SWITCHING SUBSTATION AND 132kV POWER LINE FROM THE AUTHORISED ORKNEY SOLAR FARM SUBSTATION TO THE EXISTING VAAL REEFS TEN SUBSTATION, NORTH WEST PROVINCE

Transmission and Distribution Infrastructure Generic Environmental Management Programme (EMPR) – Switching Substation

May 2022

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











TABLE OF CONTENTS

INTF	RODL	ICTION	1
1	. В	ackground	1
2	. Р	urpose	1
3	. С	bjective	1
4	. S	cope	1
5	. S ⁺	ructure of this document	2
6	. С	ompletion of part B: section 1: the pre-approved generic EMPr template	4
7 n		mendments of the impact management outcomes and impact agement actions	4
8		ocuments to be submitted as part of part B: section 2 site specific informatio	
(0	a)	Amendments to Part B: Section 2 – site specific information and declaration	5
PAR	2T A -	GENERAL INFORMATION	2
1	. D	EFINITIONS	2
2	. А	CRONYMS and ABBREVIATIONS	3
3 P		OLES AND RESPONSIBILITIES FOR ENVIRONMENTAL MANAGEMENT GRAMME (EMPr) IMPLEMENTATION	4
4	. E	NVIRONMENTAL DOCUMENTATION REPORTING AND COMPLIANCE1	.0
	4.1	Document control/Filing system1	.0
	4.2	Documentation to be available1	.0
	4.3	Weekly Environmental Checklist1	.0
	4.4	Environmental site meetings1	.1
	4.5	Required Method Statements1	.1
	4.6	Environmental Incident Log (Diary)1	.2
	4.7	Non-compliance1	.2
	4.8	Corrective action records	.3
	4.9	Photographic record1	.3
	4.10	Complaints register1	.4
	4.1	Claims for damages1	.4
	4.12	2 Interactions with affected parties1	.4
	4.13	B Environmental audits1	.5
	4.14	Final environmental audits1	.5
PAR	T B: S	SECTION 1: Pre-approved generic EMPr template1	6

5.	IMPA	CT MANAGEMENT OUTCOMES AND IMPACT MANAGEMENT ACTIONS	16
	5.1	Environmental awareness training	17
	5.2	Site Establishment development	19
	5.3	Access restricted areas	21
	5.4	Access roads	22
	5.5	Fencing and Gate installation	24
	5.6	Water Supply Management	28
	5.7	Storm and wastewater management	29
	5.8	Solid and hazardous waste management	30
	5.9	Protection of watercourses and estuaries	33
	5.10	Vegetation clearing	35
	5.11	Protection of fauna	39
	5.12	Protection of heritage resources	41
	5.13	Safety of the public	43
	5.14	Sanitation	45
	5.15	Prevention of disease	46
	5.16	Emergency procedures	48
	5.17	Hazardous substances	50
	5.18	Workshop, equipment maintenance and storage	56
	5.19	Batching plants	57
	5.20	Dust emissions	61
	5.21	Blasting	63
	5.22	Noise	63
	5.23	Fire prevention	64
	5.24	Stockpiling and stockpile areas	66
	5.25	Civil works	67
	5.26	Excavation of foundation, cable trenching and drainage systems	69
	5.27	Installation of foundations, cable trenching and drainage systems	70
	5.28 Insulc	Installation of equipment (circuit breakers, current Transformers, Isolatentors, surge arresters, voltage transformers, earth switches)	
	5.30	Cabling and Stringing	73
	5.31 syster	Testing and Commissioning (all equipment testing, earthing system, mintegration)	74
	5.32	Socio-economic	74

5.3	33 Temporary closure of site	76
5.3	B4 Dismantling of old equipment	79
5.3	35 Landscaping and rehabilitation	81
6 AG	CCESS TO THE GENERIC EMPr	84
PART B: SI	ECTION 2	85
7.	SITE SPECIFIC INFORMATION AND DECLARATION	85
7.1.	Sub-section 1: contact details and description of the project	85
7.2.	Sub-section 2: Development footprint site map	86
7.1	Sub-section 3: Declaration	94
7.2	Sub-section 4: amendments to site specific information (Part B	; section 2)94
PART C		95
8.	SITE SPECIFIC ENVIRONMENTAL ATTRIBUTES	95
APPENDI)	(1: METHOD STATEMENTS	96
APPENDI)	(2: CV OF THE EAP	97
List of tab	les	
Table 1:0	Guide to roles and responsibilities for implementation of a generic EMPr	. 1

INTRODUCTION

1. Background

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

2. Purpose

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

3. Objective

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

4. Scope

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

5. Structure of this document

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.
В	1	Pre-approved generic EMPr template	Contains generally accepted impact management outcomes and impact management actions required for the avoidance, management and mitigation of impacts and risks associated with the development or expansion of substation infrastructure for the transmission and distribution of electricity, which are presented in the form of a template that has been preapproved.
			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 <u>Part B: Section 1</u> and understands that the impact management outcomes and impact management actions are legally binding . The preliminary infrastructure layout must be 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 preapproved or approved in terms of <u>Part C</u> .
			This section must be submitted to the CA together with the final BAR or EIAR. The information submitted to the CA will be considered to be incomplete should a signed copy of <u>Part B: section 2</u> not be submitted. Once approved, this Section forms part of the EMPr for the development and is legally binding.
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 preapproved 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

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 <u>Part B: section 1</u> .
Appendix 1			Contains the method statements to be prepared prior to commencement of the activity. The method statements are not required to be submitted to the competent authority.

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

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

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

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

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

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

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

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

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

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

<u>Sub-section 2</u> is to be prepared by an EAP and must contain his/her name and expertise including a curriculum vitae. This sub-section must include a map of the site sensitivity overlaid with the preliminary infrastructure layout using the national web based environmental screening tool, when available for compulsory use at: 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.

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

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

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

PART A - GENERAL INFORMATION

1. **DEFINITIONS**

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

- " **clearing**" means the clearing and removal of vegetation, whether partially or in whole, including trees and shrubs, as specified.
- "Construction camp" is the area designated for key construction infrastructure and services, including but not limited to offices, overnight vehicle parking areas, stores, the workshop, stockpile and lay down areas, hazardous storage areas (including fuels), the batching plant (if one is located at the construction camp), designated access routes, equipment cleaning areas and the placement of staff accommodation, cooking and ablution facilities, waste, and wastewater management.
- " **contractor**" The Contractor has overall responsibility for ensuring that all work, activities, and actions linked to the delivery of the contract, are in line with the Environmental Management Programme and that Method Statements are implemented as described.
- "Hazardous substance" is a substance governed by the Hazardous Substances Act, 1973 (Act No. 15 of 1973) as well as the Hazardous Chemical and Substances Regulations, 1995.
- "Method statement" means a written submission by the Contractor to the Project Manager in response to this EMPr or a request by the Project Manager and ECO. The method statement must set out the equipment, materials, labour, and method(s) the Contractor proposes using to carry out an activity identified by the Project Manager when requesting the Method Statement. This must be done in such detail that the Project Manager and ECO is able to assess whether the Contractor's proposal is in accordance with this specification and/or will produce results in accordance with this specification.

The method statement must cover as a minimum applicable detail 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

Competent Authority
Contractors Environmental Officer
Developer Environmental Officer
Developer Project Manager
Developer Site Supervisor
Environmental Audit Report
Environment Conservation Act No. 73 of 1989
Environmental Control Officer
Environmental Authorisation
Environmental Impact Assessment
Emergency Response Action Plan
Environmental Management Programme
Report
Environmental Assessment Practitioner
Fire Protection Agency
Hazardous chemical Substance
National Environmental Management Act, 1998 (Act No. 107 of 1998)
National Environmental Management: Biodiversity Act ,2004 (Act No. 10 of 2004)
National Environmental Management:
Waste Act, 2008 (Act No. 59 of 2008)
Material Safety Data Sheet
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)	Role The Project Developer is accountable for ensuring compliance with the EMPr and any conditions of approval from the competent authority (CA). Where required, an environmental control officer (ECO) must be contracted by the Project Developer to objectively monitor the implementation of the EMPr according to relevant environmental legislation, and the conditions of the environmental authorisation (EA). The Project Developer is further responsible for providing and giving mandate to enable the ECO to perform responsibilities, and he must ensure that the ECO is integrated as part of the project team while remaining independent. Responsibilities - 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&APs), 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 be specified by the EA, report to the relevant CA as and when required.
	Responsibilities The responsibilities of the ECO will include the following: Be aware of the findings and conclusions of all EA related to the development. Be familiar with the recommendations and mitigation measures of this EMPr. Be conversant with relevant environmental legislation, policies, and procedures, and ensure compliance with them. Undertake regular and comprehensive site inspections / audits of the construction site according to the generic EMPr and applicable licenses in order to monitor compliance as required. Educate the construction team about the management measures contained in the EMPr and environmental licenses. Compilation and administration of an environmental monitoring plan to ensure that the environmental management measures are implemented and are effective. Monitoring the performance of the Contractors and ensuring compliance with the EMPr and associated Method Statements. In consultation with the Developer Site Supervisor order the removal of person(s) and/or equipment which are in contravention of the specifications of the EMPr and/or environmental licenses. Liaison between the DPM, Contractors, authorities, and other lead stakeholders on all environmental concerns. Compile a regular environmental audit report highlighting any non-compliance issues as well as satisfactory or exceptional compliance with the EMPr. Validating the regular site inspection reports, which are to be prepared by the contractor Environmental Officer (cEO). Checking the cEO's record of environmental incidents (spills, impacts, legal transgressions etc.) as well as corrective and preventive actions taken.

