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









environmental affairs
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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 all associated listed or specified activities necessary for the realization of such infrastructure.

5. Structure of this document

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

Part	Section	Heading	Content
A		Provides general guidance and information and 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 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

Part	Section	Heading	Content
			will comply with the pre-approved generic EMPr 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 impact management 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

Part	Section	Heading	Content
			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 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 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.

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. 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.

Sub-section 3 is the declaration that the applicant (s)/proponent (s) or holder of the EA in the case of a change of ownership must complete which confirms that the applicant/EA holder will comply with the pre-approved 'generic EMPr' template in Section 1 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, 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 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.

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.

Responsible Person(s)	Role and Responsibilities
Developer Site Supervisor (DSS)	Role The DSS reports directly to the DPM, oversees site works, liaises with the contractor(s) and the ECO. The DSS is responsible for the day to day implementation of the EMPr and for ensuring the compliance of all contractors with the conditions and requirements stipulated in the EMPr. Responsibilities - Ensure that all contractors identify a contractor's Environmental Officer (cEO); - 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

Responsible Person(s)	Role and Responsibilities
	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. <u>Responsibilities</u> 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;

Responsible Person(s)	Role and Responsibilities
	- 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 (dEO)	<u>Role</u> 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;

Responsible Person(s)	Role and Responsibilities
	- 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 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. <u>Responsibilities</u> - project delivery and quality control for the development services as per appointment; - employ a suitably qualified person to monitor and report to the Project Developer's appointed person on the daily activities on-site during the construction period; - ensure that safe, environmentally acceptable working methods and practices are implemented and that equipment is properly operated and maintained, to facilitate proper access and enable any operation to be carried out safely; - attend on site meeting(s) prior to the commencement of activities to confirm the procedure and designated activity zones; - ensure that contractors' staff repair, at their own cost, any environmental damage as a result of a contravention of the specifications contained in EMPr, to the satisfaction of the ECO.

Responsible Person(s)	Role and Responsibilities
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, 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 for ensuring 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 complete 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 understand the individual responsibilities in terms of this EMPr.						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
- All staff must receive environmental awareness training prior to commencement of the activities;	ECO / cEO / dEO	Hold environmental awareness training workshops	Pre-construction Construction	ECO dEO	Monthly and as and when required	Attendance registers and training minutes / Notes for the record
- The Contractor must allow for sufficient sessions to train all personnel with no more than 20 personnel attending each course;	Contractor	Scheduling of sufficient sessions through consultation with the ECO /cEO / dEO	Pre-construction Construction	ECO dEO	Monthly and as and when required	Attendance registers and training minutes / Notes for the record
- Refresher environmental awareness training is available as and when required;	cEO / dEO in consultation with the ECO	Hold refresher environmental awareness training workshops	During the construction phase	ECO dEO	Monthly and as and when required	Attendance registers and training minutes / Notes for the record

- All staff are aware of the conditions and controls linked to the EA and within the EMPr and made aware of their individual roles and responsibilities in achieving compliance with the EA and EMPr;	cEO / dEO	Hold training workshops and ensure that the EA and EMPr is readily available	During the construction phase	ECO dEO	Monthly and as and when required	Attendance registers and training minutes / Notes for the record
- The Contractor must erect and maintain information posters at key locations on site, and the posters must include the following information as a minimum: a) Safety notifications; and	Contractor	Develop and place appropriate	Pre-construction Construction	ECO dEO cEO	Monthly	Photographic record
b) No littering.		posters at key locations				
– 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;	cEO / dEO in consultation with the ECO	Develop environmental awareness training material which covers the minimum requirements	Pre-construction Construction	ECO dEO	Prior to the commencement of the environmental awareness training	Environmental awareness training material requirements checklist

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;	ECO / cEO / dEO	Filling system including all proof of training (i.e., attendance register and training minutes / Notes for the record)	During the construction phase	ECO dEO	Monthly	Completed and up to date filling system with proof of training
- Educate workers on the dangers of open and/or unattended fires;	cEO / dEO in consultation with the ECO	Develop environmental awareness training material which covers fire.	Pre-construction Construction	ECO dEO	Prior to the commencement of the environmental	Environmental awareness training material requirements checklist

5.2 Site Establishment development

Impact management outcome: Impacts on the environment are minimized during site establishment and the development footprint are kept to demarcated development area.						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
- A method statement must be provided by the contractor prior to any onsite activity that includes the layout of the construction camp in the form of a plan showing the location of key infrastructure and services - (where applicable), including but not limited to offices, overnight vehicle parking areas, stores, the workshop, stockpile and lay down areas, hazardous materials storage areas (including fuels), the batching plant (if one is located at the construction camp), designated access routes, equipment cleaning areas and the placement of staff accommodation, cooking and ablution facilities, waste and wastewater management;	Contractor	Development of an appropriate method statement	Pre-construction	ECO dEO	Once, prior to construction	Availability of the method statement which complies with the minimum requirements listed
- Location of construction camps must be within approved area to ensure that the site does not impact on sensitive areas identified in the environmental assessment or site walk through;	DPM	Place construction camps outside of sensitive areas identified in the Basic	Pre-construction Construction	ECO dEO	Once, prior to construction	Availability of a layout and sensitivity map indicating avoidance of sensitive areas

		Assessment Report				
- Sites must be located where possible on previously disturbed areas;	DPM	Place site outside of sensitive areas and within previously disturbed areas identified in the BA Report	Pre-construction	ECO dEO	Once, prior to construction	Availability of a layout and sensitivity map indicating avoidance of sensitive areas and placement within disturbed areas
- The camp must be fenced in accordance with Section 5.5: Fencing and gate installation; and	DPM	Design and implementation of fencing as per the requirements of Section 5.5 of this EMPr	Pre-construction & Construction	ECO dEO	Once, prior to construction and once during the construction of the fencing	The camp is fenced accordance with Section 5.5 of this EMPr
- The use of existing accommodation for contractor staff, where possible, is encouraged.	Not applicable – the development of new accommodation is not proposed.					

5.3 Access restricted areas

Impact management outcome: Access to restricted areas prevented.						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
- Identification of access restricted areas is to be informed by the environmental assessment, site walk through, and any additional areas identified during development;	dEO / cEO in consultation with the ECO	Spatially demarcate access restricted areas informed by the BA Report	Pre-construction	ECO	Once, prior to construction	Access restricted areas are identified and provided in a spatial format
- Erect, demarcate and maintain a temporary barrier with clear signage around the perimeter of any access restricted area, colour coding could be used if appropriate; and	dEO / cEO in consultation with the ECO	Erect appropriate temporary barriers around access restricted areas	At the commencement and for the duration of the construction phase	ECO	Monthly	Access restricted areas are closed-off through temporary barriers and barriers are maintained to a sufficient standard

- Unauthorised access and development related activity inside access restricted areas is prohibited.	Contractor / dEO / cEO	Erect appropriate temporary barriers around access restricted areas and provide clear signage of restricted status	During the construction phase	ECO	Monthly, and as and when required	Photographic evidence and notes of compliance that no unauthorised access or Activities have taken place within the access restricted areas

5.4 Access roads

Impact management outcome: Minimise impact to the environment through the planned and restricted movement of vehicles on site.						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
- An access agreement must be formalized and signed by the DPM, Contractor and landowner before commencing with the activities;	DPM Contractor	Develop access agreements with the affected landowners. Ensure that agreements are approved and signed	Pre-construction	dEO ECO	Once, prior to construction	Availability of approved and signed negotiations

- 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	During the construction phase	cEO / ECO	Weekly	Photographic record of the pre-construction condition and degradation of roads, and records of the implementation and effectiveness of maintenance activities
- All contractors must be made aware of all these access routes.	dEO / cEO	Develop a map illustrating all access routes associated with the project and present and provide the map to all contractors	Pre-construction Construction	ECO	Once, prior to construction	Access routes Map must be available

- Any access route deviation from that in the written agreement must be closed and re-vegetated immediately, at the contractor's expense	Contractor	All access routes developed that are not in-line with the access route agreements must be closed and re-habilitated to the pre-disturbance state	Construction and Rehabilitation	ECO	Bi-weekly (every two weeks)	Photographic record of the closure of access roads and re vegetation
- Maximum use of both existing servitudes and existing roads must be made to minimise further disturbance through the development of new roads;	Contractor (and Eskom maintenance staff where relevant to operation)	Existing access routes to be used must be specified and the development of new roads must be avoided as far as possible	Construction and operation	cEO Operation and maintenance team	Weekly	Implementation of the approved layout
- In circumstances where private roads must be used, the condition of the said roads must be recorded in accordance with section 4.9: photographic record; prior to use and the condition thereof agreed by the landowner, the DPM, and the contractor;	dEO / cEO	Record the conditions of private roads to be used (prior to use) as per the	During the construction phase	ECO	Prior to the use of private roads	Photographic record and proof of the road conditions agreed upon

		requirements of section 4.9 and agree on the required condition of the roads with the landowner, DPM and contractor				with the relevant parties
- Access roads in flattish areas must follow fence lines and tree belts to avoid fragmentation of vegetated areas or croplands	DPM and Contractor	Design access roads to follow fence lines and avoid vegetated areas	Pre-construction	ECO	Once during the design and once prior to construction	Implementation of the approved layout
- Access roads must only be developed on pre-planned and approved roads.	Contractor	Construction of access roads only on pre- planned and approved access roads	During the construction phase	ECO dEO	Once during the design and weekly during the construction of access roads	Implementation of the approved layout

5.5 Fencing and Gate installation

Impact management outcome: Minimise impact to the environment and ensure safe and controlled access to the site through the erection of fencing and gates where required.						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
- Use existing gates provided to gain access to all parts of the area authorised for development, where possible;	Contractor	Identify and inform all relevant staff of the existing gates to be used	Pre-construction & Construction	dEO	Monthly	Existing gates are utilised on a frequent basis and only limited new access gates are developed
- Existing and new gates to be recorded and documented in accordance with section 4.9: photographic record;	ECO	Existing and new gates will be recorded and documented as per the requirements of section 4.9	During the construction phase	ECO	Once, when the construction of all new gates has been completed	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 (and Eskom maintenance staff where relevant to operation)	Ensure all relevant gates are fitted with locks and are always locked	Construction and Operation	ECO Operation and maintenance team	Bi-weekly (every second week)	All gates are locked and no complaints from landowners are received in

						this regard
- At points where the line crosses an existing 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;	dEO	Install new gates where required with the approval of the affected landowner	During the construction phase	ECO	Once, prior to construction and during the construction phase, as and when required	New gates are installed where required
- 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	During the construction phase	cEO	Once, during the erection of the gates during the construction phase	New gates installed as per the requirement
- Where gates are installed in jackal proof fencing, a suitable reinforced concrete still must be provided beneath the gate;	Contractor	Implement a reinforced concrete sill beneath gates Installed for jackal proofing	During the construction phase	cEO	Once, during the erection of the gates during the construction phase	New gates installed as per the requirement
- Original tension must be maintained in the fence wires;	Contractor	Maintain original tension of fences through required activities	During the construction phase	ECO	Monthly	No tension reduction on fence wires
- All gates installed in electrified fencing must be re- electrified;	Contractor	Electrify gates installed in electrified fencing	During the construction phase	ECO	Once, during the erection of the gates during the construction phase	Gates installed in electrified fencing is

						electrified
- All demarcation fencing and barriers must be maintained in good working order for the duration of the development activities;	Contractor	Undertake maintenance activities on Fences and barriers	During the construction phase	ECO	Monthly	Photographic record of maintained fences and barriers
- Fencing must be erected around the camp, batching plants, hazardous storage areas, and all designated access restricted areas, where applicable;	Contractor	Fence construction camps, batching plants, hazardous storage areas And access restricted areas	During the construction phase	ECO	Once during the erection of fencing	Photography 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.	dEO/ cEO Contractor	Obtain written approval from the relevant landowner where temporary fencing is Required to restrict life-stock movement	During the construction phase	ECO	To be monitored as temporary fencing is required	Written approval to be provided by the dEO
- All fencing must be developed of high-quality material bearing the SABS mark;	Contractor	Make use of high-quality materials approved by SABS	During the construction phase	cEO	To be monitored as fencing is erected during the construction phase	Use of high-quality materials for fencing approved by SABS

- The use of razor wire as fencing must be avoided as far as possible;	Contractor	Razor wire must not be sourced or used for the erection of fencing	During the construction phase	ECO	To be monitored as fencing is erected during the construction phase	Fences erected do not make use of razor wire
- Fenced areas with gate access must remain locked after hours, during weekends and on holidays if staff is away from site. Site security will be required at all times;	DSS and Contractor	Ensure fenced areas are locked as required through the implementation of a formalised process. Appoint a security company	During the construction phase	cEO	Weekly and as and when required	Fences are locked and no complaints from landowners are received. A security company is appointed
- On completion of the development phase all temporary fences are to be removed;	Contractor	Removal of all temporary fences	At the end of the Construction Phase	ECO dEO	Once, following the completion of the construction phase	No temporary fences associated with the project is present following the completion of the construction phase
- The contractor must ensure that all fence uprights are appropriately removed, ensuring that no uprights are cut at ground level but rather removed completely.	Contractor	Appropriate removal of all fence uprights	At the end of the Construction Phase	ECO dEO	Once, following the completion of the construction phase	No fence uprights associated with the project is present

						following the completion of The construction phase

5.6 Water Supply Management

Impact management outcome: Undertake responsible water usage**.**						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
- All abstraction points or bore holes must be registered with the DWS and suitable water meters installed to ensure that the abstracted volumes are measured on a daily basis;	DPM/ Contractor/ dEO /cEO in consultation with the ECO	The onsite borehole must be registered with the DWS prior to commencement of activities	Prior to commencement, during construction and operational phase	ECO / dEO	Registration of borehole once off prior commencement of construction and monitoring of abstraction volumes on a daily basis during construction and during operation.	Proof of registration of borehole from DWS and proof of daily records of abstraction volumes to be attached to monthly audit reports.

