# GENERIC ENVIRONMENTAL MANAGEMENT PROGRAME FOR THE PROPOSED CONSTRUCTION OF A 132 KV SUBSTATION WITHIN THE PROPOSED SOYUZ 2 SOLAR PV PARK NEAR BRITSTOWN, NORTHERN CAPE PROVINCE

**CLIENT: Soyuz 2 Solar PV Park (Pty) Ltd**


terramanzi GROUP (PTY) LTD

people. planet. prosperity.

tel: +27 21 701 5228
fax: +27 86 558 1213
mobile: +27 82 575 3800

email: info@terramanzi.co.za
website: www.terramanzi.co.za

postal: postnet suite 211, private bag X26, tokai, 7966


**August 2023**

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




environmental affairs
Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

**TABLE OF CONTENTS**

**List of tables**



**List of Figures**

**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).

Please kindly see below an Organogram of the Applicant Company Structure (Figure 1) and requirements for an Environmental Site Compliance Officer (ESCO) and an Environmental Control Officer (ECO). The ESCO will be a full-time appointee by the applicant and will be available on the construction site daily for the duration of construction. The ECO will be appointed by the applicant to conduct independent monthly compliance auditing against the Environmental Authorisation and the Environmental Management Plan for the duration of the construction Phase. The ECO is answerable to the DFFE. The contractor will appoint a full-time Environmental Officer who will assist the site manager to implement environmental management requirements of the EA and the EMPR.

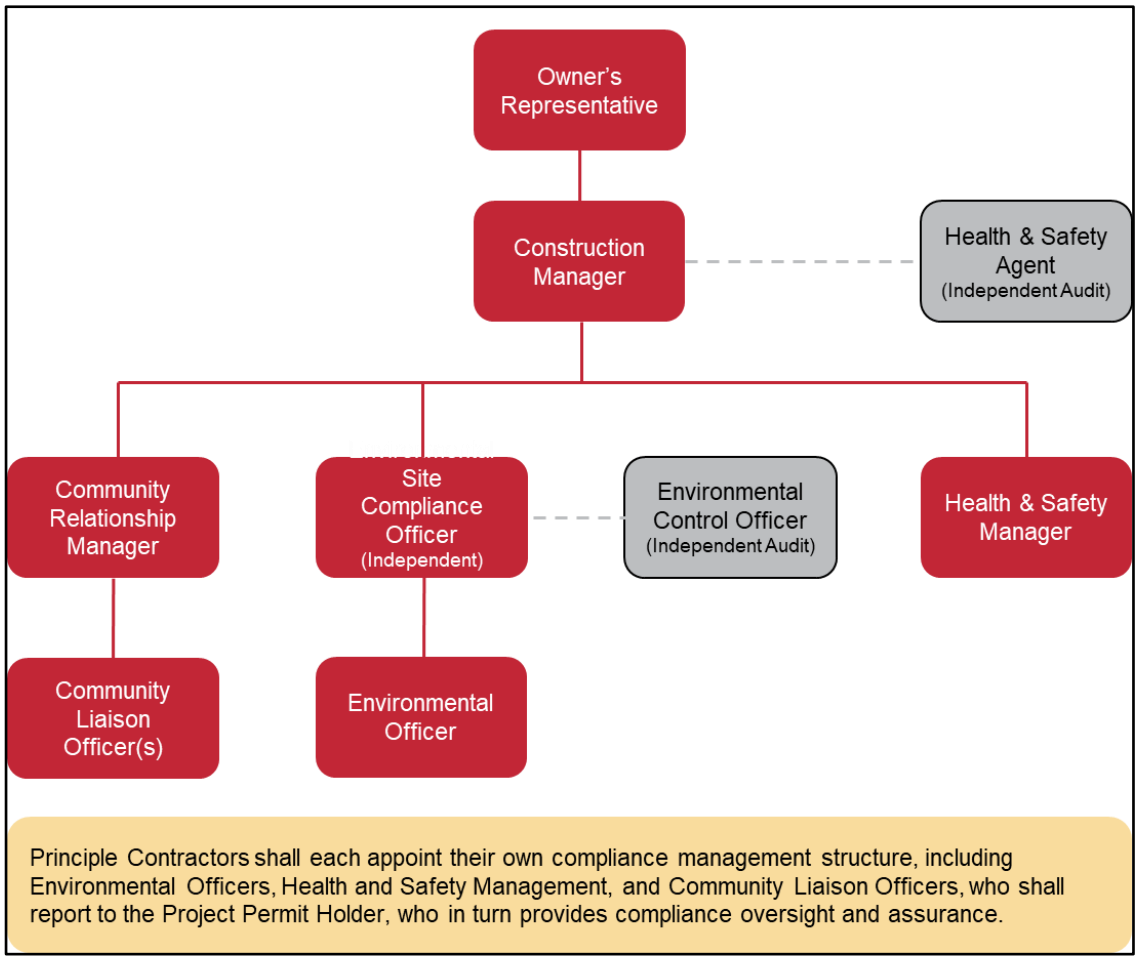



**Figure 1: Organogram of the construction of the Soyuz 2 Solar PV Park 33 - 132 kV Sub**

The responsibilities of the ESCO will be as follows:

- Be fully conversant with the EIAR, the conditions of EA and the EMPr;
- Be fully conversant with all relevant environmental legislation and ensure compliance thereof;
- Approve method statements (co-approval with Site Manager);
- Remain Employed until the completion of the construction activities; and
- Report to the Project Manager, including all findings identified onsite.
- Undertake regular inspections of the construction site and surrounding areas to audit compliance with the EMPr and conditions of the environmental authorisation;
- Take appropriate action if the specifications contained in the EMPr and conditions of the environmental authorisation are not followed;
- Monitor and verify that environmental impacts are kept to a minimum, as far as possible; and
- Ensure that activities onsite comply with all relevant environmental legislation.

The responsibilities of the ECO will be as follows:

- A suitably qualified external ECO must be appointed by the Holder of the EA to audit the construction phase project compliance in terms of the EMPr and conditions of the EA on a monthly basis, during the construction phase, in line with Condition 21 of the EA.

The responsibilities of the EO will be as follows:

- Be fully conversant with the EIAR, the conditions of EA and the EMPr;
- Be fully conversant with all relevant environmental legislation and ensure compliance thereof;
- Approve method statements (co-approval with Site Manager);
- Remain Employed until the completion of the construction activities; and
- Report to the Project Manager, including all findings identified onsite.
- Undertake regular inspections of the construction site and surrounding areas to audit compliance with the EMPr and conditions of the environmental authorisation;
- Take appropriate action if the specifications contained in the EMPr and conditions of the environmental authorisation are not followed;
- Monitor and verify that environmental impacts are kept to a minimum, as far as possible; and
- Ensure that activities onsite comply with all relevant environmental legislation.

## 2. Purpose

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

This generic EMPr has been amended to include requirements that are specific to the construction and operation of the Soyuz 2 Solar PV Park **132 kV back-to-back Substation**. This EMPr will be updated for operation purposes before the facility is commissioned and operations begin.

## 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 construction, operation 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 construction, operation 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. |
| B | 1 | Pre-approved generic EMPr template | Contains generally accepted impact management outcomes and impact management actions required for the avoidance, management and mitigation of impacts and risks associated with the construction, operation or expansion of substation infrastructure for the transmission and distribution of electricity, which are presented in the form of a template that has been pre-approved.<br><br>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.<br><br>Where an impact management outcome is not relevant, the words "not applicable" can be inserted in the template under the "responsible persons" column.<br><br>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.<br><br>To allow interested and affected parties access to the pre-approved EMPr template for consideration through the decision-making process, the EAP on behalf of the applicant /proponent must make the hard copy of this EMPr available at a public location and where the applicant has a website, the EMPr should also be made available on such publicly accessible website. |
| | 2 | Site specific information | Contains preliminary infrastructure layout and a declaration that the applicant/holder of the EA will comply with the pre-approved generic EMPr template contained in Part B: Section 1 and understands that the impact management outcomes and impact management actions are **legally binding**. The preliminary infrastructure layout must be finalized to inform the final EMPr that is to be submitted with the basic assessment report (BAR) or environmental impact assessment report (EIAR), ensuring that all impact management outcomes and impact management actions have been either pre-approved or approved in terms of Part C. |

| Part | Section | Heading | Content |
|---|---|---|---|
| | | | This section **must be** submitted to the CA together with the final BAR or EIAR. The information submitted to the CA will be incomplete should a signed copy of Part B: section 2 not be submitted. Once approved, this Section forms part of the EMPr for the development and is legally binding. |
| C | | Site specific sensitivities/ attributes | If any specific environmental sensitivities/ attributes are present on the site which require site specific impact management outcomes and impact management actions, not included in the pre-approved generic EMPr, to manage impacts, these specific impact management outcomes and impact management actions must be included in this section. These specific environmental attributes must be referenced spatially, and impact management outcomes and impact management actions must be provided. These specific impact management outcomes and impact management actions must be presented in the format of the pre-approved EMPr template (Part B: section 1).<br><br>This section will not be required should the site contain no specific environmental sensitivities or attributes. However, if Part C is applicable to the site, it **is required** to be submitted together with the BAR or EIAR, for consideration of, and decision on, the application for EA. The information in this section must be prepared by an EAP and must contain his/her name and expertise including a curriculum vitae. Once approved, Part C forms part of the EMPr for the site and is legally binding.<br><br>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 construction and operation and which are not already included in Part B: section 1. |
| Appendix 1 | | | Contains the method statements to be prepared prior to commencement of the activity. The method statements are **not required** to be submitted to the competent authority. |

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

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

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

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

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

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

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

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

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

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

Sub-section 2 is to be prepared by an EAP and must contain his/her name and expertise including a curriculum vitae. This sub-section must include a map of the site sensitivity overlaid with the preliminary infrastructure layout using the national web based environmental screening tool, when available for compulsory use at: https://screening.environment.gov.za/screeningtool. The sensitivity map shall identify the nature of each sensitive feature e.g., threatened plant species, archaeological site, etc. Sensitivity maps shall identify features both within the planned working area and any known sensitive features and within 50 m from the development footprint.

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

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

Should the EA be transferred, Part B: Section 2 must be completed by the new applicant/proponent and submitted with the application for an amendment of the EA in terms of regulations 29 or 31 of the EIA

Regulations, whichever applies. The information submitted as part of such an application for an amendment to an EA will be considered to be incomplete should a signed copy of Part B: Section 2 not be submitted. Once approved, Part B: Section 2 forms part of the EMPr for the development and the EMPr becomes legally binding to the new EA holder.

**PART A – GENERAL INFORMATION**

**1. DEFINITIONS**

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

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

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

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

"**Environmental Control Officer (ECO)**" – is a suitably qualified person acceptable to the Competent Authority who will be responsible for independently monitoring the compliance of the project with the requirements of the Environmental Authorisation and the Environmental Management Programme. The Environmental Control Officer will report to the Competent Authority.

"**Environmental Site Compliance Officer (ESCO)**": - is a suitably qualified person acceptable to the holder of the Environmental Authorisation who will be responsible in the day-to-day monitoring of the compliance of the project with the requirement of the Environmental Authorisation and the Environmental Management Programme. The ESCO will report to the Project Manager.

"**Environmental Officer (EO)**": is a suitably qualified person acceptable to the holder of the Environmental Authorisation, but appointed by the principal contractor, who will be responsible in assisting the contractor with the day-to-day implementation of the requirements of the Environmental Authorisation and the Environmental Management Programme. The EO will report to the Project Manager.

"**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/ESCO. 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/ESCO 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

| | |
|---|---|
| **CA** | Competent Authority |
| **EA** | Environmental Authorisation |
| **EAP** | Environmental Assessment Practitioner |
| **EAR** | Environmental Audit Report |
| **ECA** | Environment Conservation Act No. 73 of 1989 |
| **ECO** | Environmental Control Officer |
| **EIA** | Environmental Impact Assessment |
| **EO** | Contractors Environmental Officer |
| **ERAP** | Emergency Response Action Plan |
| **EMPr** | Environmental Management Programme Report |
| **ESCO** | Environmental Site Compliance Officer |
| **FPA** | Fire Protection Agency |
| **HCS** | Hazardous chemical Substance |
| **NEMA** | National Environmental Management Act, 1998 (Act No. 107 of 1998) |
| **NEMBA** | National Environmental Management: Biodiversity Act ,2004 (Act No. 10 of 2004) |

| | |
|---|---|
| **NEMWA** | National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) |
| **MSDS** | Material Safety Data Sheet |
| **PM** | Developer Project Manager |
| **RI&APs** | Registered Interested and affected parties |
| **SM** | Site Manager |

## 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/ESCO) is appointed, the holder of the EA remains responsible for ensuring that the duties indicated in this document for action by the ECO/ESCO are undertaken.