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)	Role The dEOs will report to the Project Manager and are responsible for implementation of the EMPr, environmental monitoring and reporting, providing environmental input to the Project Manager and Contractor's Manager, liaising with contractors and the landowners as well as a range of environmental coordination responsibilities.	
	 Responsibilities Be fully conversant with the EMPr. Be familiar with the recommendations and mitigation measures of this EMPr and implement these measures. Ensure that all stipulations within the EMPr are communicated and adhered to by the Employees, Contractor(s). Confine the development site to the demarcated area. Conduct environmental internal audits with regards to EMPr and authorisation compliance (on cEO). Assist the contractors in addressing environmental challenges on site. Assist in incident management: Reporting environmental incidents to developer and ensuring that corrective action is taken, and lessons learnt shared. Assist the contractor in investigating environmental incidents and compile investigation reports. Follow-up on pre-warnings, defects, non-conformance reports. Measure and communicate environmental performance to the Contractor. 	

Responsible Person(s)	Role and Responsibilities		
	 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	Role The Contractor appoints the cEO and has overall responsibility for ensuring that all work, activities, and actions linked to the delivery of the contract are in line with the EMPr and that Method Statements are implemented as described. External contractors must ensure compliance with this EMPr while performing the onsite activities as per their contract with the Project Developer. The contractors are required, where specified, to provide Method Statements setting out in detail how the impact management actions contained in the EMPr will be implemented during the development or expansion of substation infrastructure for the transmission and distribution of electricity activities.		
	 Responsibilities project delivery and quality control for the development services as per appointment. employ a suitably qualified person to monitor and report to the Project Developer's appointed person on the daily activities on-site during the construction period. ensure that safe, environmentally acceptable working methods and practices are implemented, and that equipment is properly operated and maintained, to facilitate proper access and enable any operation to be carried out safely. attend on site meeting(s) prior to the commencement of activities to confirm the procedure and designated activity zones. ensure that contractors' staff repair, at their own cost, any environmental damage as a result of a contravention of the specifications contained in EMPr, to the satisfaction of the ECO. 		
contractor Environmental Officer (cEO)	Role Each Contractor affected by the EMPr should appoint a cEO, who is responsible for the on-site implementation of the EMPr (or relevant sections of the EMPr). The Contractor's representative can be the site agent; site engineer; a dedicated environmental officer; or an independent consultant. The Contractor must ensure that the Contractor's Representative is suitably qualified to perform the necessary tasks and is		

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

4. ENVIRONMENTAL DOCUMENTATION REPORTING AND COMPLIANCE

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

4.1 Document control/Filing system

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

4.2 Documentation to be available

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

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

4.3 Weekly Environmental Checklist

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

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

4.4 Environmental site meetings

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

4.5 Required Method Statements

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

The method statement must cover applicable details with regard to:

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

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

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

The ECOs shall monitor and ensure that the contractors perform in accordance with these method statements. Completed and agreed method statements between the holder of the EA and the contractor shall be captured in Appendix 1.

4.6 Environmental Incident Log (Diary)

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

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

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

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

The Environmental Incident Log will be captured in the EAR.

4.7 Non-compliance

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

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

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

4.8 Corrective action records

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

4.9 Photographic record

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

The Contractor shall:

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

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

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

4.10 Complaints register

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

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

4.11 Claims for damages

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

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

4.12 Interactions with affected parties

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

The ECOs shall:

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

4.13 Environmental audits

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

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

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

4.14 Final environmental audits

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

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

5. IMPACT MANAGEMENT OUTCOMES AND IMPACT MANAGEMENT ACTIONS

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

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

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

5.1 Environmental awareness training

Impact management 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. h) Solid waste management procedures. i) Sanitation procedures. j) Fire prevention; and k) Disease prevention. 	cEO / dEO in consultation with the ECO	Develop environmental awareness training material which covers the minimum requirements	Pre-construction Construction	ECO dEO	Prior to the commencemen t of the environmental awareness training	Environmental awareness training material requirements checklist
 A record of all environmental awareness training courses undertaken as part of the EMPr must be available; 	ECO/cEO/dEO	Filing system including all proof of training (i.e., attendance register and training minutes / notes for the record)	During the construction phase	ECO dEO	Monthly	Completed and up to date filing system with proof of training
 Educate workers on the dangers of open and/or unattended fires; 	cEO / dEO in consultation with the ECO	Develop environmental awareness training material which covers the	Pre-construction Construction	ECO dEO	Prior to the commencemen t of the environmental	Environmental awareness training material requirements checklist

		dangers of open			awareness	
		and/or			training	
		unattended fire				
 A staff attendance registers of all staff to have received 	ECO/cEO/dEO	Filing system	During the	ECO	Monthly	Completed and
environmental awareness training must be available.		including all	construction	dEO		up to date filing
		proof of training	phase			system inclusive
		(i.e.,				of all
		attendance				attendance
		register)				registers
- Course material must be available and presented in	ECO/cEO/dEO	Develop	During the	ECO	Monthly	Environmental
appropriate languages that all staff can understand.		environmental	construction	dEO		awareness
		awareness	phase			training material
		training material				requirements
		in the required				checklist and
		languages.				the training
		Training material				register which
		must by readily				must indicate
		available to all				the language of
		staff				the training

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.

development area.	de volopinoni dica.							
Impact Management Actions	Implementation			Monitoring				
			1			-		
	Responsible	Method of	Timeframe for	Responsible	Frequency	Evidence of		
	person	implementation	implementation	person		compliance		
- A method statement must be provided by the	Contractor	Development of	Pre-construction	ECO	Once, prior to	Availability of		
contractor prior to any onsite activity that includes the		an appropriate		dEO	construction	the method		
layout of the construction camp in the form of a plan		method				statement which		
showing the location of key infrastructure and services		statement				complies with		
(where applicable), including but not limited to offices,						the minimum		

	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;						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 Assessment Report	Pre-construction Construction	ECO dEO	Once, prior to construction	Availability of a layout and sensitivity map indicating avoidance of sensitive areas
_	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 in accordance with Section 5.5 of this EMPr
_	The use of existing accommodation for contractor staff, where possible, is encouraged.	Not applicable – t town of Orkney	he development of	new accommoda	tion is not proposec	d. Staff will be acco	mmodated in the

5.3 Access restricted areas

Impact management outcome: Access to restricted areas prevented.

	T					
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		Erect appropriate temporary barriers around access restricted areas	At the commencemen t 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 has taken place within the access restricted areas

5.4 Access roads

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

Impact Management Actions	Implementation			Monitoring		
	Responsible	Method of	Timeframe for	Responsible	Frequency	Evidence of
	person	implementation	implementation	person		compliance
An access agreement must be formalized and signed	DPM	Develop access	Pre-construction	dEO	Once, prior to	Availability of
by the DPM, Contractor and landowner before	Contractor	agreements with		ECO	construction	approved and
commencing with the activities;		the affected				signed
		landowners.				negotiations
		Ensure that				
		agreements are				
		approved and				
		signed				
 All private roads used for access to the servitude must 	Contractor	Undertake	During the	cEO / ECO	Weekly	Photographic
be maintained and upon completion of the works, be		maintenance	construction			record of the
left in at least the original condition		activities on	phase			pre-construction
		private roads				condition and
		used for				degradation of
		construction as				roads, and
		degradation				records of the
		takes place				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	Pre-construction Construction	ECO	Once, prior to construction	Access routes map readily available
Any access route deviation from that in the written agreement must be closed and re-vegetated immediately, at the contractor's expense;	Contractor	to all contractors All access routes developed that are not in-line with the access route agreements	Construction and Rehabilitation	ECO	Bi-weekly (every two weeks)	Photographic record of the closure of access roads and revegetation
		must be closed and rehabilitated to the predisturbance state				
 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 requirements of	During the construction phase	ECO	Prior to the use of private roads	Photographic record and proof of the road conditions agreed upon

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

5.5 Fencing and Gate installation

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

Impact Management Actions	Implementation A			Monitoring		
	Responsible	Method of	Timeframe for	Responsible	Frequency	Evidence of
	person	implementation	implementation	person		compliance
 Use existing gates provided to gain access to all parts 	Contractor	Identify and	Pre-construction	dEO	Monthly	Existing gates
of the area authorised for development, where		inform all	& Construction			are utilised on a
possible;		relevant staff of				frequent basis
						and only limited

		the existing gates to be used				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 section 4.9
 All gates must be fitted with locks and be kept locked at all times during the development phase, unless otherwise agreed with the landowner; 		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;		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	During the construction phase	cEO	Once, during the erection of the gates during	New gates installed as per the requirement

		installed for jackal proofing			the construction phase	
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; 		Fence construction camps, batching plants, hazardous storage areas and access restricted areas	During the construction phase	ECO	Once during the erection of fencing	Photographic record of fences erected
 Any temporary fencing to restrict the movement of life- stock must only be erected with the permission of the land owner. 	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; The use of razor wire as fencing must be avoided as far as possible; 	Contractor	Make use of high-quality materials approved by SABS Razor wire must not be sourced or used for the erection of	During the construction phase During the construction phase	cEO	To be monitored as fencing is erected during the construction phase To be monitored as fencing is erected during the construction	Use of high- quality materials for fencing approved by SABS 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	fencing Ensure fenced areas are locked as required through the implementation of a formalised process. Appoint a security company	During the construction phase	CEO	phase 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 Method of Timeframe Responsible Frequency Evidence of implementation implementation compliance person person All abstraction points or bore holes must be registered Not applicable water for the project will be either sourced from municipal sources and abstraction points. with the DWS and suitable water meters installed to ensure that the abstracted volumes are measured on a daily basis; The Contractor must ensure the following: Not applicable - water for the project will be sourced from municipal sources and abstraction points. a. The vehicle abstracting water from a river does not enter or cross it and does not operate from within the river. b. No damage occurs to the river bed or banks and that the abstraction of water does not entail stream diversion activities; and c. All reasonable measures to limit pollution or sedimentation of the downstream watercourse are implemented. Ensure water conservation is being practiced by: ECO Monthly, and as Contractor Implement the Successful During the a. Minimising water use during cleaning of dEO / cEO in required water construction and when implementation consultation conservation phase required water equipment. b. Undertaking regular audits of water systems; and with the FCO measures conservation throughout on-

c. Including a discussion on water usage and	site construction	
conservation during environmental awareness	processes	
training.		
d. The use of grey water is encouraged.		

