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





environmental affairs Department: Environmental Affairs REPUBLIC OF SOUTH AFRICA

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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 substation infrastructure for the transmission and distribution of electricity, 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 substation infrastructure for the transmission and distribution of electricity. 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 substation infrastructure for the transmission and distribution of electricity requiring EA in terms of NEMA. 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 realization of such infrastructure.

5. Structure of this document

Part	Section	Heading	Content
А		Provides general	Definitions, acronyms, roles & responsibilities
		guidance and information	and documentation and reporting.

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

Part	Section	Heading	Content
		and is not legally binding	
В	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 substation infrastructure for the transmission and distribution of electricity, which are presented in the form of a template that has been pre- approved.
			The template in this section is to be completed by the contractor, with each completed page signed and dated by 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 template contained in <u>Part B: Section 1</u> , and understands that the impact management outcomes and impact management actions are legally binding . The preliminary infrastructure layout must be

Part	Section	Heading	Content
			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 impact management actions have been either pre- approved or approved in terms of <u>Part C</u> .
			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 <u>Part B: section 2</u> not be submitted. Once approved, this Section forms part of the EMPr for the development and is legally binding.
С		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 actions must be provided. These specific 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 <u>Part C</u> 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.
			This section applies only to additional impact management outcomes and impact

Part	Section	Heading	Content
			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 <u>Part B: section 1</u> .
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 <u>Appendix 1</u>. 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

<u>Part B: Section 2</u> 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.

<u>Sub-section 1</u> contains the project name, the applicant's name and contact details, the site information, which includes coordinates of the property or farm in which the proposed substation infrastructure is proposed as well as the 21-digit Surveyor General code of each cadastral land parcel and, where available, the farm name.

<u>Sub-section 2</u> 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: <u>https://screening.environment.gov.za/screeningtool.</u> The sensitivity map shall identify the nature of each sensitive feature e.g. threatened plant species, archaeological site, etc. Sensitivity maps shall identify features both within the planned working area and any known sensitive features and within 50 m from the development footprint.

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

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

Should the EA be transferred, <u>Part B: Section 2</u> 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 <u>Part B: Section 2</u> not be submitted. Once approved, <u>Part B: Section 2</u> forms part of the EMPr for the development and the EMPr becomes legally binding to the new EA holder.

PART 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 as a minimum 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;

"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.

Role and Responsibilities
Role The Project Developer is accountable for ensuring compliance with the EMPr and any conditions of approval from the competent authority (CA). Where required, an environmental control officer (ECO) must be contracted by the Project Developer to objectively monitor the implementation of the 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.
Role The DSS reports directly to the DPM, oversees site works, liaises with the contractor(s) and the ECO. The DSS

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

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)	<u>Role</u> 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.

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

Responsible Person(s)	Role and Responsibilities
	 reviewing the training programmes of the Contractor; In case of non-compliances, the ECO must first communicate this to the Senior Site Supervisor, who has the power to ensure this matter is addressed. Should no action or insufficient action be taken, the ECO may report this matter to the authorities as non-compliance; Maintenance, update and review of the EMPr; Communication of all modifications to the EMPr to the relevant stakeholders.
developer Environmental Officer (dEO)	Role The dEOs will report to the Project Manager and are responsible for implementation of the EMPr, environmental monitoring and reporting, providing environmental input to the Project Manager and Contractor's Manager, liaising with contractors and the landowners as well as a range of environmental coordination responsibilities.
	 Responsibilities Be fully conversant with the EMPr; Be familiar with the recommendations and mitigation measures of this EMPr, and 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;

Responsible Person(s)	Role and Responsibilities
	 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	Role The Contractor appoints the cEO and has overall responsibility for ensuring that all work, activities, and actions linked to the delivery of the contract are in line with the EMPr and that Method Statements are implemented as described. External contractors must ensure compliance with this EMPr while performing the onsite activities as per their contract with the Project Developer. The contractors are required, where specified, to provide Method Statements setting out in detail how the impact management actions contained in the EMPr will be implemented during the development or expansion of substation infrastructure for the transmission and distribution of electricity 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,

Responsible Person(s)	Role and Responsibilities
	labourers, the Environmental Control Officer and the public. As a minimum the cEO shall meet the
	following criteria:
	Responsibilities
	- Be on site throughout the duration of the project and be dedicated to the project;
	 Ensure all their staff are aware of the environmental requirements, conditions and constraints with respect to all of their activities on site;
	 Implementing the environmental conditions, guidelines and requirements as stipulated within the EA, EMPr and Method Statements;
	- Attend the Environmental Site Meeting;
	 Undertaking corrective actions where non-compliances are registered within the stipulated timeframes;
	 Report back formally on the completion of corrective actions;
	- Assist the ECO in maintaining all the site documentation;
	- Prepare the site inspection reports and corrective action reports for submission to the ECO;
	- Assist the ECO with the preparing of the monthly report; and
	 Where more than one Contractor is undertaking work on site, each company appointed as a Contractor will appoint a cEO representing that company.

