REPORT

Generic Environmental Management Programme for the 33kV Overhead Powerlines – 40MW Photovoltaic (PV) Plant associated with the Tubatse Ferrochrome (TFC) Smelter, Fetakgomo Tubatse Local Municipality Ref 12/1/9/2-GS88

Generic EMPr for 33kV Overhead Powerlines

Client: Samancor Chrome Pty Ltd

Reference: MD6154-RHD-XX-ZZ-RP-Z-0001

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Enhancing Society Together

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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 has that meaning, and unless the context requires otherwise –

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

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

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

Hazardous Substances - 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/ ECO/ Engineer in response to this EMPr. 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 can 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 shall cover applicable details with regard to:

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

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

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

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

Topsoil - means a varying depth (up to 300 mm) of the soil profile irrespective of the fertility, appearance, structure, agricultural potential, fertility, and composition of the soil.

Works - means the Works to be executed in terms of the Contract.

2 ACRONYMS AND ABBREVIATIONS

CA	Competent Authority
cEO	Contractors Environmental Officer
DFFE	Department of Forestry, Fisheries and the Environment
dEO	Developer Environmental Officer
DPM	Developer Project Manager
DSS	Developer Site Supervisor
EAR	Environmental Audit Report
ECA	Environmental Conservation Act No. 73 of 1989
ECO	Environmental Control Officer
EA	Environmental Authorisation
EIA	Environmental Impact Assessment
ERAP	Emergency Response Action Plan
EMPr	Environmental Management Programme Report
EAP	Environmental Assessment Practitioner
FPA	Fire Protection Agency
HCS	Hazardous chemical Substance
MSDS	Material Safety Data Sheet
NCDAERL	Northern Cape Department for Agriculture, Environmental Affairs, Rural Development and Land Reform
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)
RI&AP's	Registered Interested and affected parties

This EMPr is based on the generic Environmental Management Programme for the development and expansion for overhead electricity transmission and distribution infrastructure (Government Gazette No 42323, 22 March 2019), contemplated in Regulations 19(4), 23(4), and Appendix 4 to the Environmental Impact Assessment Regulations, 2014, as amended.

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. Therefore, this section of the generic EMPr gives guidance to the various environmental roles and reporting lines.

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

Function	Role and Responsibilities
Developer's Project Manager (DPM)	Role The Project Developer is accountable for ensuring compliance with the EMPr and any conditions of approval from the competent authority (CA). Furthermore, where required, an environmental control officer (ECO) must be contracted by the Project Developer to objectively monitor the implementation of the EMPr according to relevant environmental legislation and the conditions of the environmental authorisation (EA). The Project Developer is further responsible for providing and giving the mandate to enable the ECO to perform responsibilities. He must ensure that the ECO is integrated as part of the project team while remaining independent. Responsibilities ▪ Be fully conversant with the conditions of the EA; ▪ Ensure that all stipulations within the EMPr are communicated and adhered to by the Developer and its Contractor(s); ▪ Issuing of site instructions to the Contractor for corrective actions required; ▪ Monitor the implementation of the EMPr throughout the project by means of site inspections and meetings. ▪ Overall management of the project and EMPr implementation; and ▪ Ensure that periodic environmental performance audits are undertaken on the project implementation.
Developer Site Supervisor (DSS)	Role The DSS reports directly to the DPM, oversees site works, liaises with the Contractor(s) and the ECO. The DSS is responsible for the day-to-day implementation of the EMPr and for ensuring the compliance of all contractors with the conditions and requirements stipulated in the EMPr. Responsibilities ▪ Ensure that all Contractors identify a contractor's Environmental Officer (cEO); ▪ Must be fully conversant with the conditions of the EA. ▪ Oversees site works, liaison with Contractor, DPM, and ECO; ▪ Must ensure that all landowners have the relevant contact details of the site staff, ECO, and cEO; ▪ Issuing of site instructions to the Contractor for corrective actions required; ▪ Will issue all non-compliances to contractors; and ▪ Ratify the Monthly Environmental Report.