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

| **Responsible Person(s)** | **Role and Responsibilities** |
|---|---|
| Project Manager<br>(PM) | <u>Role</u><br>The holder of the Environmental Authorisation and the Project Manager 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 Manager to objectively monitor the implementation of the EMPr according to relevant environmental legislation, and the conditions of the environmental authorisation (EA). The Project Manager 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.<br><br><u>Responsibilities</u><br>- Be fully conversant with the conditions of the EA.<br>- Ensure that all stipulations within the EMPr are communicated and adhered to by the Developer and its Contractor(s).<br>- Issuing of site instructions to the Contractor for corrective actions required.<br>- 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<br>- Ensure that periodic environmental performance audits are undertaken on the project implementation. |

| Responsible Person(s) | Role and Responsibilities |
|---|---|
| Site Manager<br>SM | Role<br>The SM reports directly to the PM, oversees site works, liaises with the contractor(s) and the ECO. The SM 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.<br><br>Responsibilities<br>- Ensure that all contractors identify a contractor's Environmental Officer (EO).<br>- Must be fully conversant with the conditions of the EA. Oversees site works, liaison with Contractor, PM and ECO/ESCO.<br>- Must ensure that all landowners have the relevant contact details of the site staff, ECO/ESCO and EO.<br>- Issuing of site instructions to the Contractor for corrective actions required.<br>- Will issue all non-compliances to contractors; and<br>- Ratify the Monthly Environmental Report. |
| Environmental Control Officer (ECO) | Role<br>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 ESCO and EO. The ECO provides feedback to the SM and Project Manager regarding all environmental matters. The Contractor, EO and ESCO are answerable to the Environmental Control Officer for non-compliance with the Performance Specifications as set out in the EA and EMPr.<br><br>The ECO provides feedback to the SM 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 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. |

| Responsible Person(s) | Role and Responsibilities |
|---|---|
| | <u>Responsibilities</u><br>The responsibilities of the ECO will include the following:<br>- Be aware of the findings and conclusions of all EA's related to the development.<br>- Be familiar with the recommendations and mitigation measures of this EMPr.<br>- Be conversant with relevant environmental legislation, policies, and procedures, and ensure compliance with them.<br>- 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.<br>- Educate the construction team about the management measures contained in the EMPr and environmental licenses.<br>- Compilation and administration of an environmental monitoring plan to ensure that the environmental management measures are implemented and are effective.<br>- Monitoring the performance of the Contractors and ensuring compliance with the EMPr and associated Method Statements.<br>- 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.<br>- Liaison between the PM, Contractors, authorities, and other lead stakeholders on all environmental concerns.<br>- Compile a regular environmental audit report highlighting any non-compliance issues as well as satisfactory or exceptional compliance with the EMPr.<br>- Validating the regular site inspection reports, which are to be prepared by the ESCO & EO.<br>- Checking the ESCO & EO's record of environmental incidents (spills, impacts, legal transgressions etc.) as well as corrective and preventive actions taken.<br>- Checking the ESCO & EO's public complaints register in which all complaints are recorded, as well as action taken.<br>- Assisting in the resolution of conflicts.<br>- Facilitate training for all personnel on the site – this may range from carrying out the training, to reviewing the training programmes of the Contractor.<br>- In case of non-compliances, the ECO must first communicate this to the PM, SM, ESCO and ECO, 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.<br>- Maintenance, update, and review of the EMPr.<br>- Communication of all modifications to the EMPr to the relevant stakeholders. |

| Responsible Person(s) | Role and Responsibilities |
|---|---|
| | |
| Environmental Site Compliance Officer (ESCO) | Role<br>The ESCO 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, EO and the landowners as well as a range of environmental coordination responsibilities.<br><br>Responsibilities<br>- Be fully conversant with the EMPr.<br>- Be familiar with the recommendations and mitigation measures of this EMPr and implement these measures.<br>- Ensure that all stipulations within the EMPr are communicated and adhered to by the Employees, Contractor(s).<br>- Confine the development site to the demarcated area.<br>- Conduct environmental internal audits with regards to EMPr and authorisation compliance (on EO).<br>- Assist the contractors in addressing environmental challenges on site.<br>- Assist in incident management:<br>- Reporting environmental incidents to developer and ensuring that corrective action is taken, and lessons learnt shared.<br>- Assist the contractor in investigating environmental incidents and compile investigation reports.<br>- Follow-up on pre-warnings, defects, non-conformance reports.<br>- Measure and communicate environmental performance to the Contractor.<br>- Conduct environmental awareness training on site together with ECO and EO.<br>- Ensure that the necessary legal permits and / or licenses are in place and up to date.<br>- Acting as holder of the EA's Environmental Representative on site and work together with the ECO/EO and contractor; |
| Contractor | Role<br>The Contractor appoints the EO 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 construction, operation or expansion of substation infrastructure for the transmission and distribution of electricity activities. |

| Responsible Person(s) | Role and Responsibilities |
|---|---|
| | Responsibilities<br>- project delivery and quality control for the construction services as per appointment.<br>- 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.<br>- 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.<br>- attend on site meeting(s) prior to the commencement of activities to confirm the procedure and designated activity zones.<br>- 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/ESCO. |
| contractor Environmental Officer (EO) | Role<br>Each Contractor affected by the EMPr should appoint an EO, who is responsible for the on-site implementation of the EMPr (or relevant sections of the EMPr). The Contractor's representative can be the site agent; site engineer; a dedicated environmental officer; or an independent consultant. The Contractor must ensure that the Contractor's Representative is suitably qualified to perform the necessary tasks and is appointed at a level such that she/he can interact effectively with other site Contractors, labourers, the Environmental Control Officer and the Environmental Site Compliance Officer, and the public. As a minimum the EO shall meet the following criteria:<br><br>Responsibilities<br>- Be on site throughout the duration of the project and be dedicated to the project.<br>- Ensure all their staff are aware of the environmental requirements, conditions, and constraints with respect to all of their activities on site.<br>- Implementing the environmental conditions, guidelines and requirements as stipulated within the EA, EMPr and Method Statements.<br>- Attend the Environmental Site Meeting.<br>- Undertaking corrective actions where non-compliances are registered within the stipulated timeframes.<br>- Report back formally on the completion of corrective actions.<br>- Assist the ECO/ESCO in maintaining all the site documentation.<br>- Prepare the site inspection reports and corrective action reports for submission to the ECO/ESCO. |

| Responsible Person(s) | Role and Responsibilities |
|---|---|
| | - Assist the ECO/ESCO with the preparing of the monthly report; and<br>- 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 construction, operation 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 ESCO/EOs are required to complete a Weekly Environmental Checklist, the format of which is to be agreed prior to commencement of the activity. The ESCO/EOs 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 PM and SM 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 ECO/ESCOs 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:

- construction 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 ECO/ESCOs.

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 ECO/ESCOs 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 ESCO/EO's 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 ESCO/EOs. (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 ESCO/EOs 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 ECO/ESCOs via the PM or SM. 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/ESCO 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 PM, the contractor's EO will ensure that the corrective actions required take place within the stipulated timeframe. On completion of the corrective action the EO is to issue a Corrective Action Report in writing to the ECO/ESCOs. If satisfied that the corrective action has been completed, the ECO/ESCOs 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 ECO/ESCOs.

## 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 ECO/ESCOs access to take photographs of all areas, activities, and actions.

The ESCO/EOs 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 ECO/ESCO/EOs 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 (ECO/ESCO/EOs to take relevant photographs); and
5. Contain a copy of the ECO/ESCO/EOs written response to each complaint received and keep a record of any further correspondence with the complainant. The ECO/ESCO/EOs written response will

include a description of any corrective action to be taken and must be signed by the Contractor, ECO/ESCO and affected party. Where a damage claim is issued by the complainant, the ECO/ESCOs 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 ECO/ESCOs shall:

1. Record the full detail of the complaint as described in (**section 4.10**) above.
2. The PM will evaluate the claim and associated damage and submit the evaluation to the SM for approval.
3. Following consideration by the PM, 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/ESCO shall, in writing report the incident to the holder of the Environmental Authorisation's negotiator and legal department; and
4. A formal record of the response by the ECO/ESCOs 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 ECO/ESCO/EOs 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 by the ESCO and EO. The findings and outcomes included in the EMPr file and submitted to the PM and SM.

The ECO 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 ECO 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 construction of substation infrastructure for the transmission and distribution of electricity. There is a list of aspects identified for the construction, operation 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 construction, operation 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/ESCO/EO | Hold environmental awareness training workshops | Pre-construction Construction | ECO/ESCO | 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/ESCO/EO | Pre-construction Construction | ECO/ESCO | 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; | ESCO/EO in consultation with the ECO | Hold refresher environmental awareness training workshops | During the construction phase | ECO/ESCO 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/ESCO | Monthly and as and when required | Attendance registers and training minutes / notes for the record |

| **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 |
| – The Contractor must erect and maintain information posters at key locations on site, and the posters must include the following information as a minimum:<br>a) Safety notifications; and<br>b) No littering. | Contractor / EO | Develop and place appropriate posters at key locations | Pre-construction<br>Construction | ECO/ESCO | Monthly | Photographic record |
| – Environmental awareness training must include as a minimum the following:<br>a) Description of significant environmental impacts, actual or potential, related to their work activities.<br>b) Mitigation measures to be implemented when carrying out specific activities.<br>c) Emergency preparedness and response procedures.<br>d) Emergency procedures.<br>e) Procedures to be followed when working near or within sensitive areas.<br>f) Wastewater management procedures.<br>g) Water usage and conservation.<br>h) Solid waste management procedures.<br>i) Sanitation procedures.<br>j) Fire prevention; and<br>k) Disease prevention. | ESCO/ EO consultation with the ECO | Develop environmental awareness training material which covers the minimum requirements | Pre-construction<br>Construction | ECO/ESCO | Prior to the commencement 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; | ESCOEO | Filing system including all proof of | During the construction phase | ECO/ESCO | Monthly | Completed and up to date filing |

| **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 |
| | | training (i.e., attendance register and training minutes / notes for the record) | | | | system with proof of training |
| – Educate workers on the dangers of open and/or unattended fires; | ESCO/EO in consultation with the ECO | Develop environmental awareness training material which covers the dangers of open and/or unattended fire | Pre-construction Construction | ECO/ESCO | Prior to the commencement of the environmental awareness training | Environmental awareness training material requirements checklist |
| – A staff attendance registers of all staff to have received environmental awareness training must be available. | ESCO/EO | Filing system including all proof of training (i.e., attendance register) | During the construction phase | ECO/ESCO | Monthly | Completed and up to date filing system inclusive of all attendance registers |
| – Course material must be available and presented in appropriate languages that all staff can understand. | ESCO/EO in consultation with the ECO | Develop environmental awareness training material in the required languages. Training material | During the construction phase | ECO/ESCO | Monthly | Environmental awareness training material requirements checklist and the training register which must |

| **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 |
| | | must by readily available to all staff | | | | indicate the language of 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. | | | | | | |
|---|---|---|---|---|---|---|
| **Impact Management Actions** | **Implementation** | | | **Monitoring** | | |
| | Responsible person | Method of implementation | Timeframe for implementation | Responsible person | Frequency | Evidence of compliance |
| – A method statement must be provided by the contractor prior to any onsite activity that includes the layout of the construction camp in the form of a plan showing the location of key infrastructure and services (where applicable), including but not limited to offices, overnight vehicle parking areas, stores, the workshop, stockpile and lay down areas, hazardous materials storage areas (including fuels), the batching plant (if one is located at the construction camp), designated access routes, equipment cleaning areas and the placement of staff accommodation, | Contractor & EO | Development of an appropriate method statement | Pre-construction | ECO/ESCO | Once, prior to construction | Availability of the method statement which complies with the minimum requirements listed |

| | | | | | | |
|---|---|---|---|---|---|---|
| cooking and ablution facilities, waste and wastewater management; | | | | | | |
| – 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; | PM & ESCO | Place construction camps outside of sensitive areas identified in the Basic Assessment Report | Pre-construction Construction | ECO/ESCO | 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; | PM | Place site outside of sensitive areas and within previously disturbed areas identified in the BA Report | Pre-construction | ECO/ESCO | 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 | PM | Design and implementation of fencing as per the requirements of Section 5.5 of this EMPr | Pre-construction & Construction | ECO/ESCO | 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 – the development of new accommodation is not proposed. Staff will be accommodated in the closet town | | | | | |

### *5.3 Access restricted areas*

**Impact management outcome:** Access to restricted areas prevented.

| Impact Management Actions | Implementation | | | Monitoring | | |
|---|---|---|---|---|---|---|
| | Responsible person | Method of implementation | Timeframe for implementation | Responsible person | Frequency | Evidence of compliance |
| – Identification of access restricted areas is to be informed by the environmental assessment, site walk through, and any additional areas identified during development; | EO in consultation with the ECO/ESCO | Spatially demarcate access restricted areas informed by the BA Report | Pre-construction | ECO/ESCO | 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 | EO in consultation with the ECO/ESCO | Erect appropriate temporary barriers around access restricted areas | At the commencement and for the duration of the construction phase | ECO/ESCO | 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 & EO | Erect appropriate temporary barriers around access restricted areas and provide clear signage of restricted status | During the construction phase | ECO/ESCO | 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 person | Method of implementation | Timeframe for implementation | Responsible person | Frequency | Evidence of compliance |
| – An access agreement must be formalized and signed by the PM, Contractor and landowner before commencing with the activities; | PM<br>Contractor | Develop access agreements with the affected landowners. Ensure that agreements are approved and signed | Pre-construction | EO<br>ECO/ESCO | Once, prior to construction | Availability of approved and signed negotiations |
| – All private roads used for access to the servitude must be maintained and upon completion of the works, be left in at least the original condition | Contractor & EO | Undertake maintenance activities on private roads used for construction as degradation takes place | During the construction phase | ECO/ ESCO | Weekly | Photographic record of the pre-construction condition and degradation of roads, and records of the implementation and effectiveness of maintenance activities |

| **Impact management outcome:** Minimise impact to the environment through the planned and restricted movement of vehicles on site. | | | | | | |
|---|---|---|---|---|---|---|
| **Impact Management Actions** | **Implementation** | | | **Monitoring** | | |
| | Responsible person | Method of implementation | Timeframe for implementation | Responsible person | Frequency | Evidence of compliance |
| – All contractors must be made aware of all these access routes. | ESCO/EO | Develop a map illustrating all access routes associated with the project and present and provide the map to all contractors | Pre-construction Construction | ECO/ESCO | 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 | All access routes constructed for the construction of the substation that are not in-line with the access route agreements must be closed and re-habilitated to the pre-disturbance state | Construction and Rehabilitation | ECO/ESCO | Bi-weekly (every two weeks) | Photographic record of the closure of access roads and re-vegetation |
| – Maximum use of both existing servitudes and existing roads must be made to minimise further disturbance through the development of new roads; where possible | 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 | Construction and operation | ESCO/EO Operation and maintenance team | Weekly | Implementation of the approved layout |

| **Impact management outcome:** Minimise impact to the environment through the planned and restricted movement of vehicles on site. | | | | | | |
|---|---|---|---|---|---|---|
| **Impact Management Actions** | **Implementation** | | | **Monitoring** | | |
| | Responsible person | Method of implementation | Timeframe for implementation | Responsible person | Frequency | Evidence of compliance |
| | | avoided where it is possible | | | | |
| – 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; | ESCO/EO | Record the conditions of private roads to be used (prior to use) as per the requirements of section 4.9 and agree on the required condition of the roads with the landowner, PM and contractor | During the construction phase | ECO/ESCO | Prior to the use of private roads | Photographic record and proof of the road conditions agreed upon with the relevant parties |
| – Access roads in flattish areas must follow fence lines and tree belts to avoid fragmentation of vegetated areas or croplands | PM and Contractor | Design access roads to follow fence lines and avoid vegetated areas | Pre-construction | ECO/ESCO | Once during the design and once prior to construction | Implementation of the approved layout |
| – Access roads must only be constructed on pre-planned and approved roads. | Contractor & EO | Construction of access roads only on pre-planned and approved access roads | During the construction phase | ECO/ESCO EO | Once during the design and weekly during the construction of access roads | Implementation of the approved layout |