– 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	Not applicable - During the construction phase, water will be sourced from municipality system or might be trucked in from an alternate water supply if needed). At this stage, no water is planned to be abstracted from or discharged to any surface water systems. During the operational phase of the proposed distribution line, water requirements are not applicable.					
- All reasonable measures to limit pollution or sedimentation of the downstream watercourse is implemented.						
– Ensure water conservation is being practiced by: a. Minimising water uses during cleaning of equipment; b. Undertaking regular audits of water systems; and c. Including a discussion on water usage and conservation during environmental awareness training. d. The use of grey water is encouraged.	Contractor / dEO / cEO in consultation with the ECO	Implement the required water conservation measures throughout on-site construction processes	During the construction phase	ECO	Monthly, and as and when required	Successful implementation of water conservation

5.7 Storm and waste water management

Impact management outcome: Impacts to the environment caused by 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	During the construction phase	ECO	Weekly	No mismanagement of runoff or contaminated water due to the temporary concrete batching plant
- All spillage of oil onto concrete surfaces must be controlled by the use of an approved absorbent material and the used absorbent material disposed of at an appropriate waste disposal facility;	Contractor and cEO	Obtain approved absorbent material and make use of licensed waste disposal facilities for disposal of oil	During the Construction Phase	ECO	Monthly	Availability of approved absorbent material at the construction site and proof of disposal of oil at licenses disposal facilities
- Natural stormwater runoff not contaminated during the development and clean water can be discharged directly to watercourses and water bodies, subject to the Project Manager's approval and	DPM in consultation with the ECO	Consultation between the DPM and the ECO to Determine if	During the construction phase	ECO	As and when the need arises to discharge natural stormwater runoff and	Proof of consultation between the DPM and ECO and the

support by the ECO;		water can be discharged directly into water bodies (where present). The necessary water quality testing must be undertaken prior to discharge			clean water	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	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	During the construction phase	ECO	As and when the need arises to discharge water	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: Wastes are appropriately stored, handled and safely disposed of at a recognised waste facility**.**						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
- All measures regarding waste management must be undertaken using an integrated waste management approach;	Contractor	Develop and implement a waste management plan	During the construction phase	ECO	Monthly	Implementation of the waste management plan and proof of waste management through proof of responsible disposal
- Sufficient, covered waste collection bins (scavenger and weatherproof) must be provided;	Contractor	Provision of appropriate waste collection bins which are strategically placed throughout the site	During the construction phase	ECO	Weekly	Appropriate waste collection bins are available throughout the site

- A suitably positioned and clearly demarcated waste collection site must be identified and provided;	DPM and Contractor	Identify an appropriate location for the waste collection site which must be clearly demarcated through signage and temporary fencing	Design and Construction Phase	ECO	Once, prior to the commencement t of construction	A waste collection site is appropriately placed and demarcated
- The waste collection site must be maintained in a clean and orderly manner;	Contractor	Regular collection of Waste and maintenance of the area must be undertaken as per the waste requirements for the project during construction	During the Construction Phase	ECO	Weekly	The waste collection site is maintained and clean
- 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	During the Construction Phase	cEO	Weekly	Separate waste bins are available on site and waste generated is separated into the relevant bins

		construction phase				
- Staff must be trained in waste segregation;	cEO / dEO in consultation with the ECO	Include waste segregation as part of the environmental awareness training material.	Pre-construction Construction	ECO	Monthly, and as and when required	Environmental awareness training material requirements checklist
- Bins must be emptied regularly;	Contractor	Bins must be emptied before reaching total capacity and on a regular basis as required for the project	During the construction phase	ECO	Monthly	No mismanagement of bins.
- 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	During the construction phase	ECO	Monthly	Disposal certificates of Disposal at licensed facilities to be provided

		per the waste management plan				
- Hazardous waste must be disposed of at a registered waste disposal site;	Contractor	Disposal of hazardous waste at licensed waste disposal facilities must be undertaken as per the waste management plan	During the construction phase	ECO	Monthly	Disposal certificates of disposal at licensed facilities to be provided
- Certificates of safe disposal for general, hazardous and recycled waste must be maintained.	Contractor	Obtain certificates for safe disposal of waste	During the construction phase	ECO	Monthly	Disposal certificates of disposal at licensed facilities to be provided and filed as part of the filing system

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 contaminated water or organic material resulting from the Contractor's activities;	Contractor	Contractor to undertake activities which can cause spills of pollutants outside of watercourses	During the construction phase	ECO	Weekly	No incidents reported of Spillage of pollutants into watercourses
- In the event of a spill, prompt action must be taken to clear the polluted or affected areas;	Contractor and cEO	Develop a management plan or process for implementation should a spill take place	During the construction phase	ECO	Weekly	Feedback must be provided by the contractor in terms of how the spill was handled and photographic evidence of the feedback must be provided and kept on record

Where possible, no development equipment must traverse any seasonal or permanent wetland	cEO and Contractor	Ensure layout Has been informed by the environmental sensitivities as determined by thebasic assessment and specialist studies	Constructio n Phase	ECO	Once off review that the layout used is the approved one	Confirm no development equipment traverses any Seasonal or permanent wetland as per the authorised layout by reviewing the as- built designs (once-off confirmation).
- No return flow into the estuaries must be allowed and no disturbance of the Estuarine functional Zone should occur;	Not applicable – no estuaries are located within the study area.					
- Development of permanent watercourse or estuary crossing must only be undertaken where no alternative access to tower position is available;	Development of permanent watercourse or estuary crossing must only be undertaken whereno alternative access to tower position is available;	cEO, Contractor	Ensure that permeant crossings (access roads) are provided for access to the grid connection corridor if no alternative crossing is available.	During th e construction phase	cEO	Weekly

- There must not be any impact on the long-term morphological dynamics of watercourses or estuaries	There must not be any impact on the long-term morphological dynamics of watercourses or estuaries;	DPM, cEO	Develop a management plan or process for implementation should a spill take place within a watercourse and ensure continually monitoring	During the construction and operation phase	ECO, dEO	For all phases of the project life cycle (i.e. construction, operation, decommissioning)
- Existing crossing points must be favored over the creation of new crossings (including temporary access)	DPM, cEO	Develop a management plan or process For implementation should a spill take place Within a watercourse and ensure continually monitoring	During the pre-construction and construction phase	ECO, dEO	During the construction Phase of the project.	Existing crossing points utilised as opposed to new ones created and no incidents reported of spillage of pollutants into watercourses
– 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	Contractor	Activities undertaken near watercourses must be in-line with and consider the specified	During the construction phase	ECO	Monthly, and as and when required	No degradation of the watercourses and no incidents of destruction reported

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.		environmental controls				

5.10. Vegetation clearing

Impact management outcome: Vegetation clearing is restricted to the authorised development footprint of the proposed infrastructure.						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
General:						
- Indigenous vegetation which does not interfere with the development must be left undisturbed;	cEO, Contractor (and Eskom maintenance staff where relevant to operation)	Demarcate areas of indigenous vegetation to be avoided before clearance is undertaken	Construction and operation (i.e. for maintenance purposes)	ECO Operation and maintenance team	Weekly, and as and when required	No unnecessary clearance of indigenous vegetation is undertaken
- Protected or endangered species may occur on or near the development site. Special care should be taken not to damage such species;	Contractor	Demarcate areas containing protected or endangered species to be avoided by construction activities	During the Construction Phase	ECO	Weekly, and as and when required	No clearance of protected or endangered species other Then those permitted to be removed

- Search, rescue and replanting of all protected and endangered species likely to be damaged during project development must be identified by the relevant specialist and completed prior to any development or clearing;	Relevant specialist in consultation with the Contractor	Develop and implement a Plant Search and Rescue Plan	Pre-construction & Construction	ECO	Weekly, and as and when required	Implementation of the Plant Search and Rescue Plan and photographic evidence and notes of the implementation of the plan
- Permits for removal must be obtained from the relevant CA prior to the cutting or clearing of the affected species, and they must be filed;	DPM	Undertake the permitting process in order to obtain the relevant permits for the removal of protected species. Permits must be kept on file	Pre-construction	ECO	Once, prior to the commencement of the construction phase and removal of the protected species	Permits on file
- The Environmental Audit Report must confirm that all identified species have been rescued and replanted and that the location of replanting is compliant with conditions of approvals;	ECO	Ensure that the audit report indicates all species rescued and replanted and provides feedback in terms of compliance with the conditions of permits for replanting	During the Construction Phase and following the completion of the Construction Phase	ECO	Once off or as and when required	ECO confirmed rescued and replanted programme implemented correctly.

- Trees felled due to construction must be documented and form part of the Environmental Audit Report;	ECO	Ensure that the audit report documents the details of trees felled	During the Construction Phase and following the completion of the Construction Phase	CA permits on file	Trees felled due to construction must be documented and form part of the Environmental Audit Report;	ECO
- Rivers and watercourses must be kept clear of felled trees, vegetation cuttings and debris;	Contractor	Felled trees, vegetation cuttings and debris must be disposed of at a licensed waste disposal facility	During the Construction Phase	ECO	Monthly	No felled trees, vegetation cuttings and debris are dumped in inappropriate locations and disposal certificates are available as proof of responsible disposal
- Only a registered pest control operator may apply herbicides on a commercial basis and commercial application must be carried out under the supervision of a registered pest control operator, supervision of a registered pest control operator or is appropriately trained;	DPM and Contractor (and Eskom maintenance staff where relevant to operation)	A suitably qualified pest control operator must be appointed	Construction and Operation	ECO	As and when the use of herbicides is required	Only registered pest control operators must be appointed and proof of their registration must be provided

- A daily register must be kept of all relevant details of herbicide usage;	Contractor	Develop a daily register for the documentation of the details of herbicide usage	During the construction phase	ECO	Monthly	Daily register provided by the pest control operator
- 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.	Contractor in consultation with the cEO	Spatially demarcate protected species and sensitive vegetation and implement appropriate fencing where required as per section 5.3	During the construction phase	ECO	Once, during the undertaking of the demarcation of the areas and the erection of the fencing	Demarcation and fencing are undertaken in-line with the requirements of section 5.3
Alien invasive vegetation must be removed and disposed of at a licensed waste management facility.	Contractor	Remove all alien invasive vegetation and dispose of the removed vegetation at a licensed waste management facility	During the construction phase	ECO	Monthly, and as and when required	Disposal certificates of disposal at licensed facilities to be provided and filed as part of the filing system

5.10 Protection of fauna

Impact management outcome: Disturbance to fauna is minimised.						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
- No interference with livestock must occur without the landowner's written consent and with the landowner or a person representing the landowner being present;	dEO / cEO Contractor	Develop a procedure for Dealing with livestock within the affected properties	Pre-construction and during the construction phase	ECO	Once, prior to the commencement of construction and as and when required during the construction phase	Written consent provided by the landowner and proof of representation of the landowner during interference
- 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	Once, prior to the commencement t of construction and as and when required	The planning and development programme which includes the consideration of breeding sites for wild bird species

- Breeding sites must be kept intact and disturbance to breeding birds must be avoided. Special care must be taken where nestlings or fledglings are present;	dEO / cEO in consultation with the Contractor (and Eskom maintenance staff where relevant to operation)	Avoid breeding sites and ensure that special care is taken in the presence of nestlings and fledglings	During the Construction Phase Operation Phase	ECO Operation and maintenance team	Weekly, and as and when required during the construction. Monthly, and as and when required during operation	Photographic record of intact breeding sites
- Special recommendations of the avian specialist must be adhered to at all times to prevent unnecessary disturbance of birds;	dEO / cEO in consultation with the Contractor (and Eskom maintenance staff where relevant to operation)	All mitigation measures recommended by the avifauna specialist must be implemented	During the Construction Phase Operation Phase	ECO Operation and maintenance team	Weekly during construction and monthly during operation	Photographic record of compliance and successful implementation of the recommended measures
- 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	During the Construction Phase	ECO	Monthly, and as and when required	No instances of poaching are reported

		areas must be demarcated as Access Restricted Areas				
- No deliberate or intentional killing of fauna is allowed;	dEO / cEO in consultation with the Contractor	All site staff must be informed of this requirement during the Environmental Awareness Training and the consequences of not adhering to the requirement. These areas must be demarcated as Access Restricted Areas	During the Construction Phase	ECO	Monthly, and as and when required	No instances of deliberate or intentional killing are reported
- In areas where snakes are abundant, snake deterrents are to be deployed on the pylons to prevent snakes climbing up, being electrocuted and causing power outages; and	dEO / cEO in consultation with the Contractor (and Eskom maintenance staff where	Implement and maintain snake deterrents in areas where snakes are abundant	During the Construction Phase Operation Phase	ECO Operation and maintenance team	Once, during the construction and as and when required. Monthly	Photographic record of the implementation and maintenance of snake deterrents

	relevant to operation)				during operation	
- No Threatened or Protected species (ToPs) and/or protected fauna as listed according NEMBA (Act No. 10 of 2004) and relevant provincial ordinances may be removed and/or relocated without appropriate authorisations/permits.	DPM in consultation with the dEO	Undertake a permitting process to obtain the required permits	Pre-construction	ECO	Once, prior to the commencement t of construction and as and when required	Permits for removal and/relocation must be kept on file and be readily available

5.11 Protection of heritage resources

Impact management outcome: Impact to heritage resources is minimised.						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
- Identify, demarcate and prevent impact to all known sensitive heritage features on site in accordance with the No-Go procedure in Section 5.3: Access restricted areas;	DPM and a suitably qualified specialist dEO / cEO in consultation with the Contractor and ECO	Undertake a Heritage Walk- through Survey Spatially identify and demarcate areas of heritage significance as per the Heritage Walk-through Report and as per the requirements of section 5.3	Pre-construction	ECO	Once, prior to the commencement of construction	Proof of Avoidance of sensitive heritage features through details of avoidance and photographic records

- Carry out general monitoring of excavations for potential fossils, artefacts and material of heritage importance;	Suitably qualified specialist in consultation with the ECO	Appoint a suitably qualified specialist to carry out the monitoring of excavations for fossils, artefacts and important heritage material	During the Construction Phase	ECO	During the undertaking of excavations of fossils, artefacts and heritage material	Proof of appointment of a suitably qualified specialist and photographic record of required monitoring by the specialist
- All work must cease immediately, if any human remains and/or other archaeological, 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	During the Construction Phase	ECO	Weekly, during the construction phase and as and when required	Proof of work ceased and the required procedures followed in cases where material is discovered.