4. ENVIRONMENTAL DOCUMENTATION REPORTING AND COMPLIANCE

To ensure accountable and demonstrated implementation of the EMPr, a number of reporting systems, documentation controls and compliance mechanisms must be in place for all substation 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. As 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 activities, as approved in generic and site specific EMPr as relevant as set out in the EMPr, which deviation has, or may cause, an environmental impact.

4.8 Corrective action records

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

4.9 Photographic record

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

The Contractor shall:

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

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

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

The ECOs must prepare a monthly EAR. The report will be tabled as the key point on the agenda of the Environmental Site Meeting. The Report is submitted for acceptance at the meeting and the final report will be circulated to the Project Manager and filed in the EMPr file. At a frequency determined by the EA, the ECOs shall submit the monthly reports to the CA. 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 substation infrastructure for the transmission and distribution of electricity. There is a list of aspects identified for the development or expansion of substation infrastructure for the transmission and distribution of electricity, 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 substation infrastructure for the transmission and distribution of electricity.

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 Actions	Implementati	on		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; The Contractor must allow for sufficient sessions to train all personnel with no more than 20 personnel attending each course; Refresher environmental awareness training is available as and when required; 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; The Contractor must erect and maintain information posters at key locations on site, and the posters must include the following information as a minimum: a) Safety notifications; and b) No littering. 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.			
A record of all environmental awareness training courses			
undertaken as part of the EMPr must be available;			
Educate workers on the dangers of open and/or unattended			
fires;			
A staff attendance register of all staff to have received			
environmental awareness training must be available.			
Course material must be available and presented in			
appropriate languages that all staff can understand.			

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	Implementati	on	Monitoring			
	Responsible	Method of	Timeframe for	Responsible	Frequency	Evidence of
	person	implementation	implementation	person		compliance
 A method statement must be provided by the contractor prior 						
to any onsite activity that includes the layout of the						
construction camp in the form of a plan showing the location						
of key infrastructure and services (where applicable), including						

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5.3 Access restricted areas

Impact management outcome: Access to restricted areas prevented.								
Impact Management Actions	Implementati	on	Monitoring					
	Responsible	Method of	Timeframe for	Responsible	Frequency	Evidence of		
	person	implementation	implementation	person		compliance		
- Identification of access restricted areas is to be informed by								
the environmental assessment, site walk through and any								
additional areas identified during development;								
- Erect, demarcate and maintain a temporary barrier with								
clear signage around the perimeter of any access restricted								
area, colour coding could be used if appropriate; and								

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- Unauthorised access and development related activity			
inside access restricted areas is prohibited.			

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	Implementati	on	Monitoring			
	Responsible	Method of	Timeframe for	Responsible	Frequency	Evidence of
	person	implementation	implementation	person		compliance
 An access agreement must be formalised and signed by the DPM, Contractor and landowner before commencing with the activities; 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 All contractors must be made aware of all these access routes. Any access route deviation from that in the written agreement must be closed and re-vegetated immediately, at the contractor's expense; Maximum use of both existing servitudes and existing roads must be made to minimize further disturbance through the development of new roads; 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; 						

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	croplands			
-	Access roads must only be developed on a pre-planned			
	and approved roads.			

5.5 Fencing and Gate installation

Impact management outcome: Minimise impact to the environment and ensure safe and controlled access to the site through the erection of fencing and gates where required.

onsible on	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
on	implementation	implementation	person		compliance

 good working order for the duration of the development activities; Fencing must be erected around the camp, batching plants, hazardous storage areas, and all designated access restricted areas, where applicable; Any temporary fencing to restrict the movement of life-stock must only be erected with the permission of the land owner. All fencing must be developed of high quality material 			
 bearing the SABS mark; The use of razor wire as fencing must be avoided; Fenced areas with gate access must remain locked after hours, during weekends and on holidays if staff is away from site. Site security will be required at all times; On completion of the development phase all temporary fences are to be removed; 			
 The contractor must ensure that all fence uprights are appropriately removed, ensuring that no uprights are cut at ground level but rather removed completely. 			