5.7 Storm and wastewater 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 mismanagemen t 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; 		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 	DPM in consultation with the ECO	Consultation between the DPM and the	During the construction phase	ECO	As and when the need arises to discharge	Proof of consultation between the

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

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 commencemen 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	During the Construction Phase	ECO	Weekly	The waste collection site is maintained and clean

		as per the waste				
		requirements for				
		the project				
		during				
		construction				
Waste must be segregated into separate bins and	Contractor	Provide	During the	cEO	Weekly	Separate waste
,	Confidence		- C	CEO	weekiy	l '
clearly marked for each waste type for recycling and		separate and	Construction			bins are
safe disposal;		marked bins for	Phase			available on site
		the different				and waste
		waste types				generated is
		associated with				separated into
		the construction				the relevant bins
		phase				
 Staff must be trained in waste segregation; 	cEO / dEO in	Include waste	Pre-construction	ECO	Monthly, and as	Environmental
	consultation	segregation as	Construction		and when	awareness
	with the ECO	part of the			required	training material
		environmental				requirements
		awareness				checklist
		training material.				
 Bins must be emptied regularly; 	Contractor	Bins must be	During the	ECO	Monthly	No
		emptied before	construction		,	mismanagemen
		reaching total	phase			t of bins.
		capacity and on				
		a regular basis				
		as required for				
		the project				
General waste produced onsite must be disposed of at	Contractor	Disposal of	During the	ECO	Monthly	Disposal
registered waste disposal sites/ recycling company;		general waste at	construction		,	certificates of
		licensed waste	phase			disposal at
		disposal facilities	P. 1030			licensed facilities
		must be				to be provided
		undertaken as				10 DC PIOVIGGO
		per the waste				
		management				
		plan				

- Hazardous waste must be disposed of at a registered	Contractor	Disposal of	During the	ECO	Monthly	Disposal
waste disposal site;		hazardous	construction			certificates of
		waste at	phase			disposal at
		licensed waste				licensed facilities
		disposal facilities				to be provided
		must be				
		undertaken as				
		per the waste				
		management				
		plan				
- Certificates of safe disposal for general, hazardous,	Contractor	Obtain	During the	ECO	Monthly	Disposal
and recycled waste must be maintained.		certificates for	construction			certificates of
		safe disposal of	phase			disposal at
		waste				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	Method of	Timeframe for	Responsible	Frequency	Evidence of
	person	implementation	implementation	person		compliance
- All watercourses must be protected from direct or	Contractor	Contractor to	During the	ECO	Weekly	No incidents
indirect spills of pollutants such as solid waste, sewage,		undertake	construction			reported of
cement, oils, fuels, chemicals, aggregate tailings, wash		activities which	phase			spillage of
and contaminated water or organic material resulting		can cause spills				pollutants into
from the Contractor's activities;		of pollutants				watercourses

		outside of				
		watercourses				
		Walercoolses				
- In the event of a spill, prompt action must be taken to	Contractor and	Develop a	During the	ECO	Weekly	Feedback must
clear the polluted or affected areas;	cEO	management	construction			be provided by
		plan or process	phase			the contractor in
		for				terms of how the
		implementation				spill was handled
		should a spill				and
		take place				photographic
						evidence of the
						feedback must
						be provided
						and kept on
						record
- Where possible, no development equipment must	Not applicable - r	no wetlands are loca	ated near the site fo	or the placement of	f the switching statio	on.
traverse any seasonal or permanent wetland						
- No return flow into the estuaries must be allowed and	Not applicable – r	no estuaries are loca	ated within the stud	ly area.		
no disturbance of the Estuarine functional Zone should						
occur;						
- Development of permanent watercourse or estuary	Not applicable – r	no watercourses will	be crossed becau	se of the developm	ent of the switching	g station.
crossing must only be undertaken where no alternative						
access to tower position is available;						
- There must not be any impact on the long-term	Not applicable – t	he development of	the switching statio	on will not have any	long-term morphol	ogical impacts on
morphological dynamics of watercourses or estuaries;	watercourses as t	here are no waterd	courses present with	nin the section of th	ne preferred grid co	onnection corridor
	where the switchir	ng station will be de	veloped.			
- Existing crossing points must be favoured over the	Not applicable – r	no new road crossin	gs will be required f	or the developmen	nt of switching statio	n.
creation of new crossings (including temporary access)						
- When working in or near any watercourse or estuary,	Contractor	Activities	During the	ECO	Monthly, and as	No degradation
the following environmental controls and		undertaken near	construction		and when	of the
consideration must be taken:		watercourses	phase		required	watercourses
a) Water levels during the period of construction.		must be in-line				and no incidents
		with and				

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

5.10 Vegetation clearing

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

Impact Management Actions	Implementation			Monitoring		
	Responsible	Method of	Timeframe for	Responsible	Frequency	Evidence of
	person	implementation	implementation	person		compliance
General:						
- Indigenous vegetation which does not interfere with	cEO and	Demarcate	Construction	ECO	Weekly, and as	No unnecessary
the development must be left undisturbed;	contractor	areas of	and operation	Operation and	and when	clearance of
		indigenous	(i.e., for	maintenance	required	indigenous
		vegetation to be	maintenance	team		vegetation is
		avoided before	purposes)			undertaken

		clearance 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 than those permitted to be removed
 Prior to construction activity a walk-through survey must be undertaken to tag/mark flora species to be relocated. Appropriate permits must be obtained prior to relocation of the identified species. 	DPM / Appointed specialist	Complete final walkthrough to identify protected vegetation / required for permit application	Before commencemen t of construction	dEO, cEO, ECO	Evaluate accuracy of permit obtained for the translocation of protected species	No clearance of protected or endangered species other than those permitted to be removed
 Search, rescue, and replanting of all protected and endangered species likely to be damaged during project development must be identified by the relevant specialist and completed prior to any development or clearing; 	Relevant specialist in consultation with the Contractor	Develop and implement a Plant Search and Rescue Plan	Pre-construction & Construction	ECO	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	Pre-construction	ECO	Once, prior to the commencemen t of the construction	Permits on file

		for the removal of protected species. Permits must be kept on file			phase and removal of the protected species	
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;		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		Not Applicable	
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		Not Applicable	
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	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
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
 No herbicides must be used in estuaries 	Not applicable - n	o estuaries are pres	sent within the study	/ area		
 All protected species and sensitive vegetation not removed must be clearly marked and such areas fenced off in accordance with 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	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

	management		
	facility		

5.11 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 commencemen t 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 commencemen 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	Avoid breeding sites and ensure that special care is taken in	During the Construction Phase Operation Phase	ECO Operation and maintenance team	Weekly, and as and when required during the construction.	Photographic record of intact breeding sites

		the presence of			Monthly, and as	
		nestlings and			and when	
		fledgelings			required during	
		neagenings			,	
	150 / 50 :	A II	D II	500	operation	Di i i i i i i i i i i i i i i i i i i
Special recommendations of the avian specialist must	dEO / cEO in	All mitigation	During the		Weekly during	Photographic
be adhered to at all times to prevent unnecessary	consultation	measures	Construction	Operation and	construction	record of
disturbance of birds;	with the	recommended	Phase	maintenance	and monthly	compliance and
	Contractor	by the avifauna	Operation Phase	team	during operation	successful
		specialist must				implementation
		be implemented				of the
						recommended
						measures
- No poaching must be tolerated under any	dEO / cEO in	All site staff must	During the	ECO	Monthly, and as	No instances of
circumstances. All animal dens in close proximity to the	consultation	be informed of	Construction		and when	poaching are
works areas must be marked as Access restricted	with the	this requirement	Phase		required	reported
areas;	Contractor	during the				
		Environmental				
		Awareness				
		Training and the				
		consequences				
		of not adhering				
		to the				
		requirement.				
		These areas				
		must be				
		demarcated as				
		Access				
		Restricted Areas				
 No deliberate or intentional killing of fauna is allowed; 	dEO / cEO in	All site staff must	During the	ECO	Monthly, and as	No instances of
3 3 3 3 3 3 3 3 3 3	consultation	be informed of	Construction		and when	deliberate or
	with the	this requirement	Phase		required	intentional killing
	Contractor	during the			1	are reported
		Environmental				
		Awareness				
		Training and the				
	l					

	ı		1	ı		
		consequences				
		of not adhering				
		to the				
		requirement.				
		These areas				
		must be				
		demarcated as				
		Access				
		Restricted Areas				
 In areas where snakes are abundant, snake deterrents 	dEO / cEO in	Implement and	During the	ECO	Once, during	Photographic
are to be deployed on the pylons to prevent snakes	consultation	maintain snake	Construction	Operation and	the construction	record of the
climbing up, being electrocuted, and causing power	with the	deterrents in	Phase	maintenance	and as and	implementation
outages; and	Contractor	areas where	Operation Phase	team	when required.	and
		snakes are	·		Monthly during	maintenance of
		abundant			operation	snake deterrents
- No Threatened or Protected species (ToPs) and/or	DPM in	Undertake a	Pre-construction	ECO	Once, prior to	Permits for
protected fauna as listed according NEMBA (Act No.	consultation	permitting			the	removal
10 of 2004), and relevant provincial ordinances may be	with the dEO	process to			commencemen	and/relocation
removed and/or relocated without appropriate		obtain the			t of construction	must be kept on
authorisations/permits.		required permits			and as and	file and be
					when required	readily available

5.12 Protection of heritage resources

Impact management outcome: Impact to heritage resources is minimised.