5.12 Safety of the public

Impact management outcome: All precautions are taken to minimise the risk of injury, harm or complaints.						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
- Identify fire hazards, demarcate and restrict public access to these areas as well as notify the local authority of any potential threats e.g., large brush stockpiles, fuels etc.;	cEO in consultation with the Contractor	Develop an Emergency Preparedness, Response and Fire Management Plan specific to the project	Pre-construction Construction	ECO	Once, prior to the commencement t t of construction and weekly during the construction phase	Compliance with the Emergency Preparedness, Response and Fire Management Plan
- All unattended open excavations must be adequately fenced or demarcated;	Contractor	Ensure that all excavations undertaken is fenced and demarcated within a reasonable timeframe and in instances where excavations	During the Construction Phase	ECO	Weekly	Excavations are fenced where required and photographic proof can be provided

		will be open for long-periods of time				
- Adequate protective measures must be implemented to prevent unauthorised access to and climbing of partly constructed infrastructure and protective scaffolding;	Contractor	All staff must be easily identifiable and the climbing of infrastructure and scaffolding must be undertaken by authorised personnel as managed by the Contractor	During the construction phase	ECO	Monthly, and as and when required	No incidents of unauthorised climbing are reported
- Ensure structures vulnerable to high winds are secured;	Contractor	Ensure that sufficient stabilisation measures are implemented to secure structures vulnerable to high winds	During the construction phase	ECO	Weekly, and as and when required	No incidents of unstable structures due to high winds are reported
- Maintain an incidents and complaints register in which all incidents or complaints involving the public are logged.	cEO	Compile and regularly update as incidents and complaints are submitted	During the construction phase	ECO	Monthly, and as and when required	The incidents and complaints register are complete and provides all the required details

		from the public and indicate the actions taken to resolve the complaint				

☐ Maintain an incidents and complaints register in which all incidents or complaints involving the public are logged.						

5.13 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 which avoid environmental sensitivities	During the Construction Phase	ECO	Weekly	Mobile toilets are installed and avoid environmental sensitivities
- The use of ablution facilities and or mobile toilets must be used at all times and no indiscriminate use of the veld for the purposes of ablutions must be permitted under any circumstances;	Contractor in consultation with the cEO	All site staff must be informed of this requirement during the Environmental Awareness Training and	Pre-construction & Construction	ECO	Monthly, and as and when required	No evidence of non-compliance identified

		the consequences of 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	The installation of the toilets by the Contractor must be as per the listed requirements	During the Construction Phase	ECO	Weekly	No evidence of non-compliance identified

A copy of the waste disposal certificates must be maintained.	Contractor	Certificates obtained from the licensed waste disposal facility with the emptying of the	During the Construction Phase	ECO	Monthly, and as and when required	Certificates for waste disposal from the licensed waste disposal facility

5.14 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 must be used, when required	During the Construction Phase	ECO	As and when pest control is required for the project	Contractor to provide proof of pest control Used being environmentally-friendly
- Ensure that the workforce is sensitised to the effects of sexually transmitted diseases, especially HIV/ AIDS;	cEO / Contractor in consultation with the ECO	The effects of sexually transmitted diseases and HIV/ AIDS must be covered in the Environmental Awareness Training	Pre-construction & Construction	ECO	Once, prior to the commencement of construction and monthly during construction	Environmental awareness training material requirements checklist

- The Contractor must ensure that information posters on HIV/ AIDS are displayed in the Contractor Camp area;	Contractor	Develop and place information posters on HIV/ AIDS	During the Construction Phase	ECO	Weekly	Photographic evidence of poster placement
- Information and education relating to sexually transmitted diseases to be made available to both construction workers and local community, where applicable;	cEO / Contractor in consultation with the ECO	Information and education of sexually transmitted diseases must be covered in the Environmental Awareness Training.	Pre-construction & Construction	ECO	Monthly	Environmental awareness training material requirements checklist
- Free condoms must be made available to all staff on site at central points;	Contractor	Placement of free condoms in mobile toilets and at the construction camps	During the Construction Phase	ECO	Monthly	Proof of Placement of free condoms By the contractor to be provided
- Medical support must be made available;	dEO / cEO in consultation Contractor (and Eskom maintenance staff where relevant to operation)	Ensure that designated personnel with first aid training are available on site and that	Construction and Operations	ECO	Monthly	Check the availability of first aid trained personnel and medical kits (Including if these are complete in Terms of

		first aid kits to provide medical support is readily available				supplies)
- Provide access to Voluntary HIV Testing 69 and Counselling Services.	Contractor	Compile a HIV testing schedule and provide counselling	During the Construction Phase	ECO	Quarterly, and as and when required	Voluntary testing schedules and proof of counselling

5.15 Emergency procedures

Impact management outcome: Emergency procedures are in place to enable a rapid and effective response to all types of environmental emergencies.						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
- Compile an Emergency Response Action Plan (ERAP) prior to the commencement of the proposed project;	Contractor	Develop an Emergency Preparedness, Response and Fire Management Plan specific to the project.	Pre-construction	ECO	Once, prior to the commencement of construction	Emergency Preparedness, Response and Fire Management Plan compiled
- The Emergency Plan must deal with accidents, potential spillages and fires in line with relevant legislation;	Contractor	Develop an Emergency Preparedness, Response and Fire Management Plan specific to the project which covers accidents	Pre-construction	ECO	Once, prior to the commencement of construction	Emergency Preparedness, Response and Fire Management Plan includes required specifications

		, potential spillages and fires				
- All staff must be made aware of emergency procedures as part of environmental awareness training;	cEO / dEO in consultation with the ECO	Develop environmental awareness training material which covers the relevant emergency procedures	Pre-construction	ECO	Prior to the commencement of the environmental awareness training	Environmental awareness training material requirements checklist
– In the event of emergency necessary mitigation measures to contain the spill or leak must be implemented (see Hazardous Substances section 5.17). – In the event of a significant spill or leak of hazardous substances (petrol and diesel) during the construction or operational phase, such incident(s) must be reported to all relevant authorities, including the Directorate: Pollution and Chemicals Management, in accordance with section 30(5) of the NEMA, 1998 pertaining to the control of incidents.	Contractor (andEskom maintenance staff where relevant to operation)	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	As and when a spill or leak occurs	The mitigation measures included under Section5.17 Have been adhered to

5.16 Hazardous substances

Impact management outcome: Safe storage, handling, use and disposal of hazardous substances.						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
- The use and storage of hazardous substances to be minimised and non-hazardous and non-toxic alternatives substituted where possible;	cEO in consultation with the Contractor	Develop a strategy of how hazardous substances can be and should be minimised	Pre-construction & Construction	ECO	Once, prior to the commencement of construction and monthly duringthe Construction phase	Contractor to provide evidence of substances used for proof of compliance
- All hazardous substances must be stored in suitable containers as defined in the Method Statement;	Contractor	Develop a Method Statement for the storage of hazardous substances in suitable containers	Pre-construction & Construction	ECO	Once, prior to the commencement of construction and monthly duringThe construction phase	Photographic proof that hazardous substance are s stored in suitable Containers as Per the requirements of the relevant Method Statements

- Containers must be clearly marked to indicate contents, quantities and safety requirements;	Contractor	Where hazardous waste is stored, these must be clearly marke d indicating the required details of the contents	During the Construction Phase	ECO	Monthly	Photographic proof that containers are marked as per the requirements
- All storage areas must be bunded. The bunded area must be of sufficient capacity to contain a spill / leak from the stored containers;	Contractor	Ensure that storage areas are sufficiently bunded which are of sufficient capacity to contain a spill / leakfrom the stored containers	During the Construction Phase	ECO	Monthly during the Construction Phase	Photographic proof that storage areas are bunded and proof that the bund areas are of sufficient capacity to contain a spill / leak from the stored containers
- Bunded areas to be suitably lined with a SABS approved liner;	Contractor	Ensure that bunded storage areas ar e suitably lined	During the Constructio n Phase	ECO	Once, during the Construction Phase	Photographic proof that bunded storage areas are suitably lined
- An Alphabetical Hazardous Chemical Substance (HCS) control sheet must be drawn up and kept up to date on a continuous basis;	cEO / Contractor	Compile and update an Alphabetical Hazardous Chemical Substance (HCS) control	During the Construction Phase	ECO	Monthly, and as and when required	Complete and up to date Control sheet provided by the Contractor

		sheet specific to the project				
- All hazardous chemicals that will be used on site must have Material Safety Data Sheets (MSDS);	cEO / Contractor	Keep a record of all hazardous chemicals and the respective MSDS	During the Construction Phase	ECO	Monthly, and as and when required	Record of hazardous chemicals and the respective MSDS
- All employees working with HCS must be trained in the safe use of the substance and according to the safety data sheet;	cEO / Contractor	Provide training for personnel working with HCS	Pre-construction	ECO	Once, prior to the commencement of construction and as and when required	Record of training provided to personnel working with HCS

- Employees handling hazardous substances / materials must be aware of the potential impacts and follow appropriate safety measures. Appropriate personal protective equipment must be made available;	cEO / Contractor	Develop environmental awareness training material which covers the relevant impacts and safety measures. Provide appropriate training and personal protective equipment for the relevant personnel handling Hazardous substances and materials	Pre-construction & Construction	ECO	Prior to the commencement of the environmental awareness training and monthly during the construction phase for personal protective equipment	Environmental awareness training material requirements checklist and all relevant personnel have undergone appropriate training and have access to personal protective equipment
- The Contractor must ensure that diesel and other liquid fuel, oil and hydraulic fluid is stored in appropriate storage tanks or in bowsers;	Contractor	Appropriate storage facilities must be constructed or obtained for the storing of diesel, other liquid fuel, oil	During the Construction Phase	ECO	Monthly, and as and when required	Storage tanks for the project are appropriate and no incidents are reported in this regard

		and hydraulic fluid				
– 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); – Bowsers must have a lock on any permanent tap or valve fitted, and this must be locked when not in use; – Where not possible to use portable bunding, make use of drip trays and uPVC lining that has been set up in such a way as to prevent runoff. – Make sure that any container that is used for transporting fuel is fit for purpose, has a sealed lid, does not leak, and is properly labelled.	Contractor	Appropriate storage facilities must be Constructed or obtained for tanks as per the requirements listed	During the Construction Phase	ECO	Monthly, and as and when required	Storage areas for the tanks/ bowsers for the project are appropriate and no incidents are reported in this regard
- The floor of the bund must be sloped, draining to an oil separator;	Contractor	Appropriate storage facilities must be Constructed as per the requirements listed	During the Construction Phase	ECO	Once, during construction	Bunded storage areas are constructed according to the requirements

- Provision must be made for refueling at the storage area by protecting the soil with an impermeable groundcover. Where dispensing equipment is used, a drip tray must be used to ensure small spills are contained;	Contractor	Appropriately constructed refueling facility must be developed as Per the requirements. Drip trays must be provided for use	During the Construction Phase	ECO cEO	Monthly Weekly	Soils at the refueling facility are protected as required and drip trays are provided and used
- All empty externally dirty drums must be stored on a drip tray or within a bunded area;	Contractor	Ensure that empty dirty drums are stored appropriately as per the requirements	During the Construction Phase	ECO cEO	Monthly Weekly	Drip trays or bunded areas are used for the storage of dirty drums
- No unauthorised access into the hazardous substance's storage areas must be permitted;	Contractor	Ensure through the implementation of procedures that no unauthorised access is undertaken	During the Construction Phase	ECO	Monthly	Proof of the implementation of the relevant procedure must be provided by the contractor

		into the storage areas				
- No smoking must be allowed within the vicinity of the hazardous storage areas;	Contractor	Inform all employees of the requirement and develop and place relevant signage in the relevant areas	During the Construction Phase	ECO cEO	Monthly Weekly	Photographic record of the signage placed must be provided
- Adequate fire-fighting equipment must be made available at all hazardous storage areas;	Contractor	Hazardous storage areas must be fitted with adequate fire fighting equipment	During the Construction Phase	ECO	Monthly	Adequate fire-fighting equipment is available and has been serviced
- Where refuelling away from the dedicated refuelling station is required, a mobile refuelling unit must be used. Appropriate ground protection such as drip trays must be used;	Contractor	Provide a mobile refueling unit as well as suitable ground protection, where required	During the Construction Phase	ECO	Monthly, and as and when required	A mobile Refueling unit and suitable ground protection must be available for use
- An appropriately sized spill kit kept onsite relevant to the scale of the activity/s involving the use of hazardous substance must be available at all times;	Contractor	Provide an appropriate spill kit for the project for the use of	During the Construction Phase	ECO	Monthly, and as and when required	Appropriate spill kits are available for use

		hazardous substances				
- The responsible operator must have the required training to make use of the spill kit in emergency situations;	cEO and Contractor	Provide training on the use of spill kits to the relevant employees	Pre-construction	ECO	Once, prior to the commencement of construction	Proof of training to be provided by the contractor
- An appropriate number of spill kits must be available and must be located in all areas where activities are being undertaken;	cEO and Contractor	Provide an appropriate number of spill kits in relevant areas	During the Construction Phase	ECO	Monthly	Proof of appropriate number of spill kits in appropriate areas to be provided by the contractor
– In the event of a spill, contaminated soil must be collected in containers and stored in a central location and disposed of according to the National Environmental Management: Waste Act 59 of 2008. Refer to Section 5.7 for procedures concerning storm and waste water management and 5.8 for solid and hazardous waste management. – In the event of a significant spill or leak of hazardous substances (petrol and diesel) during the construction or operational phase, such incident(s) must be reported to all relevant authorities, including the Directorate: Pollution and Chemicals Management, in accordance with section 30(5) of the NEMA, 1998 pertaining to the control of incidents.	cEO and Contractor	Storage and Disposal of contaminated soil must be in accordance with the National Environmental Management: Waste Act and sections 5.7 and 5.8 of this EMPr	During the Construction Phase	ECO	Monthly, and as and when required	Proof of storage and disposal in terms of the National Environmental Management: Waste Act must be provided. Certificates of Disposal at licensed waste disposal facilities must be provided

5.17 Workshop, equipment maintenance and storage

Impact management outcome: Soil, surface water and groundwater contamination is minimised.						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
- Where possible and practical all maintenance of vehicles and equipment must take place in the workshop area;	Contractor	Demarcate specific areas For the maintenance of Vehicles and equipment	During th e Construction Phase	ECO	Monthly	A dedicated area for the maintenance of vehicles and machinery is used.
- During servicing of vehicles or equipment, especially where emergency repairs are affected outside the workshop area, a suitable drip tray must be used to	Contractor	Ensure that a Drip tray is available for an	During the Constructio n Phase	ECO	Monthly	Contractor to provide evidence of drip
prevent spills onto the soil. The relevant local authority must be made aware of a fire as soon as it starts;		emergency repairs required				Tray use for emergency 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	During the Construction Phase	ECO	Monthly	Contractor to provide details of equipment repaired or removed from site

