fly rock from blasting activity must be minimised and any pieces greater than 150 mm falling beyond the Working Area, must be collected and removed;	Not applicable (No blasting will take place)					
– Only existing disturbed areas are utilised as spoil areas; – Drainage is provided to control groundwater exit gradient with the spill areas such that migration of fines is kept to a minimum; – Surface water runoff is appropriately channeled through or around spoil areas; – During backfilling operations, care must be taken not to dump the topsoil at the bottom of the foundation and then put spoil on top of that; – The surface of the spoil is appropriately rehabilitated in accordance with the requirements specified in Section 5.31: Landscaping and rehabilitation; – The retained topsoil must be spread evenly over areas to be rehabilitated and suitably compacted to effect re-vegetation of such areas to prevent erosion as soon as construction activities on the site is complete. Spreading of topsoil must not be undertaken at the beginning of the dry season.	Contractor	As defined	Construction	ECO / dEO	Monthly	Visual inspections (photographic records)

5.28 Stringing

Impact management outcome: No environmental degradation occurs as a result of stringing.

Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
– Where possible, previously disturbed areas must be used for the siting of winch and tensioner stations. In all other instances, the siting of the winch and tensioner must avoid Access restricted areas and other sensitive areas;	Contractor	Inspect, identify previously disturbed areas for the siting of the winch and tensioner and avoid Access restricted areas and other sensitive areas	Construction	ECO / dEO	Monthly	Visual inspections (photographic records)
– The winch and tensioner station must be equipped with drip trays in order to contain any fuel, hydraulic fuel or oil spills and leaks;	Contractor	Ensure the winch and tensioner station are equipped with drip trays as defined	Construction	ECO / dEO	Monthly	Visual inspections (photographic records)

– Refueling of the winch and tensioner stations must be undertaken in accordance with Section 5.17: Hazardous substances; – In the case of the development of overhead transmission and distribution infrastructure, a one metre "trace-line" may be cut through the vegetation for stringing purposes only and no vehicle access must be cleared along "trace-lines". Vegetation clearing must be undertaken by hand, using 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;	Contractor	As defined	Construction	ECO / dEO	Monthly	Visual inspections

– 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;	DPM Contractor	Notifications in writing to the affected landowners or persons when and where access road closure and disruption of services will be needed	Construction	ECO / dEO	Monthly	Proof of notification
– Where stringing operations cross cultivated land, damage to crops is restricted to the minimum required to conduct stringing operations, and reasonable notice (10 work days minimum), in writing, must be provided to the landowner;	Contractor	Notify the affected landowners in writing 10 days prior stringing operation on cultivated land.	Construction	ECO / dEO	Monthly	Proof of Landowner notification
– Necessary scaffolding protection measures must be installed to prevent damage to the structures supporting certain high value agricultural areas such as vineyards, orchards, nurseries.	Contractor	As defined	Construction	ECO / dEO	Monthly	Visual inspections (photographic records)

5.29 Socio-economic

Impact management outcome: Socio-economic development is enhanced.						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
– Develop and implement communication strategies to facilitate public participation;	Contractor DPM, dEO	Identify and implement appropriate strategies for communication with the communities through consideration of the community needs	Pre-Construction & Construction	ECO / dEO	Monthly	Documented GRM Proof of communication

– Develop and implement a collaborative and constructive approach to conflict resolution as part of the external stakeholder engagement process; – Sustain continuous communication and liaison with neighboring owners and residents	Contractor/ DPM	Development and implement a Grievance Redress Mechanism (GRM) which • considers the community needs and provides procedures for conflict resolution • provides procedures for communication / liaison with neighbouring landowners and residents Share contact details of ECO with stakeholders	Pre-Construction & Construction	ECO / dEO	Monthly Monthly	Related entries into Public Complaints Register
– Create work and training opportunities for local stakeholders; and	Contractor/ DPM	Develop and implement a "locals first" policy for the provision of employment opportunities	Pre-Construction & Construction	ECO / dEO	Monthly	Proof of hired locals workers
– Where feasible, no workers, with the exception of security personnel, must be permitted to stay over-night on the site. This	Contractor/ DPM	Workers must not be allowed to work or stay over-night on the	Construction	ECO / dEO	Monthly	Visual inspections

would reduce the risk to local farmers.		construction site accept for the security guards				

5.30 Temporary closure of site

Impact management outcome: Minimise the risk of environmental impact during periods of site closure greater than five days.

Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
– Bunds must be emptied (where applicable) and need to be undertaken in accordance with the impact management actions included in ***sections 5.17: management of hazardous substances*** and ***5.18 workshop, equipment maintenance and storage***; –	Contractor	Regular emptying of the bunds must be undertaken. This must be undertaken as per the requirements listed in sections 5.17 and 5.18	Construction	ECO / dEO	Prior to site closure	Visual inspections and photographic records
– Hazardous storage areas must be well ventilated;	Contractor	Install appropriate ventilation in all hazardous storage areas	Construction	ECO / dEO	Prior to site closure	Visual inspections and photographic records
– Fire extinguishers must be serviced and accessible. Service records to be filed and audited at last service;	Contractor	Ensure fire extinguishers are serviced, as required and are easily accessible	Construction	ECO / dEO	Prior to site closure	Fire extinguishers Service

		with appropriate signage indicating location.				records
– Emergency and contact details displayed must be displayed;	Contractor	Place emergency and contact details which are readily available and easily accessible	Construction	ECO / dEO	Prior to site closure	Visual inspections
– Security personnel must be briefed and have the facilities to contact or be contacted by relevant management and emergency personnel;	Contractor in consultation with the ECO	Hold a workshop with all security personnel to provide a brief of the project and security requirements. Provide facilities to contact management and emergency personnel	Construction	ECO / dEO	Prior to site closure	Visual inspections and photographic records
– Night hazards such as reflectors, lighting, traffic signage etc. must have been checked;	Contractor	Regular checks of night hazards must be undertaken	Construction	ECO / dEO	Prior and during site closure	Visual inspections and photographic records
– Fire hazards identified and the local authority must have been notified of any potential threats e.g. large brush stockpiles, fuels etc.;	Contractor in consultation with the DPM / dEO	Identify any potential fire hazards and notify the Relevant local authority	Construction	ECO / dEO	Prior and during site closure	Visual inspections and photographic records
– Structures vulnerable to high winds must be secured;	Contractor	Ensure structures vulnerable to wind are	Construction	ECO / dEO	Prior and during	Visual

		secure prior to site closure			site closure	inspections
– Wind and dust mitigation must be implemented;	Contractor	Implement wind and dust mitigation prior to site closure	Construction	ECO / dEO	Prior and during site closure	Visual inspections
– Cement and materials stores must have been secured;	Contractor	Ensure cement and material stores are secured prior to site closure	Construction	ECO / dEO	Prior and during site closure	Photographic records
– Toilets must have been emptied and secured;	Contractor	Ensure toilets are emptied and secured prior to site closure	Construction	ECO / dEO	Prior and during site closure	Disposal records
– Refuse bins must have been emptied and secured;	Contractor	Ensure refuse bins are emptied and secured prior to site closure	Construction	ECO / dEO	Prior to site closure	Disposal records
– Drip trays must have been emptied and secured.	Contractor	Ensure drip trays are emptied and secured prior to site closure	Construction	ECO / dEO	Prior to site closure	Disposal records

5.31 Landscaping and rehabilitation

Impact management outcome: Areas disturbed during the development phase are returned to a state that approximates the original condition.		
Impact Management Actions	**Implementation**	**Monitoring**

	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
– All areas disturbed by construction activities must be subject to landscaping and rehabilitation; All spoil and waste must be disposed to a registered waste site and certificates of disposal provided;	Contractor	Implement a rehabilitation plan; Dispose of all spoil and waste at a licensed waste disposal facility	Rehabilitation	ECO / dEO	Monthly	Visual inspections Waste disposal certificates.
– All slopes must be assessed for contouring, and to contour only when the need is identified in accordance with the Conservation of Agricultural Resources Act, No 43 of 1983 – All slopes must be assessed for terracing, and to terrace only when the need is identified in accordance with the Conservation of Agricultural Resources Act, No 43 of 1983;	Contractor	Assess all slopes	Rehabilitation	ECO / dEO	Monthly	Visual inspections
– Berms that have been created must have a slope of 1:4 and be replanted with indigenous species and grasses that approximates the original condition;	Contractor	Ensure all berms have a slope of 1:4 and is replanted with indigenous species	Rehabilitation	ECO / dEO	Monthly	Visual inspections
– Where new access roads have crossed cultivated farmlands, that lands must be rehabilitated by ripping which must be agreed to by the holder of the EA and the landowners;	Not Applicable (The powerline and its associated activities will not affect the cultivated farmlands)					