### *5.5 Fencing and Gate installation*

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

| **Impact Management Actions** | **Implementation** | | | **Monitoring** | | |
|---|---|---|---|---|---|---|
| | Responsible person | Method of implementation | Timeframe for implementation | Responsible person | Frequency | Evidence of compliance |
| – Use existing gates provided to gain access to all parts of the area authorised for development, where possible; | Contractor | Identify and inform all relevant staff of the existing gates to be used | Pre-construction & Construction | ESCO/EO ECO | Monthly | Existing gates are utilised on a frequent basis and only limited new access gates are constructed |
| – Existing and new gates to be recorded and documented in accordance with section 4.9: photographic record; | ESCO/EO | Existing and new gates will be recorded and documented as per the requirements of section 4.9 | During the construction phase | ESCO/EO ECO | Once, when the construction of all new gates has been completed | Photographic record of the existing and new gates as per the requirements of section4.9 |
| – All gates must be fitted with locks and be kept locked at all times during the development phase, unless otherwise agreed with the landowner; | Contractor & EO | Ensure all relevant gates are fitted with | Construction and Operation | ECO/ESCO | Bi-weekly (every second week) | All gates are locked and no complaints from |

| **Impact management outcome:** Minimise impact to the environment and ensure safe and controlled access to the site through the erection of fencing and gates where required. | | | | | | |
|---|---|---|---|---|---|---|
| **Impact Management Actions** | **Implementation** | | | **Monitoring** | | |
| | Responsible person | Method of implementation | Timeframe for implementation | Responsible person | Frequency | Evidence of compliance |
| | | locks and are always locked | | Operation and maintenance team | | 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 PM, a gate must be installed at the approval of the landowner; | EO | Install new gates where required with the approval of the affected landowner | During the construction phase | ECO/ESCO | Once, prior to construction and during the construction phase, as and when required | New gates are installed where required |
| – Care must be taken that the gates must be so erected that there is a gap of no more than 100 mm between the bottom of the gate and the ground; | Contractor | Install gates in a manner so that there is a gap of no more than 100mm between the bottom of the gate and the ground | During the construction phase | EO | Once, during the erection of the gates during the construction phase | New gates installed as per the requirement |
| – Where gates are installed in jackal proof fencing, a suitable reinforced concrete still must be provided beneath the gate; | Contractor | Implement a reinforced concrete sill beneath gates installed for jackal proofing | During the construction phase | EO | Once, during the erection of the gates during the construction phase | New gates installed as per the requirement |

| **Impact management outcome:** Minimise impact to the environment and ensure safe and controlled access to the site through the erection of fencing and gates where required. | | | | | | |
|---|---|---|---|---|---|---|
| **Impact Management Actions** | **Implementation** | | | **Monitoring** | | |
| | Responsible person | Method of implementation | Timeframe for implementation | Responsible person | Frequency | Evidence of compliance |
| – Original tension must be maintained in the fence wires; | Contractor | Maintain original tension of fences through required activities | During the construction phase | EO<br>ECO/ESCO | 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 | EO<br>ECO/ESCO | 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 | EO<br>ECO/ESCO | Monthly | Photographic record of maintained fences and barriers |
| – Fencing must be erected around the camp, batching plants, hazardous storage areas, and all designated access restricted areas, where applicable; | Contractor | Fence construction camps, batching plants, hazardous storage areas and access restricted areas | During the construction phase | EO<br>ECO/ESCO | Once during the erection of fencing | Photographic record of fences erected |

| **Impact management outcome:** Minimise impact to the environment and ensure safe and controlled access to the site through the erection of fencing and gates where required. | | | | | | |
|---|---|---|---|---|---|---|
| **Impact Management Actions** | **Implementation** | | | **Monitoring** | | |
| | Responsible person | Method of implementation | Timeframe for implementation | Responsible person | Frequency | Evidence of compliance |
| – Any temporary fencing to restrict the movement of life-stock must only be erected with the permission of the land owner. | ESCO/EO Contractor | Obtain written approval from the relevant landowner where temporary fencing is required to restrict life-stock movement | During the construction phase | ECO/ESCO | To be monitored as temporary fencing is required | Written approval to be provided by the EO |
| – All fencing must be constructed using high-quality material bearing the SABS mark; | Contractor | Make use of high-quality materials approved by SABS | During the construction phase | EO | To be monitored as fencing is erected during the construction phase | Use of high-quality materials for fencing approved by SABS |
| – The use of razor wire as fencing must be avoided as far as possible; | Contractor & EO | Razor wire must not be sourced or used for the erection of fencing | During the construction phase | ECO/ESCO | To be monitored as fencing is erected during the construction phase | Fences erected do not make use of razor wire |
| – Fenced areas with gate access must remain locked after hours, during weekends and on holidays if staff is away from site. Site security will be required at all times; | SM and Contractor | Ensure fenced areas are locked as required through the implementation of a formalised | During the construction phase | ESCO/EO ECO | Weekly and as and when required | Fences are locked and no complaints from landowners are received. A |

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

| **Impact Management Actions** | **Implementation** | | | **Monitoring** | | |
|---|---|---|---|---|---|---|
| | Responsible person | Method of implementation | Timeframe for implementation | Responsible person | Frequency | Evidence of compliance |
| | | process. Appoint a security company | | | | security company is appointed |
| – On completion of the development phase all temporary fences are to be removed; | Contractor & EO | Removal of all temporary fences | At the end of the Construction Phase | ECO/ESCO | 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/ESCO EO | Once, following the completion of the construction phase | No fence uprights associated with the project is present following the completion of the construction phase |

### *5.6 Water Supply Management*

| **Impact management outcome:** Undertake responsible water usage**.** | | | | | | |
|---|---|---|---|---|---|---|
| **Impact Management Actions** | **Implementation** | | | **Monitoring** | | |
| | Responsible person | Method of implementation | Timeframe for implementation | Responsible person | Frequency | Evidence of compliance |
| – All abstraction points or bore holes must be registered with the DWS and suitable water meters installed to ensure that the abstracted volumes are measured on a daily basis; | Not applicable water for the project will be either sourced from municipal sources and abstraction points. | | | | | |
| – The Contractor must ensure the following:<br>a. The vehicle abstracting water from a river does not enter or cross it and does not operate from within the river.<br>b. No damage occurs to the river bed or banks and that the abstraction of water does not entail stream diversion activities; and<br>c. All reasonable measures to limit pollution or sedimentation of the downstream watercourse are implemented. | Not applicable - water for the project will be sourced from municipal sources and abstraction points. | | | | | |
| – Ensure water conservation is being practiced by:<br>a. Minimising water use during cleaning of equipment.<br>b. Undertaking regular audits of water systems; and<br>c. Including a discussion on water usage and conservation during environmental awareness training.<br>d. The use of grey water is encouraged. | Contractor / ESCO EO in consultation with the ECO | Implement the required water conservation measures throughout on-site construction processes | During the construction phase | ECO/ESCO | Monthly, and as and when required | Successful implementation of water conservation |

### *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 & EO | Implement measures for the control and management of runoff | During the construction phase | ECO/ESCO | Weekly | No mismanagement of runoff or contaminated water due to the temporary concrete batching plant |
| – All spillage of oil onto concrete surfaces must be controlled by the use of an approved absorbent material and the used absorbent material disposed of at an appropriate waste disposal facility; | Contractor and EO | Obtain approved absorbent material and make use of licensed waste disposal facilities for disposal of oil | During the Construction Phase | ECO/ESCO | Monthly | Availability of approved absorbent material at the construction site and proof of disposal of oil at licenses disposal facilities |
| – Natural stormwater runoff not contaminated during the development and clean water can be discharged directly to watercourses and water bodies, subject to the Project Manager's approval and support by the ECO/ESCO; | PM in consultation with the ECO/ESCO | Consultation between the PM and the ECO/ESCO to determine if water can be | During the construction phase | ECO/ESCO | As and when the need arises to discharge natural stormwater | Proof of consultation between the PM and ECO/ESCO and the outcomes |

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

### *5.8 Solid and hazardous waste management*

| **Impact management outcome:** Wastes are appropriately stored, handled, and safely disposed of at a recognised waste facility**.** | | | | | | |
|---|---|---|---|---|---|---|
| **Impact Management Actions** | **Implementation** | | | **Monitoring** | | |
| | Responsible person | Method of implementation | Timeframe for implementation | Responsible person | Frequency | Evidence of compliance |
| – All measures regarding waste management must be undertaken using an integrated waste management approach; | Contractor & EO | Develop and implement a waste management plan | During the construction phase | ECO/ESCO | 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 & EO | Provision of appropriate waste collection bins which are strategically placed throughout the site | During the construction phase | ECO/ESCO | Weekly | Appropriate waste collection bins are available throughout the site |
| – A suitably positioned and clearly demarcated waste collection site must be identified and provided; | PM 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/ESCO EO | Once, prior to the commencement of construction | A waste collection site is appropriately placed and demarcated |

| **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 |
| – The waste collection site must be maintained in a clean and orderly manner; | Contractor & EO | Regular collection of waste and maintenance of the area must be undertaken as per the waste requirements for the project during construction | During the Construction Phase | ECO/ESCO | Weekly | The waste collection site is maintained and clean |
| – Waste must be segregated into separate bins and clearly marked for each waste type for recycling and safe disposal; | Contractor & EO | Provide separate and marked bins for the different waste types associated with the construction phase | During the Construction Phase | ESCO | Weekly | Separate waste bins are available on site and waste generated is separated into the relevant bins |
| – Staff must be trained in waste segregation; | ESCO/ EO in consultation with the ECO | Include waste segregation as part of the environmental awareness training material. | Pre-construction Construction | ECO/ESCO | Monthly, and as and when required | Environmental awareness training material requirements checklist |
| – Bins must be emptied regularly; | Contractor & EO | Bins must be emptied before reaching total | During the construction phase | ECO/ESCO | Monthly | No mismanagement of bins. |

| **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 |
| | | capacity and on a regular basis as required for the project | | | | |
| – General waste produced onsite must be disposed of at registered waste disposal sites/ recycling company; | Contractor & EO | Disposal of general waste at licensed waste disposal facilities must be undertaken as per the waste management plan | During the construction phase | ECO/ESCO | Monthly | Disposal certificates of disposal at licensed facilities to be provided |
| – Hazardous waste must be disposed of at a registered waste disposal site; | Contractor & EO | Disposal of hazardous waste at licensed waste disposal facilities must be undertaken as per the waste management plan | During the construction phase | ECO/ESCO | Monthly | Disposal certificates of disposal at licensed facilities to be provided |
| – Certificates of safe disposal for general, hazardous, and recycled waste must be maintained. | Contractor & EO | Obtain certificates for safe disposal of waste | During the construction phase | ECO/ESCO | Monthly | Disposal certificates of disposal at licensed facilities to be provided and filed as part |

| **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 |
| | | | | | | of the filing system |

### *5.9 Protection of watercourses and estuaries*

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

| Impact Management Actions | Implementation | | | Monitoring | | |
|---|---|---|---|---|---|---|
| | Responsible person | Method of implementation | Timeframe for implementation | Responsible person | Frequency | Evidence of compliance |
| – All watercourses must be protected from direct or indirect spills of pollutants such as solid waste, sewage, cement, oils, fuels, chemicals, aggregate tailings, wash and contaminated water or organic material resulting from the Contractor's activities; | Contractor | Contractor to undertake activities which can cause spills of pollutants outside of watercourses | During the construction phase | ECO/ESCO | Weekly | No incidents reported of spillage of pollutants into watercourses |
| – In the event of a spill, prompt action must be taken to clear the polluted or affected areas; | Contractor and EO | Develop a management plan or process for implementation should a spill take place | During the construction phase | ECO/ESCO | Weekly | Feedback must be provided by the contractor in terms of how the spill was handled and photographic evidence of the feedback must be provided and kept on record |
| – Where possible, no development equipment must traverse any seasonal or permanent wetland | Not applicable - no wetlands are located near the site for the placement of the substation. | | | | | |
| – No return flow into the estuaries must be allowed and no disturbance of the Estuarine functional Zone should occur; | Not applicable – no estuaries are located within the study area. | | | | | |
| – Development of permanent watercourse or estuary crossing must only be undertaken where no alternative access to tower position is available; | Not applicable – no watercourses will be crossed because of the development of the substation. | | | | | |

| **Impact management outcome:** Pollution and contamination of the watercourse environment and or estuary erosion are prevented. | | | | | | |
|---|---|---|---|---|---|---|
| **Impact Management Actions** | **Implementation** | | | **Monitoring** | | |
| | Responsible person | Method of implementation | Timeframe for implementation | Responsible person | Frequency | Evidence of compliance |
| – There must not be any impact on the long-term morphological dynamics of watercourses or estuaries; | Not applicable – the construction of the substation will not have any long-term morphological impacts on watercourses as there are no watercourses present within the section of the preferred grid connection corridor where the substation will be constructed. | | | | | |
| – Existing crossing points must be favoured over the creation of new crossings (including temporary access) | Not applicable – no new road crossings will be required for the development of substation. | | | | | |
| – When working in or near any watercourse or estuary, the following environmental controls and consideration must be taken:<br>a) Water levels during the period of construction.<br>No altering of the bed, banks, course, or characteristics of a watercourse<br>b) During the execution of the works, appropriate measures to prevent pollution and contamination of the riparian environment must be implemented e.g., including ensuring that construction equipment is well maintained.<br>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<br>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. | Contractor & EO | Activities undertaken near watercourses must be in-line with and consider the specified environmental controls | During the construction phase | ECO/ESCO | Monthly, and as and when required | No degradation of the watercourses and no incidents of destruction reported |