- Workshop areas must be monitored for oil and fuel spills;	cEO	Undertake regular inspections of the workshop areas for oil and fuel spills and keep an updated register of inspection on site	During the Construction Phase	ECO	Monthly	Register of inspection
- Appropriately sized spill kit kept onsite relevant to the scale of the activity taking place must be available;	Contractor	Provide an appropriate spill kit for the project	During the Construction Phase	ECO	Monthly, and as and when required	Appropriate spill kits are available for use
- The workshop area must have a bunded concrete slab that is sloped to facilitate runoff into a collection sump or suitable oil / water separator where maintenance work on vehicles and equipment can be performed;	Contractor	Ensure that the workshop area is sufficiently bunded in accordance with the required specification	During the Construction Phase	ECO	Once, during the Construction Phase and as and when required	Workshop area is bunded in accordance with the required specification
- 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	During the Construction Phase	ECO	Monthly	Workshop drainage is managed in accordance

5.18 Batching plants

Impact management outcome: Minimise spillages and contamination of soil, surface water and groundwater**.**						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
- Concrete mixing must be carried out on an impermeable surface;	Contractor	Provide impermeable surface for the mixing of concrete	During the Construction Phase	ECO	Weekly	No concrete mixing is undertaken on open ground
- Batching plants areas must be fitted with a containment facility for the collection of cement laden water.	Contractor	Provide containment facility for the collection of cement laden water	During the Construction Phase	ECO	Weekly	No cement laden water is released into the environment
- Dirty water from the batching plant must be contained to prevent soil and groundwater contamination	Contractor	Provide containment facility for the collection of cement laden water	During the Construction Phase	ECO	Weekly	No cement laden water is released into the environment

		(dirty water)				
- Bagged cement must be stored in an appropriate facility and at least 10 m away from any water courses, gullies and drains;	Contractor	Demarcate and provide a storage area for bagged cement in-line with the listed requirements	During the Construction Phase	ECO	Weekly	Photographic proof of bagged cement stored within the demarcated area
- A washout facility must be provided for washing of concrete associated equipment. Water used for washing must be restricted;	Contractor	Provide a washout facility for the washing of associated equipment. Enforce limitations on water use for washing of equipment	During the Construction Phase	ECO	Weekly	No cement laden water is released into the environment. Only minimal water is used for washing
- Hardened concrete from the washout facility or concrete mixer can either be reused or disposed of at an appropriate licensed disposal facility;	Contractor	Make use of hardened concrete where possible or dispose of concrete in a suitable	During the Construction Phase	ECO	Monthly	Certificates of Disposal of concrete at licensed waste disposal facility

		manner				
-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 appropriate area on site	During the Construction Phase	ECO	Monthly	Proof of binding of empty cement bags and storage in an appropriate area on site to be provided by the Contractor
- Sand and aggregates containing cement must be kept damp to prevent the generation of dust (Refer to Section 5.20: Dust emissions)	Contractor	Ensure that sand and aggregates are kept damp or otherwise protected from dust generation	During the Construction Phase	ECO	Monthly	Proof of damping (or alternative dust suppression) of sand and aggregates must be provided by the Contractor
- Any excess sand, stone and cement must be removed or reused from site on completion of the construction period and disposed at a registered disposal facility;	Contractor	Ensure that all excess sand, Stone and cement are removed or reused	At the completion of the Construction Phase	ECO	Once, with the completion of construction	Certificates for the disposal of sand, stone and cement at licensed waste disposal facilities 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.	Contractor	Erect temporary fencing around batching plants as per the requirements listed in section 5.5	During the Construction Phase	ECO	Weekly	Temporary fencing is undertaken in accordance with section 5.5

5.19 Dust emissions

Impact management outcome: Dust prevention measures are applied to minimise the generation of dust.						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
- Take all reasonable measures to minimise the generation of dust as a result of project development activities to the satisfaction of the ECO;	Contractor	Apply appropriate dust suppressant	During the Construction Phase	ECO	Weekly	Contractor to provide proof of use of appropriate dust suppressants
- Removal of vegetation must be avoided until such time as soil stripping is required and similarly exposed surfaces must be re- vegetated or stabilised as soon as is practically possible;	Contractor	Proper planning for vegetation removal must be undertaken as well as for the associated rehabilitation	During the Construction Phase and Rehabilitation	ECO	Weekly	Plan for implementation must be provided by the Contractor

- Excavation, handling and transport of erodible materials must be avoided under high wind conditions or when a visible dust plume is present;	Contractor	Ensure that specific limitations are placed on the transport and handling of erodible materials during high wind conditions or when a visible dust plume is present	During the Construction Phase	ECO	Bi-weekly (every second week)	No complaints submitted in this regard
- During high wind conditions, the ECO must evaluate the situation and make recommendations as to whether dust-damping measures are adequate, or whether working will cease altogether until the wind speed drops to an acceptable level;	ECO	ECO to provide adequate recommendations	During the Construction Phase	ECO	When Applicable	Recommendation papers on available on site
- Where possible, soil stockpiles must be located in sheltered areas where they are not exposed to the erosive effects of the wind;	Contractor	Place soil Stockpiles in Areas less affected by wind	During the Construction Phase	ECO	Bi-weekly (every second week)	Soil stockpiles are not exposed to wind and have not been eroded
- 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	During the Construction Phase	ECO	Weekly, until erosion is no longer a problem	Recommendations made by the ECO have been implemented by the Contractor

		the ECO				
- Vehicle speeds must not exceed 40 km/h along dust roads or 20 km/h when traversing unconsolidated and non-vegetated areas;	cEO / dEO / contractor (and Eskom maintenance staff where relevant to operation)	Inform all drivers of speed limits and place appropriate signage along the relevant roads	During the Construction Phase Operation Phase	ECO Operation and Maintenance team	Monthly	No complaints from community members are submitted
- 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 stabilization is undertaken as per the listed requirements	During the Construction Phase	ECO	Monthly	Photographic record of all straw stabilisation undertaken
- For significant areas of excavation or exposed ground, dust suppression measures must be used to minimise the spread of dust.	Contractor	Appropriate dust suppressant measures are implemented	During the Construction Phase	ECO	Weekly	Photographic record of measures being implemented and the results thereof

5.20 Blasting

Impact management outcome: Impact to the environment is minimized 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	cEO / dEO / contractor	Ensure the contractor is suitably licensed with all necessary credentials and certifications	Pre-Construction Phase	ECO/EO	Once off, before blasting activities commence.	ECO/EO to check all valid credentials and certifications on hand.
- Notification of surrounding landowners, emergency services site personnel of blasting activity 24 hours prior to such activity taking place on Site.	cEO / dEO / contractor	Ensure all responsible personnel have been notified of blasting Activities 24 Hours in Advance and keep records of notifications.	Pre-Construction Phase	ECO/EO	Once off, before blasting activities commence.	ECO/EO to Confirm all necessary personnel have Been notified. Notification records to be provided.

5.21 Noise

Impact Management outcome: Prevent unnecessary noise to the environment by ensuring that noise from development activity is mitigated.						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
- 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.	During the Construction Phase	ECO	Monthly, and as and when required	No complaints registered in this regard. No amplification
- All vehicles and machinery must be fitted with appropriate silencing technology and must be properly maintained;	Contractor	Provide and implement silencing technology	During the Construction Phase	ECO	Monthly, and as and when required	No complaints registered in this regard. Silencing Technology is utilised.
- Any complaints received by the Contractor 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;	cEO	Update complaints register. Provide daily transport to and from site for employees	During the Construction Phase	ECO	Monthly, and as and when required	Complaints register provided by the cEO and proof of transportation services provided

☐ Develop a Code of Conduct for the construction phase in terms of behaviour of construction staff. Operating hours as determined by the environmental authorisation are adhered to during the development phase. Where not defined, it must be ensured that development activities must still meet the impact management outcome related to noise management	cEO and Contractor in consultation with the ECO	Compile a Code of Conduct for staff. Appropriate operating hours must be identified for the project.	Pre-construction and Construction	ECO	Once, prior to the commencement of construction	Complaints registered must be available.

5.22 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;	cEO/ Contractor	Identify and demarcate through signage for designated smoking areas	Pre-construction & Construction	ECO	Monthly	Photographic record of designated smoking area
- Firefighting equipment must be available on all vehicles located on site;	cEO / dEO in consultation with the Contractor	Provide all vehicles with firefighting equipment	Construction	ECO	Monthly	All vehicles are fitted with firefighting equipment and the details thereof are provided by the cEO
- The local Fire Protection Agency (FPA) must be informed of construction activities;	cEO in consultation with the ECO	Undertake formal consultation to inform the local FPA of the associated construction activities	Pre-construction	ECO	Once, during the commencement of the Construction Phase	Proof of consultation with the FPA

- Contact numbers for the FPA and emergency services must be communicated in environmental awareness training and displayed at a central location on site;	dEO / cEO / Contractor in consultation with the ECO	Develop environmental awareness training material which covers the contact numbers for the FPA and emergency services. Place the contact numbers for the FPA and Emergency services at a visible and central location	Pre-construction & Construction	ECO	Prior to the commencement of the environmental awareness training and once during the construction phase	Environmental awareness training material requirements checklist and photographic record of contact numbers on display

5.23 Stockpiling and stockpile areas

Impact management outcome: Reduce erosion and sedimentation as a result of stockpiling.						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance

- All material that is excavated during the project development phase (either during piling (if required) or earthworks) must be stored appropriately on site in order to minimise impacts to watercourses and water bodies;	Contractor	Identify and demarcate an appropriate location for the storage of excavated materials	Pre-construction & Construction	ECO	Monthly	Excavated material is not stored within sensitive environmental areas
- All stockpiled material must be maintained and kept clear of weeds and alien vegetation growth by undertaking regular weeding and control methods;	Contractor	Implement appropriate and sufficient maintenance on stockpiled material regularly	During the Construction Phase	ECO	Bi-monthly (every second month)	Stockpiled material is maintained sufficiently and is clear of weeds and alien vegetation
- Topsoil stockpiles must not exceed 2 m in height;	Contractor	Enforce limitations for the height of topsoil stockpiles	During the Construction Phase	ECO	Bi-monthly (every second month)	Topsoil stockpiles do not exceed 2m in height
- During periods of strong winds and heavy rain, the stockpiles must be covered with appropriate material (e.g. cloth, tarpaulin etc.);	Contractor	Appropriate material must be provided in order to cover stockpiles when required	During the Construction Phase	ECO	Monthly	Contractor to provide proof of availability of appropriate material to cover stockpiles when required
- Where possible, sandbags (or similar) must be placed at the bases of the stockpiled material in order to prevent erosion of the material.	Contractor	Sandbags must be provided in order to prevent erosion of stockpiled	During the Construction Phase	ECO	Monthly	Contractor to provide proof of availability of Sandbags to prevent erosion of stockpiled materials

		materials				

– 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.						

5.24 Civil works

Impact management outcome: Impact to the environment minimised during civil works to create the substation terrace.

Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of 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;	Contractor / Site Supervisor	Strip and stockpile topsoil prior to terracing. Protect stockpiles from erosion. Reapply topsoil	Before terracing and during rehabilitation	ECO / Contractor	Weekly during terracing and rehabilitation	Topsoil stockpiling records Photos Inspection reports

		during rehabilitation				

– 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.						

5.25 Excavation of foundation, cable trenching and drainage systems

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	Contractor	Use a licensed waste disposal facility for the	During the Construction Phase	ECO	Monthly	Certificates obtained for the disposal of excess spoil at a

purposes;		disposal of excess spoil				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 and Rehabilitation	ECO	Monthly	Photographic record of spoil used for landscaping purposes as well as feedback from the contractor
– Management of equipment for excavation purposes must be undertaken in accordance with ***Section 5.18: Workshop equipment maintenance and storage***; and	Contractor	Undertake the management of equipment for excavation as per the requirements of section 5.18	During the Construction Phase	ECO	Monthly	Management of equipment is undertaken in line with the requirements of section 5.18
– Hazardous substances spills from equipment must be managed in accordance with ***Section 5.17: Hazardous substances***.	Contractor	Undertake the management of hazardous substances spills from equipment	During the Construction Phase	ECO	Monthly	Management of hazardous substances spills from equipment is undertaken in

5.26 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 person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of 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***.	-Site Supervisor / Contractor	Ensure batching plant layout, operation, drainage, and pollution-control measures comply with Section 5.19 requirements. Train staff on correct batching and material handling procedures.	Before commencement of batching activities and ongoing throughout project	Environmental Control Officer (ECO)	Weekly inspections & during batching operations	Inspection reports Training attendance records Photographs Compliance checklists
	-Contractor / Waste Management Officer	Segregate solid waste at source. Store waste in designated,	Throughout construction phase	ECO / Waste Management Officer	Weekly & during waste removal activities	Waste disposal receipts Waste registers • Inspection

		labelled containers. Dispose of waste at licensed disposal facilities as per Section 5.8. Keep waste transport and disposal receipts.				reports Photographs of waste areas

5.27 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 excavation or installation of foundations.						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
– Management of dust must be conducted in accordance with Section 5. 20: Dust emissions;	Contractor	Dust suppression	During the Construction Phase	ECO	Monthly	Dust suppression register must be provided
– Management of equipment used for installation must be conducted in accordance with Section 5.18: Workshop, equipment maintenance and storage;	Contractor	Undertake the management of equipment for	Construction and Rehabilitation	ECO	Monthly	Photographic record

		excavation as per the requirements of section 5.18				
– Management hazardous substances and any associated spills must be conducted in accordance with Section 5.17: Hazardous substances; and	Contractor	Undertake the management of hazardous substances spills from equipment	During the Construction Phase	ECO	Monthly	Management of equipment is undertaken in line with the requirements of section 5.17
– Residual solid waste must be recycled or disposed of in accordance with Section 5.8: Solid waste and hazardous management.	Contractor	Undertake the management of hazardous substances spills from equipment	During the Construction Phase	ECO	Monthly	Management of hazardous substances spills from equipment is undertaken in