Function	Role and Responsibilities
Environmental Control Officer (ECO)	Role The ECO should have appropriate training and experience in the implementation of environmental management specifications. The primary role of the ECO is to act as an independent quality controller and monitoring agent regarding all environmental concerns and associated environmental impacts. In this respect, the ECO is to conduct periodic site inspections, attend regular site meetings, pre-empt problems and suggest mitigation and be available to advise on incidental issues that arise. The ECO is also required to conduct compliance audits, verifying the monitoring reports submitted by the cEO. The ECO provides feedback to the DSS and Project Manager regarding all environmental matters. The Contractor, contractor Environmental Officer (cEO), and developer Environmental Officer (dEO) are answerable to the ECO for non-compliance with the Performance Specifications set out in the EA and EMPr. The ECO provides feedback to the DSS and Project Manager, who in turn reports back to the Contractor and potential and Registered Interested & Affected Parties' (RI&AP's), as required. Issues of non-compliance raised by the ECO must be taken up by the Project Manager and resolved with the Contractor as per the conditions of his contract. Decisions regarding environmental procedures, specifications, and requirements that have a cost implication (i.e., those deemed to be a variation not allowed for in the Performance Specification) must be endorsed by the Project Manager. As specified by the EA, the ECO must report to the relevant CA as and when required. Responsibilities The responsibilities of the ECO will include the following: ▪ Be familiar with the recommendations and mitigation measures of this EMPr; ▪ Be conversant with relevant environmental legislation, policies, and procedures, and ensure compliance with them; ▪ Undertake regular and comprehensive site inspections/ audits of the construction site according to the generic EMPr and applicable licenses to monitor compliance as required; ▪ Educate the construction team about the management measures contained in the EMPr and environmental licenses; ▪ Compilation and administration of an environmental monitoring plan to ensure that the environmental management measures are implemented and are effective; ▪ Monitoring the performance of the Contractors and ensuring compliance with the EMPr and associated Method Statements; ▪ In consultation with the Developer Site Supervisor, order the removal of person(s) and/ or equipment which are in contravention of the specifications of the EMPr and/ or environmental licenses; ▪ Liaison between the DPM, Contractors, authorities, and other lead stakeholders on all environmental concerns; ▪ Compile a regular environmental audit report highlighting any non-compliance issues as well as satisfactory or exceptional compliance with the EMPr; ▪ Validating the regular site inspection reports, which are to be prepared by the contractor Environmental Officer (cEO); ▪ Checking the cEO's record of environmental incidents (spills, impacts, legal transgressions, etc.) as well as corrective and preventive actions taken; ▪ Checking the cEO's public complaints register in which all complaints are recorded, as well as action taken;

Function	Role and Responsibilities
	▪ Assisting in the resolution of conflicts; ▪ Facilitate training for all personnel on the site – this may range from carrying out the training to reviewing the training programmes of the Contractor; ▪ In case of non-compliance, the ECO must first communicate this to the Senior Site Supervisor, who has the power to ensure this matter is addressed. Should no action or insufficient action be taken, the ECO may report this matter to the authorities as non-compliance; ▪ Maintenance, update, and review of the EMPr; ▪ Communication of all modifications to the EMPr to the relevant stakeholders.
developer Environmental Officer (dEO)	Role The dEO will report to the Project Manager and are responsible for the implementation of the EMPr, environmental monitoring and reporting, providing environmental input to the Project Manager and Contractor's Manager, liaising with contractors and the landowners, and a range of environmental coordination responsibilities. Responsibilities ▪ Be fully conversant with the EMPr; ▪ Be familiar with the recommendations and mitigation measures of this EMPr, and implement these measures; ▪ Ensure that all stipulations within the EMPr are communicated and adhered to by the Employees, Contractor(s); ▪ Confine the development site to the demarcated area; ▪ Conduct internal environmental audits with regards to EMPr and authorisation compliance (on cEO); ▪ Assist the contractors in addressing environmental challenges on-site; ▪ Assist in incident management: ▪ Reporting environmental incidents to the developer and ensuring that corrective action is taken and lessons learned shared; ▪ Assist the Contractor in investigating environmental incidents and compile investigation reports; ▪ Follow-up on pre-warnings, defects, non-conformance reports; ▪ Measure and communicate environmental performance to the Contractor; ▪ Conduct environmental awareness training on-site together with ECO and cEO; ▪ Ensure that the necessary legal permits and/ or licenses are in place and up to date; ▪ Acting as Developer's Environmental Representative on-site and work together with the ECO and Contractor.
Contractor	Role The Contractor appoints the cEO and has overall responsibility for ensuring that all work, activities, and actions linked to the delivery of the contract are in line with the EMPr and that Method Statements are implemented as described. External contractors must ensure compliance with this EMPr while performing the on-site activities per their contract with the Project Developer. In addition, the contractors are required, where specified, to provide Method Statements setting out in detail how the impact management actions contained in the EMPr will be implemented during the development or expansion for overhead electricity transmission and distribution infrastructure activities.