### *5.10 Vegetation clearing*

| **Impact management outcome:** Vegetation clearing is restricted to the authorised development footprint of the proposed infrastructure. | | | | | | |
|---|---|---|---|---|---|---|
| **Impact Management Actions** | **Implementation** | | | **Monitoring** | | |
| | Responsible person | Method of implementation | Timeframe for implementation | Responsible person | Frequency | Evidence of compliance |
| **General:** | | | | | | |
| – Indigenous vegetation which does not interfere with the development must be left undisturbed; | EO and contractor | Demarcate areas of indigenous vegetation to be avoided before clearance is undertaken | Construction and operation (i.e., for maintenance purposes) | ECO/ESCO Operation and maintenance team | Weekly, and as and when required | No unnecessary clearance of indigenous vegetation is undertaken |
| – Protected or endangered species may occur on or near the development site. Special care should be taken not to damage such species; | Contractor & EO | Demarcate areas containing protected or endangered species to be avoided by construction activities | During the Construction Phase | ECO/ESCO | Weekly, and as and when required | 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/ESCO | Weekly, and as and when required | Implementation of the Plant Search and Rescue Plan and photographic evidence and notes of the |

| **Impact management outcome:** Vegetation clearing is restricted to the authorised development footprint of the proposed infrastructure. | | | | | | |
|---|---|---|---|---|---|---|
| **Impact Management Actions** | **Implementation** | | | **Monitoring** | | |
| | Responsible person | Method of implementation | Timeframe for implementation | Responsible person | Frequency | Evidence of compliance |
| | | | | | | 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; | PM | Undertake the permitting process in order to obtain the relevant permits for the removal of protected species. Permits must be kept on file | Pre-construction | ECO/ESCO | Once, prior to the commencement of the construction phase and removal of the protected species | Permits on file |
| – The Environmental Audit Report must confirm that all identified species have been rescued and replanted and that the location of replanting is compliant with conditions of approvals; | ECO/ESCO | Ensure that the audit report indicates all species rescued and replanted and provides feedback in terms of compliance with the conditions of permits for replanting | During the Construction Phase and following the completion of the Construction Phase | **ECO/ESCO** | Once, prior to the commencement of the construction phase and removal of the protected species | Specialist report |

| **Impact management outcome:** Vegetation clearing is restricted to the authorised development footprint of the proposed infrastructure. | | | | | | |
|---|---|---|---|---|---|---|
| **Impact Management Actions** | **Implementation** | | | **Monitoring** | | |
| | Responsible person | Method of implementation | Timeframe for implementation | Responsible person | Frequency | Evidence of compliance |
| – Trees felled due to construction must be documented and form part of the Environmental Audit Report; | ECO/ESCO | Ensure that the audit report documents the details of trees felled | During the Construction Phase and following the completion of the Construction Phase | ECO/ESCO | Monthly | Documented report |
| – Rivers and watercourses must be kept clear of felled trees, vegetation cuttings and debris; | Contractor & EO | Felled trees, vegetation cuttings and debris must be disposed of at a licensed waste disposal facility | During the Construction Phase | ECO/ESCO | 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; | PM and Contractor & EO | A suitably qualified pest control operator must be appointed | Construction and Operation | ECO/ESCO | 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 |

| **Impact management outcome:** Vegetation clearing is restricted to the authorised development footprint of the proposed infrastructure. | | | | | | |
|---|---|---|---|---|---|---|
| **Impact Management Actions** | **Implementation** | | | **Monitoring** | | |
| | Responsible person | Method of implementation | Timeframe for implementation | Responsible person | Frequency | Evidence of compliance |
| – A daily register must be kept of all relevant details of herbicide usage; | Contractor & EO | Develop a daily register for the documentation of the details of herbicide usage | During the construction phase | ECO/ESCO | Monthly | Daily register provided by the pest control operator |
| – No herbicides must be used in estuaries | Not applicable - no estuaries are present 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 EO/ESCO | Spatially demarcate protected species and sensitive vegetation and implement appropriate fencing where required as per section 5.3 | During the construction phase | ECO/ESCO | 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 & EO | Remove all alien invasive vegetation and dispose of the removed vegetation at a licensed waste management facility | During the construction phase | ECO/ESCO | Monthly, and as and when required | Disposal certificates of disposal at licensed facilities to be provided and filed as part of the filing system |

### *5.11 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; | Contractor ESCO/EO | Develop a procedure for dealing with livestock within the affected properties | Pre-construction and during the construction phase | ECO/ESCO | Once, prior to the commencement of construction and as and when required during the construction phase | Written consent provided by the landowner and proof of representation of the landowner during interference |
| – The breeding sites of raptors and other wild birds' species must be taken into consideration during the planning of the development programme; | EO and ESCO in consultation with the Contractor | Ensure that the planning and development programme considers breeding sites for wild bird species | Pre-construction & Construction | ECO/ESCO | Once, prior to the commencement 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; | EO and ESCO in consultation with the Contractor | Avoid breeding sites and ensure that special care is taken in the presence of nestlings and fledgelings | During the Construction Phase Operation Phase | ECO/ESCO Operation and maintenance team | Weekly, and as and when required during the construction. Monthly, and as and when | Photographic record of intact breeding sites |

| **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 |
| | | | | | required during operation | |
| – Special recommendations of the avian specialist must be adhered to at all times to prevent unnecessary disturbance of birds; | EO and ESCO in consultation with the Contractor | All mitigation measures recommended by the avifauna specialist must be implemented | During the Construction Phase Operation Phase | ECO/ESCO Operation and maintenance team | Weekly during construction and monthly during operation | Photographic record of compliance and successful implementation of the recommended measures |
| – No poaching must be tolerated under any circumstances. All animal dens in close proximity to the works areas must be marked as Access restricted areas; | EO and ESCO in consultation with the Contractor | All site staff must be informed of this requirement during the Environmental Awareness Training and the consequences of not adhering to the requirement. These areas must be demarcated as Access Restricted Areas | During the Construction Phase | ECO/ESCO | Monthly, and as and when required | No instances of poaching are reported |

| **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 deliberate or intentional killing of fauna is allowed; | EO and ESCO in consultation with the Contractor | All site staff must be informed of this requirement during the Environmental Awareness Training and the consequences of not adhering to the requirement. These areas must be demarcated as Access Restricted Areas | During the Construction Phase | ECO/ESCO | Monthly, and as and when required | No instances of deliberate or intentional killing are reported |
| – In areas where snakes are abundant, snake deterrents are to be deployed on the pylons to prevent snakes climbing up, being electrocuted, and causing power outages; and | EO and ESCO in consultation with the Contractor | Implement and maintain snake deterrents in areas where snakes are abundant | During the Construction Phase Operation Phase | ECO/ESCO Operation and maintenance team | Once, during the construction and as and when required. Monthly during operation | Photographic record of the implementation and maintenance of snake deterrents |
| – No Threatened or Protected species (ToPs) and/or protected fauna as listed according NEMBA (Act No. 10 of 2004), and relevant provincial ordinances may be removed and/or relocated without appropriate authorisations/permits. | PM in consultation with the ESCO and EO | Undertake a permitting process to obtain the required permits | Pre-construction | ECO/ESCO | Once, prior to the commencement of construction | Permits for removal and/relocation must be kept on |

| **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 |
| | | | | | and as and when required | file and be readily available |

***5.12 Protection of heritage resources***

| **Impact management outcome:** Impact to heritage resources is minimised. | | | | | | |
|---|---|---|---|---|---|---|
| **Impact Management Actions** | **Implementation** | | | **Monitoring** | | |
| | Responsible person | Method of implementation | Timeframe for implementation | Responsible person | Frequency | Evidence of compliance |
| – Identify, demarcate, and prevent impact to all known sensitive heritage features on site in accordance with the No-Go procedure in **Section 5.3: Access restricted areas;** | ESCO and EO and Contractor | | During the Construction Phase | ECO/ESCO | Once, prior to the commencement of construction and as and when required | Photos of demarcated areas |
| – Carry out general monitoring of excavations for potential fossils, artefacts, and material of heritage importance; | Suitably qualified specialist in consultation with the ECO/ESCO | Appoint a suitably qualified specialist to carry out the monitoring of excavations for | During the Construction Phase | ECO/ESCO | During the undertaking of excavations of fossils, artefacts, | Proof of appointment of a suitably qualified specialist and photographic |

| **Impact management outcome:** Impact to heritage resources is minimised. | | | | | | |
|---|---|---|---|---|---|---|
| **Impact Management Actions** | **Implementation** | | | **Monitoring** | | |
| | Responsible person | Method of implementation | Timeframe for implementation | Responsible person | Frequency | Evidence of compliance |
| | | fossils, artefacts, and important heritage material | | | and heritage material | record of required monitoring by the specialist |
| – All work must cease immediately, if any human remains and/or other archaeological, palaeontological, and historical material are uncovered. Such material, if exposed, must be reported to the nearest museum, archaeologist/ palaeontologist (or the South African Police Services), so that a systematic and professional investigation can be undertaken. Sufficient time must be allowed to remove/collect such material before development recommences. | ESCO and EO in consultation with the Contractor and ESCO | Develop and implement procedures for situations where human remains, archaeological, palaeontological, or historical material are uncovered | During the Construction Phase | ECO/ESCO | Weekly, during the construction phase and as and when required | Proof of work ceased, and the required procedures followed in cases where material is discovered. |

### *5.13 Safety of the public*

| **Impact management outcome:** All precautions are taken to minimise the risk of injury, harm, or complaints. | | | | | | |
|---|---|---|---|---|---|---|
| **Impact Management Actions** | **Implementation** | | | **Monitoring** | | |
| | Responsible person | Method of implementation | Timeframe for implementation | Responsible person | Frequency | Evidence of compliance |
| – Identify fire hazards, demarcate, and restrict public access to these areas as well as notify the local authority of any potential threats e.g., large brush stockpiles, fuels etc.; | EO in consultation with the Contractor | Develop an Emergency Preparedness, Response and Fire Management Plan specific to the project | Pre-construction Construction | ECO/ESCO | Once, prior to the commencement of construction and weekly during the construction phase | Compliance with the Emergency Preparedness, Response and Fire Management Plan |
| – All unattended open excavations must be adequately fenced or demarcated; | Contractor | Ensure that all excavations undertaken is fenced and demarcated within a reasonable timeframe and in instances where excavations will be open for long-periods of time | During the Construction Phase | ECO/ESCO | Weekly | Excavations are fenced where required and photographic proof can be provided |
| – Adequate protective measures must be implemented to prevent unauthorised access to and climbing of partly constructed infrastructure and protective scaffolding; | Contractor | All staff must be easily identifiable, and the climbing of infrastructure and | During the construction phase | ECO/ESCO | Monthly, and as and when required | No incidents of unauthorised climbing are reported |

| **Impact management outcome:** All precautions are taken to minimise the risk of injury, harm, or complaints. | | | | | | |
|---|---|---|---|---|---|---|
| **Impact Management Actions** | **Implementation** | | | **Monitoring** | | |
| | Responsible person | Method of implementation | Timeframe for implementation | Responsible person | Frequency | Evidence of compliance |
| | | scaffolding must be undertaken by authorised personnel as managed by the Contractor | | | | |
| – Ensure structures vulnerable to high winds are secured; | Contractor | Ensure that sufficient stabilisation measures are implemented to secure structures vulnerable to high winds | During the construction phase | ECO/ESCO | Weekly, and as and when required | No incidents of unstable structures due to high winds is reported |
| – Maintain an incidents and complaints register in which all incidents or complaints involving the public are logged. | ESCO and EO | Compile and regularly update as incidents and complaints are submitted from the public and indicate the actions taken to resolve the complaint | During the construction phase | ECO/ESCO | Monthly, and as and when required | The incidents and complaints register are complete and provides all the required details |

### *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/ESCO | Weekly | Mobile toilets are installed and avoid environmental sensitivities |
| – The use of ablution facilities and or mobile toilets must be used at all times and no indiscriminate use of the veld for the purposes of ablutions must be permitted under any circumstances; | Contractor in consultation with the EO | 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/ESCO | Monthly, and as and when required | No evidence of non-compliance identified |
| – Where mobile chemical toilets are required, the following must be ensured:<br>a) Toilets are located no closer than 100 m to any watercourse or water body.<br>b) Toilets are secured to the ground to prevent them from toppling due to wind or any other cause. | Contractor in consultation with the EO | The installation of the toilets by the Contractor must be as per the listed requirements | During the Construction Phase | ECO/ESCO | Weekly | No evidence of non-compliance identified |

| **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 |
| c) No spillage occurs when the toilets are cleaned or emptied, and the contents are managed in accordance with the EMPr.<br>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.<br>e) Toilets are emptied before long weekends and workers holidays and must be locked after working hours.<br>f) Toilets are serviced regularly, and the ECO/ESCO must inspect toilets to ensure compliance to health standards; | | | | | | |
| – A copy of the waste disposal certificates must be maintained. | Contractor & EO | Certificates obtained from the licensed waste disposal facility with the emptying of the toilets must be kept on file | During the Construction Phase | ECO/ESCO | 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 person | Method of implementation | Timeframe for implementation | Responsible person | Frequency | Evidence of compliance |
| – Undertake environmentally friendly pest control in the camp area; | Contractor & EO | Only environmentally friendly pest control must be used, when required | During the Construction Phase | ECO/ESCO | As and when pest control is required for the project | Contractor to provide proof of pest control used being environmentally friendly |
| – Ensure that the workforce is sensitised to the effects of sexually transmitted diseases, especially HIV/ AIDS; | EO / Contractor in consultation with the ECO/ESCO | The effects of sexually transmitted diseases and HIV/ AIDS must be covered in the Environmental Awareness Training | Pre-construction & Construction | ECO/ESCO | Once, prior to the commencement of construction and monthly during construction | Environmental awareness training material requirements checklist |
| – The Contractor must ensure that information posters on HIV/ AIDS are displayed in the Contractor Camp area; | Contractor | Develop and place information posters on HIV/ AIDS | During the Construction Phase | ECO/ESCO | 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; | EO / Contractor in consultation with the SHE officer | Information and education of sexually transmitted diseases must be covered in the Environmental Awareness Training. | Pre-construction & Construction | ECO/ESCO | Monthly | Environmental awareness training material requirements checklist |

| **Impact Management outcome:** All necessary precautions linked to the spread of disease are taken. | | | | | | |
|---|---|---|---|---|---|---|
| **Impact Management Actions** | **Implementation** | | | **Monitoring** | | |
| | Responsible person | Method of implementation | Timeframe for implementation | Responsible person | Frequency | Evidence of compliance |
| – 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/ESCO | Monthly | Proof of placement of free condoms by the contractor to be provided |
| – Medical support must be made available; | SHE Officer in consultation with the Contractor | Ensure that designated personnel with first aid training are available on site and that first aid kits to provide medical support is readily available | Construction and Operations | ECO/ESCO | Monthly | Check the availability of first aid trained personnel and medical kits (including if these are complete in terms of supplies) |
| – Provide access to Voluntary HIV Testing and Counselling Services. | Contractor | Compile a HIV testing schedule and provide counselling services where required | During the Construction Phase | ECO/ESCO | Quarterly, and as and when required | Voluntary testing schedules and proof of counselling (where undertaken) |