Impact management outcome: Impact to heritage resources is minimisea.									
Impact Management Actions	Implementation					Monitoring			
	Responsible person	Method of implementation	Timefro implem	_	for ion	Responsible person	Frequency	Evidence compliance	of
 Identify, demarcate, and prevent impact to all known sensitive heritage features on site in accordance with 		l sensitive Heritage	and Palo	aeonto	ologic	al areas identified i	n the specialist asse	essment.	

the No-Go procedure in Section 5.3: Access restricted areas;						
Carry out general monitoring of excavations for potential fossils, artefacts, and material of heritage importance;	Suitably qualified specialist in consultation with the ECO	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
 If any Archaeological resources or unmarked human remains are uncovered or exposed during excavation activities, then these must be immediately reported Heritage Western-Cape (Ms Stephanie Barnhardt 021 483 9543) 	dEO, cEO, ECO	Develop and implement procedures for situations where human remains, archaeological, palaeontologic al, 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.
 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, palaeontologic al, or historical	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.

material	are		
uncovered			

5.13 Safety of the public

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

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

		be open for				
		long-periods of				
		time				
Adequate protective measures must be implemented	Contractor	All staff must be	During the	ECO	Monthly, and as	No incidents of
to prevent unauthorised access to and climbing of		easily	construction		and when	unauthorised
partly constructed infrastructure and protective		identifiable, and	phase		required	climbing are
scaffolding;		the climbing of				reported
		infrastructure				
		and scaffolding				
		must be				
		undertaken by				
		authorised				
		personnel as				
		managed by				
		the Contractor				
 Ensure structures vulnerable to high winds are secured; 	Contractor	Ensure that	During the	ECO	Weekly, and as	No incidents of
		sufficient	construction		and when	unstable
		stabilisation	phase		required	structures due to
		measures are				high winds is
		implemented to				reported
		secure structures				
		vulnerable to				
		high winds				
 Maintain an incidents and complaints register in which 	cEO	Compile and	During the	ECO	Monthly, and as	The incidents
all incidents or complaints involving the public are		regularly update	construction		and when	and complaints
logged.		as incidents and	phase		required	register are
		complaints are			,	complete and
		submitted from				provides all the
		the public and				required details
		indicate the				,
		actions taken to				
		resolve the				
		complaint				
	l	- 3	l	l .	l	

5.14 Sanitation

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

Impact Management Actions	Implementation			Monitoring		
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance
Mobile chemical toilets are installed onsite if no other ablution facilities are available;	Contractor	Mobile chemical toilets must be placed appropriately and in areas 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 ir consultation with the cEO	All site staff must be informed of this requirement during the Environmental Awareness Training and the consequences of not adhering to the requirement.	Pre-construction & Construction	ECO	Monthly, and as and when required	No evidence of non-compliance identified
 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. 	Contractor ir 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

c) No spillage occurs when the toilets are cleaned or emptied, and the contents are managed in accordance with the EMPr. d) Toilets have an external closing mechanism and are closed and secured from the outside when not in use to prevent toilet paper from being blown out. e) Toilets are emptied before long weekends and workers holidays and must be locked after working hours. f) Toilets are serviced regularly, and the ECO must inspect toilets to ensure compliance to health standards;						
 A copy of the waste disposal certificates must be maintained. 	Contractor	Certificates obtained from the licensed waste disposal facility with the emptying of the toilets must be kept on file	During the Construction Phase	ECO	Monthly, and as and when required	Certificates for waste disposal from the licensed waste disposal facility

5.15 Prevention of disease

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

Impact Management Actions	Implementation			Monitoring			
	Responsible	Method of	Timeframe for	Responsible	Frequency	Evidence	of
	person	implementation	implementation	person		compliance	
- Undertake environmentally friendly pest control in the	Contractor	Only	During the	ECO	As and when	Contractor	to
camp area;		environmentally	Construction		pest control is	provide proof	of of
		friendly pest	Phase		required for the	pest con	ntrol
		control must be			project	used be	eing

		used, when required				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 commencemen t 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	Ensure that designated personnel with	Construction and Operations	ECO	Monthly	Check the availability of first aid trained

	with	the	first aid training				personnel	and
	Contractor		are available on				medical	kits
			site and that first				(including	if
			aid kits to				these	are
			provide medical				complete	in
			support is readily				terms	of
			available				supplies)	
- Provide access to Voluntary HIV Testing and	Contractor		Compile a HIV	During the	ECO	Quarterly, and	Voluntary te	esting
Counselling Services.			testing schedule	Construction		as and when	schedules	and
			and provide	Phase		required	proof	of
			counselling				counselling	
			services where				(where	
			required				undertaken	1)

5.16 Emergency procedures

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

Impact Management Actions	Implementation			Monitoring			
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance	
Compile an Emergency Response Action Plan (ERAP) prior to the commencement of the proposed project;	Contractor	Develop an Emergency Preparedness, Response and Fire Management Plan specific to the project	Pre-construction	ECO	Once, prior to the commencemen t of construction	Emergency Preparedness, Response and Fire Management Plan compiled	

- The Emergency Plan must deal with accidents,	Contractor	Develop an	Pre-construction	ECO	Once, prior to	Emergency
potential spillages, and fires in line with relevant		Emergency			the	Preparedness,
legislation;		Preparedness,			commencemen	Response and
is glorally		Response and			t of construction	Fire
		Fire				Management
		Management				Plan includes
		Plan specific to				required
		the project				specifications
		which covers				3pocinicanoris
		accidents,				
		potential				
		spillages, and				
		fires				
 All staff must be made aware of emergency 	cEO / dEO in	Develop	Pre-construction	ECO	Prior to the	Environmental
procedures as part of environmental awareness	consultation	environmental	110-0013110011011		commencemen	awareness
training;	with the ECO	awareness			t of the	training material
ii dii iii ig,	WIIITING ECO	training material			environmental	requirements
		which covers the			awareness	checklist
		relevant			training	CHOCKIISI
		emergency			in diriling	
		procedures				
The relevant local authority must be made aware of a	Contractor in	Develop and	Construction	ECO	As and when a	The local
fire as soon as it starts;	consultation	include a	CONSTICCTION		fire occurs	authority was
The do soon as it starts,	with the ECO	procedure in the			1110 000013	informed as per
	Will 1110 200	Emergency				the relevant
		Preparedness,				procedure set
		Response and				out in the
		Fire				Emergency
		Management				Preparedness,
		Plan for the				Response and
		event of a fire				Fire
		and the				Management
		procedure to be				Plan
		followed for				-
	1	101		1	l	

	informing the local authority			
 In the event of emergency necessary mitigation measures to contain the spill or leak must be implemented (see Hazardous Substances section 5.17). 	Implement the required mitigation measures in the event of a spill or leak as per the requirements of Section 5.17.	ECO	As and when a spill or leak occurs	The mitigation measures included under Section 5.17 have been adhered to

5.17 Hazardous substances

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

Impact Management Actions	Implementation			Monitoring		
	Responsible	Method of	Timeframe for	Responsible	Frequency	Evidence of
	person	implementation	implementation	person		compliance
- The use and storage of hazardous substances to be	cEO in	Develop a	Pre-construction	ECO	Once, prior to	Contractor to
minimised and non-hazardous and non-toxic	consultation	strategy of how	& Construction		the	provide
alternatives substituted where possible;	with the	hazardous			commencemen	evidence of
	Contractor	substances can			t of construction	substances used
		be and should			and monthly	for proof of
		be minimised			during the	compliance
					construction	
					phase	
- All hazardous substances must be stored in suitable	Contractor	Develop a	Pre-construction	ECO	Once, prior to	Photographic
containers as defined in the Method Statement;		Method	& Construction		the	proof that
		Statement for			commencemen	hazardous
		the storage of			t of construction	substances are
		hazardous			and monthly	stored in suitable
		substances in			during the	containers as

		suitable			construction	per the
		containers			phase	requirements of
						the relevant
						Method
						Statements
- Containers must be clearly marked to indicate	Contractor	Where	During the	ECO	Monthly	Photographic
contents, quantities, and safety requirements;		hazardous	Construction		,	proof that
		waste is stored,	Phase			containers are
		these must be				marked as per
		clearly marked				the
		indicating the				requirements
		required details				
		of the contents				
 All storage areas must be bunded. The bunded area 	Contractor	Ensure that	During the	ECO	Monthly during	Photographic
must be of sufficient capacity to contain a spill / leak	00111100101	storage areas	Construction		the Construction	proof that
from the stored containers;		are sufficiently	Phase		Phase	storage areas
month the stered containers,		bunded which	111000		111000	are bunded and
		are of sufficient				proof that the
		capacity to				bund areas are
		contain a spill /				of sufficient
		leak from the				capacity to
		stored				contain a spill /
		containers				leak from the
		Comainers				stored
						containers
 Bunded areas to be suitably lined with a SABS 	Contractor	Ensure that	During the	ECO	Once, during	Photographic
approved liner;	Commución	bunded storage	Construction		the Construction	proof that
арргочеа штег,		areas are	Phase		Phase	bunded storage
		suitably lined	rnuse		rnuse	•
		Sulfably lifted				areas are suitably lined
- An Alphabetical Hazardous Chemical Substance	cEO /	Compile and	During the	ECO	Monthly, and as	
(HCS) control sheet must be drawn up and kept up to	Contractor		Construction	LCO	and when	'
	Confideror	· '				
date on a continuous basis;		Alphabetical	Phase		required	control sheet
		Hazardous				provided by the
		Chemical				Contractor