5.6 Water Supply Management

Impact management outcome: Undertake responsible water usage.								
Impact Management Actions	Implementation Monitoring							
	Responsible	Method of	Timeframe for	Responsible	Frequency	Evidence of		
	person	implementation	implementation	person		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; The Contractor must ensure the following: The vehicle abstracting water from a river does not 								

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	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			
с.	All reasonable measures to limit pollution or			
	sedimentation of the downstream watercourse are			
	implemented.			
– Ensur	re water conservation is being practiced by:			
a.	Minimising water use during cleaning of equipment;			
b.	Undertaking regular audits of water systems; and			
с.	Including a discussion on water usage and			
	conservation during environmental awareness training.			
d.	The use of grey water is encouraged.			

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	Implementati	on	Monitoring			
	Responsible	Method of	Timeframe for	Responsible	Frequency	Evidence of
	person	implementation	implementation	person		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; All spillage of oil onto concrete surfaces must be controlled by the use of an approved absorbent material and the used absorbent material disposed of at an appropriate waste disposal facility; Natural storm water runoff not contaminated during the 						

development and clean water can be discharged			
directly to watercourses and water bodies, subject to the			
Project Manager's approval and support by the ECO;			
- 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.			

Solid and hazardous waste management 5.8

Impact management outcome: Wastes are appropriately stored, handled and safely disposed of at a recognised waste facility.							
Impact Management Actions	Implementati	ion	Monitoring				
	Responsible	Method of	Timeframe for	Responsible	Frequency	Evidence of	
	person	implementation	implementation	person		compliance	
 All measures regarding waste management must be undertaken using an integrated waste management approach; Sufficient, covered waste collection bins (scavenger and weatherproof) must be provided; A suitably positioned and clearly demarcated waste collection site must be identified and provided; The waste collection site must be maintained in a clean and orderly manner; Waste must be segregated into separate bins and clearly marked for each waste type for recycling and safe disposal; Staff must be trained in waste segregation; Bins must be emptied regularly; 							

- General waste produced onsite must be disposed of at			
registered waste disposal sites/ recycling company;			
- Hazardous waste must be disposed of at a registered waste			
disposal site;			
- Certificates of safe disposal for general, hazardous and			
recycled waste must be maintained.			

5.9 Protection of watercourses and estuaries

Impact management outcome: Pollution and contamination of the watercourse environment and or estuary erosion are prevented.

Impact Management Actions	Implementati	on		Monitoring		
	Responsible	Method of	Timeframe for	Responsible	Frequency	Evidence of
	person	implementation	implementation	person		compliance
- All watercourses must be protected from direct or indirect						
spills of pollutants such as solid waste, sewage, cement, oils,						
fuels, chemicals, aggregate tailings, wash and						
contaminated water or organic material resulting from						
the Contractor's activities;						
- In the event of a spill, prompt action must be taken to clear						
the polluted or affected areas;						
- Where possible, no development equipment must traverse						
any seasonal or permanent wetland						
- No return flow into the estuaries must be allowed and no						
disturbance of the Estuarine functional Zone should occur;						
 Development of permanent watercourse or estuary crossing 						
must only be undertaken where no alternative access to						
tower position is available;						
- There must not be any impact on the long term						
morphological dynamics of watercourses or estuaries;						
- Existing crossing points must be favored over the creation of						

new crossings (including temporary access)			
- When working in or near any watercourse or estuary, the			
following environmental controls and consideration must be			
taken:			
a) Water levels during the period of construction;			
No altering of the bed, banks, course or characteristics of a			
watercourse			
b) During the execution of the works, appropriate			
measures to prevent pollution and contamination of the			
riparian environment must be implemented e.g. including			
ensuring that construction equipment is well maintained;			
c) Where earthwork is being undertaken in close proximity			
to any watercourse, slopes must be stabilised using suitable			
materials, i.e. sandbags or geotextile fabric, to prevent sand			
and rock from entering the channel; and			
d) Appropriate rehabilitation and re-vegetation measures			
for the watercourse banks must be implemented timeously.			
In this regard, the banks should be appropriately and			
incrementally stabilised as soon as development allows.			