***5.16 Emergency procedures***

| **Impact management outcome:** Emergency procedures are in place to enable a rapid and effective response to all types of environmental emergencies. | | | | | | |
|---|---|---|---|---|---|---|
| **Impact Management Actions** | **Implementation** | | | **Monitoring** | | |
| | Responsible person | Method of implementation | Timeframe for implementation | Responsible person | Frequency | Evidence of compliance |
| – Compile an Emergency Response Action Plan (ERAP) prior to the commencement of the proposed project; | Contractor & EO & SHE officer | Develop an Emergency Preparedness, Response and Fire Management Plan specific to the project | Pre-construction | ECO/ESCO | Once, prior to the commencement of construction | Emergency Preparedness, Response and Fire Management Plan compiled |
| – The Emergency Plan must deal with accidents, potential spillages, and fires in line with relevant legislation; | Contractor EO & SHE Officer | Develop an Emergency Preparedness, Response and Fire Management Plan specific to the project which covers accidents, potential spillages, and fires | Pre-construction | ECO/ESCO | Once, prior to the commencement of construction | Emergency Preparedness, Response and Fire Management Plan includes required specifications |
| – All staff must be made aware of emergency procedures as part of environmental awareness training; | ESCO and EO and SHE officer | Develop environmental awareness training material which covers the relevant | Pre-construction | ECO/ESCO | Prior to the commencement of the environmental | Environmental awareness training material requirements checklist |

| **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 |
| | | emergency procedures | | | awareness training | |
| – The relevant local authority must be made aware of a fire as soon as it starts; | Contractor in consultation with the ECO/ESCO | Develop and include a procedure in the Emergency Preparedness, Response and Fire Management Plan for the event of a fire and the procedure to be followed for informing the local authority | Construction | ECO/ESCO | As and when a fire occurs | The local authority was informed as per the relevant procedure set out in the Emergency Preparedness, Response and Fire Management Plan |
| – In the event of emergency necessary mitigation measures to contain the spill or leak must be implemented (see ***Hazardous Substances section 5.17).*** | Contractor | Implement the required mitigation measures in the event of a spill or leak as per the requirements of Section 5.17. | Construction and Operations | ECO/ESCO | 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 person | Method of implementation | Timeframe for implementation | Responsible person | Frequency | Evidence of compliance |
| – The use and storage of hazardous substances to be minimised and non-hazardous and non-toxic alternatives substituted where possible; | EO in consultation with the Contractor | Develop a strategy of how hazardous substances can be and should be minimised | Pre-construction & Construction | ECO/ESCO | Once, prior to the commencement of construction and monthly during the construction phase | Contractor to provide evidence of substances used for proof of compliance |
| – All hazardous substances must be stored in suitable containers as defined in the Method Statement; | Contractor | Develop a Method Statement for the storage of hazardous substances in suitable containers | Pre-construction & Construction | ECO/ESCO | Once, prior to the commencement of construction and monthly during the construction phase | Photographic proof that hazardous substances are stored in suitable containers as per the requirements of the relevant Method Statements |
| – Containers must be clearly marked to indicate contents, quantities, and safety requirements; | Contractor | Where hazardous waste is stored, these must be clearly marked indicating the | During the Construction Phase | ECO/ESCO | Monthly | Photographic proof that containers are marked as per the requirements |

| **Impact management outcome:** Safe storage, handling, use and disposal of hazardous substances. | | | | | | |
|---|---|---|---|---|---|---|
| **Impact Management Actions** | **Implementation** | | | **Monitoring** | | |
| | Responsible person | Method of implementation | Timeframe for implementation | Responsible person | Frequency | Evidence of compliance |
| | | required details of the contents | | | | |
| – All storage areas must be bunded. The bunded area must be of sufficient capacity to contain a spill / leak from the stored containers; | Contractor | Ensure that storage areas are sufficiently bunded which are of sufficient capacity to contain a spill / leak from the stored containers | During the Construction Phase | ECO/ESCO | Monthly during the Construction Phase | Photographic proof that storage areas are bunded and proof that the bund areas are of sufficient capacity to contain a spill / leak from the stored containers |
| – Bunded areas to be suitably lined with a SABS approved liner; | Contractor | Ensure that bunded storage areas are suitably lined | During the Construction Phase | ECO/ESCO | Once, during the Construction Phase | Photographic proof that bunded storage areas are suitably lined |
| – An Alphabetical Hazardous Chemical Substance (HCS) control sheet must be drawn up and kept up to date on a continuous basis; | EO / Contractor | Compile and update an Alphabetical Hazardous Chemical Substance (HCS) control sheet specific to the project | During the Construction Phase | ECO/ESCO | Monthly, and as and when required | Complete and up to date control sheet provided by the Contractor |

| **Impact management outcome:** Safe storage, handling, use and disposal of hazardous substances. | | | | | | |
|---|---|---|---|---|---|---|
| **Impact Management Actions** | **Implementation** | | | **Monitoring** | | |
| | Responsible person | Method of implementation | Timeframe for implementation | Responsible person | Frequency | Evidence of compliance |
| – All hazardous chemicals that will be used on site must have Material Safety Data Sheets (MSDS); | EO / Contractor | Keep a record of all hazardous chemicals and the respective MSDS | During the Construction Phase | ECO/ESCO | Monthly, and as and when required | Record of hazardous chemicals and the respective MSDS |
| – All employees working with HCS must be trained in the safe use of the substance and according to the safety data sheet; | cEO / Contractor | Provide training for personnel working with HCS | Pre-construction | ECO/ESCO | Once, prior to the commencement of construction and as and when required | Record of training provided to personnel working with HCS |
| – Employees handling hazardous substances / materials must be aware of the potential impacts and follow appropriate safety measures. Appropriate personal protective equipment must be made available; | EO / Contractor | Develop environmental awareness training material which covers the relevant impacts and safety measures.<br><br>Provide appropriate training and personal protective equipment for the relevant personnel handling hazardous | Pre-construction & Construction | ECO/ESCO | Prior to the commencement of the environmental awareness training and monthly during the construction phase for personal protective equipment | Environmental awareness training material requirements checklist and all relevant personnel have undergone appropriate training and have access to personal protective equipment |

| **Impact management outcome:** Safe storage, handling, use and disposal of hazardous substances. | | | | | | |
|---|---|---|---|---|---|---|
| **Impact Management Actions** | **Implementation** | | | **Monitoring** | | |
| | Responsible person | Method of implementation | Timeframe for implementation | Responsible person | Frequency | Evidence of compliance |
| | | substances and materials | | | | |
| – The Contractor must ensure that diesel and other liquid fuel, oil and hydraulic fluid is stored in appropriate storage tanks or in bowsers; | Contractor | Appropriate storage facilities must be constructed or obtained for the storing of diesel, other liquid fuel, oil, and hydraulic fluid | During the Construction Phase | ECO/ESCO | Monthly, and as and when required | Storage tanks for the project are appropriate and no incidents are reported in this regard |
| – 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/ESCO | Monthly, and as and when required | Storage areas for the tanks/ bowsers for the project are appropriate and no incidents are reported in this regard |
| – The floor of the bund must be sloped, draining to an oil separator; | Contractor | Appropriate storage facilities must be constructed as per the requirements listed | During the Construction Phase | ECO/ESCO | Once, during construction | Bunded storage areas are constructed according to the requirements |

| **Impact management outcome:** Safe storage, handling, use and disposal of hazardous substances. | | | | | | |
|---|---|---|---|---|---|---|
| **Impact Management Actions** | **Implementation** | | | **Monitoring** | | |
| | Responsible person | Method of implementation | Timeframe for implementation | Responsible person | Frequency | Evidence of compliance |
| – 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 constructed as per the requirements. Drip trays must be provided for use | During the Construction Phase | ECO/ESCO EO | Monthly Weekly | Soils at the refuelling facility are protected as required and drip trays are provided and used |
| – All empty externally dirty drums must be stored on a drip tray or within a bunded area; | Contractor | Ensure that empty dirty drums are stored appropriately as per the requirements | During the Construction Phase | ECO/ESCO EO | 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/ESCO | 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 | During the Construction Phase | ECO/ESCO EO | Monthly Weekly | Photographic record of the signage placed must be provided |

| **Impact management outcome:** Safe storage, handling, use and disposal of hazardous substances. | | | | | | |
|---|---|---|---|---|---|---|
| **Impact Management Actions** | **Implementation** | | | **Monitoring** | | |
| | Responsible person | Method of implementation | Timeframe for implementation | Responsible person | Frequency | Evidence of compliance |
| | | relevant signage in the relevant areas | | | | |
| – 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/ESCO | Monthly | Adequate fire-fighting equipment is available and has been serviced |
| – Where refuelling away from the dedicated refuelling station is required, a mobile refuelling unit must be used. Appropriate ground protection such as drip trays must be used; | Contractor | Provide a mobile refuelling unit as well as suitable ground protection, where required | During the Construction Phase | ECO/ESCO | Monthly, and as and when required | A mobile refuelling unit and suitable ground protection is available for use |
| – An appropriately sized spill kit kept onsite relevant to the scale of the activity/s involving the use of hazardous substance must be available at all times; | Contractor | Provide an appropriate spill kit for the project for the use of hazardous substances | During the Construction Phase | ECO/ESCO | Monthly, and as and when required | Appropriate spill kits are available for use |
| – The responsible operator must have the required training to make use of the spill kit in emergency situations; | EO and Contractor | Provide training on the use of spill kits to the relevant employees | Pre-construction | ECO/ESCO | Once, prior to the commencement of construction | Proof of training to be provided by the contractor |

| **Impact management outcome:** Safe storage, handling, use and disposal of hazardous substances. | | | | | | |
|---|---|---|---|---|---|---|
| **Impact Management Actions** | **Implementation** | | | **Monitoring** | | |
| | Responsible person | Method of implementation | Timeframe for implementation | Responsible person | Frequency | Evidence of compliance |
| – An appropriate number of spill kits must be available and must be located in all areas where activities are being undertaken; | EO and Contractor | Provide an appropriate number of spill kits in relevant areas | During the Construction Phase | ECO/ESCO | Monthly | Proof of appropriate number of spill kits in appropriate areas to be provided by the contractor |
| – In the event of a spill, contaminated soil must be collected in containers and stored in a central location and disposed of according to the National Environmental Management: Waste Act 59 of 2008. Refer to ***Section 5.7*** for procedures concerning ***storm and waste water management*** and ***5.8*** for ***solid and hazardous waste management.*** | EO and Contractor | Storage and disposal of contaminated soil must be in accordance with the National Environmental Management: Waste Act and sections 5.7 and 5.8 of this EMPr | During the Construction Phase | ECO/ESCO | Monthly, and as and when required | Proof of storage and disposal in terms of the National Environmental Management: Waste Act must be provided.<br><br>Certificates of disposal at licensed waste disposal facilities must be provided |

### *5.18 Workshop, equipment maintenance and storage*

| **Impact management outcome:** Soil, surface water and groundwater contamination is minimised. | | | | | | |
|---|---|---|---|---|---|---|
| **Impact Management Actions** | **Implementation** | | | **Monitoring** | | |
| | Responsible person | Method of implementation | Timeframe for implementation | Responsible person | Frequency | Evidence of compliance |
| – Where possible and practical all maintenance of vehicles and equipment must take place in the workshop area; | Contractor | Demarcate specific areas for the maintenance of vehicles and equipment | During the Construction Phase | ECO/ESCO | 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/ESCO | 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 removed from site for repairs | During the Construction Phase | ECO/ESCO | Monthly | Contractor to provide details of equipment repaired or removed from site |
| – Workshop areas must be monitored for oil and fuel spills; | EO | Undertake regular inspections of the workshop areas for oil and fuel spills and keep an | During the Construction Phase | ECO/ESCO | Monthly | Register of inspection |

| **Impact management outcome:** Soil, surface water and groundwater contamination is minimised. | | | | | | |
|---|---|---|---|---|---|---|
| **Impact Management Actions** | **Implementation** | | | **Monitoring** | | |
| | Responsible person | Method of implementation | Timeframe for implementation | Responsible person | Frequency | Evidence of compliance |
| | | updated register of inspection on site | | | | |
| – 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/ESCO | 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/ESCO | 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/ESCO | Monthly | Workshop drainage is managed in accordance with the requirements |