5.28 Steelwork Assembly and Erection

Impact management outcome: No environmental degradation occurs as a result of steelwork assembly and erection.						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
- During assembly, care must be taken to ensure that no wasted/unused materials are left on site e.g. bolts and nuts	Contractor	Inspect areas where construction is being undertaken and remove and appropriately dispose of wasted/unused materials	During the Construction Phase	ECO	Weekly	Contractor to provide proof of inspection and removal of waste/unused materials and the appropriate disposal thereof (i.e. disposal certificates)
- 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.	Contractor	Undertake emergency repairs of equipment as Per the requirements of section 5.18	During the Construction Phase	ECO	Weekly	Emergency repairs of equipment are undertaken as per the requirements of section 5.18 and 5.16

		and 5.16				

5.29 Cabling and 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
- Residual solid waste (off cuts etc.) shall be recycled or disposed of in accordance with Section 5.8: Solid waste and hazardous Management;	Contractor	Undertake the recycling or disposal of residual solid waste as per the requirements of section 5.8	During the Construction Phase	ECO	Monthly	The recycling or disposal of Residual solid waste is undertaken in line with section 5.8.
- Management of equipment used for installation shall be conducted in accordance with Section 5.18: Workshop, equipment maintenance and storage;	Contractor	Undertake the management of equipment for installation as Per the requirements of section 5.18	During the Construction Phase	ECO	Monthly	Management of equipment for installation is undertaken in line with the requirements of section 5.18

- Management of hazardous substances and any associated spills shall be conducted in accordance with Section 5.17: Hazardous substances.	Contractor	Undertake the management of hazardous substances and associated spills as per the requirements of section 5.17	During the Construction Phase	ECO	Monthly	Management of hazardous substances and associated spills is undertaken in line with the requirements of section 5.17

5.30 Socio-economic

Impact management outcome: enhanced socio-economic development.						
Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
- Develop and implement communication strategies to facilitate public participation;	dEO / cEO	Identify and implement appropriate strategies for communication with the communities through consideration of the community needs	Pre-construction & Construction	ECO	Once, prior to the commencement of construction and monthly during the construction	Communication is undertaken as per the identified strategies and no complaints are submitted regarding communication
- Develop and implement a collaborative and constructive approach to conflict resolution as part of the external stakeholder engagement process;	Contractor	Development and implement a Grievance Mechanism which considers the community needs and	Pre-construction & Construction	ECO	Once, prior to the commencement of construction and monthly during the construction phase	Conflict resolution is undertaken in line with the requirements of The Grievance Mechanism. No complaints on conflict

		provides procedures for conflict resolution				resolution are submitted by the community
- Sustain continuous communication and liaison with neighboring owners and residents	Contractor	Development and implement a Grievance Mechanism which provides procedures for communication /liaison with neighbouring landowners and residents	Pre-construction & Construction	ECO	Once, prior to the commencement of construction and monthly during the construction phase	Communication /liaison with neighbouring landowners and residents are Undertaken in line with the requirements of the Grievance Mechanism. No complaints on communication with neighbouring landowners and residents is submitted
- Create work and training opportunities for local stakeholders; and	Contractor	Develop and Implement a "locals first" policy for the provision of employment opportunities	Pre-construction & Construction	ECO	Once, prior to the commencement of construction and monthly during the construction phase	The "locals first" policy is Considered in terms of the employment and training opportunities

- Where feasible, no workers, with the exception of security personnel, must be permitted to stay over- night on the site. This would reduce the risk to local farmers.	Not Applicable - no workers, other than security is proposed to stay on-site overnight.

5.31 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: 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; – 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.	Site Supervisor / Contractor	Dispose of contaminated materials appropriately Ensure bunds adhere to hazardous substance and workshop management requirement	Weekly and as required	ECO	Weekly	Photographic evidence

5.32 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	**Implementation**			**Monitoring**		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
- All old equipment removed during the project must be stored in such a way as to prevent pollution of the environment;	Contractor	Appropriately store old equipment in a manner which prevents pollution to the environment. This could include the construction of bunded areas	Decommissioning	Eco	Monthly	Photographic record of appropriate storage of old equipment
- Oil containing equipment must be stored to prevent leaking or be stored on drip trays;	Contractor	Appropriately store equipment containing oil through the use of drip trays or other suitable methods	Decommissioning	Eco	Monthly	Photographic record of appropriate storage of equipment containing oil

- All scrap steel must be stacked neatly and any disused and broken insulators must be stored in containers;	Contractor	Ensure all scrap steel is stacked neatly and store disused and broken insulators in appropriate containers	Decommissioning	Eco	Monthly	Photographic record of stacked scrap steel and containers containing broken and disused insulators
- 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;	Contractor	Develop and Implement a procedure for the dismantling and transportation of equipment containing pollution causing substances which prevents spillage and pollution of the environment	Decommissioning	Eco	Monthly	Proof from contractor that dismantling and transportation of equipment containing pollution causing substances has been undertaken in an appropriate manner

- The Contractor must also be equipped to contain and clean up any pollution causing spills; and	Contractor	Ensure sufficient spill kits are available for the clean-up of pollution causing spills	Decommissioning	Eco	Monthly	Sufficient spill kits are available on site
- Disposal of unusable material must be at a licensed waste disposal site.	Contractor	Make use of a licensed waste disposal site	Decommissioning	Eco	Monthly	Certificate obtained for the disposal at a licensed waste Disposal site

5.33 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 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 original condition; – Stockpiled topsoil must be used for rehabilitation (refer to ***Section 5.24: Stockpiling and stockpiled areas***);	Contractor / Site Supervisor	Landscape disturbed areas. Remove all spoil/waste. Dispose at licensed waste site.	Immediately after construction in each area	ECO / Contractor	Weekly during rehabilitation activities	Photographs Waste disposal slips Inspection reports

– 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						

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:

Details of the applicant	National Transmission Company South Africa SOC Ltd (NTCSA)
Physical address	2 Maxwell Drive Megawatt Park Sunninghill, Sandton
Contact person	Ms. Martina Phiri
Telephone Number	011 800 3550 082 468 2137
Email address	PhiriM@ntcsa.co.za

7.1.2 Details and expertise of the EAP:

Name of Company	QEMS Management and Business Solutions
Physical address	7 Munnik Avenue Sterpark Polokwane 0700
Person Responsible	Dr. Patrick Sithole
Professional Registration	Registered EAP (EAPASA) Registered Pr.Sci.Nat. (SACNASP) Registered Pest Control Operator (PCO) Registered Process Controller-IV (DWS)
Telephone Number	0152978658 / 0768598796
Email address	sitholetp@QEMS.co.za / www.qems.co.za

Expertise of the EAP (CVs included in Appendix 3): A Registered natural scientific professional (SACNASP – Environmental and Chemical scientist), Registered Environmental Assessment Practitioner (EAPASA), social and sustainability expert with 23 years of experience, Patrick Sithole specialises in Strategic Environmental, Social and Sustainable Development projects, Climate Change and Health, Environmental Management issues and Construction Supervision of all infrastructural projects. Dr Sithole is also involved in vegetation clearance and pest control projects along infrastructural projects e.g. roads, railway lines, power lines, golf courses and buildings like complexes, houses, malls, etc. Patrick has very strong business development mindset that has seen him winning and working on projects across Africa and in Europe. His key experience includes the following areas; Environmental (Natural Resource) Management;

Environmental Compliance; Social Facilitation and Consultation; Compensation of Land Claims; Climate Change; Climate (Change) and Human Health; Air Quality Management; Renewable Energy; Waste Management; Land Rehabilitation; Water Quality/Demand Management; Strategic Environmental Assessment; Waste Water (sewer) Treatment; Project Management; ISO 9001 and ISO14001; Vegetation Control Bush Clearance (Invasive plants).

7.1.3. Project Name:

The expansion of Gromis substation and its associated infrastructure located on portion 0 of farm Dikgat no. 195, within the jurisdiction of Nama Khoi Local Municipality of Namakwa District Municipality in Northern Cape Province.

7.1.4. Description of the project:

National Transmission Company South Africa SOC Ltd (NTCSA) proposes to expand the Gromis Substation by approximately 7 hectares, increasing the current substation footprint from approximately 12 hectares to 19 hectares. The proposed development will include the installation of two Synchronous Condensers (SynCons), associated infrastructure, extension of 400kV yard, temporary laydown areas of approximately 6 hectares, and an access road. The proposed access road will be located within the designated laydown area and will provide access to the construction and operational areas of the expanded substation. The proposed expansion is intended to accommodate the installation and operation of the two SynCons and associated infrastructures at the existing Gromis Substation located within the jurisdiction of the Nama Khoi Local Municipality in the Namakwa District Municipality of the Northern Cape Province.

NTCSA plans to implement SynCons to enhance grid reliability and grow renewable energy adoption. SynCons will provide several ancillary energy services, increasing rotating inertia in order to improve grid stability. The SynCons do not generate power; however, through their inertial, rotating mass provide grid stability to the local area of the national transmission grid where they are located. Currently, the only inertial, rotating mass is provided largely by the coal-fired power stations, which are stationed in the north-eastern part of the country.

7.1.5. Project location:

The proposed expansion site is located on portion 0 of Farm Dikgat No. 195 and covers approximately 7 hectares for the synchronous condenser expansion area and an additional 6 hectares for the temporary laydown area. The site is situated near the mine along the R355 Road, approximately 0.95 km north of the existing Gromis Substation and about 68.30 km southwest of Springbok Town within the Nama Khoi Local Municipality, Namakwa District Municipality, Northern Cape Province. The proposed development falls within the Strategic Transmission Corridor. The central coordinates of the site are 29°36'4.71"S and 17°10'34.48"E. The site falls within the jurisdiction of the Nama Khoi

Local Municipality of Namakwa District Municipality in Northern Cape Province. The table below depicts the Surveyor General 21 Digit and corner coordinates of the site.

Table 1:Farm portion and Surveyor General 21 Digit

Farm portion and No.	Surveyor General 21 Digit code
Portion 0 of Farm DIKGAT No. 195	C05300000000019500000

Table 2: Corner Coordinates of the Expansion Area

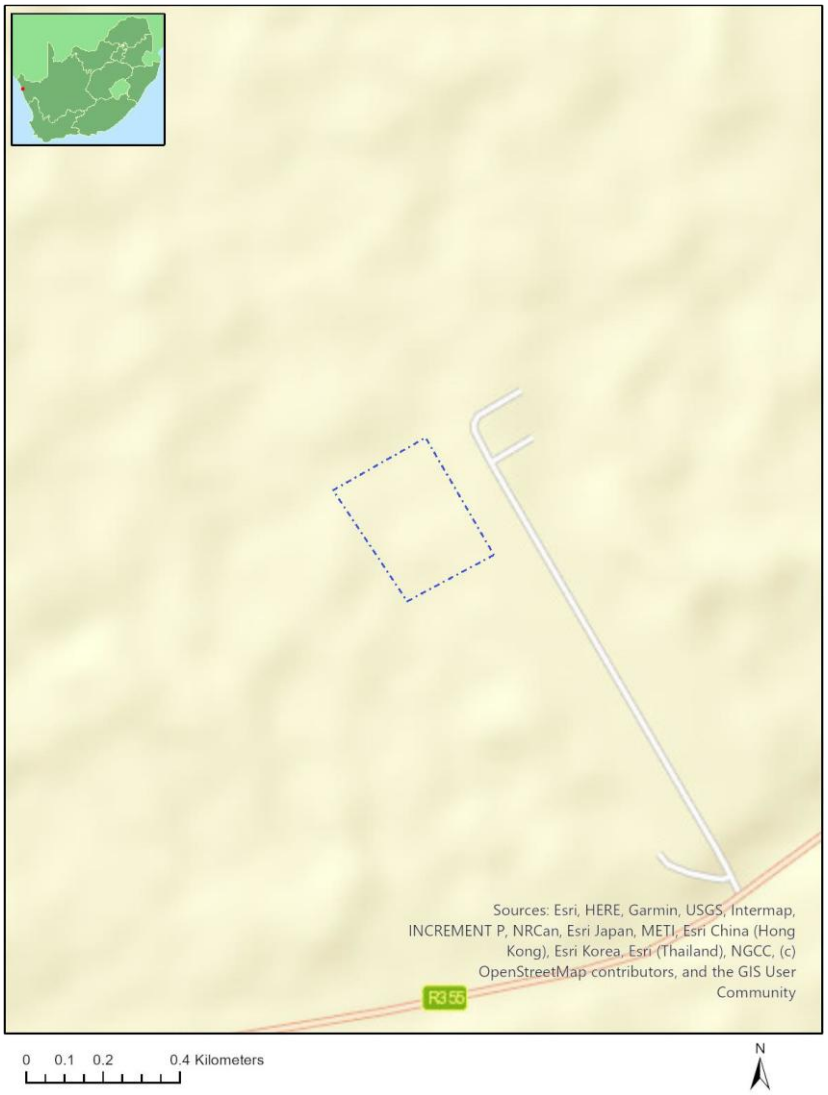
Corner coordinates	Latitude (S)	Longitude (E)
Corner A	29°35'58.54"S	17°10'35.87"E
Coner B	29°36'7.17"S	17°10'41.56"E
Coner C	29°36'10.55"S	17°10'34.28"E
Coner D	29°36'2.44"S	17°10'28.05"E

Table 3:Corner Coordinates of the Temporary Laydown Area

Corner coordinates	Latitude (S)	Longitude (E)
Corner A	29°35'58.54"S	17°10'35.87"E
Coner B	29°36'5.61"S	17°10'44.72"E
Coner C	29°36'11.44"S	17°10'48.32"E
Coner D	29°36'15.89"S	17°10'38.63"E

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 50m from the development footprint.



7.3. Sub-section 3: Declaration

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

Signature Proponent/applicant/ holder of EA Date: 09 November 2026

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 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 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.

The following are site/project specific impact mitigation measures recommended by the Specialists and must be enforced if the proposed development were approved.

5.36. Synchronous Condenses Impact

Impact Management Actions	**Implementation**			**Monitoring**		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
Oil or Coolant Leaks - Lubricants and coolants used in the machine could leak	Maintenance Engineer / HSE Office	Install secondary containment; use leak detection systems; follow hazardous material protocols	Pre-commissioning & ongoing	Maintenance Team / HSE Officer	Monthly inspections	inspection checklists
Electromagnetic Fields (EMF) - Slight increase in localized EMF levels due to added equipment	Design Engineer / Compliance Officer	Design and maintain equipment to comply with EMF exposure guidelines	During design and verification stages	Compliance Officer / HSE Officer	Annually or as per EMF audit cycle	EMF audit reports, design compliance certificates
Traffic & Access Disruption - Temporary increase in vehicle movement during delivery and construction	Logistics Coordinator / Site Supervisor	Plan traffic routes; schedule deliveries during off-peak hours; notify local	During construction and equipment delivery	Site Supervisor	As needed during deliveries	Delivery logs report

		authorities if needed				
Air Emissions - Use energy-efficient auxiliaries; prefer renewable-sourced power	Electrical Engineer / Operations Manager	Energy-efficient auxiliaries; use renewable energy if feasible	During design and operational phase	Energy Manager / EMS Coordinator	Annually or during energy audits	Energy consumption report
Heat Discharge to Atmosphere (1.5%) -Waste heat released from the synchronous condenser and associated equipment (e.g., via radiators or fans)	Mechanical Engineer / O&M Team Lead	- High-efficiency cooling systems (air or liquid) to reduce thermal losses - Heat recovery systems where feasible (e.g., using waste heat for space heating in facilities) - Thermal insulation of hot surfaces to reduce ambient heating - Proper equipment spacing for airflow and heat dissipation - Vegetative	Before commissioning and ongoing	O&M Supervisor / Environmental Officer	Continuous (SCADA or sensor-based)	thermal inspection reports

		buffers around substations to help dissipate heat naturally - Real-time thermal monitoring to detect hotspots and optimize cooling system operation				

APPENDIX 1: METHOD STATEMENTS

To be prepared by the contractor prior to commencement of the activity.