Function	Role and Responsibilities
	Responsibilities ▪ Project delivery and quality control for the construction services as per appointment; ▪ Employ a suitably qualified person to monitor and report to the Project Developer's appointed person on the daily activities on-site during the construction period; ▪ Ensure that safe, environmentally acceptable working methods and practices are implemented and that equipment is operated correctly and maintained to facilitate proper access and enable any operation to be carried out safely; ▪ Attend on-site meeting(s) prior to the commencement of construction activities to confirm the construction procedure and designated activity zones; and ▪ Ensure that Contractors' staff (or sub-contractors) repair, at their own cost, any environmental damage resulting from a contravention of the specifications contained in the EMPr to the satisfaction of the ECO.
contractor Environmental Officer (cEO)	Role Each Contractor affected by the EMPr should appoint a cEO responsible for the on-site implementation of the EMPr (or relevant sections of the EMPr). The Contractor's representative can be the site agent, site engineer; a dedicated environmental officer; or an independent consultant. The Contractor must ensure that the Contractor's Representative is suitably qualified to perform the necessary tasks and is appointed at a level such that she/ he can interact effectively with other site Contractors, labourers, the Environmental Control Officer, and the public. As a minimum, the cEO shall meet the following criteria: Responsibilities ▪ Be on-site throughout the project and be dedicated to the project; ▪ Ensure all their staff are aware of the environmental requirements, conditions, and constraints concerning all of their activities on-site; ▪ Implementing the environmental conditions, guidelines, and requirements as stipulated within the EA, EMPr, and Method Statements; ▪ Attend the Environmental Site Meeting; ▪ Undertaking corrective actions where non-compliances are registered within the stipulated timeframes; ▪ Report back formally on the completion of corrective actions; ▪ Assist the ECO in maintaining all the site documentation; ▪ Prepare the site inspection reports and corrective action reports for submission to the ECO; ▪ Assist the ECO with the preparing of the monthly report; and ▪ Where more than one Contractor is undertaking work on-site, each company appointed as a Contractor will appoint a cEO representing that company.

4 ENVIRONMENTAL DOCUMENTATION REPORTING AND COMPLIANCE

To ensure accountable and demonstrated implementation of the generic EMPr, a number of reporting systems, documentation controls, and compliance mechanisms must be in place for all overhead transmission and distribution electricity 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 generic EMPr file. At a minimum, all documentation detailed below will be stored in the generic 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 Developer's Site Supervisor (where applicable). This duplicate file will be the responsibility of the ECO and must remain current and up to date. The filing system must be updated, and relevant documents added as required. The generic EMPr file must always be made available on request by the CA (in terms of NEMA EIA Regulations) or other relevant authorities. In addition, the generic EMPr file will form part of any environmental audits undertaken as prescribed in the Regulations.

4.2 Documentation to be Available

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

- Full copy of the signed EA from the CA in terms of NEMA, granting approval for the development;
- 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; and
- Complaints register.

4.3 Weekly Environmental Checklist

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

The checklists will form the basis for the Monthly Environmental Reports. In addition, 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 be attached to the Monthly Report distributed to attendees. In addition, 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 made in such detail that the ECOs are enabled to assess whether the Contractor's proposal is in accordance with the EMPr.

The Method Statement shall cover applicable details with regard to:

- Development procedures;
- Materials and equipment to be used;
- Getting the equipment to and from the site;
- How the equipment/ material will be moved while on-site;
- How and where the 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 generic EMPr; and
- Any other information deemed necessary by the ECOs.

Unless indicated otherwise by the Project Manager, the Contractor shall provide the following Method Statements to the Project Manager no less than 14 days prior to the programmed commencement date of the subject works or 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 substances;
- Vegetation management – Protected, clearing, aliens, felling;
- Access management – roads, gates, crossings, etc.;
- Fire plan;
- Waste management transport, storage, segregation, classification, disposal (all waste streams);
- Social interaction – complaints management, compensation claims, access to properties, etc.;
- Water – use (source, abstraction, and disposal), access and all related information, crossings, and mitigation;
- Emergency preparedness – spills, training, other environmental emergencies;
- Dust and noise management methodologies;
- Fauna interaction and risk management – only if the risk was identified – wildlife interaction, especially on game farms; and
- Heritage and palaeontology management.

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

4.6 Environmental Incident Log (Diary)

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

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

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

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

The Environmental Incident Log will be captured in the EAR.