### *5.19 Batching plants*

| **Impact management outcome:** Minimise spillages and contamination of soil, surface water and groundwater. |
|---|

| Impact Management Actions | Implementation | | | Monitoring | | |
|---|---|---|---|---|---|---|
| | Responsible person | Method of implementation | Timeframe for implementation | Responsible person | Frequency | Evidence of compliance |
| – Concrete mixing must be carried out on an impermeable surface; | Contractor | Provide impermeable surface for the mixing of concrete | During the Construction Phase | ECO/ESCO | 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/ESCO | 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/ESCO | 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/ESCO | Weekly | Photographic proof of bagged cement stored within the demarcated area |
| – A washout facility must be provided for washing of concrete associated equipment. Water used for washing must be restricted; | Contractor | Provide a washout facility for the washing of associated equipment. Enforce limitations on water use for washing of equipment | During the Construction Phase | ECO/ESCO | Weekly | No cement laden water is released into the environment. Only minimal water is used for washing |

| | | | | | | |
|---|---|---|---|---|---|---|
| – Hardened concrete from the washout facility or concrete mixer can either be reused or disposed of at an appropriate licensed disposal facility; | Contractor | Make use of hardened concrete where possible or dispose of concrete in a suitable manner | During the Construction Phase | ECO/ESCO | Monthly | Certificates of disposal of concrete at licensed waste disposal facility |
| – Empty cement bags must be secured with adequate binding material if these will be temporarily stored on site; | Contractor | Bind empty cement bags and temporarily store it in an appropriate area on site | During the Construction Phase | ECO/ESCO | 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/ESCO | 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 removed or reused | At the completion of the Construction Phase | ECO/ESCO | Once, with the completion of construction | Certificates for the disposal of sand, stone and cement at licensed waste disposal facilities or proof of reuse must be provided |
| – Temporary fencing must be erected around batching plants in accordance with Section ***5.5: Fencing and gate installation.*** | Contractor | Erect temporary fencing around batching plants as per the | During the Construction Phase | ECO/ESCO | Weekly | Temporary fencing is undertaken in |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | requirements listed in section 5.5 | | | | accordance with 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/ESCO; | Contractor | Apply appropriate dust suppressant | During the Construction Phase | ECO/ESCO | 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/ESCO | 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 | During the Construction Phase | ECO/ESCO | Bi-weekly (every second week) | No complaints submitted in this regard |

| **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 |
| | | conditions or when a visible dust plume is present | | | | |
| – During high wind conditions, the ECO/ESCO 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/ESCO | ECO/ESCO to provide adequate recommendations | During the Construction Phase | ECO/ESCO | Daily | Recommendations made by the ECO/ESCO have been implemented by the Contractor |
| – 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/ESCO | Bi-weekly (every sECO/ESCOnd 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/ESCO; | Contractor in consultation with the ECO/ESCO | Contractor to implement erosion control measures as recommended and agreed with the ECO/ESCO | During the Construction Phase | ECO/ESCO | Weekly, until erosion is no longer a problem | Recommendations made by the ECO/ESCO 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: | EO and ESCO contractor | Inform all drivers of speed limits and place appropriate signage along the relevant roads | During the Construction Phase Operation Phase | ECO/ESCO Operation and Maintenance team | Monthly | No complaints from community members are submitted |

| **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 |
| – 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/ESCO | 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/ESCO | 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** | | | **Monitoring** | | |
| | Responsible person | Method of implementation | Timeframe for implementation | Responsible person | Frequency | Evidence of compliance |
| – Any blasting activity must be conducted by a suitably licensed blasting contractor; and | Not Applicable – no blasting proposed | | | | | |

| **Impact management outcome:** Impact to the environment is minimized through a safe blasting practice. | | | | | | |
|---|---|---|---|---|---|---|
| **Impact Management Actions** | **Implementation** | | | **Monitoring** | | |
| | Responsible person | Method of implementation | Timeframe for implementation | Responsible person | Frequency | Evidence of compliance |
| – Notification of surrounding landowners, emergency services site personnel of blasting activity 24 hours prior to such activity taking place on Site. | Not Applicable – no blasting proposed | | | | | |

***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 person | Method of implementation | Timeframe for implementation | Responsible person | Frequency | Evidence of compliance |
| – The Contractor must keep noise level within acceptable limits, Restrict the use of sound amplification equipment for communication and emergency only; | Contractor | Ensure that noise limits do not exceed acceptable limits and avoid the use of amplification communication | During the Construction Phase | ECO/ESCO | 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/ESCO | Monthly, and as and when required | No complaints registered in this regard. Silencing technology is utilised. |

| **Impact Management outcome:** Prevent unnecessary noise to the environment by ensuring that noise from development activity is mitigated. | | | | | | |
|---|---|---|---|---|---|---|
| **Impact Management Actions** | **Implementation** | | | **Monitoring** | | |
| | Responsible person | Method of implementation | Timeframe for implementation | Responsible person | Frequency | Evidence of compliance |
| – 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; | ESCO and EO | Update complaints register. Provide daily transport to and from site for employees | During the Construction Phase | ECO/ESCO | Monthly, and as and when required | Complaints register provided by the cEO and proof of transportation services provided |
| – Develop a Code of Conduct for the construction phase in terms of behaviour of construction staff. Operating hours as determined by the environmental authorisation are adhered to during the development phase. Where not defined, it must be ensured that development activities must still meet the impact management outcome related to noise management. | ESCO and EO and Contractor in consultation with the ECO/ESCO | Compile a Code of Conduct for staff. Appropriate operating hours must be identified for the project. | Pre-construction and Construction | ECO/ESCO | Once, prior to the commencement 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 person | Method of implementation | Timeframe for implementation | Responsible person | Frequency | Evidence of compliance |
| – Designate smoking areas where the fire hazard could be regarded as insignificant; | EO / Contractor | Identify and demarcate through signage for designated smoking areas | Pre-construction & Construction | ECO/ESCO | Monthly | Photographic record of designated smoking area |
| – Firefighting equipment must be available on all vehicles located on site; | EO / dEO in consultation with the Contractor | Provide all vehicles with firefighting equipment | Construction | ECO/ESCO | 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; | EO in consultation with the ECO/ESCO | Undertake formal consultation to inform the local FPA of the associated construction activities | Pre-construction | ECO/ESCO | Once, during the commencement of the Construction Phase | Proof of consultation with the FPA |
| – Contact numbers for the FPA and emergency services must be communicated in environmental awareness training and displayed at a central location on site; | EO / ESCO Contractor in | Develop environmental awareness training | Pre-construction & Construction | ECO/ESCO | Prior to the commencement of the | Environmental awareness training material |

| **Impact management outcome:** Prevention of uncontrollable fires. | | | | | | |
|---|---|---|---|---|---|---|
| **Impact Management Actions** | **Implementation** | | | **Monitoring** | | |
| | Responsible person | Method of implementation | Timeframe for implementation | Responsible person | Frequency | Evidence of compliance |
| | consultation with the ECO | material which covers the contact numbers for the FPA and emergency services.<br><br>Place the contact numbers for the FPA and emergency services at a visible and central location | | | environmental awareness training and once during the construction phase | requirements checklist and photographic record of contact numbers on display |
| – Two-way swop of contact details between ECO/ESCO and FPA. | ECO/ESCO | Consultation between the ECO/ESCO and FPA in order to exchange contact details | Pre-construction | ECO/ESCO | Once, during the commencement of the Construction Phase | Proof of consultation with the FPA |

### *5.24 Stockpiling and stockpile areas*

| **Impact management outcome:** Reduce erosion and sedimentation as a result of stockpiling. | | | | | | |
|---|---|---|---|---|---|---|
| **Impact Management Actions** | **Implementation** | | | **Monitoring** | | |
| | Responsible person | Method of implementation | Timeframe for implementation | Responsible person | Frequency | Evidence of compliance |
| – All material that is excavated during the project development phase (either during piling (if required) or earthworks) must be stored appropriately on site in order to minimise impacts to watercourses and water bodies; | Contractor | Identify and demarcate an appropriate location for the storage of excavated materials | Pre-construction & Construction | ECO/ESCO | Monthly | Excavated material is not stored within sensitive environmental areas |
| – All stockpiled material must be maintained and kept clear of weeds and alien vegetation growth by undertaking regular weeding and control methods; | Contractor | Implement appropriate and sufficient maintenance on stockpiled material regularly | During the Construction Phase | ECO/ESCO | Bi-monthly (every second month) | Stockpiled material is maintained sufficiently and is clear of weeds and alien vegetation |
| – Topsoil stockpiles must not exceed 2 m in height: | Contractor | Enforce limitations for the height of topsoil stockpiles | During the Construction Phase | ECO/ESCO | Bi-monthly (every second month) | Topsoil stockpiles do not exceed 2m in height |
| – During periods of strong winds and heavy rain, the stockpiles must be covered with appropriate material (e.g., cloth, tarpaulin etc.); | Contractor | Appropriate material must be provided in order to cover stockpiles when required | During the Construction Phase | ECO/ESCO | Monthly | Contractor to provide proof of availability of appropriate material to cover stockpiles when required |

| **Impact management outcome:** Reduce erosion and sedimentation as a result of stockpiling. | | | | | | |
|---|---|---|---|---|---|---|
| **Impact Management Actions** | **Implementation** | | | **Monitoring** | | |
| | Responsible person | Method of implementation | Timeframe for implementation | Responsible person | Frequency | Evidence of compliance |
| – Where possible, sandbags (or similar) must be placed at the bases of the stockpiled material in order to prevent erosion of the material. | Contractor | Sandbags must be provided in order to prevent erosion of stockpiled materials | During the Construction Phase | ECO/ESCO | Monthly | Contractor to provide proof of availability of sandbags to prevent erosion 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 person | Method of implementation | Timeframe for implementation | Responsible person | Frequency | Evidence of compliance |
| – Where terracing is required, topsoil must be collected and retained for the purpose of re-use later to rehabilitate disturbed areas not covered by yard stone; | Contractor | Collect and retain topsoil for terracing | During the Construction Phase Rehabilitation | ECO/ESCO | Weekly | Proof of collection and retaining of topsoil |
| – Areas to be rehabilitated include terrace embankments and areas outside the high voltage yards; | Contractor | Undertake rehabilitation of terrace | During the Construction Phase Rehabilitation | ECO/ESCO | Weekly | Photographic record of rehabilitation of |

| **Impact management outcome:** Impact to the environment minimised during civil works to create the substation terrace. | | | | | | |
|---|---|---|---|---|---|---|
| **Impact Management Actions** | **Implementation** | | | **Monitoring** | | |
| | Responsible person | Method of implementation | Timeframe for implementation | Responsible person | Frequency | Evidence of compliance |
| | | embankments and areas outside of the high voltage yard where applicable | | | | 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/ESCO | 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/ESCO | 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/ESCO | 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/ESCO | Monthly | Certificates obtained for the disposal of excess spoil at a licensed waste disposal facility |

| **Impact management outcome:** Impact to the environment minimised during civil works to create the substation terrace. | | | | | | |
|---|---|---|---|---|---|---|
| **Impact Management Actions** | **Implementation** | | | **Monitoring** | | |
| | Responsible person | Method of implementation | Timeframe for implementation | Responsible person | Frequency | Evidence of compliance |
| – 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/ESCO | Monthly | Photographic record of spoil used for landscaping purposes as well as feedback from the contractor |

***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/ESCO | Monthly | Certificates obtained for the disposal of excess spoil at a licensed waste disposal facility |

| **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 |
| – 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/ESCO | 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/ESCO | Monthly | Management of equipment is undertaken in line with the requirements of section 5.18 |
| – Hazardous substances spills from equipment must be managed in accordance with ***Section 5.17: Hazardous substances.*** | Contractor | Undertake the management of hazardous substances spills from equipment as per the requirements of section 5.17 | During the Construction Phase | ECO/ESCO | Monthly | Management of hazardous substances spills from equipment is undertaken in line with the requirements of 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/ESCO | 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/ESCO | 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/ESCO | 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/ESCO | 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/ESCO | 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 waste as per the | During the Construction Phase | ECO/ESCO | Monthly | The recycling or disposal of residual solid waste is |

| **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 |
| | | requirements of section 5.8 | | | | undertaken in line with section 5.8. |

***5.29Steelwork 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/ESCO | 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/ESCO | 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 ***6.8: 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/ESCO | 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/ESCO | 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/ESCO | 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 person | Method of implementation | Timeframe for implementation | Responsible person | Frequency | Evidence of compliance |
| – 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 waste as per the requirements of section 5.8 | During the Construction Phase | ECO/ESCO | Monthly | The recycling or disposal of residual solid waste is undertaken in line with section 5.8. |

### *5.32 Socio- Economic*

| **Impact management outcome:** enhanced socio-ECO/Economic development. | | | | | | |
|---|---|---|---|---|---|---|
| **Impact Management Actions** | **Implementation** | | | **Monitoring** | | |
| | Responsible person | Method of implementation | Timeframe for implementation | Responsible person | Frequency | Evidence of compliance |
| – Develop and implement communication strategies to facilitate public participation; | ESCO/EO | Identify and implement appropriate strategies for communication | Pre-construction & Construction | ECO/ESCO | Once, prior to the commencement of construction and monthly | Communication is undertaken as per the identified strategies and no complaints are |

| **Impact management outcome:** enhanced socio-ECO/Economic development. | | | | | | |
|---|---|---|---|---|---|---|
| **Impact Management Actions** | **Implementation** | | | **Monitoring** | | |
| | Responsible person | Method of implementation | Timeframe for implementation | Responsible person | Frequency | Evidence of compliance |
| | | with the communities through consideration of the community needs | | | during the construction | submitted regarding communication |
| – Develop and implement a collaborative and constructive approach to conflict resolution as part of the external stakeholder engagement process; | Contractor | Development and implement a Grievance Mechanism which considers the community needs and provides procedures for conflict resolution | Pre-construction & Construction | ECO/ESCO | Once, prior to the commencement of construction and monthly during the construction phase | Conflict resolution is undertaken in line with the requirements of the Grievance Mechanism. No complaints on conflict 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 | Pre-construction & Construction | ECO/ESCO | Once, prior to the commencement of construction and monthly during the construction phase | Communication / liaison with neighbouring landowners and residents are undertaken in line with the requirements of |

| **Impact management outcome:** enhanced socio-ECO/Economic development. | | | | | | |
|---|---|---|---|---|---|---|
| **Impact Management Actions** | **Implementation** | | | **Monitoring** | | |
| | Responsible person | Method of implementation | Timeframe for implementation | Responsible person | Frequency | Evidence of compliance |
| | | neighbouring landowners and residents | | | | the Grievance Mechanism. No complaints on communication with neighbouring landowners and residents is submitted |
| – Create work and training opportunities for local stakeholders; and | Contractor | Develop and implement a "locals first" policy for the provision of employment opportunities | Pre-construction & Construction | ECO/ESCO | Once, prior to the commencement of construction and monthly during the construction phase | The "locals first" policy is considered in terms of the employment and training opportunities |
| – Where feasible, no workers, with the exception of security personnel, must be permitted to stay over-night on the site. This would reduce the risk to local farmers. | Not Applicable - no workers, other than security is proposed to stay on-site overnight. | | | | | |