– Rehabilitation of tower sites and access roads outside of farmland; – Indigenous species must be used for with species and/grasses to where it compliments or approximates the original condition; – Stockpiled topsoil must be used for rehabilitation (refer to Section ***5.24: Stockpiling and stockpiled areas***); – Stockpiled topsoil must be evenly spread so as to facilitate seeding and minimise loss of soil due to erosion; – Before placing topsoil, all visible weeds from the placement area and from the topsoil must be removed; – Subsoil must be ripped before topsoil is placed;	Contractor	• Ensure that tower sites be rehabilitated • Make use of indigenous species for rehabilitation • Ensure stockpiled topsoil is used as per the requirements listed under section 5.24 • Ensure that topsoil is spread evenly • Remove all visible weeds from placement area and topsoil before spreading the topsoil • Undertake the ripping of subsoil prior to the spreading of topsoil	Throughout the duration of the construction period, as relevant to the concurrent or progressive reinstatement and rehabilitation of affected areas. Up to end of defects liability period. Rehabilitation will also extent into the operational phase.	ECO / dEO	Monthly	Visual inspections and photographic records

– The rehabilitation must be timed so that rehabilitation can take place at the optimal time for vegetation establishment;	Contractor	As defined.	Throughout the duration of the construction period, as relevant to the concurrent or progressive reinstatement and rehabilitation of affected areas. Up to end of defects liability period. Rehabilitation will also extent into the operational phase	ECO / dEO	Monthly	Visual inspections.
– Where impacted through construction related activity, all sloped areas must be stabilised to ensure proper rehabilitation is effected and erosion is controlled ;	Contractor	All disturbed slope areas must be stabilized.				
– Sloped areas stabilised using design structures or vegetation as specified in the design to prevent erosion of embankments. The contract design specifications must be adhered to and implemented strictly;	Contractor	Stabilize slopes as per the design specifications where and when required.				
– Spoil can be used for backfilling or landscaping as long as it is covered by a minimum of 150 mm of topsoil.	Contractor	Spoil used for landscaping must be applied as per the listed requirements				
– Where required, re-vegetation including hydro-seeding can be enhanced using a vegetation seed mixture as described below. A mixture of seed can be used provided the mixture is carefully selected to ensure the following: a) Annual and perennial plants are chosen; b) Pioneer species are included; c) Species chosen must be indigenous to the area with the seeds used coming from the area; d) Root systems must have a binding effect on the soil; e) The final product must not cause an ecological imbalance in the area	Contractor in consultation with a suitably qualified specialist	Make use of a suitable vegetation seed mixture should enhancement be required				

5.32. Recommended mitigation measures provided in the Botanical Walkdown report.						
– The Contractor shall ensure that all pertinent permits, certificates, relevant reports and permissions have been obtained prior to any activities commencing on site and ensure that they are strictly enforced /adhered to. This includes, for example, updating the Department of Water Affairs and Sanitation (DWS) Water Use licence, the EMPr and other monitoring programs. – Should any protected plant species be noted that are deemed to be under threat from the construction activity, these plants must be removed by a suitably qualified specialist and replanted as part of vegetation rehabilitation after the construction (Note, these plants may only be removed with the permission of the provincial authority and as provided for in the Environmental Authorisation). – The extent of the construction site and access roads should be demarcated on site layout plans and should be restricted to disturbed areas, or those identified with low importance/ sensitivity. No personnel or construction vehicle may be allowed to move outside demarcated areas, except those authorised to do so and under strict supervision of the ECO. All sensitive areas, including wetlands, drainage lines, etc., situated in spatial proximity of the construction site that are not part of the demarcated	Contractor, dEO, DPM	As recommended by the Botanical Specialist.	Throughout the duration of the construction period, as relevant to the concurrent or progressive reinstatement and rehabilitation of affected areas. Up to end of defects liability period. Rehabilitation will also extent into the operational phase.	ECO / dEO	Monthly	Visual inspections and photographic records