5.10 Vegetation clearing

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

Impact Management Actions	Implementati	on	Monitoring			
	Responsible	Method of	Timeframe for	Responsible	Frequency	Evidence of
	person	implementation	implementation	person		compliance
 General: Indigenous vegetation which does not interfere with the development must be left undisturbed; Protected or endangered species may occur on or near the 						

development site. Special care should be taken not to				
damage such species;				
– Search, rescue and replanting of all protected and				
endangered species likely to be damaged during project				
development must be identified by the relevant specialist				
and completed prior to any development or clearing;				
- Permits for removal must be obtained from the relevant CA				
prior to the cutting or clearing of the affected species, and				
they must be filed;				
– 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;				
- Trees felled due to construction must be documented and				
form part of the Environmental Audit Report;				
- Rivers and watercourses must be kept clear of felled trees,				
vegetation cuttings and debris;				
– Only a registered pest control operator may apply				
herbicides on a commercial basis and commercial				
application must be carried out under the supervision of a				
registered pest control operator, supervision of a registered				
pest control operator or is appropriately trained;				
– A daily register must be kept of all relevant details of				
herbicide usage;				
 No herbicides must be used in estuaries; 				
– All protected species and sensitive vegetation not removed				
must be clearly marked and such areas fenced off in				
accordance to Section 5.3: Access restricted areas.				
Alien invasive vegetation must be removed and disposed of				
at a licensed waste management facility.				
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5.11 Protection of fauna

Impact management outcome: Disturbance to fauna is minimised.						
Impact Management Actions	Implementati	on		Monitoring		
	Responsible	Method of	Timeframe for	Responsible	Frequency	Evidence of
	person	implementation	implementation	person		compliance
 No interference with livestock must occur without the landowner's written consent and with the landowner or a person representing the landowner being present; The breeding sites of raptors and other wild birds species must be taken into consideration during the planning of the development programme; Breeding sites must be kept intact and disturbance to breeding birds must be avoided. Special care must be taken where nestlings or fledglings are present; Special recommendations of the avian specialist must be adhered to at all times to prevent unnecessary disturbance of birds; 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; No deliberate or intentional killing of fauna is allowed; 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 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. 						

5.12 Protection of heritage resources

mpact Management Actions	Implementati	on		Monitoring		
	Responsible	Method of	Timeframe for	Responsible	Frequency	Evidence of
	person	implementation	implementation	person		compliance
- Identify, demarcate and prevent impact to all known						
sensitive heritage features on site in accordance with the						
No-Go procedure in Section 5.3: Access restricted areas;						
- Carry out general monitoring of excavations for potential						
fossils, artefacts and material of heritage importance;						
- All work must cease immediately, if any human remains						
and/or other archaeological, palaeontological and						
historical material are uncovered. Such material, if exposed,						
must be reported to the nearest museum, archaeologist/						
palaeontologist (or the South African Police Services), so that						
a systematic and professional investigation can be						
undertaken. Sufficient time must be allowed to						
remove/collect such material before development						
recommences.						

5.13 Safety of the public

Impact management outcome: All precautions are taken to minimi	se the risk of inj	ury, harm or comple	aints.			
Impact Management Actions	Implementati	on		Monitoring		
	Responsible		Timeframe for	Responsible	Frequency	Evidence of
	person	implementation	implementation	person		compliance
- Identify fire hazards, demarcate and restrict public access to						
these areas as well as notify the local authority of any						
potential threats e.g. large brush stockpiles, fuels etc.;						

_	All unattended open excavations must be adequately			
	fenced or demarcated;			
-	Adequate protective measures must be implemented to			
	prevent unauthorised access to and climbing of partly			
	constructed towers and protective scaffolding;			
-	Ensure structures vulnerable to high winds are secured;			
-	Maintain an incidents and complaints register in which all			
	incidents or complaints involving the public are logged.			

5.14 Sanitation

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	Implementati	on		Monitoring		
	Responsible	Method of	Timeframe for	Responsible	Frequency	Evidence of
	person	implementation	implementation	person		compliance
 Mobile chemical toilets are installed onsite if no other ablution facilities are available; The use of ablution facilities and or mobile toilets must be used at all times and no indiscriminate use of the veld for the purposes of ablutions must be permitted under any circumstances; Where mobile chemical toilets are required, the following must be ensured: a) Toilets are located no closer than 100 m to any watercourse or water body; b) Toilets are secured to the ground to prevent them from toppling due to wind or any other cause; c) No spillage occurs when the toilets are cleaned or emptied and the contents are managed in accordance 						

with the EMPr;			
d) Toilets have an external closing mechanism and are			
closed and secured from the outside when not in use to			
prevent toilet paper from being blown out;			
e) Toilets are 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;			
- A copy of the waste disposal certificates must be			
maintained.			