### *5.33 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 person | Method of implementation | Timeframe for implementation | Responsible person | Frequency | Evidence of compliance |
| – Bunds must be emptied (where applicable) and need to be undertaken in accordance with the impact management actions included in ***sections 5.17: Hazardous substances and 5.18: Workshop, equipment maintenance and storage;*** | Contractor | Regular emptying of the bunds must be undertaken. This must be undertaken as per the requirements listed in sections 5.17 and 5.18 | During the Construction Phase | ECO/ESCO | Prior to site closure for more than 05 days | Bunds are emptied as per the requirements listed under sections 5.17 and 5.18 |
| – Hazardous storage areas must be well ventilated; | Contractor | Install appropriate ventilation in all hazardous storage areas | During the construction phase | ECO/ESCO | Prior to site closure for more than 05 days | Effective ventilation is installed in hazardous storage areas |
| – Fire extinguishers must be serviced and accessible. Service records to be filed and audited at last service; | Contractor / EO | Ensure fire extinguishers are serviced, as required and are easily accessible with appropriate signage indicating location. Ensure service records | During the Construction Phase | ECO/ESCO | Prior to site closure for more than 05 days | Signage placed indicating location of fire extinguishers and service records |

| **Impact management outcome:** Minimise the risk of environmental impact during periods of site closure greater than five days. | | | | | | |
|---|---|---|---|---|---|---|
| **Impact Management Actions** | **Implementation** | | | **Monitoring** | | |
| | Responsible person | Method of implementation | Timeframe for implementation | Responsible person | Frequency | Evidence of compliance |
| | | are kept up to date and filed | | | | |
| – Emergency and contact details displayed must be displayed; | Contractor /cEO | Place emergency and contact details which are readily available and easily accessible | During the Construction Phase | ECO/ESCO | Prior to site closure for more than 05 days | Photographic proof of contact details on display |
| – Security personnel must be briefed and have the facilities to contact or be contacted by relevant management and emergency personnel; | Contractor in consultation with the ECO/ESCO | Hold a workshop with all security personnel to provide a brief of the project and security requirements. Provide facilities in order to contact management and emergency personnel | Pre-construction & construction | ECO/ESCO | Prior to site closure for more than 05 days | Proof of the workshop held must be kept on file by the contractor. |
| – Night hazards such as reflectors, lighting, traffic signage etc. must have been checked; | Contractor | Regular checks of night hazards | During the Construction Phase | ECO/ESCO | Prior to site closure for more than 05 days | Proof of checks of night hazards |

| **Impact management outcome:** Minimise the risk of environmental impact during periods of site closure greater than five days. | | | | | | |
|---|---|---|---|---|---|---|
| **Impact Management Actions** | **Implementation** | | | **Monitoring** | | |
| | Responsible person | Method of implementation | Timeframe for implementation | Responsible person | Frequency | Evidence of compliance |
| | | must be undertaken | | | | must be 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.; | EO / Contractor in consultation with the ECO/ESCO | Identify any potential fire hazards and notify the relevant local authority | During the Construction Phase | ECO/ESCO | 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/ESCO | 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/ESCO | 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/ESCO | Prior to site closure for more than 05 days | Cement and material stores are secured prior to site closure |

| **Impact management outcome:** Minimise the risk of environmental impact during periods of site closure greater than five days. | | | | | | |
|---|---|---|---|---|---|---|
| **Impact Management Actions** | **Implementation** | | | **Monitoring** | | |
| | Responsible person | Method of implementation | Timeframe for implementation | Responsible person | Frequency | Evidence of compliance |
| – Toilets must have been emptied and secured; | Contractor | Ensure toilets are emptied and secured prior to site closure | During the Construction Phase | ECO/ESCO | 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/ESCO | 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 are emptied and secured prior to site closure | During the Construction Phase | ECO/ESCO | Prior to site closure for more than 05 days | Drip trays are emptied and secured prior to site 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 person | Method of implementation | Timeframe for implementation | Responsible person | Frequency | Evidence of compliance |
| – All old equipment removed during the project must be stored in such a way as to prevent pollution of the environment; | Contractor | Appropriately store old equipment in a manner which prevents pollution to the environment. This could include the construction of bunded areas | Decommissioning | ECO/ESCO | Monthly | Photographic record of appropriate storage of old equipment |
| – Oil containing equipment must be stored to prevent leaking or be stored on drip trays; | Contractor | Appropriately store equipment containing oil through the use of drip trays or other suitable methods | Decommissioning | ECO/ESCO | Monthly | Photographic record of appropriate storage of equipment containing oil |
| – All scrap steel must be stacked neatly, and any disused and broken insulators must be stored in containers; | Contractor | Ensure all scrap steel is stacked neatly and store disused and broken insulators in appropriate containers | Decommissioning | ECO/ESCO | Monthly | Photographic record of stacked scrap steel and containers containing broken and disused insulators |

| **Impact management outcome:** Impact to the environment to be minimised during the dismantling, storage, and disposal of old equipment commissioning. | | | | | | |
|---|---|---|---|---|---|---|
| **Impact Management Actions** | **Implementation** | | | **Monitoring** | | |
| | Responsible person | Method of implementation | Timeframe for implementation | Responsible person | Frequency | Evidence of compliance |
| – Once material has been scrapped and the contract has been placed for removal, the disposal Contractor must ensure that any equipment containing pollution causing substances is dismantled and transported in such a way as to prevent spillage and pollution of the environment; | Contractor | Develop and implement a procedure for the dismantling and transportation of equipment containing pollution causing substances which prevents spillage and pollution of the environment | Decommissioning | ECO/ESCO | Monthly | Proof from contractor that dismantling and transportation of equipment containing pollution causing substances has been undertaken in an appropriate manner |
| – The Contractor must also be equipped to contain and clean up any pollution causing spills; and | Contractor | Ensure sufficient spill kits are available for the clean-up of pollution causing spills | Decommissioning | ECO/ESCO | Monthly | Sufficient spill kits are available on site |
| – Disposal of unusable material must be at a licensed waste disposal site. | Contractor | Make use of a licensed waste disposal site | Decommissioning | ECO/ESCO | Monthly | Certificates obtained for the 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; | Contractor | Develop and implement a rehabilitation plan for the rehabilitation of all disturbed areas.<br><br>Dispose of all spoil and waste at a licensed waste disposal facility | Pre-construction & Rehabilitation | ECO/ESCO | Weekly | Rehabilitation of the disturbed areas is undertaken as per the rehabilitation plan. All certificates of waste disposal at licensed facilities are available. |
| – 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 | Contractor in consultation with the ECO/ESCO | Assess all slopes and determine whether contouring is required | Rehabilitation | ECO/ESCO | Weekly | All slopes are assessed and contoured as required |
| – All slopes must be assessed for terracing, and to terrace only when the need is identified in accordance with the Conservation of Agricultural Resources Act, No 43 of 1983; | Contractor in consultation with the ECO/ESCO | Assess all slopes and determine whether terracing is required | Rehabilitation | ECO/ESCO | Weekly | All slopes are assessed and terraced as required |
| – Berms that have been created must have a slope of 1:4 and be replanted with indigenous species and grasses that approximates the original condition; | Contractor | Ensure all berms have a slope of 1:4 and is replanted | Rehabilitation | ECO/ESCO | Weekly | All berms have a slope of 1:4 and is replanted with indigenous |

| **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 |
| | | with indigenous species and grasses | | | | species and grasses |
| – Where new access roads have crossed cultivated farmlands, that lands must be rehabilitated by ripping which must be agreed to by the holder of the EA and the landowners; | Contractor and EO in consultation with ESCO and ECO | A rehabilitation plan must be developed and implemented in association with landowner. | Rehabilitation | ESCO/ECO | Weekly | Photos and landowner sign-off |
| – Rehabilitation of access roads inside of farmland; | Contractor and EO in consultation with ESCO and ECO | A rehabilitation plan must be developed and implemented | Rehabilitation | ESCO/ECO | Weekly | Photos and landowner sign-off |
| – Indigenous species must be used for with species and/grasses to where it compliments or approximates the original condition; | Contractor | Make use of indigenous species for rehabilitation | Rehabilitation | ECO/ESCO | Weekly | Indigenous species are used for rehabilitation |
| – Stockpiled topsoil must be used for rehabilitation (refer to ***Section 5.24: Stockpiling and stockpiled areas***); | Contractor | Ensure stockpiled topsoil is used as per the requirements listed under section 5.24 | Rehabilitation | ECO/ESCO | Weekly | Stockpiled topsoil is used as per the requirements listed under section 5.24 |
| – Stockpiled topsoil must be evenly spread so as to facilitate seeding and minimise loss of soil due to erosion; | Contractor | Ensure that topsoil is spread evenly | Rehabilitation | ECO/ESCO | Weekly | Topsoil is spread evenly |
| – Before placing topsoil, all visible weeds from the placement area and from the topsoil must be removed; | Contractor | Remove all visible weeds from | Rehabilitation | ECO/ESCO | Weekly | No weeds are visible in the |

| **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 |
| | | placement area and topsoil before spreading the topsoil | | | | placement area or the topsoil |
| – Subsoil must be ripped before topsoil is placed; | Contractor | Undertake the ripping of subsoil prior to the spreading of topsoil | Rehabilitation | ECO/ESCO | 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/ESCO | At the start of rehabilitation to confirm the correct timeframe | Rehabilitation is undertaken during the optimal time |
| – Where impacted through construction related activity, all sloped areas must be stabilised to ensure proper rehabilitation is effected and erosion is controlled; | Contractor | All disturbed slope areas must be stabilised | Rehabilitation | ECO/ESCO | 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/ESCO | 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 | Rehabilitation | ECO/ESCO | Weekly | Photographic record of spoil |

| **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 |
| | | applied as per the listed requirements | | | | used for landscaping purposes as well as feedback from the contractor |
| – Where required, re-vegetation including hydro-seeding can be enhanced using a vegetation seed mixture as described below. A mixture of seed can be used provided the mixture is carefully selected to ensure the following:<br>a) Annual and perennial plants are chosen.<br>b) Pioneer species are included.<br>c) Species chosen must be indigenous to the area with the seeds used coming from the area.<br>d) Root systems must have a binding effect on the soil.<br>e) The final product must not cause an ecological imbalance in the area | Contractor and EO in consultation with a suitably qualified specialist | Make use of a suitable vegetation seed mixture should enhancement be required | Rehabilitation | ECO/ESCO | As and when required | Use of a suitable vegetation seed mixture if required |

## 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:

| PROJECT APPLICANT DETAILS | |
|---|---|
| **DEVELOPMENT ENTITY** | |
| **Applicant Name** | Soyuz 2 Solar PV Park (Pty) Ltd |
| **Responsible Person** | Mr Matteo Giulio Luigi Brambilla |
| **Address** | 14th Floor<br>Pier Place<br>Heerengracht Street<br>Foreshore<br>Cape Town<br>8001 |
| **Contact Details** | +27 (0)21 418 3940 (T)<br>+27 (0)72 212 1531 (C)<br>Email: m.logan@redrocket.energy |

7.1.2 Details and expertise of the EAP: Terramanzi Group (Pty) Ltd

| Details and expertise of the EAP: | |
|---|---|
| **EAP Name** | Natasha Williams - Terramanzi Group (Pty) Ltd |
| **EAP Qualifications** | BSc (Hons) Microbiology & Waste Technology University of KwaZulu Natal - 29 years' experience as an environmental practitioner |
| **Professional Affiliation/Registration** | EAPASA(2019/1458) |
| **Physical Address** | 5 Devon Air Cl, Crofters Valley, Cape Town, 7966 |
| **Telephone** | 021 701 5228 |
| **Cellphone** | 082 520 0007 |
| **Email Address** | Natasha@terramanzi.co.za |

Expertise of the EAP (Curriculum Vitae included): Yes

7.1.3 Project name:

Proposed Development of the Soyuz 2 Solar PV Park near Britstown, Northern Cape Province

7.1.4 Description of the project:

Red Rocket South Africa (Pty) Ltd is proposing to develop the **Soyuz Solar Photovoltaic (PV) Cluster 1-6** comprising of six (6) Photovoltaic Solar Energy Parks. It is proposed that this Soyuz Solar PV Cluster be situated approximately 14km South-east of Britstown in the Northern Cape Province (Error! Reference source not found.).