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APPENDIX 2: ENVIRONMENTAL SCREENING TOOL REPORT

SCREENING REPORT FOR AN ENVIRONMENTAL AUTHORIZATION AS REQUIRED BY THE 2014 EIA REGULATIONS – PROPOSED SITE ENVIRONMENTAL SENSITIVITY

EIA Reference number:

Project name: Expansion of Gromis Substation

Project title: Expansion of Gromis Substation

Date screening report generated: 27/08/2026 12:34:32

Applicant: NTCSA SOC Ltd

Compiler: QEMS

Compiler signature: 

.....

Application Category: Utilities Infrastructure|Electricity|Distribution and Transmission|Substation

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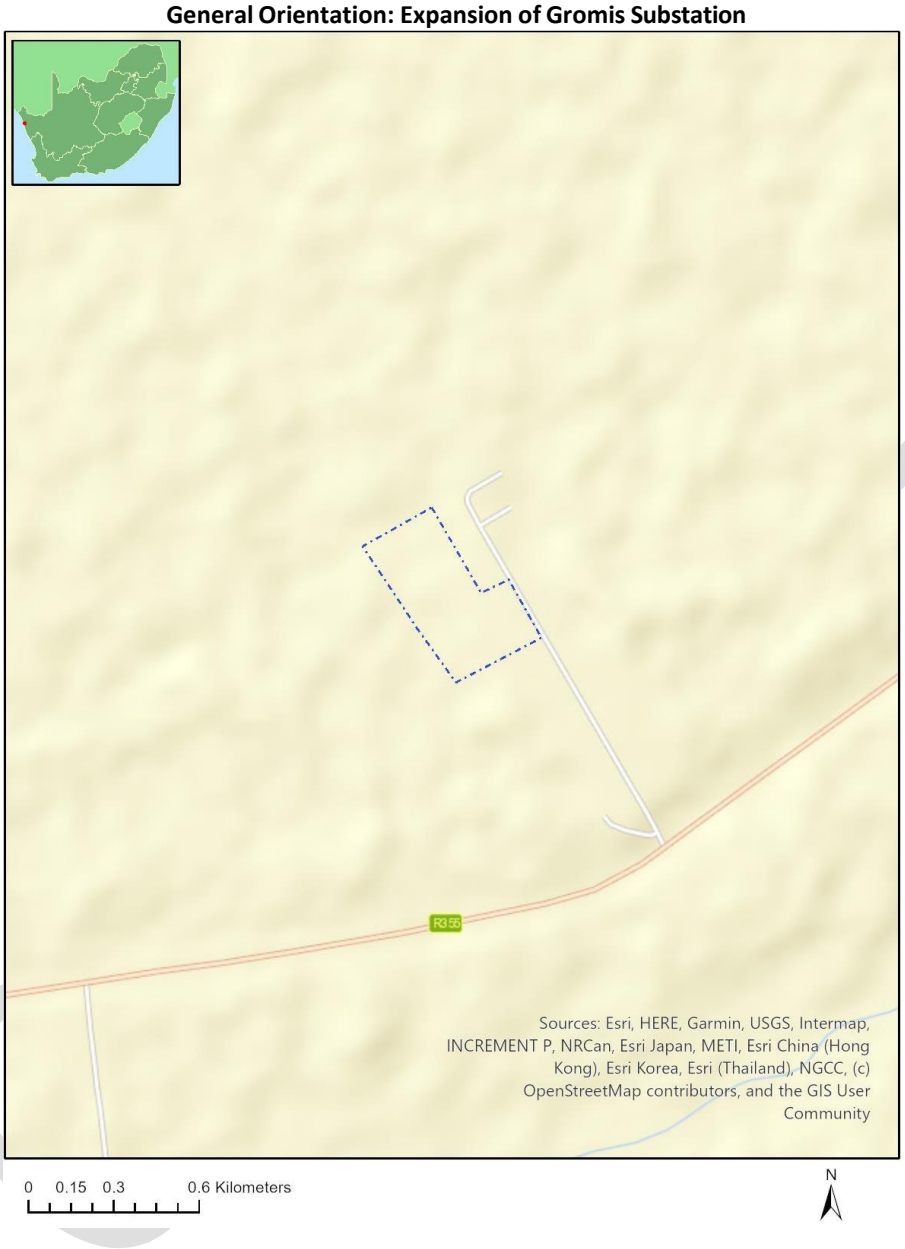
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Proposed Project Location

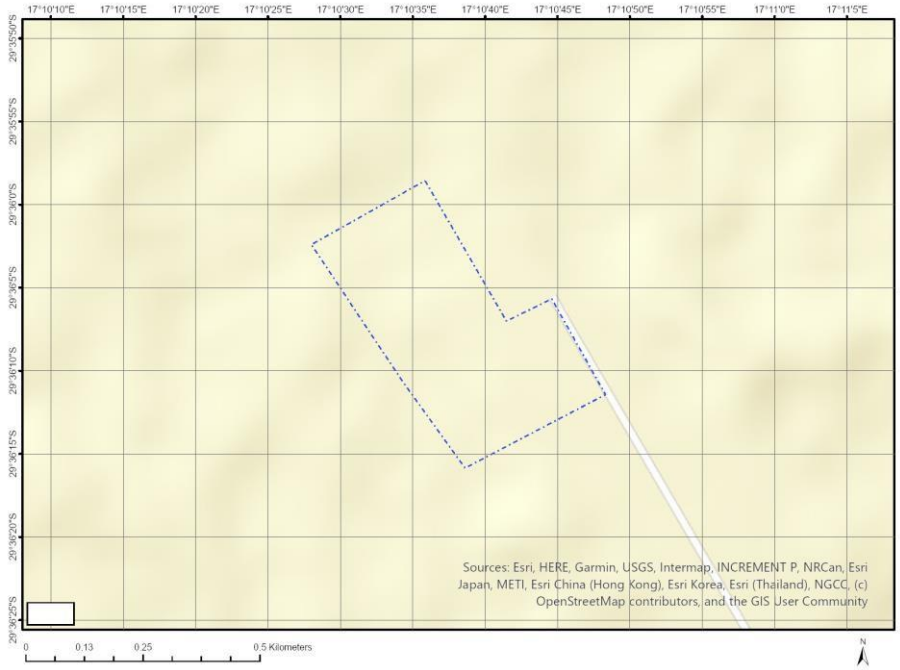
Orientation map 1: General location

General Orientation: Expansion of Gromis Substation



Disclaimer applies

Map of proposed site and relevant area(s)



Cadastral details of the proposed site

Property details:

No	Farm Name	Farm/ Erf No	Portion	Latitude	Longitude	Property Type
1	DIKGAT	195	0	29°37'5.34S	17°9'19.48E	Farm
2	DIKGAT	195	0	29°36'56.72S	17°11'8.5E	Farm Portion
3	DIKGAT	195	4	29°36'46.2S	17°8'27.09E	Farm Portion

Development footprint[1] vertices:
No development footprint(s) specified.

Wind and Solar developments with an approved Environmental Authorisation or applications under consideration within 30 km of the proposed area

No	EIA Reference No	Classification	Status of application	Distance from proposed area (km)
1	14/12/16/3/3/1/2763	Solar PV	Approved	20.6
2	12/12/20/1807/AM2	Wind	Approved	29.8
3	12/12/20/2331/1/AM1	Wind	Approved	0
4	12/12/20/2331/1	Wind	Approved	0
5	14/12/16/3/3/1/2032	Wind	Approved	0

[1] "development footprint", means the area within the site on which the development will take place and incudes all ancillary developments for example roads, power lines, boundary walls, paving etc. which require vegetation clearance or which will be disturbed and for which the application has been submitted.

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6	14/12/16/3/3/1/1970	Wind	Approved	20.6
7	14/12/16/3/3/1/1970/AM1	Wind	Approved	20.6
8	14/12/16/3/3/2/1046	Wind	Approved	20.9
9	14/12/16/3/3/1/1971	Wind	Approved	29.3
10	14/12/16/3/3/1/2033	Wind	Approved	0
11	14/12/16/3/3/1/2764	Solar PV	Approved	20.6
12	12/12/20/1807	Wind	Approved	29.8
13	14/12/16/3/3/1/1907	Wind	Approved	0
14	14/12/16/3/3/1/1971/AM2	Wind	Approved	29.3
15	12/12/20/2212	Wind	Approved	11.3

Environmental Management Frameworks relevant to the application

No intersections with EMF areas found.

Environmental screening results and assessment outcomes

The following sections contain a summary of any development incentives, restrictions, exclusions or prohibitions that apply to the proposed development site as well as the most environmental sensitive features on the site based on the site sensitivity screening results for the application classification that was selected. The application classification selected for this report is: **Utilities Infrastructure|Electricity|Distribution and Transmission|Substation**.

Relevant development incentives, restrictions, exclusions or prohibitions

The following development incentives, restrictions, exclusions or prohibitions and their implications that apply to this site are indicated below.

Incentive, restriction or prohibition	Implication
Strategic Transmission Corridor-Northern corridor	https://screening.environment.gov.za/ScreeningDownloads/DevelopmentZones/Combined_EGI.pdf
Renewable energy development zones 8-Springbok	https://screening.environment.gov.za/ScreeningDownloads/DevelopmentZones/Combined_REDZ.pdf
Main Electricity Transmission Substation	https://screening.environment.gov.za/ScreeningDownloads/DevelopmentZones/Distribution_Transmission.pdf

Proposed Development Area Environmental Sensitivity

The following summary of the development site environmental sensitivities is identified. Only the highest environmental sensitivity is indicated. The footprint environmental sensitivities for the proposed development footprint as identified, are indicative only and must be verified on site by a suitably qualified person before the specialist assessments identified below can be confirmed.

Theme	Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
Agriculture Theme				X

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Animal Species Theme			X	
Aquatic Biodiversity Theme				X
Archaeological and Cultural Heritage Theme				X
Civil Aviation Theme			X	
Defence Theme				X
Paleontology Theme				X
Plant Species Theme			X	
Terrestrial Biodiversity Theme				X

Specialist assessments identified

Based on the selected classification, and the known impacts associated with the proposed development, the following list of specialist assessments have been identified for inclusion in the assessment report. It is the responsibility of the EAP to confirm this list and to motivate in the assessment report, the reason for not including any of the identified specialist study including the provision of photographic evidence of the site situation.

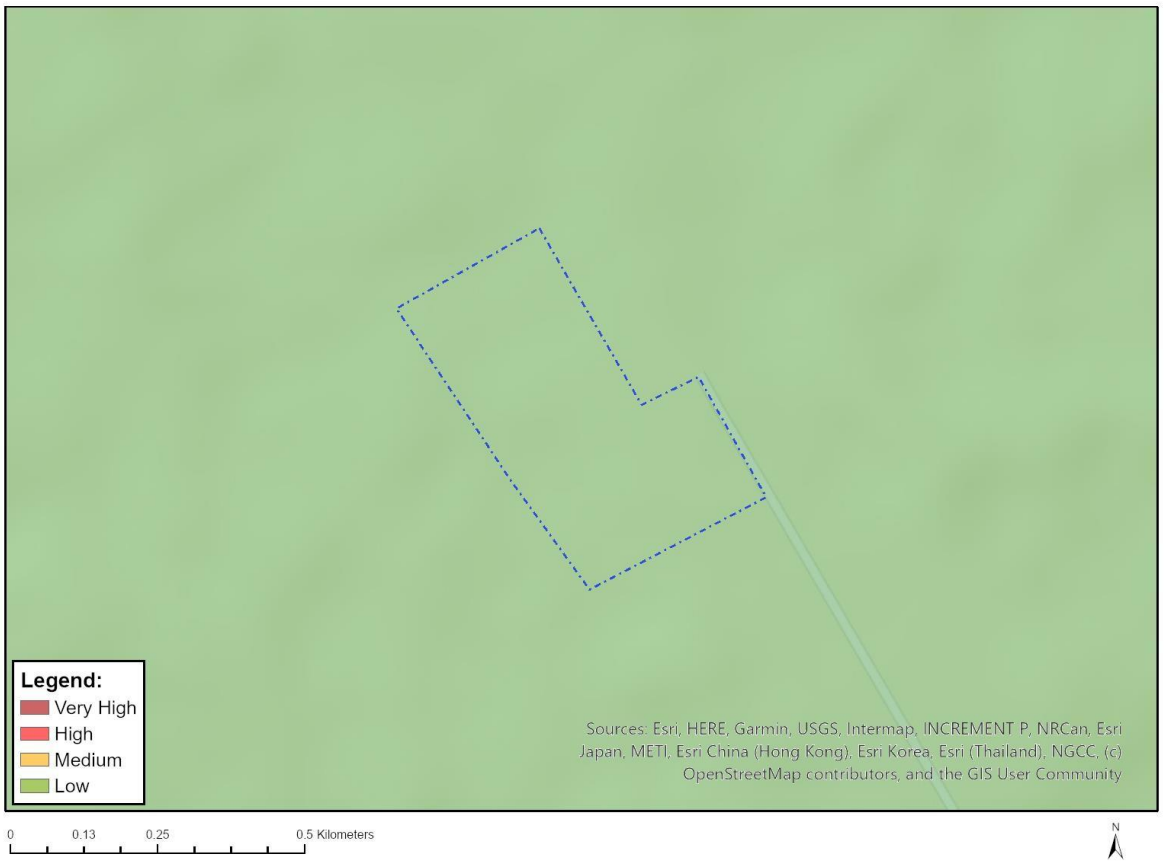
No	Specialist assessment	Assessment Protocol
1	Agricultural Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Agriculture_Assessment_Protocols.pdf
2	Archaeological and Cultural Heritage Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/GuidanceforHIA.pdf
3	Palaeontology Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/GuidanceforPIA.pdf
4	Terrestrial Biodiversity Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Terrestrial_Biodiversity_Assessment_Protocols.pdf
5	Aquatic Biodiversity Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Aquatic_Biodiversity_Assessment_Protocols.pdf
6	Geotechnical Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
7	Plant Species Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Plant_Species_Assessment_Protocols.pdf
8	Animal Species Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Animal_Species_Assessment_Protocols.pdf

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Results of the environmental sensitivity of the proposed area.