4.7 Non-compliance

A non-compliance notice will be issued to the responsible Contractor by the ECOs via the Developer's Site Supervisor or Project Manager. The non-compliance notice will be issued in writing; a copy filed in the generic EMPr file and will at a minimum include the following:

- Time and date of the non-compliance;
- Name of the contractor responsible;
- Nature and description of the non-compliance;
- Recommended/ required corrective action; and
- Date by which the corrective action to be completed.

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

4.8 Corrective Action Records

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

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 and cases of damages claims if they arise. Each image must be dated, and a brief description note attached.

The Contractor shall:

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

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

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

4.10 Complaints Register

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

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

4.11 Claims for Damages

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

- Record the full detail of the complaint as described in ***Section 4.10*** above;
- The DPM will evaluate the claim and associated damage and submit the evaluation to the Senior Site Representative for approval;
- Following consideration by the DPM, the claim is to be resolved and settled immediately, or the reason for not accepting the claim communicated in writing to the claimant. Should the claimant not accept this, the ECO shall, in writing, report the incident to the Developer's negotiator and legal department; and
- A formal record of the response by the ECOs to the claimant and 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 essential aspects of successful management and mitigation of environmental impacts.

The ECOs shall:

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

4.13 Environmental Audits

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

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

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

4.14 Final Environmental Audits

On 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

5 IMPACT MANAGEMENT OUTCOMES AND ACTION

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

The template provided below is completed by providing the information under each heading for each environmental impact management action. The items listed below that are not applicable to this project are mark as not applicable and will not form part of the impact management actions. 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

Management Outcome: All on-site staff are aware and understand the individual responsibilities in terms of this EMPr.					
Impact Management Actions	**Implementation**		**Monitoring**		
	Responsible Person/s	**Method of Implementation**	**Responsible Person**	**Frequency**	**Evidence of Compliance**
▪ All staff must receive environmental awareness training; ▪ The Contractor must allow for sufficient sessions to train all personnel (with no more than 20 personnel attending each course) - not applicable. ▪ Refresher environmental awareness training is available as and when required; ▪ All staff are aware of the conditions and controls linked to the EA and within the EMPr and made aware of their individual roles and responsibilities in achieving compliance with the EA and EMPr; ▪ All staff are made aware of their individual roles and responsibilities in achieving compliance with the environmental authorisation and EMPr; ▪ The Contractor must erect and maintain information posters at key locations on-site, and the posters must include the following information as a minimum: a) Safety notifications; and b) No littering (not applicable). The topics to be communicated will be displayed as per a set schedule for awareness. ▪ Environmental awareness training must include as a minimum the following: a) Description of significant environmental impacts, actual or potential, related to their work activities; b) Mitigation measures to be implemented when carrying out specific activities; c) Emergency preparedness and response procedures; d) Emergency procedures;	DPM	Environmental awareness training and weekly toolbox talks	ECO	Monthly	Record of attendance to awareness training and toolbox talks must be filed in the Site Environmental File

Management Outcome: All on-site staff are aware and understand the individual responsibilities in terms of this EMPr.					
Impact Management Actions	**Implementation**		**Monitoring**		
	Responsible Person/s	**Method of Implementation**	**Responsible Person**	**Frequency**	**Evidence of Compliance**
e) Procedures to be followed when working near or within sensitive areas; f) Wastewater management procedures; g) Water usage and conservation; h) Solid waste management procedures; i) Sanitation procedures; j) Fire prevention; and k) Disease prevention. ▪ A record of all environmental awareness training courses undertaken as part of the EMPr must be available; ▪ Educate workers on the dangers of open and/ or unattended fires; ▪ A staff attendance register of all staff to have received environmental awareness training must be available; and ▪ Course material must be available and presented in appropriate languages that all staff can understand.					

5.2 Site Establishment Development

Management Outcome: Impacts on the environment are minimised during site establishment, and the development footprint is kept to the demarcated development area.					
Impact Management Actions	**Implementation**		**Monitoring**		
	Responsible Person/s	**Method of Implementation**	**Responsible Person**	**Frequency**	**Evidence of Compliance**
▪ A Method Statement must be provided by the Contractor prior to any on-site 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	Contractor & cEO	Method Statement for site establishment and layout plan	ECO	Once-off approval of method statement On-going monitoring of implementation	Approved Method Statement and layout plan Environmental checklists and reports

Management Outcome: Impacts on the environment are minimised during site establishment, and the development footprint is kept to the demarcated development area.					
Impact Management Actions	**Implementation**		**Monitoring**		
	Responsible Person/s	**Method of Implementation**	**Responsible Person**	**Frequency**	**Evidence of Compliance**
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; ▪ Location of camps must be within approved area to ensure that the site does not impact on sensitive areas identified in the environmental assessment or site walkthrough; ▪ Sites must be located where possible on previously disturbed areas; ▪ The camp must be fenced in accordance with ***Section 5.5: Fencing and Gate Installation;*** and ▪ The use of existing accommodation for contractor staff, where possible, is encouraged.					