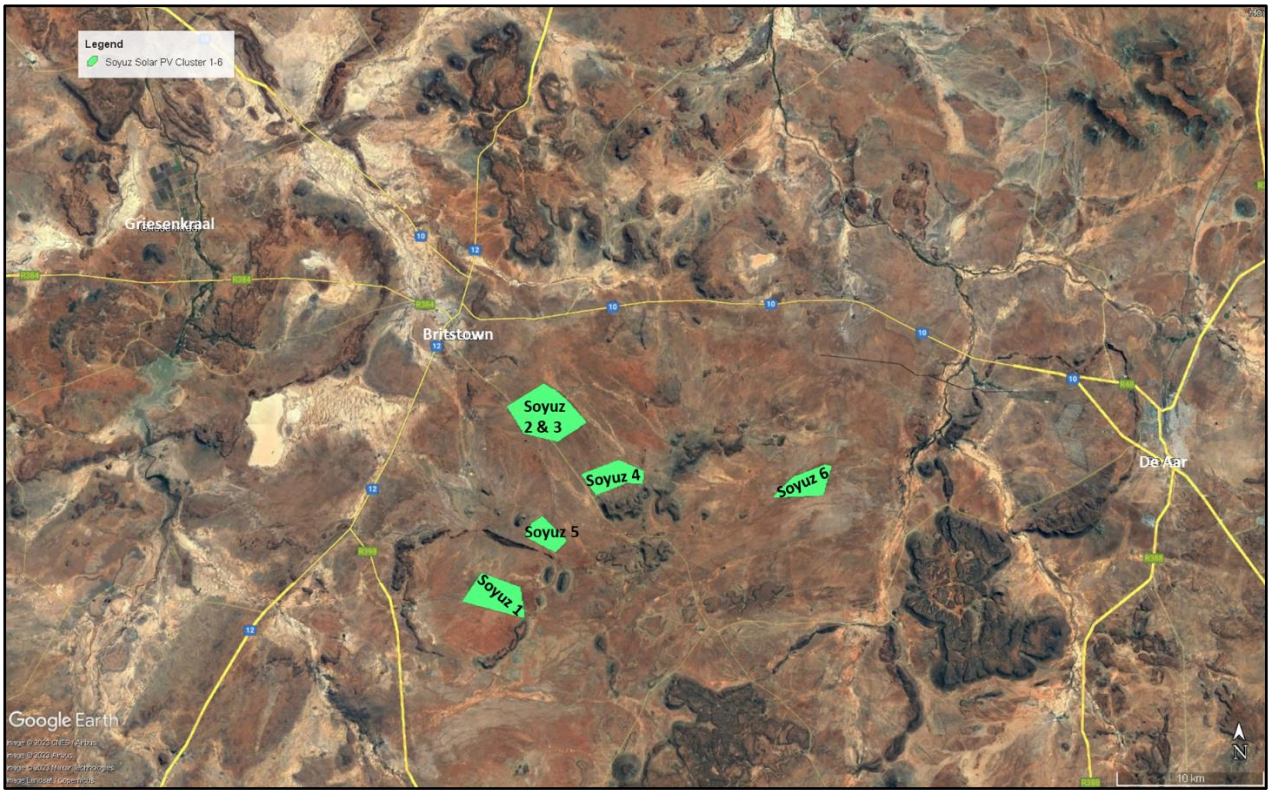



**Figure 2: Regional Location of the Soyuz Solar PV Cluster 1-6**

All 6 Soyuz Solar PV Parks will require respective Environmental Authorisations. Due to commercial reasons, each of the Soyuz Solar PV Parks application for environmental authorisation are being applied for separately by different applicants but the application processes are being conducted simultaneously.

Soyuz 2 Solar PV Park (Pty) Ltd proposes the development of the Soyuz 2 Solar PV Park and associated infrastructure, near Britstown, Northern Cape Province. The proposed Soyuz 2 Solar PV Park will be located on Portion 2 of the Farm 97, Pettspot. The Soyuz 2 Solar PV Park will have a generating capacity of up to 300MW and will include a Battery Energy Storage System (BESS) of up to 1200MWh. An on-site substation with a capacity of 33 – 132 kV, will enable the connection of the Solar PV Park to a 132kV Overhead Powerline (OHPL). (**Note:** the 132 kV OHPL does not form part of this Environmental Authorisation process). The purpose of the Project is to generate clean electricity from a renewable energy source (i.e., solar radiation) to contribute to the Eskom national energy grid and/or any Private off-takers (where applicable). The 33 – 132 kV back-to-back substation will occupy a development footprint of 6 ha within the development area for the proposed Soyuz 2 Solar PV Park.

**Table 2: Details of the land parcel on which the Soyuz 2 Solar PV Park 240 MVA (33 – 132 kV) Substation is located**

| Cadastral Land Parcel | SG Code | Approximate Co-ordinates of the Substation on land portion |
|---|---|---|
| Farm Pettspot 2/97 | C01200000000009700002 | 30° 38’ 54.65 S |

| | | |
|---|---|---|
| | | 23° 33’ 49.57” E " |

7.1.5 Project location:

The proposed Soyuz 2 Solar PV Park is situated approximately 13km South-east of Britstown and 42 km west of the town of De Aar. The substation will be located on Portion 1 of the Farm 127, Twyfelhoek within the development footprint of the Soyuz 2 Solar PV Park. (see Figure 33).

The substation will encompass an area of 6Ha:

**Table 3: The approximate co-ordinates of the 6 ha for the construction of the Soyuz 2 Solar PV Park 33 - 132 kV substation are presented in the following table:**

| Point | Latitude | Longitude |
|---|---|---|
| Corner A | 30° 38’ 54.65 S | 23° 33’ 49.57” E |
| Corner B | 30° 38’ 59.85 S | 23° 33’ 54.04” E |
| Corner C | 30° 39’ 05.62 S | 23° 33’ 45.01” E |
| Corner D | 30° 39’ 00.43 S | 23° 33’ 40.52” E |

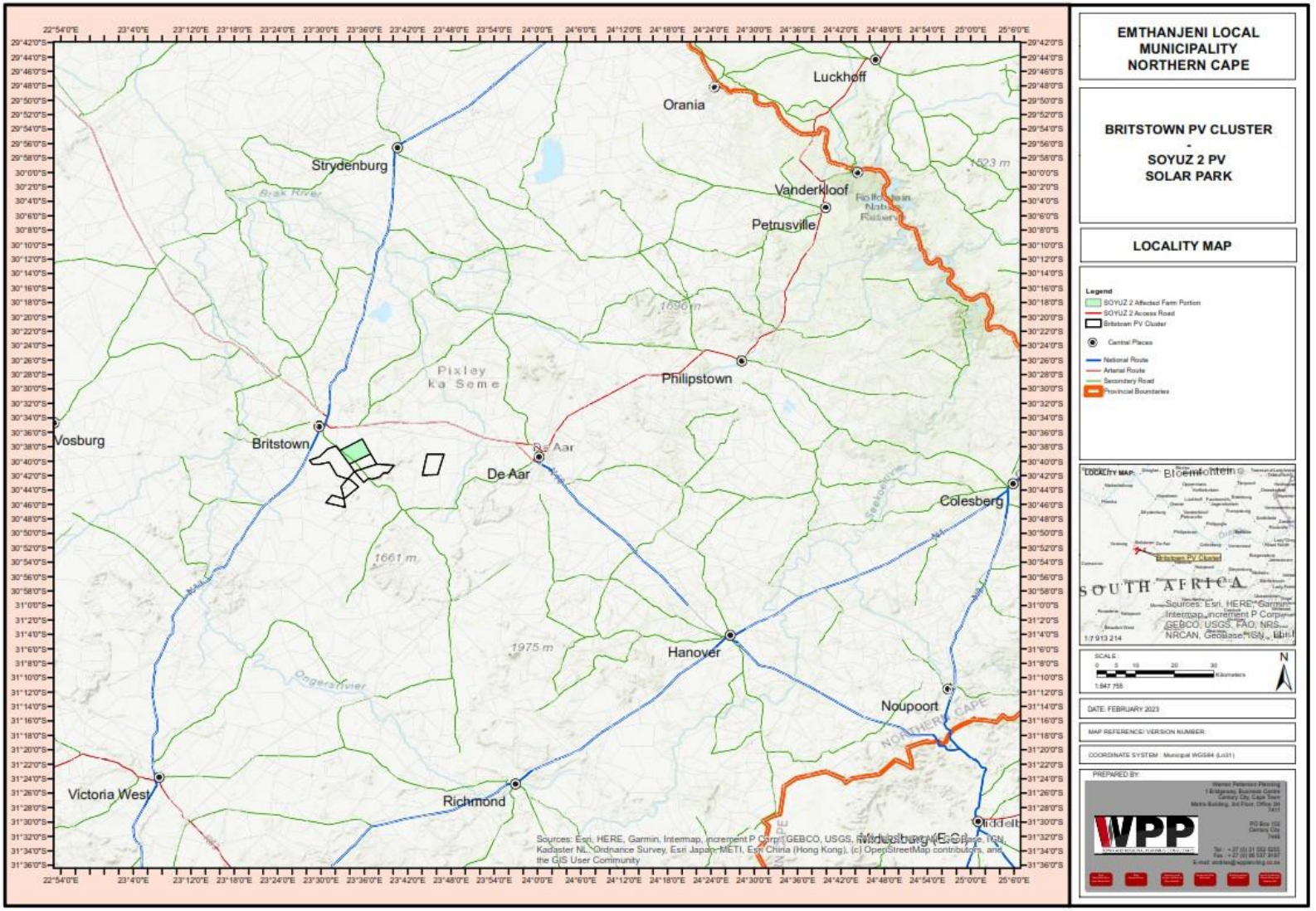



**Figure 3: Regional Locality Plan**

### 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.

The site layout map for the Soyuz 2 Solar PV Park, showing the location of the substation, is presented in **Figure 4** and the site sensitivity map is shown in **Figure 5**.


**Figure 4: Site Map for the Soyuz 2 Solar PV Park showing the location of the Substation (dark green)**

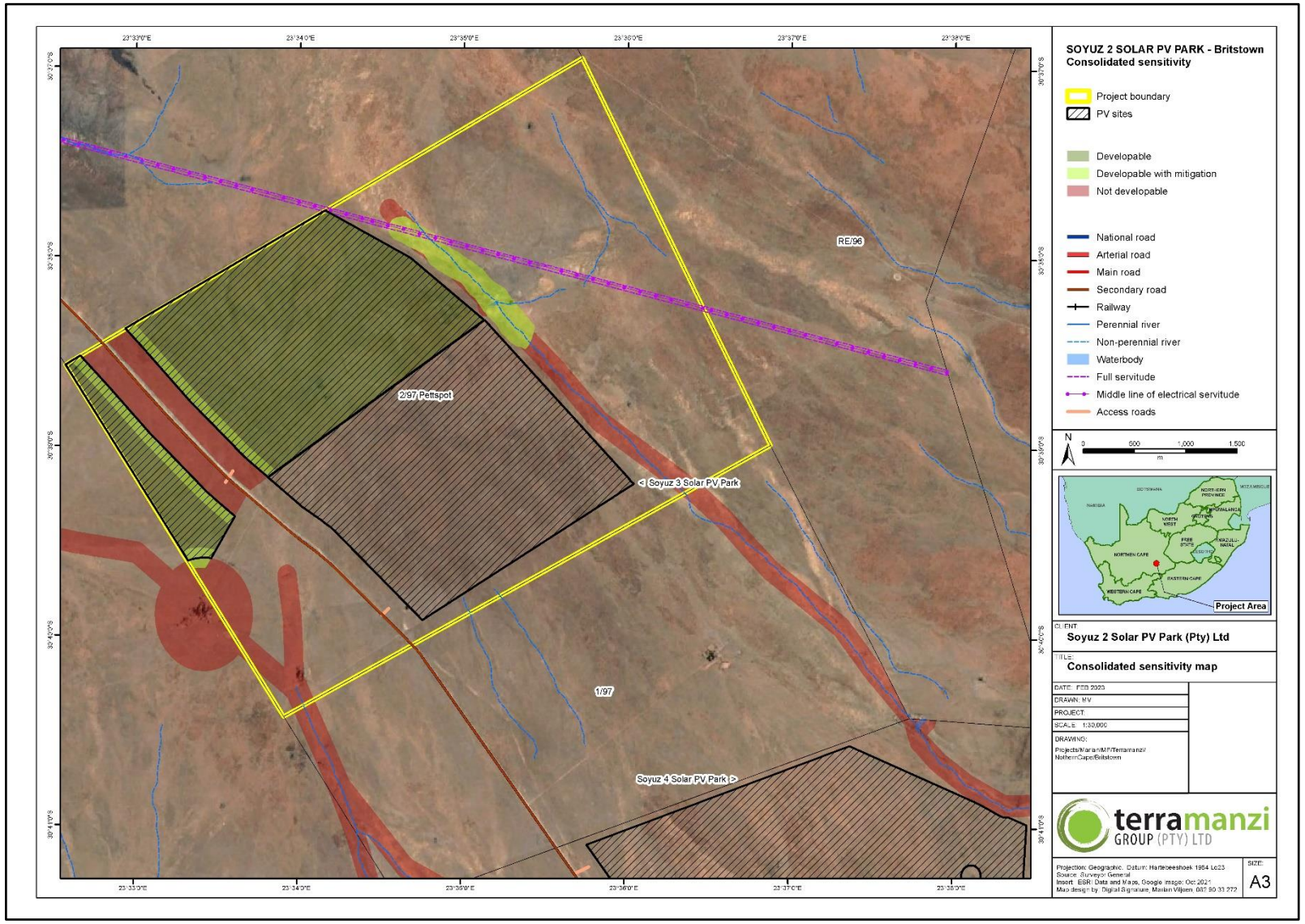
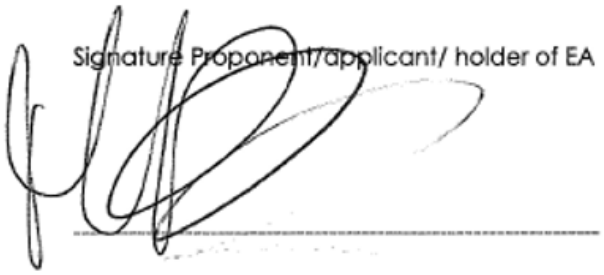



**Figure 5: Site Map for the Soyuz 2 Solar PV Park showing the location of the Substation (dark green)**

### 7.3 Sub-section 3: Declaration

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




Date:

13/08/2023

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

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

**PART C**

## 8 SITE SPECIFIC ENVIRONMENTAL ATTRIBUTES

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

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

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

**Please note:** The Soyuz 2 Solar PV Park substation site does not contain any specific environmental sensitivities or attributes which require additional management to what is already presented in the Generic EMP and the following document which is submitted in support of the application for Environmental Authorisation for the development and operation of the proposed Soyuz 2 Solar PV Park, of which the substation is a part of:

- Environmental Management Programme for the Proposed Development of the Soyuz 2 Solar PV Park near Britstown, Northern Cape Province.

This Generic EMP will be an appendix in the above Environmental Management Programme.

**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.