The following section represents the results of the screening for environmental sensitivity of the proposed site for relevant environmental themes associated with the project classification. It is the duty of the EAP to ensure that the environmental themes provided by the screening tool are comprehensive and complete for the project. Refer to the disclaimer.

MAP OF RELATIVE AGRICULTURE THEME SENSITIVITY



Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
			X

Sensitivity Features:

Sensitivity	Feature(s)
Low	05. Low

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MAP OF RELATIVE ANIMAL SPECIES THEME SENSITIVITY



Where only a sensitive plant unique number or sensitive animal unique number is provided in the screening report and an assessment is required, the environmental assessment practitioner (EAP) or specialist is required to email SANBI at eiadatarequests@sanbi.org.za listing all sensitive species with their unique identifiers for which information is required. The name has been withheld as the species may be prone to illegal harvesting and must be protected. SANBI will release the actual species name after the details of the EAP or specialist have been documented.

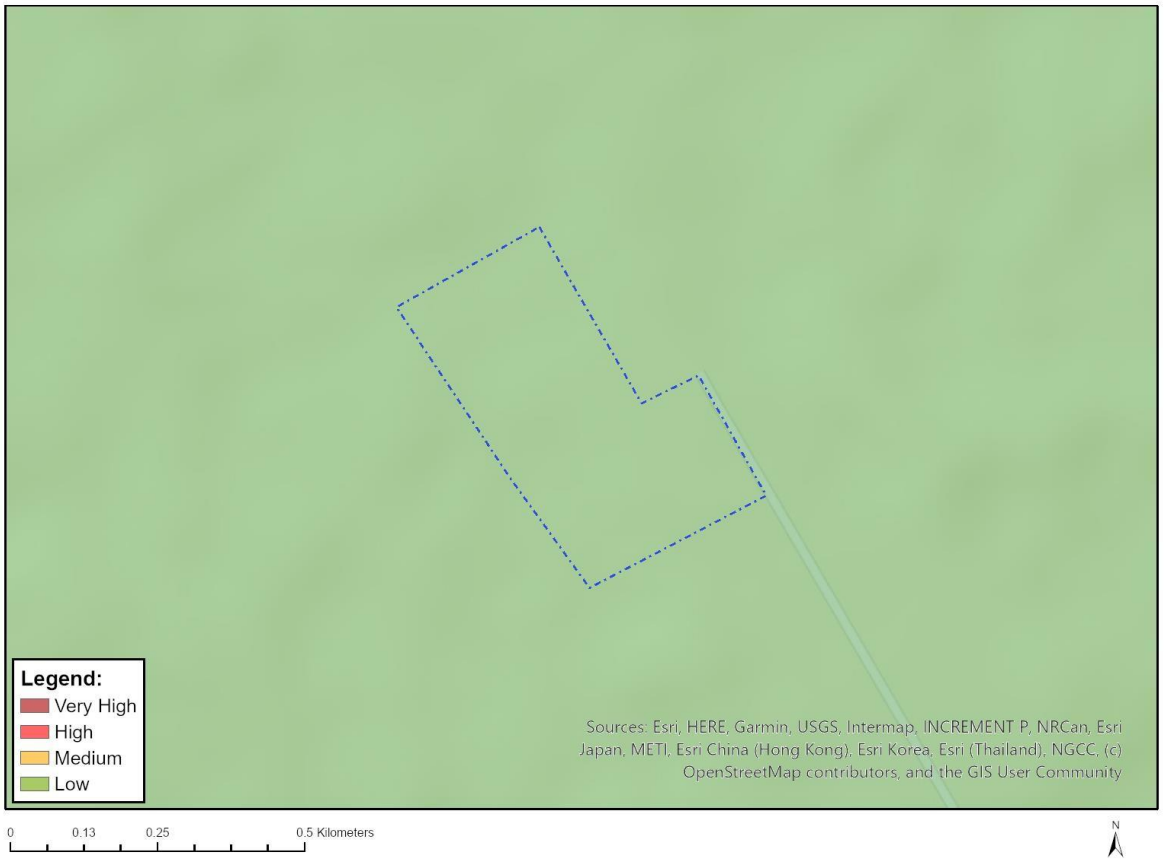
Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
		X	

Sensitivity Features:

Sensitivity	Feature(s)
Medium	Aves-Circus maurus
Medium	Mammalia-Eremitalpa granti granti
Medium	Sensitive species 21
Medium	Invertebrate-Brinckiella mauerbergerorum

Disclaimer applies

MAP OF RELATIVE AQUATIC BIODIVERSITY THEME SENSITIVITY



Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
			X

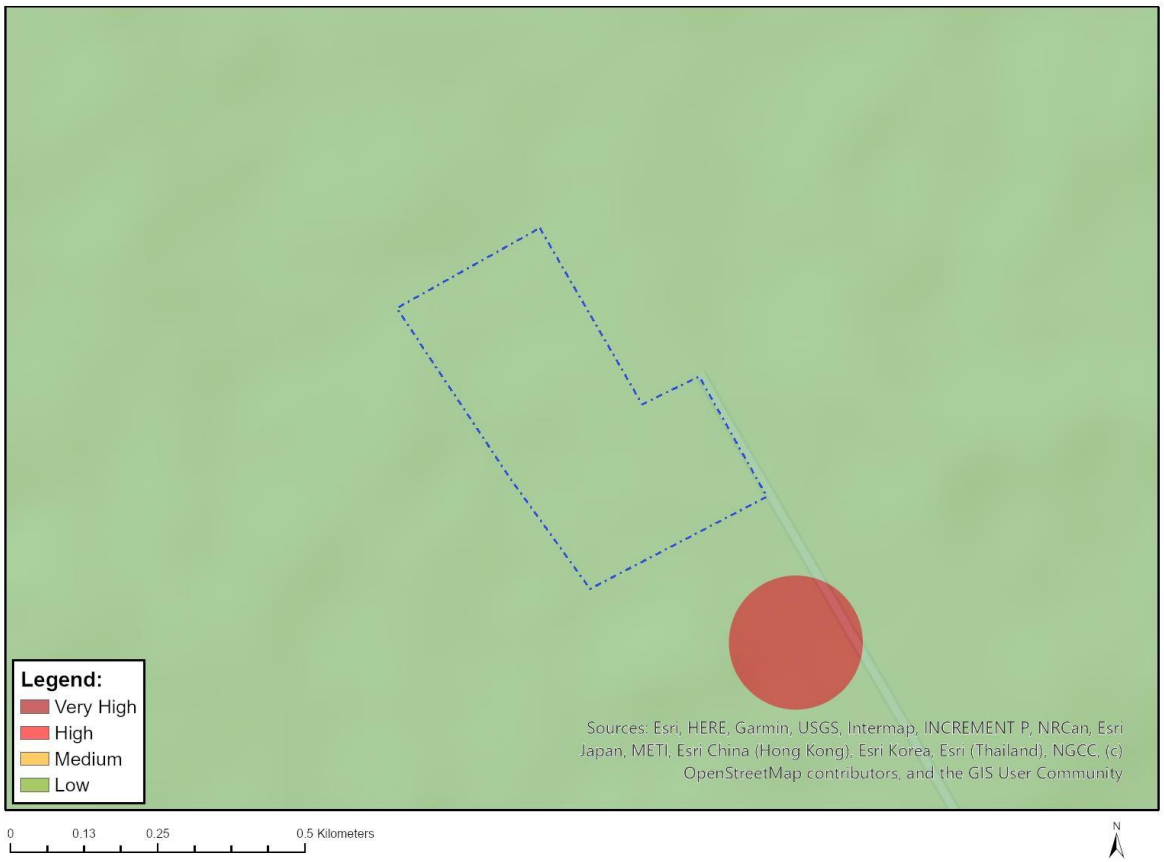
Sensitivity Features:

Sensitivity	Feature(s)
Low	Low Sensitivity

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MAP OF RELATIVE ARCHAEOLOGICAL AND CULTURAL HERITAGE THEME SENSITIVITY



Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
			X

Sensitivity Features:

Sensitivity	Feature(s)
Low	Low Sensitivity

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MAP OF RELATIVE CIVIL AVIATION THEME SENSITIVITY



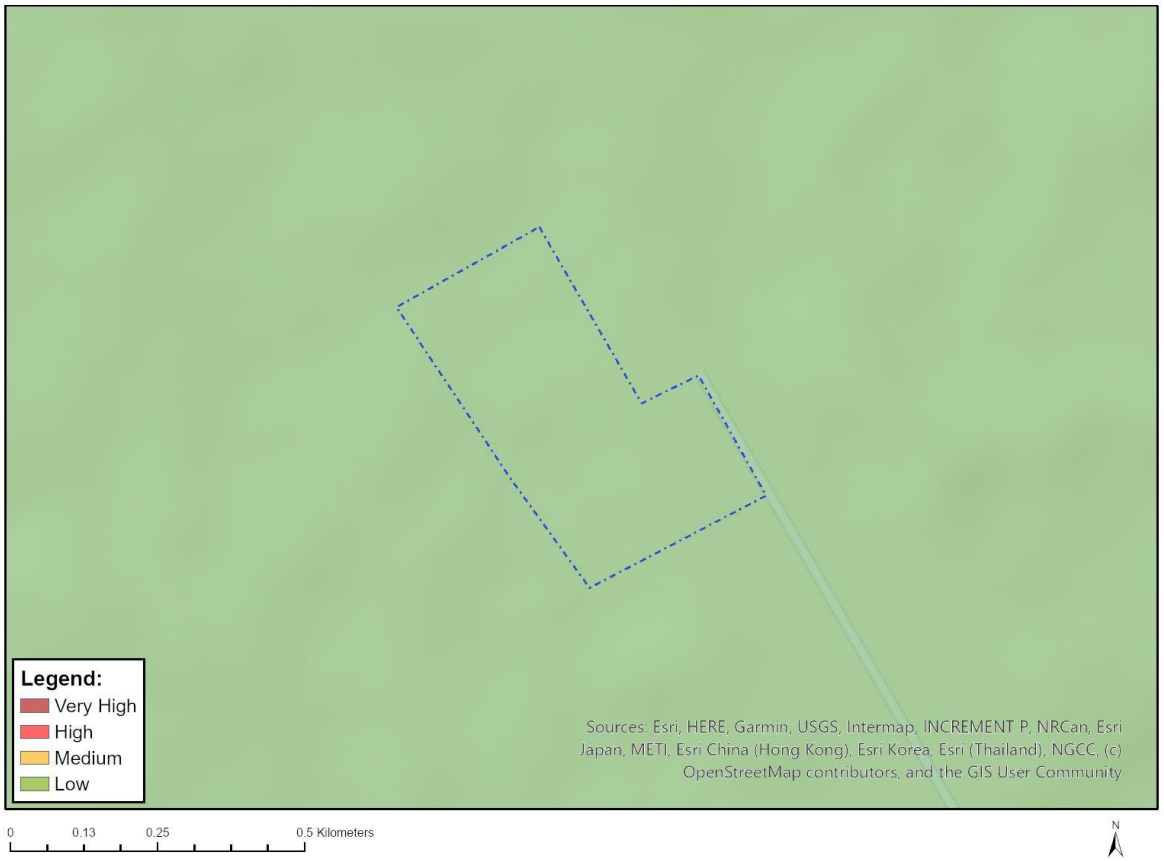
Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
		X	

Sensitivity Features:

Sensitivity	Feature(s)
Medium	Between 8 and 15 km of other civil aviation aerodrome

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MAP OF RELATIVE DEFENCE THEME SENSITIVITY



Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
			X

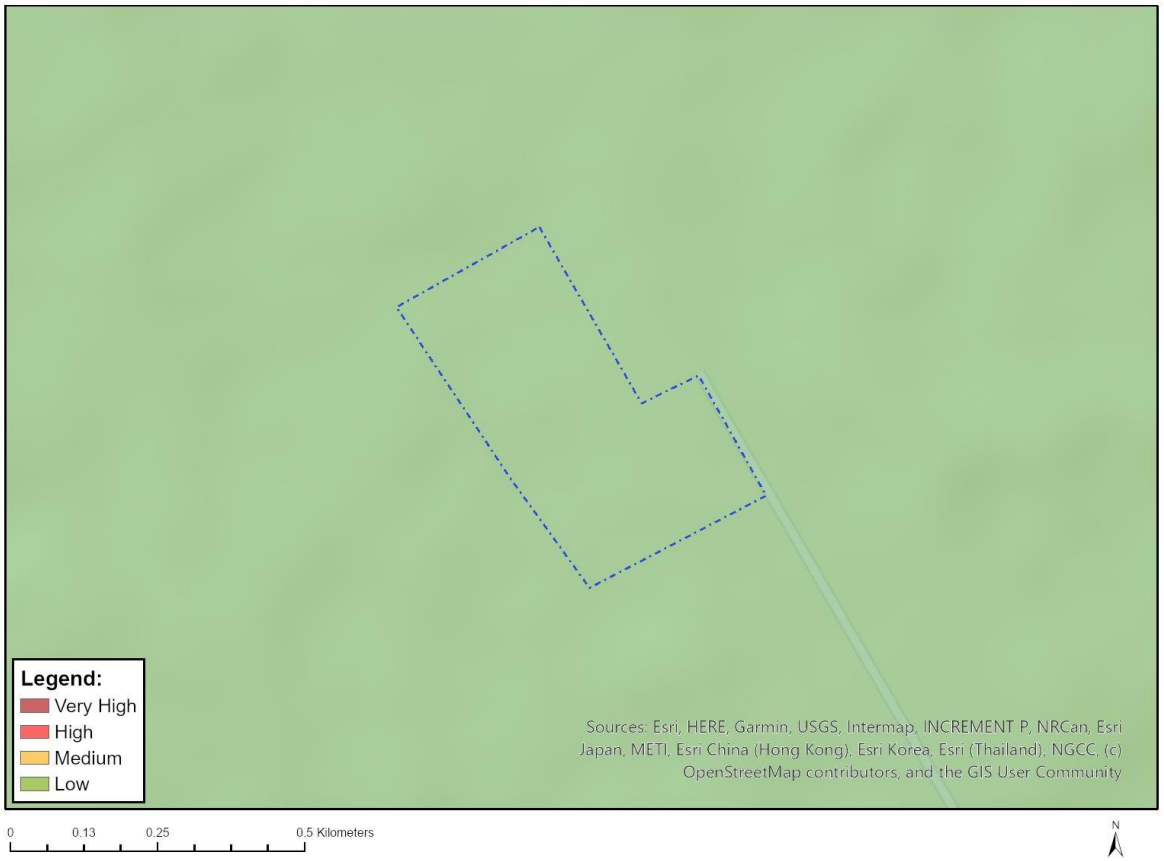
Sensitivity Features:

Sensitivity	Feature(s)
Low	Low Sensitivity

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Disclaimer applies

MAP OF RELATIVE PALEONTOLOGY THEME SENSITIVITY



Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
			X

Sensitivity Features:

Sensitivity	Feature(s)
Low	Features with a Low paleontological sensitivity

Disclaimer applies

MAP OF RELATIVE PLANT SPECIES THEME SENSITIVITY



Where only a sensitive plant unique number or sensitive animal unique number is provided in the screening report and an assessment is required, the environmental assessment practitioner (EAP) or specialist is required to email SANBI at eiadatarequests@sanbi.org.za listing all sensitive species with their unique identifiers for which information is required. The name has been withheld as the species may be prone to illegal harvesting and must be protected. SANBI will release the actual species name after the details of the EAP or specialist have been documented.