5.15 Prevention of disease

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

Services.								
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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	Implementati	on		Monitoring		
	Responsible	Method of	Timeframe for	Responsible	Frequency	Evidence of
	person	implementation	implementation	person		compliance
 Compile an Emergency Response Action Plan (ERAP) prior to the commencement of the proposed project; The Emergency Plan must deal with accidents, potential spillages and fires in line with relevant legislation; All staff must be made aware of emergency procedures as part of environmental awareness training; The relevant local authority must be made aware of a fire as soon as it starts; In the event of emergency necessary mitigation measures to contain the spill or leak must be implemented (see 						
Hazardous Substances section 5.17).						

5.17 Hazardous substances

Impact management outcome: Safe storage, handling, use and disposal of hazardous substances. Monitoring **Impact Management Actions** Implementation Responsible Method of Timeframe for Responsible Frequency Evidence of implementation implementation compliance person person The use and storage of hazardous substances to be _ minimised and non-hazardous and non-toxic alternatives

substituted where possible;]
 All hazardous substances must be stored in suitable 			
containers as defined in the Method Statement:			
 Containers must be clearly marked to indicate contents, 			
quantities and safety requirements;			
 All storage areas must be bunded. The bunded area must 			
be of sufficient capacity to contain a spill / leak from the			
stored containers;			
 Bunded areas to be suitably lined with a SABS approved 			
liner:			
– An Alphabetical Hazardous Chemical Substance (HCS)			
control sheet must be drawn up and kept up to date on a			
continuous basis;			
 All hazardous chemicals that will be used on site must have 			
Material Safety Data Sheets (MSDS);			
 All employees working with HCS must be trained in the safe 			
use of the substance and according to the safety data			
sheet;			
 Employees handling hazardous substances / materials must 			
be aware of the potential impacts and follow appropriate			
safety measures. Appropriate personal protective			
equipment must be made available;			
 The Contractor must ensure that diesel and other liquid fuel, 			
oil and hydraulic fluid is stored in appropriate storage tanks			
or in bowsers;			
- The tanks/ bowsers must be situated on a smooth			
impermeable surface (concrete) with a permanent bund.			
The impermeable lining must extend to the crest of the bund			
and the volume inside the bund must be 130% of the total			
capacity of all the storage tanks/ bowsers (110% statutory			
requirement plus an allowance for rainfall);			

- The floor of the bund must be sloped, draining to an oil			
separator;			
 Provision must be made for refueling at the storage area by 			
protecting the soil with an impermeable groundcover.			
Where dispensing equipment is used, a drip tray must be			
used to ensure small spills are contained;			
 All empty externally dirty drums must be stored on a drip tray 			
or within a bunded area;			
 No unauthorised access into the hazardous substances 			
storage areas must be permitted;			
 No smoking must be allowed within the vicinity of the 			
hazardous storage areas;			
 Adequate fire-fighting equipment must be made available 			
at all hazardous storage areas;			
 Where refueling away from the dedicated refueling station is 			
required, a mobile refueling unit must be used. Appropriate			
ground protection such as drip trays must be used;			
- An appropriately sized spill kit kept onsite relevant to the			
scale of the activity/s involving the use of hazardous			
substance must be available at all times;			
 The responsible operator must have the required training to 			
make use of the spill kit in emergency situations;			
- An appropriate number of spill kits must be available and			
must be located in all areas where activities are being			
undertaken;			
- In the event of a spill, contaminated soil must be collected in			
containers and stored in a central location and disposed of			
according to the National Environmental Management:			
Waste Act 59 of 2008. Refer to Section 5.7 for procedures			
concerning storm and waste water management and 5.8 for			
solid and hazardous waste management.			
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5.18 Workshop, equipment maintenance and storage

Impact management outcome: Soil, surface water and groundwater contamination is minimised.
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Impact Management Actions	Implementati	on		Monitoring		
	Responsible	Method of	Timeframe for	Responsible	Frequency	Evidence of
	person	implementation	implementation	person		compliance
 Where possible and practical all maintenance of vehicles and equipment must take place in the workshop area; During servicing of vehicles or equipment, especially where emergency repairs are effected outside the workshop area, a suitable drip tray must be used to prevent spills onto the soil. The relevant local authority must be made aware of a fire as soon as it starts; Leaking equipment must be repaired immediately or be removed from site to facilitate repair; Workshop areas must be monitored for oil and fuel spills; Appropriately sized spill kit kept onsite relevant to the scale of the activity taking place must be available; The workshop area must have a bunded concrete slab that is sloped to facilitate runoff into a collection sump or suitable oil / water separator where maintenance work on vehicles and equipment can be performed; Water drainage from the workshop must be contained and managed in accordance Section 5.7: Storm and waste 						
water management.						