development area, should be treated as "no-go" areas for employees, machinery and visitors and no access is allowed. – The footprint of the impact area around pylons and required access to these areas should be minimised as far as practically possible. – Restrict all movement of vehicles and heavy machinery to permissible areas only, i.e. designated access roads, maintenance roads, turning points, laydown and parking areas. No off-road driving beyond designated areas may be allowed. – Do not permit vehicular or pedestrian access into natural areas or into seasonally wet areas during and immediately after rainy periods, until such a time that the soil has dried out. No activities should take place during rain events and at least 2 days afterwards. – Disturbed areas must be revegetated as soon as practically possible. – Soil conditions/ disturbances should be restored to 'pre-impact' condition, taking cognisance of the natural lay of the land and hydrological characteristics to allow for the natural evacuation of surface water. – Retain vegetation and soil in position for as long as possible, only removing it immediately ahead of construction/earthworks and returning it immediately afterwards. – Rehabilitation plans must be submitted and approved for rehabilitation of damage during						

construction activities and that plan must be implemented immediately upon completion of construction. – Cordon off areas that are under rehabilitation as 'no-go' areas, using temporary danger tape and steel droppers. If necessary, these areas should be fenced off to prevent vehicular, pedestrian and livestock access. – Develop and implement an Alien and Invasive Species management plan. – Monitor the establishment of alien invasive species within the areas affected by construction and maintenance activities and take immediate corrective action where invasive species are noted. – Implement alien plant eradication and follow-up control activities prior to construction, to prevent spread into disturbed soils, as well as follow-up control during construction. – Weed control measures and eradication of noxious weeds (Category 1a &1b species) must be applied prior to construction or soil disturbance. By removing these species prior to development, the spread of seeds will be prevented into disturbed soils which could thus have a positive impact on the surrounding natural vegetation. – Removed plants should be disposed of at an appropriate and approved waste disposal facility. Under no circumstance should these plants be burnt on site.						

– Chemical treatment methods is not preferred for the control of alien and invasive or common weed species on this site; manual removal methods should be used. Inadvertent spillage of chemicals could potentially contaminate water sources. – Ensure the enforcement of fire control and management measures to avoid accidental fires that will adversely affect the surrounding grasslands. – Collection of branches, wood (dead or alive), shrubs or any vegetation for fire making purposes is strictly prohibited. – Picking or collecting of any plants outside the approved development footprint/ perimeter is not allowed. – Prevent all open fires on site. – The irresponsible use of welding equipment, oxy-acetylene torches, and other naked flames, which could result in veld fires, or constitute a hazard should be guided by safe practice guidelines. – The burning of general waste material is not to be allowed. – Provide demarcated fire-safe zones, facilities, and suitable fire control measures. – No effluent of any nature should be released into sensitive or natural habitat. – Implementation of best management practices at all stages of the development.						

6 ACCESS TO THE GENERIC EMPr

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

PART B: SECTION 2

7 SITE SPECIFIC INFORMATION AND DECLARATION

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

7.1.1 Details of the applicant:

Name of applicant: Tebogo Chauke

Tel No: 0136932714

Fax No: N/A

Postal Address: P.O. Box 223, Emalahleni, 1035

Physical Address: Cnr Jellicoe & Watermayer Street, Eskompark, Emalahleni, 1035

7.1.2 Details and expertise of the EAP:

Name of applicant:

Tel No:

Fax No:

E-mail address:

Expertise of the EAP (Curriculum Vitae included):