All hazardous chemicals that will be used on site must have Material Safety Data Sheets (MSDS);	cEO / Contractor	Substance (HCS) control sheet specific to the project 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;	Contractor	Provide training for personnel working with HCS	Pre-construction	ECO	Once, prior to the commencemen t 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	Pre-construction & Construction	ECO	Prior to the commencemen t 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

		substances and materials				
The Contractor must ensure that diesel and other liquid	Contractor	Appropriate	During the	ECO	Monthly, and as	Storage tanks for
fuel, oil and hydraulic fluid is stored in appropriate storage tanks or in bowsers;		storage facilities must be constructed or obtained for the storing of diesel, other liquid fuel, oil, and	Construction Phase		and when required	1
		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); 	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	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 refuelling 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 refuelling facility must be developed as per the requirements. Drip trays must	During the Construction Phase	ECO cEO	Monthly Weekly	Soils at the refuelling facility are protected as required and drip trays are provided and used

		be provided for use				
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 into the storage areas	During the Construction Phase	ECO	Monthly	Proof of the implementation of the relevant procedure must be provided by the contractor
 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	Contractor		Provide a mobile	During the	ECO	Monthly, and as	A mobile
-	station is required, a mobile refuelling unit must be	Cornidcioi		refuelling unit as	Construction	100	and when	refuelling unit
	,				Phase			
	used. Appropriate ground protection such as drip trays			well as suitable	Phase		required	and suitable
	must be used;			ground				ground
				protection,				protection is
				where required				available for use
_	An appropriately sized spill kit kept onsite relevant to	Contractor		Provide an	During the	ECO	Monthly, and as	Appropriate spill
	the scale of the activity/s involving the use of			appropriate spill	Construction		and when	kits are available
	hazardous substance must be available at all times;			kit for the project	Phase		required	for use
				for the use of				
				hazardous				
				substances				
_	The responsible operator must have the required	cEO (and	Provide training	Pre-construction	ECO	Once, prior to	Proof of training
	training to make use of the spill kit in emergency	Contractor		on the use of spill			the	to be provided
	situations;			kits to the			commencemen	by the
				relevant			t of construction	contractor
				employees				
_	An appropriate number of spill kits must be available	cEO (and	Provide an	During the	ECO	Monthly	Proof of
	and must be located in all areas where activities are	Contractor		appropriate	Construction		,	appropriate
	being undertaken;			number of spill	Phase			number of spill
				kits in relevant				kits in
				areas				appropriate
				G., G G.G				areas to be
								provided by the
								contractor
	In the event of a spill, contaminated soil must be	cEO (and	Storage and	During the	ECO	Monthly, and as	Proof of storage
	collected in containers and stored in a central location	Contractor	ana	disposal of	Construction		and when	_
		Cornidcioi		contaminated	Phase			and disposal in
	and disposed of according to the National			soil must be in	FIIUSE		required	terms of the
	Environmental Management: Waste Act 59 of 2008.							National
	Refer to Section 5.7 for procedures concerning storm			accordance				Environmental
	and waste water management and 5.8 for solid and			with the National				Management:
	hazardous waste management.			Environmental				Waste Act must
				Management:				be provided.
				Waste Act and				
					l	1	1	1

sections 5.7 and	Certificates of
5.8 of this EMPr	disposal at
	licensed waste
	disposal facilities
	must be
	provided

5.18 Workshop, equipment maintenance and storage

Impact management outcome: Soil, surface water and groundwater contamination are minimised.

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

		removed from site for repairs				
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 with the requirements

5.19 Batching plants

Impact management outcome: Minimise spillages and contamination of soil and surface water.

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 (dirty water)	During the Construction Phase	ECO	Weekly	No cement laden water is released into the environment
 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	During the Construction Phase	ECO	Weekly	No cement laden water is released into the

Hardened concrete from the washout facility or concrete mixer can either be reused or disposed of at an appropriate licensed disposal facility;	Contractor	of associated equipment. Enforce limitations on water use for washing of equipment Make use of hardened concrete where possible or	During the Construction Phase	ECO	Monthly	environment. Only minimal water is used for washing Certificates of disposal of concrete at licensed waste
		dispose of concrete in a suitable manner				disposal facility
 Empty cement bags must be secured with adequate binding material if these will be temporarily stored on site; 	Contractor	Bind empty cement bags and temporarily store it in an appropriate area on site	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 is	At the completion of the Construction Phase	ECO	Once, with the completion of construction	Certificates for the disposal of sand, stone and cement at

		removed or				licensed waste
		reused				disposal facilities
						or proof of reuse
						must be
						provided
 Temporary fencing must be erected around batching 	Contractor	Erect temporary	During the	ECO	Weekly	Temporary
plants in accordance with Section 5.5: Fencing and		fencing around	Construction			fencing is
gate installation.		batching plants	Phase			undertaken in
		as per the				accordance
		requirements				with section 5.5
		listed in section				
		5.5				

5.20 Dust emissions

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

Impact Management Actions	Implementation			Monitoring			
	Responsible person	Method of implementation	Timeframe for implementation	Responsible person	Frequency	Evidence of compliance	
 Take all reasonable measures to minimise the generation of dust as a result of project development activities to the satisfaction of the ECO; 	Contractor	Apply 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		Not Applicable	
 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 the ECO	During the Construction Phase	ECO	Weekly, until erosion is no longer a problem	Recommendati ons made by the ECO have been implemented by the Contractor
 Vehicle speeds must not exceed 40 km/h along dust roads or 20 km/h when traversing unconsolidated and non-vegetated areas: 	cEO / dEO / contractor	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 stabilisation 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

5.21 Blasting

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

Impact Management Actions	Implementation	Implementation A			Monitoring				
	Responsible	Method o	f Ti	imeframe	for	Responsible	Frequency	Evidence	of
	person	implementation	in	mplementa	tion	person		compliance	
 Any blasting activity must be conducted by a suitably licensed blasting contractor; and 	Not Applicable – r	no blasting propos	sed						
 Notification of surrounding landowners, emergency services site personnel of blasting activity 24 hours prior to such activity taking place on Site. 		no blasting propos	sed						

5.22 Noise

Impact Management outcome: Prevent unnecessary noise to the environment by ensuring that noise from development activity is mitigated.

Impact Management Actions	Implementation			Monitoring			
	Responsible	Method of	Timeframe for	Responsible	Frequency	Evidence of	
	person	implementation	implementation	person		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 equipment is used.	

 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
 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	utilised. 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 commencemen t of construction	No complaints registered in this regard.

5.23 Fire prevention

Impact management outcome: Prevention of uncontrollable fires. Impact Management Actions Implementation Monitoring Responsible Responsible Evidence Method of Timeframe Frequency of compliance person implementation implementation person Designate smoking areas where the fire hazard could сЕО Photographic Identify and Pre-construction ECO Monthly be regarded as insignificant; & Construction Contractor demarcate record of through signage

		for designated smoking areas				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 commencemen t 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	Pre-construction & Construction	ECO	Prior to the commencemen t 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

		services at a				
		visible and				
		central location				
- Two-way swop of contact details between ECO and	ECO	Consultation	Pre-construction	Not Applicable	<u> </u>	
FPA.		between the				
		ECO and FPA in				
		order to				
		exchange				
		contact details				

5.24 Stockpiling and stockpile areas

Impact management outcome: Reduce erosion and sedimentation as a result of stockpiling.

Impact Management Actions	Implementation			Monitoring		
impact Management Actions	Implementation			Monitoring		
	Responsible	Method of	Timeframe for	Responsible	Frequency	Evidence of
	person	implementation	implementation	person		compliance
- All material that is excavated during the project	Contractor	Identify and	Pre-construction	ECO	Monthly	Excavated
development phase (either during piling (if required) or		demarcate an	& Construction			material is not
earthworks) must be stored appropriately on site in		appropriate				stored within
order to minimise impacts to watercourses and water		location for the				sensitive
bodies;		storage of				environmental
		excavated				areas
		materials				
- All stockpiled material must be maintained and kept	Contractor	Implement	During the	ECO	Bi-monthly	Stockpiled
clear of weeds and alien vegetation growth by		appropriate and	Construction		(every second	material is
undertaking regular weeding and control methods;		sufficient	Phase		month)	maintained
		maintenance on				sufficiently and is
		stockpiled				clear of weeds
		material				and alien
		regularly				vegetation

Topsoil stockpiles must not exceed 2 m in height:	Contractor	Enforce	During the	e ECO	Bi-monthly	Topsoil stockpiles
		limitations for the	Construction		(every second	do not exceed
		height of topsoil	Phase		month)	2m in height
		stockpiles				
- During periods of strong winds and heavy rain, the	Contractor	Appropriate	During the	e ECO	Monthly	Contractor to
stockpiles must be covered with appropriate material		material must be	Construction			provide proof of
(e.g., cloth, tarpaulin etc.);		provided in	Phase			availability of
		order to cover				appropriate
		stockpiles when				material to
		required				cover stockpiles
						when required
- Where possible, sandbags (or similar) must be placed	Contractor	Sandbags must	During the	e ECO	Monthly	Contractor to
at the bases of the stockpiled material in order to		be provided in	Construction			provide proof of
prevent erosion of the material.		order to prevent	Phase			availability of
		erosion of				sandbags to
		stockpiled				prevent erosion
		materials				of stockpiled
						materials

5.25 Civil works

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

Impact Management Actions	Implementation			Monitoring			
	Responsible	Method of	Timeframe for	Responsible	Frequency	Evidence	of
	person	implementation	implementation	person		compliance	
 Where terracing is required, topsoil must be collected 	Contractor	Collect and	During the	ECO	Weekly	Proof	of
and retained for the purpose of re-use later to		retain topsoil for	Construction			collection	and
rehabilitate disturbed areas not covered by yard stone;		terracing	Phase			retaining	of
			Rehabilitation			topsoil	