5.19 Batching plants

Impact management outcome: Minimise spillages and contamination	ion of soil, surfc	ice water and grour	ndwater.			
Impact Management Actions	Implementat	ion	Monitoring			
	Responsible	Method of	Timeframe for	Responsible	Frequency	Evidence of
	person	implementation	implementation	person		compliance
 Concrete mixing must be carried out on an impermeable surface; 						
 Batching plants areas must be fitted with a containment facility for the collection of cement laden water. 						
 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; 						
 A washout facility must be provided for washing of concrete associated equipment. Water used for washing must be restricted; 						
 Hardened concrete from the washout facility or concrete mixer can either be reused or disposed of at an appropriate licenced disposal facility; 						
 Empty cement bags must be secured with adequate binding material if these will be temporarily stored on site; 						
 Sand and aggregates containing cement must be kept damp to prevent the generation of dust (Refer to Section 						
5.20: Dust emissions)						
 Any excess sand, stone and cement must be removed or reused from site on completion of construction period and 						
disposed at a registered disposal facility;						
 Temporary fencing must be erected around batching plants in accordance with Section 5.5: Fencing and gate 						

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5.20 Dust emissions

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

•	Method of	Timeframe for			Monitoring			
erson			Responsible	Frequency	Evidence of			
	implementation	implementation	person		compliance			

or 20 km/h when traversing unconsolidated a	nd non-			
vegetated areas;				
 Straw stabilisation must be applied at a rate of one 	bale/10			
m ² and harrowed into the top 100 mm of top mater	al, for all			
completed earthworks;				
 For significant areas of excavation or exposed group 	und, dust			
suppression measures must be used to minimise the	e spread			
of dust.				

5.21 Blasting

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

Impact Management Actions	Implementati	on	Monitoring			
	Responsible	Method of	Timeframe for	Responsible	Frequency	Evidence of
	person	implementation	implementation	person		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. 						

5.22 Noise

Impact Management outcome: Prevent unnecessary noise to the environment by ensuring that noise from development activity is mitigated. **Impact Management Actions** Implementation Monitoring Method Timeframe Evidence of Responsible Responsible Frequency of for implementation implementation compliance person person The Contractor must keep noise level within acceptable _ limits, Restrict the use of sound amplification equipment for

to during the development phase. Where not defined, it must be ensured that development activities must still meet the impact management outcome related to noise	·			
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5.23 Fire prevention

Impact Management Actions	Implementati	ion	Monitoring			
	Responsible	Method of	Timeframe for	Responsible	Frequency	Evidence of
	person	implementation	implementation	person		compliance
 Designate smoking areas where the fire hazard could be regarded as insignificant; Firefighting equipment must be available on all vehicles located on site; The local Fire Protection Agency (FPA) must be informed of construction activities; Contact numbers for the FPA and emergency services must be communicated in environmental awareness training and displayed at a central location on site; 						

 Two way swop of contact details between ECO and FPA. 			

5.24 Stockpiling and stockpile areas

Impact management outcome: Reduce erosion and sedimentation as a result of stockpiling. **Impact Management Actions** Monitoring Implementation Method Responsible Timeframe Responsible of for Frequency Evidence of implementation implementation compliance person person 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: All stockpiled material must be maintained and kept clear of _ weeds and alien vegetation growth by undertaking regular weeding and control methods; Topsoil stockpiles must not exceed 2 m in height; During periods of strong winds and heavy rain, the stockpiles _ must be covered with appropriate material (e.g. cloth, tarpaulin etc.); Where possible, sandbags (or similar) must be placed at the bases of the stockpiled material in order to prevent erosion of the material.

5.25 Civil works

Impact management outcome: Impact to the environment minimised during civil works to create the substation terrace.									
Impact Management Actions	Implementation				Monitoring				
	Responsible	Method	of	Timeframe	for	Responsible	Frequency	Evidence of	

	person	implementation	implementation	person	compliance
- Where terracing is required, topsoil must be collected and					
retained for the purpose of re-use later to rehabilitate					
disturbed areas not covered by yard stone;					
- Areas to be rehabilitated include terrace embankments and					
areas outside the high voltage yards;					
- Where required, all sloped areas must be stabilised to ensure					
proper rehabilitation is effected and erosion is controlled;					
- These areas can be 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;					
- Rehabilitation of the disturbed areas must be managed in					
accordance with Section 5.35: Landscaping and					
rehabilitation;					
- All excess spoil generated during terracing activities must be					
disposed of in an appropriate manner and at a recognised					
landfill site; and					
- Spoil can however be used for landscaping purposes and					
must be covered with a layer of 150 mm topsoil for					
rehabilitation purposes.					