7.1.3 Project name: REABETSWE 132 KV LOOP-IN LOOP-OUT

7.1.4 Description of the project: Construction of 132kV Loop-in Loop-out overhead powerline approximately 150m

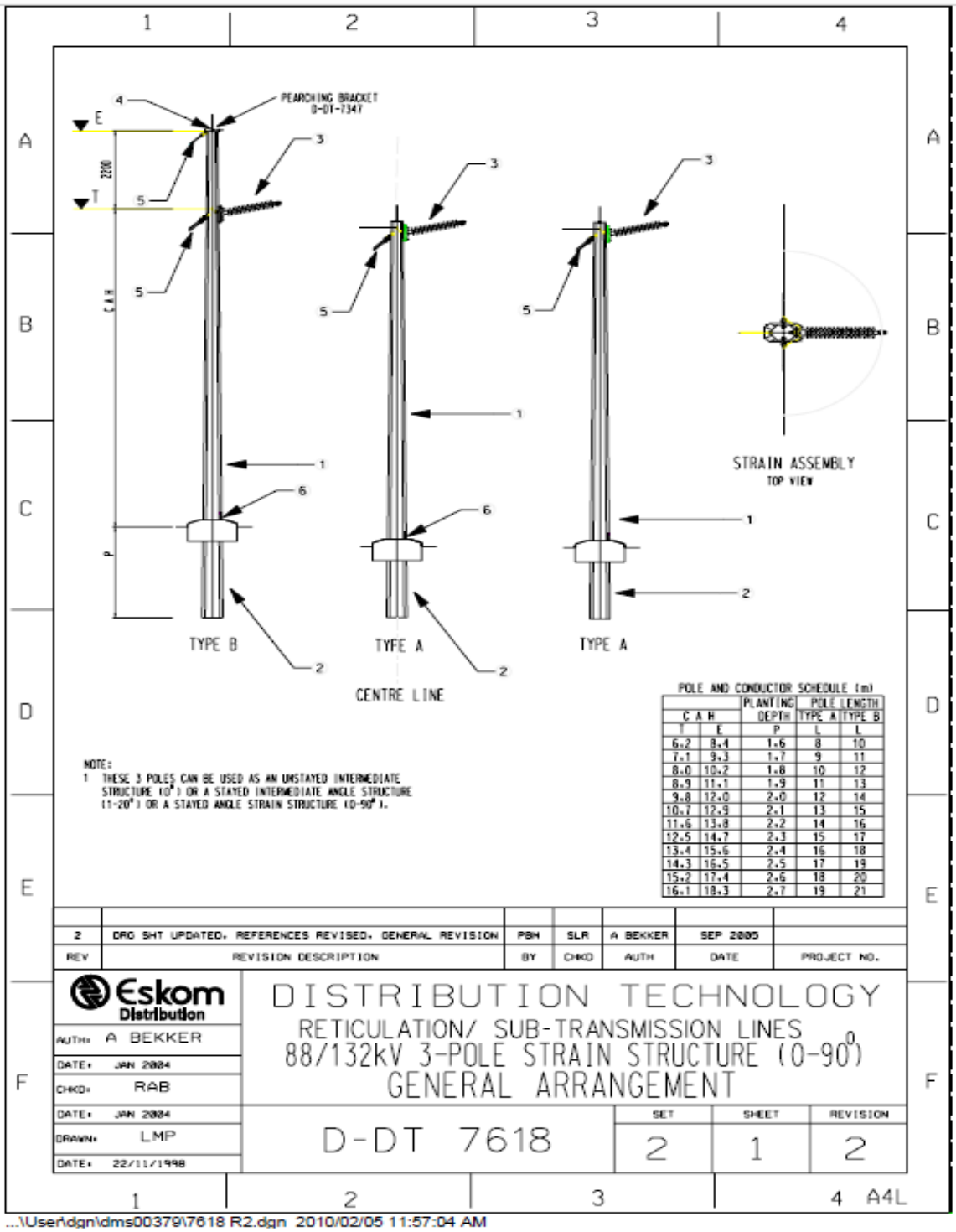
7.1.5 Project location:

NO	FARM NAME(if applicable)	FARM NUMBER(if applicable)	PORTION NAME	PORTION NUMBER	LATITUDE	LONGITUDE
1	**Tweefontein**	**458**	**JS**	**4**	**29°47'7.7" E**	**25°54'47.8" S**

7.16 Preliminary technical specification of the overhead transmission and distribution:

- Length: **140m**
- Tower parameters
  - Number and types of towers: **7 new towers, monopole (D-DT-7618, attached drawing)**
  - Tower spacing (mean and maximum): **Mean, 75m. Max, 203m**
  - Tower height (lowest, mean and height): **Lowest, 10m. Mean, 16.4m. Max, 18m**