 Areas to be rehabilitated include terrace embankments and areas outside the high voltage yards; 	Contractor	Undertake rehabilitation of terrace embankments and areas outside of the high voltage yard where applicable	During the Construction Phase Rehabilitation	ECO	Weekly	Photographic record of rehabilitation of terrace embankments and areas outside the high voltage yards
 Where required, all sloped areas must be stabilised to ensure proper rehabilitation is affected and erosion is controlled; 	Contractor	All disturbed slope areas must be stabilised	Rehabilitation	ECO	Weekly	Disturbed slopes are stabilised sufficiently
 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; 	Contractor	Stabilise slopes as per the design specifications	Pre-construction & Rehabilitation	ECO	Weekly	Slopes are stabilised as per the design specifications
 Rehabilitation of the disturbed areas must be managed in accordance with Section 5.35: Landscaping and rehabilitation; 	Contractor	Undertaken rehabilitation of disturbed areas as per the requirements listed under section 5.35	Rehabilitation	ECO	Weekly	Rehabilitation of disturbed areas is undertaken in- line with the requirements of section 5.35
 All excess spoil generated during terracing activities must be disposed of in an appropriate manner and at a recognised landfill site; and 	Contractor	Use a licensed waste disposal facility for the disposal of excess spoil	During the Construction Phase	ECO	Monthly	Certificates obtained for the disposal of excess spoil at a licensed waste disposal facility
 Spoil can however be used for landscaping purposes and must be covered with a layer of 150 mm topsoil for rehabilitation purposes. 	Contractor	Spoil used for landscaping must be applied as per the listed requirements	Construction and Rehabilitation	ECO	Monthly	Photographic record of spoil used for landscaping purposes as well

			as feed	dback
			from	the
			contractor	r

5.26 Excavation of foundation, cable trenching and drainage systems

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

Impact Management Actions	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 licensed landfill site, if not used for backfilling purposes; 	Contractor	Use a licensed waste disposal facility for the disposal of excess spoil	During the Construction Phase	ECO	Monthly	Certificates obtained for the disposal of excess spoil at a licensed waste disposal facility
 Spoil can however be used for landscaping purposes and must be covered with a layer of 150 mm topsoil for rehabilitation purposes; 	Contractor	Spoil used for landscaping must be applied as per the listed requirements	Construction 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	Contractor	Undertake the	During the	ECO	Monthly	Management of
managed in accordance with Section 5.17: Hazardous		management of	Construction			hazardous
substances.		hazardous	Phase			substances spills
		substances spills				from equipment
		from equipment				is undertaken in
		as per the				line with the
		requirements of				requirements of
		section 5.17				section 5.17

5.27 Installation of foundations, cable trenching and drainage systems

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

Impact Management Actions	Implementation			Monitoring		
	Responsible 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	Contractor	Undertake the batching of cement as per the requirements of section 5.19	During the Construction Phase	ECO	Monthly	Management of batching cement is undertaken in line with the requirements of section 5.19
 Residual solid waste must be disposed of in accordance with Section 5.8: Solid waste and hazardous management. 	Contractor	Undertake the disposal of solid waste as per the requirements of section 5.8	During the Construction Phase	ECO	Monthly	The disposal of solid waste is undertaken in line with section 5.8.

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

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

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	Manage dust as per the requirements of section5.20	During the Construction Phase	ECO	Weekly	The management of dust is undertaken as per the requirements of section 5.20
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 installation 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
Management of 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 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
 Residual solid waste must 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	During the Construction Phase	ECO	Monthly	The recycling or disposal of residual solid waste is

waste as per the	undertaken in
requirements of	line with section
section 5.8	5.8.

5.29 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 and 5.16	During the Construction Phase	ECO	Weekly	Emergency repairs of equipment is undertaken as per the requirements of section 5.18 and 5.16	

5.30 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

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

Impact management outcome: No environmental degradation occurs as a result of Testing and Commissioning.

Impact Management Actions	Implementation					Monitoring		
	Responsible	Method	of	Timeframe	for	Responsible	Frequency	Evidence of
	person	implement	ation	implementa	tion	person		compliance
 Residual solid waste must be recycled or disposed of in 	Contractor	Undertake	the	During	the	ECO	Monthly	The recycling or
accordance with Section 5.8: Solid waste and		recycling	or	Construction	1			disposal of
hazardous management.		disposal	of	Phase				residual solid
		residual	solid					waste is
		waste as pe	er the					undertaken in
		requiremen	its of					line with section
		section 5.8						5.8.

5.32 Socio-economic

Impact management outcome: enhanced socio-economic development.

	l					
Impact Management Actions	Implementation			Monitoring		
	Responsible	Method of	Timeframe for	Responsible	Frequency	Evidence of
	person	implementation	implementation	person		compliance
 Develop and implement communication strategies to 	dEO / cEO	Identify and	Pre-construction	ECO	Once, prior to	Communication
facilitate public participation;		implement	& Construction		the	is undertaken as
		appropriate			commencemen	per the
		strategies for			t of construction	identified
		communication			and monthly	strategies and
		with the			during the	no complaints
		communities			construction	are submitted
		through				regarding
		consideration of				communication

		the community needs				
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 provides procedures for conflict resolution	Pre-construction & Construction	ECO	Once, prior to the commencemen t 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 resolution are submitted by the community
Sustain continuous communication and liaison with neighbouring 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 commencemen t 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	Pre-construction & Construction	ECO	Once, prior to the commencemen t of construction	The "locals first" policy is considered in terms of the

	provision of	and monthly	employment
	employment	during the	and training
	opportunities	construction	opportunities
		phase	
- Where feasible, no workers, with the exception of	Not Applicable - no workers, other than security is propo	sed to stay on-site overnight.	
security personnel, must be permitted to stay over-			
night on the site. This would reduce the risk to local			
farmers.			

5.33 Temporary closure of site

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

Impact Management Actions	Implementation				Monitoring				
	Responsible	Method of	Timeframe f	or	Responsible	Frequency	Evidence of		
	person	implementation	implementation	n	person		compliance		
- Bunds must be emptied (where applicable) and need	Contractor	Regular	During th	ne	ECO	Prior to site	Bunds are		
to be undertaken in accordance with the impact		emptying of the	Construction			closure for more	emptied as per		
management actions included in sections 5.17:		bunds must be	Phase			than 05 days	the		
Hazardous substances and 5.18: Workshop, equipment		undertaken. This					requirements		
maintenance and storage;		must be					listed under		
		undertaken as					sections 5.17		
		per the					and 5.18		
		requirements							
		listed in sections							
		5.17 and 5.18							
 Hazardous storage areas must be well ventilated; 	Contractor	Install	During th	ne	ECO	Prior to site	Effective		
		appropriate	construction			closure for more	ventilation is		
		ventilation in all	phase			than 05 days	installed in		
		hazardous					hazardous		
		storage areas					storage areas		

_	Fire extinguishers must be serviced and accessible.	Contractor	/	Ensure fire	During the	ECO	Prior to site	Signage placed
	Service records to be filed and audited at last service;	cEO		extinguishers are	Construction		closure for more	indicating
				serviced, as	Phase		than 05 days	location of fire
				required and are			,	extinguishers
				easily accessible				and service
				with appropriate				records
				signage				
				indicating				
				location. Ensure				
				service records				
				are kept up to				
				date and filed				
_	Emergency and contact details displayed must be	Contractor	/	Place	During the	ECO	Prior to site	Photographic
	displayed;	cEO		emergency and	Construction		closure for more	proof of contact
				contact details	Phase		than 05 days	details on
				which are				display
				readily available				
				and easily				
				accessible				
	Security personnel must be briefed and have the			Hold a workshop	Pre-construction	ECO	Prior to site	Proof of the
	facilities to contact or be contacted by relevant	consultation		with all security	& construction		closure for more	workshop held
	management and emergency personnel;	with the ECO		personnel to			than 05 days	must be kept on
				provide a brief				file by the
				of the project				contractor.
				and security				
				requirements.				
				Provide facilities				
				in order to				
				contact				
				management				
				and emergency				
	Night hazards such as reflectors lighting traffic signage	Contractor	_	personnel Pagular chacks	During than	ECO	Prior to site	Proof of checks
	Night hazards such as reflectors, lighting, traffic signage etc. must have been checked;	Contractor		Regular checks of night hazards	During the Construction	ECO	Prior to site closure for more	
	erc. mosi nave been checked,			or nigni nazaras	Phase		than 05 days	of night hazards
					rnase		man us days	must be

		must be undertaken				provided by the contractor
Fire hazards identified and the local authority must have been notified of any potential threats e.g., large brush stockpiles, fuels etc.;	CEO / Contractor in consultation with the ECO	Identify any potential fire hazards and notify the relevant local authority	During the Construction Phase	ECO	Prior to site closure for more than 05 days	Proof of notification of the fire hazards to the local authority must be provided by the Contractor
Structures vulnerable to high winds must be secured;	Contractor	Ensure structures vulnerable to wind is secure prior to site closure	During the Construction Phase	ECO	Prior to site closure for more than 05 days	Structures vulnerable to wind is secured prior to site closure
Wind and dust mitigation must be implemented;	Contractor	Implement wind and dust mitigation prior to site closure	During the Construction Phase	ECO	Prior to site closure for more than 05 days	Wind and dust mitigation is implemented prior to site closure
Cement and materials stores must have been secured;	Contractor	Ensure cement and material stores are secured prior to site closure	During the Construction Phase	ECO	Prior to site closure for more than 05 days	Cement and material stores are secured prior to site closure
Toilets must have been emptied and secured;	Contractor	Ensure toilets are emptied and secured prior to site closure	During the Construction Phase	ECO	Prior to site closure for more than 05 days	Toilets are emptied and secured prior to site closure
Refuse bins must have been emptied and secured;	Contractor	Ensure refuse bins are emptied and secured prior to site closure	During the Construction Phase	ECO	Prior to site closure for more than 05 days	Refuse bins are emptied and secured prior to site closure