5.26 Excavation of foundation, cable trenching and drainage systems

Impact management outcome: No environmental degradation occurs as a result of excavation of foundation, cable trenching and drainage systems.

Impact Management Actions	Implementati	ion	Monitoring			
	Responsible	Method of	Timeframe for	Responsible	Frequency	Evidence of
	person	implementation	implementation	person		compliance
- All excess spoil generated during foundation excavatio	ก					
must be disposed of in an appropriate manner and at	נ					

	licensed landfill site, if not used for backfilling purposes;			
_	Spoil can however be used for landscaping purposes and			
	must be covered with a layer of 150 mm topsoil for			
	rehabilitation purposes;			
_	Management of equipment for excavation purposes must			
	be undertaken in accordance with Section 5.18: Workshop ,			
	equipment maintenance and storage; and			
_	Hazardous substances spills from equipment must be			
	managed in accordance with Section 5.17: Hazardous			
	substances.			

5.27 Installation of foundations, cable trenching and drainage systems

Impact management outcome: No environmental degradation occurs during the installation of foundation, cable trenching and drainage system.

Impact Management Actions	Implementation			Monitoring		
	Responsible	Method of	Timeframe for	Responsible	Frequency	Evidence of
	person	implementation	implementation	person		compliance
- Batching of cement to be undertaken in accordance with						
Section 5.19: Batching plants; and						
- Residual solid waste must be disposed of in accordance with						
Section 5.8: Solid waste and hazardous management.						

5.28 Installation of equipment (circuit breakers, current Transformers, Isolators, Insulators, surge arresters, voltage transformers, earth switches)

Impact management outcome: No environmental degradation occurs as a result of installation of equipment. Monitoring **Impact Management Actions** Implementation Evidence of Responsible Method of Timeframe for Responsible Frequency implementation compliance implementation person person

- Management of dust must be conducted in accordance			
with Section 5. 20: Dust emissions;			
- Management of equipment used for installation must be			
conducted in accordance with Section 5.18: Workshop,			
equipment maintenance and storage;			
- Management hazardous substances and any associated			
spills must be conducted in accordance with Section 5.17:			
Hazardous substances; and			
- Residual solid waste must be recycled or disposed of in			
accordance with Section 5.8: Solid waste and hazardous			
management.			

5.29 Steelwork Assembly and Erection

Impact management outcome: No environmental degradation occurs as a result of steelwork assembly and erection.								
Impact Management Actions	Implementati	Implementation Monitoring						
	Responsible	Method of	Timeframe for	Responsible	Frequency	Evidence of		
	person	implementation	implementation	person		compliance		
 During assembly, care must be taken to ensure that no wasted/unused materials are left on site e.g. bolts and nuts Emergency repairs due to breakages of equipment must be managed in accordance with Section 5. 18: Workshop, equipment maintenance and storage and Section 5.16: Emergency procedures. 								

5.30 Cabling and Stringing

Impact management outcome: No environmental degradation oc	curs as a result of stringing.	
Impact Management Actions	Implementation	Monitoring

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	Responsible	Method of	Timeframe for	Responsible	Frequency	Evidence of
	person	implementation	implementation	person		compliance
- Residual solid waste (off cuts etc.) shall be recycled or						
disposed of in accordance with Section 6.8: Solid waste and						
hazardous Management;						
- Management of equipment used for installation shall be						
conducted in accordance with Section 5.18: Workshop,						
equipment maintenance and storage;						
- Management hazardous substances and any associated						
spills shall be conducted in accordance with Section 5.17:						
Hazardous substances.						

5.31 Testing and Commissioning (all equipment testing, earthing system, system integration)

Impact management outcome: No environmental degradation occurs as a result of Testing and Commissioning.								
Impact Management Actions Implementation Monitoring								
	Responsible	Method of	Timeframe for	Responsible	Frequency	Evidence of		
	person	implementation	implementation	person		compliance		
- Residual solid waste must be recycled or disposed of in								
accordance with Section 5.8: Solid waste and hazardous								
management.								

5.32 Socio-economic

Impact management outcome: enhanced socio-economic development.								
Impact Management Actions	Implementation Monitoring							
	Responsible	Responsible Method of Timeframe for			Frequency	Evidence of		
	person	implementation	implementation	person		compliance		

- Develop and implement communication strategies to			
facilitate public participation;			
- 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			
 Create work and training opportunities for local stakeholders; 			
and			
 Where feasible, no workers, with the exception of security 			
personnel, must be permitted to stay over-night on the site.			
This would reduce the risk to local farmers.			