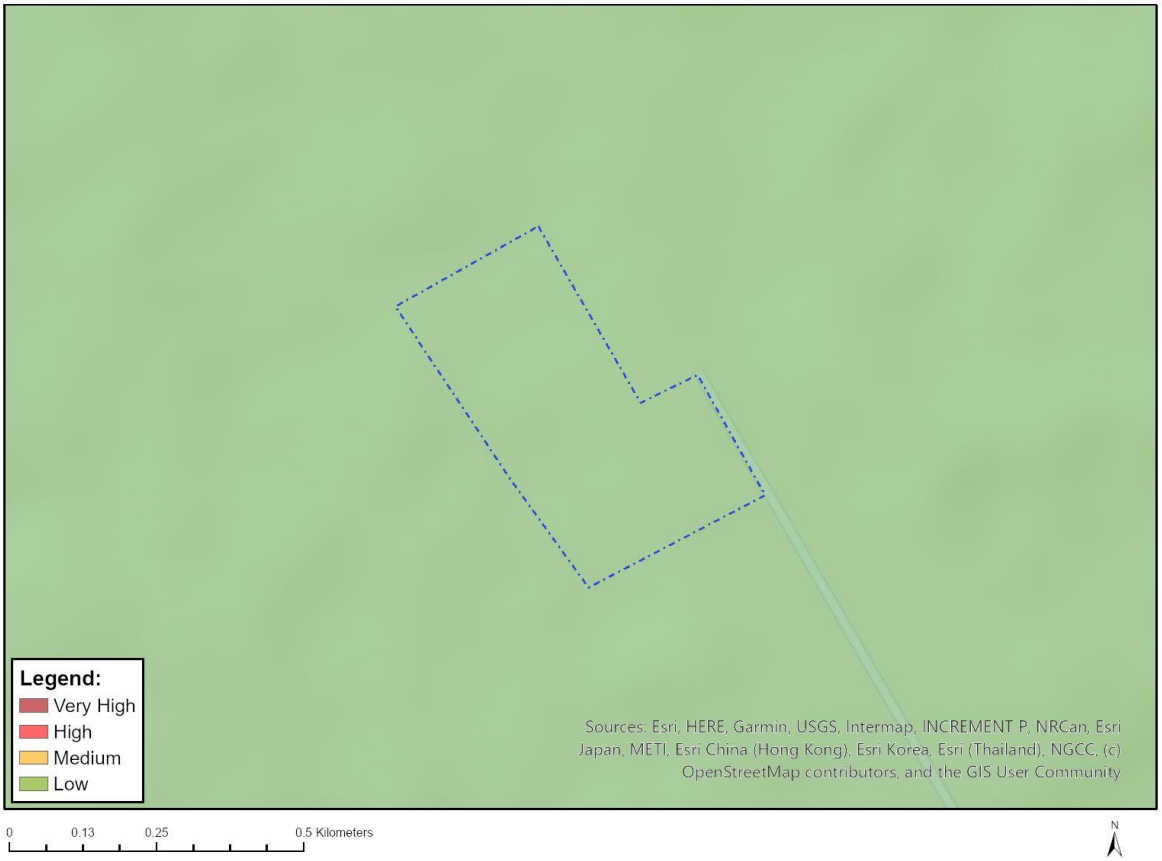
Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
		X	

Sensitivity Features:

Sensitivity	Feature(s)
Medium	Jordaaniella uniflora
Medium	Boophone haemanthoides
Medium	Tetragonia pillansii
Medium	Sensitive species 422
Medium	Sensitive species 884
Medium	Sensitive species 795

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MAP OF RELATIVE TERRESTRIAL BIODIVERSITY THEME SENSITIVITY



Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
			X

Sensitivity Features:

Sensitivity	Feature(s)
Low	Low Sensitivity

APPENDIX 3: CV

CURRICULUM VITAE **DR PATRICK SITHOLE (REG EAP; PR.SCI.NAT, IAP2)**



POSITION	:	**Climate Change Expert, Environmental, Social, Resettlement, Public Health, ESG & Sustainability, Transaction Advisor, Pest/Weed Control and Operator/ Class (IV) Water Process Controller**
NAME OF FIRM	:	Consultant
NAME OF STAFF	:	Dr Patrick SITHOLE
DATE OF BIRTH	:	17.03.1976
YEARS OF EXPERIENCE	:	23

SUMMARY OF QUALIFICATIONS:

A Registered natural scientific professional (SACNASP – Environmental and Chemical scientist), Registered Environmental Assessment Practitioner (EAPASA), Public Health consultant, Registered International Association for Public Participation (IAP2) Practitioner, Social and Sustainability expert with 23 years of experience. Dr Patrick Sithole specialises in Strategic Environmental projects, Social and Sustainable Development projects, Climate Change and Public Health, all disciplines on Environmental Management issues, Construction Supervision of all infrastructural projects and Manufacturing/ Production processes. Dr Sithole ahas very strong business development and strategic mindset that has seen him winning and working on projects across Africa and in Europe. He is also experienced in dealing with Non-Profit making Organistaions, Government engagement within the SADC Region and has previously worked with the World Bank and on World Bank funded projects. His key experience includes the following areas

- Environmental Compliance	- Public Health Investigations
- Environmental (Natural Resource) Management	- Occupational Health & Safety
- Social Facilitation and Consultation	- Socio-Economic Impact Assessment
- Business Development Plans	- Compensation of Land Claims and Resettlement
- Climate (Change) and Human Health Impact Assessments	- Climate Change and Financing
- Heritage Resources Impact Assessment	- Waste Management and Land Rehabilitation
- Air Quality Management	- Water Quality and Demand Management
- Renewable Energy	- Strategic Environmental Assessment
- Waste Water (sewer) Treatment	- ISO 9001 and ISO14001
- Project Management	- Vegetation Control Bush Clearance (Invasive plants)
- Manufacturing/ Production processes	- Teaching and mentoring

EDUCATION:

Institution:	***Qualification:***	***Year Obtained:***
North West University	Doctor of Philosophy (Environmental Sciences) Climate Change and Malaria Prevalence	2016
University of Limpopo	Master of Philosophy (Environmental Law and Management) A Legal and Policy Framework for Addressing Climate Change in the Western Cape Province, South Africa	2008
University of Zimbabwe	Bachelor of Science (Chemistry and Biochemistry)	1997

OTHER TRAINING:

- Certificate IAP2: Applying Methods (2023)
- Certificate IAP2: Way in Challenging Contexts (2023)
- Certificate IAP2: Designing P2/engagement (2023)
- Certificate World Bank Group: BSAFE WBG Edition (2022)
- Certificate Environmental Management System Development (ISO 14001:1996)
- Certificate Internal Environmental Auditing (ISO 14001:1996)
- Certificate Cleaner Development Mechanism
- Certificate City Guilds Quality Assurance (UK)
- Certificate ISO 9001:1994 Quality Auditing
- Certificate Quality Management Systems Transition (ISO 9001:2000)
- Certificate (ISO 9001:2000) Auditor Transition
- Certificate Ultra Violet Technology (Berson UV-Techniek, Netherlands)
- Certificate Weed Control (PCSIB)

MEMBERSHIPS OF PROFESSIONAL ASSOCIATIONS:

- Registered as a Natural Scientific Professional (Environmental and Chemical Scientist) : South African Council for Natural Scientific Professions, 26/09/2007 (Chemical) and 03/03/2010 (Environmental) SACNASP Registration No : 400264/07
- Registered Environmental Assessment Practitioner (EAP) and Assesor, Registration No: 2016/27
- International Association for Public Participation (IAP2), Reg No: IAP2SA154
- Registered Member National Association for Clean Air, Reg No: SIT003
- Registered as Pest Control Operator (Weed Control – Industrial Use) : Department of Agriculture, Forestry and Fisheries, Registration No : P33654 (Initial Registration: 03/10/2011)
- Registered Class (IV) Process Contoller (Department of Water Affairs): Treatment of Portable Water & Waste Water
- Registered Member: Coaches and Mentors of South Africa (COMENSA): 8756
- South African Council for the Project and Construction Management Professions (SACPCMP): Registration in Progress No. CHS20303
- Founding Secretary (General): Pan African Projects Forum, 2017 to date
- International Association for Impact Assessments SA (IAIAsa): Executive Member, 2018 to date
- Past President International Association for Impact Assessments SA (IAIAsa) 2014/2015
- President IAIAsa, 2013/2014
- Vice President/President Elect IAIAsa, 2012/2013
- Vice Chairperson – IAIAsa Limpopo Province, 2011/2012
- Sekhukhune Environmental Forum : Founding Chairperson, 2008/2009
- Christian Achievers Academy : Parents Association Chairperson, 2010/2011
- Designated National Authority (RSA): First Sub-Committee Member, Limpopo

COMMUNITY SERVICE/ VOLUNTARY ACTIVITIES:

- Board Member – Letaba Trust Fund 2021 to date
- Member – Limpopo Coaches & Mentors 2020 to date
- Assist colleagues in Development of Business plans, Tendering and Funding models
- Mentoring and Monitoring of Postgraduate Students (Masters & PhD)
- Religious Marriage Officer and Counsellor (DHA Registration No. BD60021)
- Conducts Marriage Seminars & Couples Retreats

COUNTRIES OF WORK EXPERIENCE:

South Africa	Zimbabwe	Mozambique	Gabon
Swaziland	Lesotho	Ghana	SADC

EMPLOYMENT RECORD:

Date from - to	Location	Organisation	Position	Description of Duties and achievements
2003 - date	South Africa, Lesotho, SADC States	QEMS	Consultant	Climate Change, Environmental Management, Social, Socio-Economic, Resettlement, Public Health, ESG & Sustainability, Transaction Advisor, Pest/Weed Control and Operator (Class (IV)) Water Process Controller Projects (+150).
2022	South Africa	World Bank	Consultant	Environmental & Social Specialist on COVID-19 programmes in hospitals
2014 - 2019	South Africa, Mozambique, Zimbabwe, Ghana, Lesotho, SADC States	GIBB Architecture & Engineering	Consultant	Climate Change, Environmental Management, Social, Socio-Economic, Resettlement, Public Health, ESG & Sustainability, Transaction Advisor, Pest/Weed Control and Operator (Class (IV)) Water Process Controller Projects (+150).
2017	South Africa	University of Limpopo	Senior Lecturer	Part-time Lecturing on Environmental Modules
2013 - 2014	South Africa	Hatch Goba/ Eskom	Consultant	Environmental Specialist on World Bank funded Majuba Rail Project between Ermelo and Majuba.
2005 - 2013	South Africa, Zimbabwe	Limpopo Water Initiative	Consultant & Executive	Climate Change, Environmental Management, Social, Socio-Economic, Sustainability, Pest/Weed Control and Operator (Class (IV)) Water Process Controller Projects.

WORK UNDERTAKEN THAT BEST ILLUSTRATES CAPABILITY TO HANDLE THE TASKS ASSIGNED PER DISCIPLINE:

PROJECTS

1. **CLIMATE CHANGE REPORTING AND ASSESSMENT**
2. **OCCUPATIONAL, PUBLIC HEALTH AND SAFETY**
3. **FEASIBILITY STUDIES AND TRANSACTION ADVISOR**
4. **SOCIO-ECONOMIC ASSESSMENTS AND COMPENSATION VALUATIONS**
5. **ENVIRONMENTAL, SOCIAL AND RESETTLEMENT & VALUATION SPECIALIST**
6. **MINING LIABILITY COST CALCULATION/ FINANCIAL PROVISION**
7. **SUSTAINABILITY AND ENERGY ASSESSMENTS**
8. **AIR QUALITY MANAGEMENT**
9. **DRINKING AND WASTE WATER QUALITY MANAGEMENT**
10. **WASTE MANAGEMENT**
11. **ECO, AUDITING AND COMPLIANCE MONITORING**
12. **MINING PERMITS, MINING RIGHTS AND PROSPECTING RIGHTS**
13. **ENVIRONMENTAL OUTLOOK REPORTING**
14. **VEGETATION & PEST CONTROL MANAGEMENT**
15. **LEGAL COMPLIANCE**
16. **ENVIRONMENTAL MANAGEMENT FRAMEWORKS AND SEAs**
17. **ENVIRONMENTAL IMPACT ASESSMENTS**
18. **TRAINING AND COACHING**
19. **HYDROCARBON AND LAND REHABILITATION MANAGEMENT**
20. **GEOTECHNICAL AND GEOHYDROLOGICAL INVESTIGATIONS**
21. **PROJECT MANAGEMENT**

PUBLICATIONS:

- SADC Climate Change Yearbook 2016 and 2023

Certification

I, the undersigned, certify that to the best of my knowledge and belief, this CV correctly describes myself, my qualifications and my experience. I understand that any wilful misstatement described herein may lead to my disqualification or dismissal, if engaged.



01/12/2023

_____ Date: _____

[Signature of staff member or authorized representative of the staff] Day/Month/Year

Full Name of Authorized Representative: _____