- Conductor attachment height (mean): **Mean, 12.2m. Lowest, 6.2m. Highest, 15.3m**
- Minimum ground clearance: **8.4m**
- Foundations sizes: **1.8m deep, 0.5m diameter. Overall volume = 0.353m3**



ITEM NØ.	DESCRIPTION	D-DT NØ.
	STRUCTURE	
	TYPE 259S-MANUFACTURE DORBYL	7618
	TYPE 261S- MANUFACTURE CIS	7618
1	POLE LENGTH (BODY)	
	7.1M STEEL	7107
	8.0M STEEL	7107
	8.9M STEEL	7107
	9.8M STEEL	7107
	10.7M STEEL	7107
	11.6M STEEL	7107
	12.5M STEEL	7107
2	FOUNDATION	
	TYPE 1 (300kPa)	7337
	TYPE 2 (150kPa)	7338
	TYPE 3 (100kPa)	7339
	TYPE 4 (50kPa)	7340
	ROCK&DECOMPOSED ROCK	7341
3	INSULATOR ASSEMBLY	
	STRAIN ASSEMBLY	7311
	JUMPER ASSEMBLY	7321
4	EARTH WIRE ASSEMBLIES	
	STRAIN INSULATED	7324
	STRAIN NON-INSULATED	7323
5	STAY ASSEMBLY	7325
6	CONCRETE CAP & EARTHING DETAILS	7345

REV	REVISION DESCRIPTION	BY	CHKD	AUTH	DATE	PROJECT NO.
2	DRG SHT UPDATED, REFERENCES REVISED, GENERAL REVISION	PBN	SLR	A BEKKER	SEP 2005	

Eskom Distribution

AUTH: AB
DATE: AUG 2004
CHKD: RAB
DATE: AUG 2004
DRAWN: SLR
DATE: AUG 2004

DISTRIBUTION TECHNOLOGY

RETICULATION/ SUB-TRANSMISSION LINES
88/132kV 3-POLE STRAIN STRUCTURE (0-90°)
REFERENCE TABLE

D-DT 7618

SET	SHEET	REVISION
2	2	2

A4L

...\User\dgn\dms00379\7618 R2.dgn 2010/02/05 11:57:22 AM

7.2 Sub-section 2: Development footprint site map

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

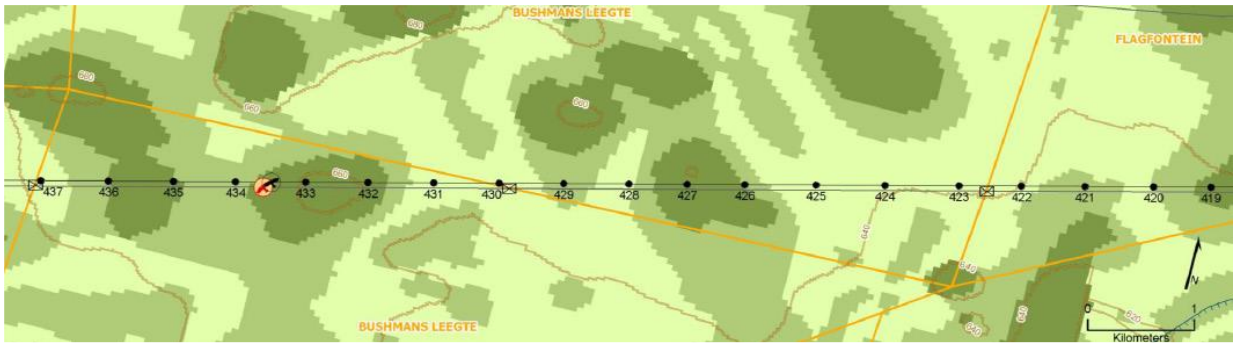


Figure 1: Example of an environmental sensitivity map in the context of a final overhead transmission and distribution profile

7.3 Sub-section 3: Declaration

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

Signature Proponent/applicant/ holder of EA Date:

Tebogo Chauke

14 February 2023

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

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

PART C

8 SITE SPECIFIC ENVIRONMENTAL ATTRIBUTES

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

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

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

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.