 Drip trays must have been emptied and secured. 	Contractor	Ensure drip trays	During the	ECO	Prior to site	Drip trays are
		are emptied	Construction		closure for more	emptied and
		and secured	Phase		than 05 days	secured prior to
		prior to site				site closure
		closure				

5.34 Dismantling of old equipment

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

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

- All scrap steel must be stacked neatly, and any disused	Contractor	Ensure all scrap	Decommissionin	Eco	Monthly	Photographic
and broken insulators must be stored in containers;		steel is stacked	g		,	record of
		neatly and store				stacked scrap
		disused and				steel and
		broken insulators				containers
		in appropriate				containing
		containers				broken and
						disused
						insulators
- Once material has been scrapped and the contract	Contractor	Develop and	Decommissionin	Eco	Monthly	Proof from
has been placed for removal, the disposal Contractor		implement a	g			contractor that
must ensure that any equipment containing pollution		procedure for				dismantling and
causing substances is dismantled and transported in		the dismantling				transportation of
such a way as to prevent spillage and pollution of the		and				equipment
environment;		transportation of				containing
		equipment				pollution
		containing				causing
		pollution				substances has
		causing				been
		substances				undertaken in
		which prevents				an appropriate
		spillage and				manner
		pollution of the				
		environment				
 The Contractor must also be equipped to contain and 	Contractor	Ensure sufficient	Decommissionin	Eco	Monthly	Sufficient spill kits
clean up any pollution causing spills; and		spill kits are	g			are available on
		available for the				site
		clean-up of				
		pollution				
		causing spills				
- Disposal of unusable material must be at a licensed	Contractor	Make use of a	Decommissionin	Eco	Monthly	Certificates
waste disposal site.		licensed waste	g			obtained for the
		disposal site				disposal at a
						licensed waste
						disposal site

5.35 Landscaping and rehabilitation

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

Impact Management Actions	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;		Develop and implement a rehabilitation plan for the rehabilitation of all disturbed areas. Dispose of all spoil and waste at a licensed waste disposal facility	Pre-construction & Rehabilitation	ECO	Weekly	Rehabilitation of the disturbed areas is undertaken as per the rehabilitation plan. All certificates of waste disposal at licensed facilities are available.
 Temporary areas that are denuded during construction needs to be re-vegetated with indigenous vegetation. This will also reduce the likelihood of encroachment by Invasive Alien Plant species. 	cEO,					
 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 	consultation	Assess all slopes and determine whether contouring is required	Rehabilitation	ECO	Weekly	All slopes are assessed and contoured as required

only when	nust be assessed for terracing, and to terrace the need is identified in accordance with rvation of Agricultural Resources Act, No 43	Contractor in consultation with the ECO	Assess all slopes and determine whether terracing is required	Rehabilitation	ECO	Weekly	All slopes are assessed and terraced as required
1:4 and b	have been created must have a slope of e replanted with indigenous species and at approximates the original condition;	Contractor	Ensure all berms have a slope of 1:4 and is replanted with indigenous species and grasses	Rehabilitation	ECO	Weekly	All berms have a slope of 1:4 and is replanted with indigenous species and grasses
farmlands, which mus the landow		Not applicable					
 Rehabilitat 	ion of access roads inside of farmland;	Not applicable					
_	s species must be used for with species es to where it compliments or approximates I condition;	Contractor	Make use of indigenous species for rehabilitation	Rehabilitation	ECO	Weekly	Indigenous species are used for rehabilitation
·	topsoil must be used for rehabilitation (refer 5.24: Stockpiling and stockpiled areas);	Contractor	Ensure stockpiled topsoil is used as per the requirements listed under section 5.24	Rehabilitation	ECO	Weekly	Stockpiled topsoil is used as per the requirements listed under section 5.24
	topsoil must be evenly spread so as to eeding and minimise loss of soil due to	Contractor	Ensure that topsoil is spread evenly	Rehabilitation	ECO	Weekly	Topsoil is spread evenly
	acing topsoil, all visible weeds from the t area and from the topsoil must be	Contractor	Remove all visible weeds from placement area and topsoil	Rehabilitation	ECO	Weekly	No weeds are visible in the placement area or the topsoil

		before spreading the topsoil				
 Subsoil must be ripped before topsoil is placed; 	Contractor	Undertake the ripping of subsoil prior to the spreading of topsoil	Rehabilitation	ECO	Weekly	Subsoil is ripped before topsoil is placed
The rehabilitation must be timed so that rehabilitation can take place at the optimal time for vegetation establishment;	Contractor	Plan the timeframe for rehabilitation in order to undertake vegetation planting during the optimal time for vegetation establishment	Rehabilitation	ECO	At the start of rehabilitation to confirm the correct timeframe	undertaken
 Where impacted through construction related activity, all sloped areas must be stabilised to ensure proper rehabilitation is affected and erosion is controlled; 	Contractor	All disturbed slope areas must be stabilised	Rehabilitation	ECO	Weekly	Disturbed slopes are stabilised sufficiently
 Sloped areas stabilised using design structures or vegetation as specified in the design to prevent erosion of embankments. The contract design specifications must be adhered to and implemented strictly; 	Contractor	Stabilise slopes as per the design specifications	Pre-construction & Rehabilitation	ECO	Weekly	Slopes are stabilised as per the design specifications
Spoil can be used for backfilling or landscaping as long as it is covered by a minimum of 150 mm of topsoil.	Contractor	Spoil used for landscaping must be applied as per the listed requirements	Rehabilitation	ECO	Weekly	Photographic record of spoil used for landscaping purposes as well as feedback from the contractor

- Where required, re-vegetation including hydro-	Contractor in	Make use of a	Rehabilitation	ECO	As and whe	en Use of a suitable
seeding can be enhanced using a vegetation seed	consultation	suitable			required	vegetation seed
mixture as described below. A mixture of seed can be	with a suitably	vegetation seed				mixture if
used provided the mixture is carefully selected to	qualified	mixture should				required
ensure the following:	specialist	enhancement				
a) Annual and perennial plants are chosen.		be required				
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:

	Borans of me Applicaring				
Applicant Name	Genesis Eco-Energy Developments (Pty) Ltd				
Contact Person	Davin Chown				
Physical Address	Suite 212, 2nd Floor, Kildare House, The Oval, 1 Oakdale Road, Newlands, Cape Town, 7700				
Postal Address	PO Box 363 Newlands Cape Town				
Cell	083 460 3898				
Email Address	davin@genesis-eco.com				

7.1.2. Details and Expertise of Environmental Assessment Practitioner (EAP)

EAP Name	Ansone' Esterhuizen
EAP Qualifications	Bachelor of Arts in Environmental Management and is currently completing a BSc Honours in Environmental Management.
Professional Affiliation/Registration	EAPASA (2021/3909)
Physical Address	First Floor, Block 2 5 Woodlands Drive Office Park Cnr Woodlands Drive & Western Service Road Woodmead 2191
Telephone	011 656 3237
Fax	086 684 0547
Cell	076 714 1234
Email Address	ansone@savannahsa.com

Refer to **Appendix A** of the EMPr for the detailed experience of the EAP and the Project Team.

7.1.3. Project Details

Switching Substation and 132kV Power Line from the authorised Orkney Solar Farm Substation to the existing Vaal Reefs Ten Substation

7.1.4. Project Description

Genesis Eco-Energy Developments (Pty) Ltd proposes the construction and operation of grid connection infrastructure consisting of a Switching Substation and a 132kV power line

between authorised Orkney Solar Farm Substation (DFFE Ref: 14/12/16/3/3/2/954) and the existing Vaal Reefs Ten Substation The grid connection infrastructure will include a substation on portion 21 of the Farm Wolvehuis 114,

The 100MW Orkney Solar Farm (DFFE Ref: 14/12/16/3/3/2/954) was authorised in 2016 and is located within Remaining Extent of Portion 7 and the Remaining Extent of Portion 21 of the Farm Wolvehuis 114 north west of the Vaal River and approximately 15km south west from the town of Orkney in the North West Province.

7.1.5. Project Location

Location details of the development of the switching station:

Province/s	North West Province
District Municipality/ies	Dr. Kenneth Kaunda District Municipality
Local Municipality/ies	City of Matlosana Local Municipality
Ward number/s	Ward 28
Nearest town/s	Orkney (15km), Viljoenskroon, Klerksdorp, Vierfontein
Farm and Portion number/s	Portion 21 of the Farm Wolvehuis 114

7.1.6. Preliminary Technical Specifications of the 132kV Switching Station

Infrastructur	'e		Footprint, dimensions, and details
Switching station Capacity		acity	Evacuation at 132kV
Switching Footprint	station	Development	Up to 1ha

It should be noted that Eskom's requirements for work in or near Eskom servitudes should be adhered to.

7.2. Sub-section 2: Development footprint site map

This sub-section must include a map of the site sensitivity overlaid with the preliminary infrastructure layout. The sensitivity map must be prepared from the national web based environmental screening tool, when available for compulsory use at: https://screening.environment.gov.za/screeningtool. The sensitivity map shall identify the nature of each sensitive feature e.g., threatened plant species, archaeological site, etc. Sensitivity maps shall identify features both within the planned working area and any known sensitive features within 50 m from the development footprint.