5.33 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	Implementati	on	Monitoring				
	Responsible	Method of	Timeframe for	Responsible	Frequency	Evidence of	
	person	implementation	implementation	person		compliance	
- Bunds must be emptied (where applicable) and need to be							
undertaken in accordance with the impact management							
actions included in sections 5.17: Hazardous substances and							
5.18: Workshop, equipment maintenance and storage;							
 Hazardous storage areas must be well ventilated; 							
- Fire extinguishers must be serviced and accessible. Service							
records to be filed and audited at last service;							
- Emergency and contact details displayed must be							
displayed;							
- Security personnel must be briefed and have the facilities to							
contact or be contacted by relevant management and							

 emergency personnel; Night hazards such as reflectors, lighting, traffic signage etc. must have been checked; Fire hazards identified and the local authority must have been notified of any potential threats e.g. large brush stockpiles, fuels etc.; Structures vulnerable to high winds must be secured; Wind and dust mitigation must be implemented; 			
 Wind and dust mitigation must be implemented; Cement and materials stores must have been secured; 			
 Toilets must have been emptied and secured; 			
 Refuse bins must have been emptied and secured; 			
 Drip trays must have been emptied and secured. 			

5.34 Dismantling of old equipment

Impact management outcome: Impact to the environment to be minimised during the dismantling, storage and disposal of old equipment commissioning.

Impact Management Actions	Implementati	on		Monitoring		
	Responsible	Method of	Timeframe for	Responsible	Frequency	Evidence of
	person	implementation	implementation	person		compliance
- All old equipment removed during the project must be						
stored in such a way as to prevent pollution of the environment;						
 Oil containing equipment must be stored to prevent leaking or be stored on drip trays; 						
 All scrap steel must be stacked neatly and any disused and broken insulators must be stored in containers; 						
- Once material has been scrapped and the contract has						
been placed for removal, the disposal Contractor must ensure that any equipment containing pollution causing substances is dismantled and transported in such a way as						

to prevent spillage and pollution of the environment;			
- The Contractor must also be equipped to contain and clean			
up any pollution causing spills; and			
- Disposal of unusable material must be at a licensed waste			
disposal site.			

5.35 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	Implementati	on	Monitoring			
	Responsible	Method of	Timeframe for	Responsible	Frequency	Evidence of
	person	implementation	implementation	person		compliance
- All areas disturbed by construction activities must be subject						
to landscaping and rehabilitation; All spoil and waste must						
be disposed of to a registered waste site;						
- 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;						
- 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;						
- 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;						
 Rehabilitation of access roads outside of farmland; 						
- Indigenous species must be used for with species						
and/grasses to where it compliments or approximates the						

			1	
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; 				
- The rehabilitation must be timed so that rehabilitation can				
take place at the optimal time for vegetation establishment;				
- Where impacted through construction related activity, all				
sloped areas must be stabilised to ensure proper				
rehabilitation is effected and erosion is controlled;				
 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;				
- Spoil can be used for backfilling or landscaping as long as it				
is covered by a minimum of 150 mm of topsoil.				
- 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				
			1	

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:

Brandvalley Wind Farm (RF) (Pty) Ltd

7.1.2 Details and expertise of the EAP:

Refer to Section 2.2 of the EMPr

7.1.3 Project name:

Proposed Brandvalley132kV Overhead Powerline

7.1.4 Description of the project:

Refer to Section 3 of the EMPr

7.1.5 Project location:

Refer to Section 3.2 of the EMPr

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. threatened plant species, archaeological site, etc. Sensitivity maps shall identify features both within the planned working area and any known sensitive features within 50 m from the development footprint.

Refer to Section 3.2 of the EMPr

7.3 Sub-section 3: Declaration

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

To be signed in the Final Report

Signature Proponent/applicant/ holder of EA

Date:

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

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

PART C

8 SITE SPECIFIC ENVIRONMENTAL ATTRIBUTES

If any specific environmental sensitivities/attributes are present on the site which require more specific impact management outcomes and actions, not included in the pre-approved generic EMPr template, to manage impacts, those impact management outcomes and impact management 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 preapproved generic EMPr template. This applies only to additional impact management outcomes and impact management actions that are necessary.

If <u>Part C</u> 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, <u>Part C</u> 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.

NOT REQUIRED

No Environmental Sensitivities Identified within the Substation Site Footprint

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.