<u>The national web-based environmental screening tool was utilised for this project and the grid connection corridor sensitivity maps can be seen in Figures 3 to 7. The site-specific environmental sensitivity map included in the BA Report is included as Figure 2.</u>

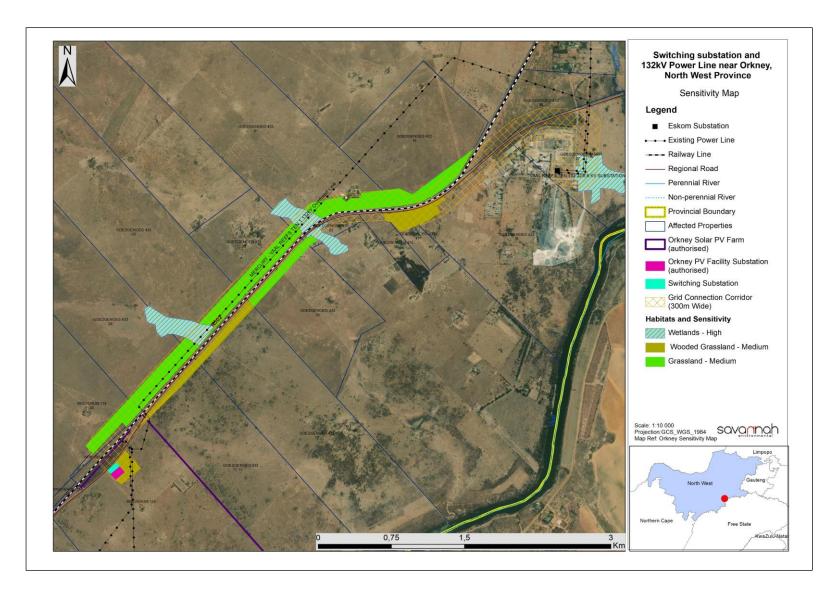


Figure 2: Environmental sensitivity map generated from the Basic Assessment overlain with the proposed grid connection corridor within which the switching substation is proposed to be developed.

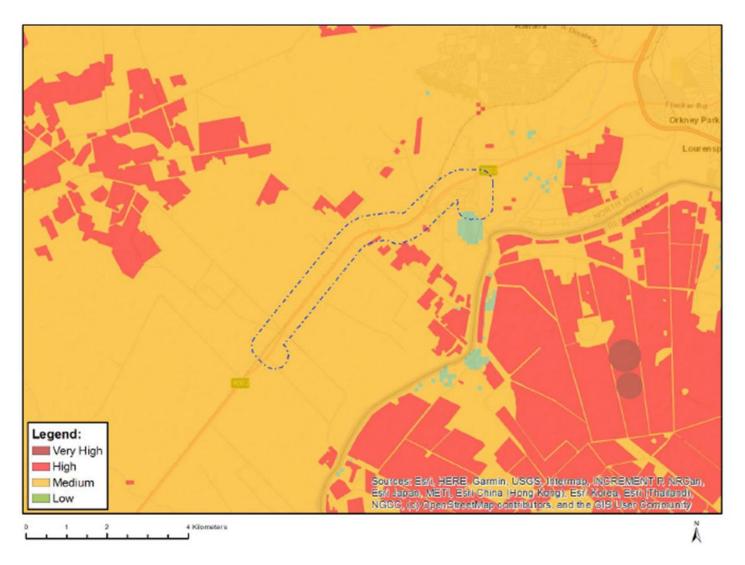


Figure 3: Map of Relative Agriculture Theme Sensitivity (switching substation)

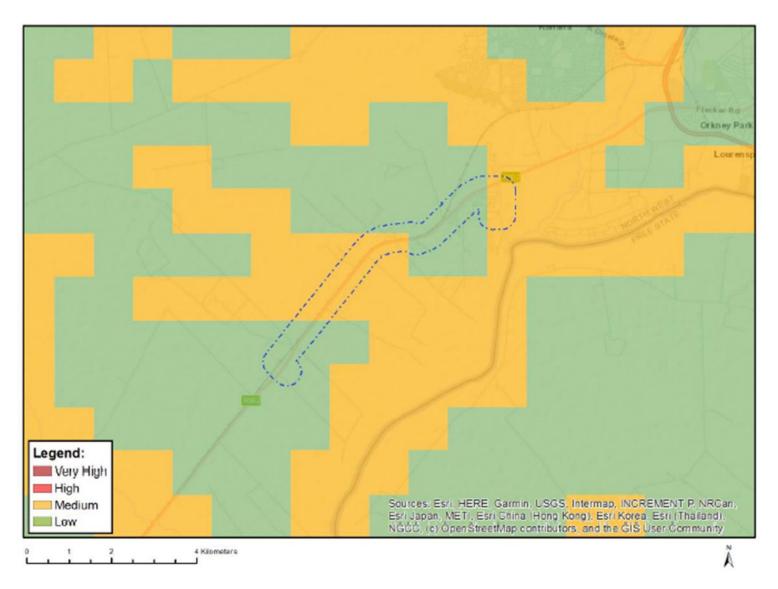


Figure 4: Map of Relative Animal Species Theme Sensitivity (switching station)



Figure 5: Map of Relative Aquatic Biodiversity Sensitivity (switching station)

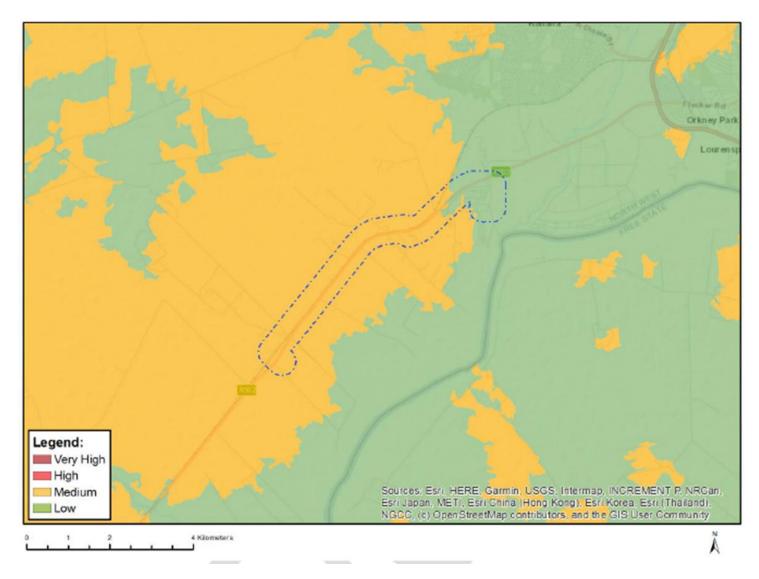


Figure 6: Map of Relative Plant Species Theme Sensitivity (switching station)

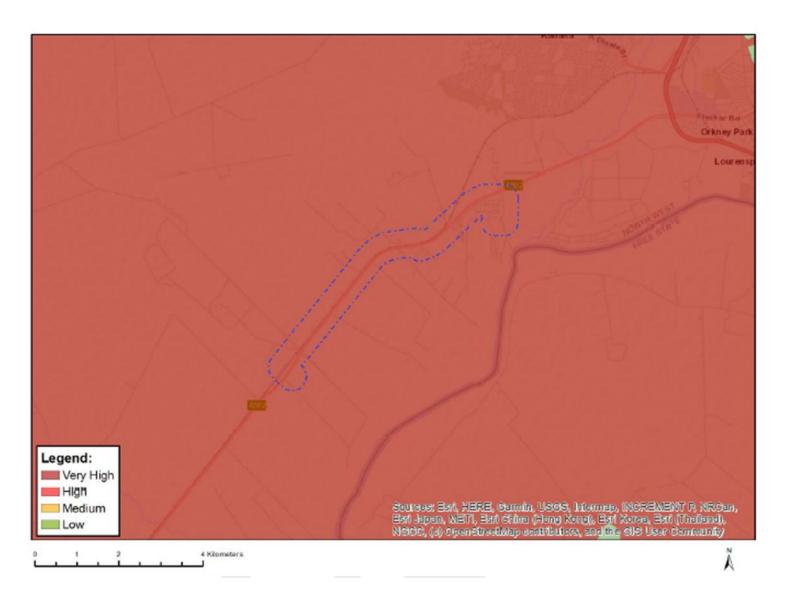


Figure 7: Map of Terrestrial Biodiversity Theme Sensitivity (switching station)

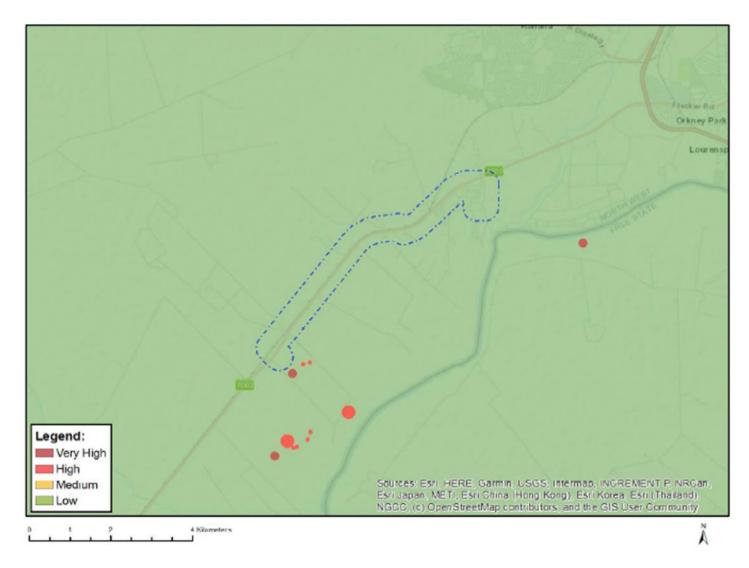


Figure 8: Map of Relative Archaeological and Cultural Heritage Theme Sensitivity (switching station)

7.1 Sub-section 3: Declaration

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

Signature Proponent/applicant/ holder of EA	Date:

This declaration will be signed by the proponent/applicant/holder of the EA once the contractor is appointed and has provided inputs to this Generic EMPr as per the requirements of this template.

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

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

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

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

APPENDIX 1: METHOD STATEMENTS

To be prepared by the contractor prior to commencement of the activity. The method statements are **not required** to be submitted to the CA.

APPENDIX 2: CV OF THE EAP