5.3 Access Restricted Areas

Management Outcome: Access to restricted areas prevented.					
Impact Management Actions	**Implementation**		**Monitoring**		
	Responsible Person/s	**Method of Implementation**	**Responsible Person**	**Frequency**	**Evidence of Compliance**
▪ Identification of restricted access areas is to be informed by the environmental assessment, site walkthrough, and any additional areas identified during development; ▪ Erect, demarcate and maintain a temporary barrier with clear signage around the perimeter of any restricted access area, colour coding could be used if appropriate; and ▪ Unauthorised access and development-related activity inside restricted access areas are prohibited.	Contractor & cEO	Demarcation of Access restricted areas and staying within approved areas for construction	ECO & dEO	Once-off identification of restricted access areas On-going monitoring of implementation	Clearly marked restricted access areas Site inspection of No-Go areas

5.4 Access Roads

Management Outcome: Minimise impact on the environment through the planned and restricted movement of vehicles on-site.					
Impact Management Actions	**Implementation**		**Monitoring**		
	Responsible Person/s	**Method of Implementation**	**Responsible Person**	**Frequency**	**Evidence of Compliance**
▪ Access to the servitude and tower positions must be negotiated with the relevant landowner and must fall within the assessed and authorised area; ▪ An access agreement must be formalised and signed by the DPM, Contractor, and landowner before commencing with the activities; ▪ The access roads to tower positions must be signposted after access has been negotiated and before the commencement of the activities; ▪ All private roads used for access to the servitude must be maintained and, upon completion of the works, be left in at least the original condition; ▪ All Contractors must be made aware of all these access routes; ▪ Any access route deviation from that in the written agreement must be closed and re-vegetated immediately, at the Contractor's expense; ▪ Maximum use of both existing servitudes and existing roads must be made to minimize further disturbance through the development of new roads; ▪ In circumstances where private roads must be used, the condition of the said roads must be recorded in accordance with ***Section 4.9: Photographic Record***; prior to use and the condition thereof agreed by the landowner, the DPM, and the Contractor; ▪ Access roads in flattish areas must follow fence lines and tree belts to avoid fragmentation of vegetated areas or croplands; and ▪ Access roads must only be developed on pre-planned and approved roads.	Contractor	Access roads must be identified, and agreements formalised before commencing construction	ECO	Monthly	Access road inspection

5.5 Fencing and Gate Installation

Management Outcome: Minimise impact on 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/s	**Method of 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; ▪ Existing and new gates to be recorded and documented in accordance with ***Section 4.9: Photographic Record***; ▪ All gates must be fitted with locks and be kept locked at all times during the development phase unless otherwise agreed with the landowner; ▪ At points where the line crosses a fence in which there is no suitable gate within the extent of the line servitude, on the instruction of the DPM, a gate must be installed at the approval of the landowner; ▪ Care must be taken that the gates must be so erected that there is a gap of no more than 100mm between the bottom of the gate and the ground – not applicable; ▪ Where gates are installed in jackal-proof fencing, a suitably reinforced concrete sill must be provided beneath the gate (not applicable); ▪ Original tension must be maintained in the fence wires; ▪ All gates installed in electrified fencing must be re-electrified; ▪ All demarcation fencing and barriers must be kept in good working order for the duration of overhead transmission and distribution electricity infrastructure development activities; ▪ Fencing must be erected around the camp, batching plants, hazardous storage areas, and all designated access restricted areas, where appropriate and would not cause harm to the sensitive flora; and ▪ Any temporary fencing to restrict the movement of life-stock must only be erected with the landowner's permission.	Contractor	Controlled access to working areas	dEO & ECO	Monthly	Site inspection

Management Outcome: Minimise impact on 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/s	**Method of Implementation**	**Responsible Person**	**Frequency**	**Evidence of Compliance**
▪ All fencing must be developed of high-quality material bearing the SABS mark; ▪ The use of razor wire as fencing must be avoided; ▪ Fenced areas with gate access must remain locked after hours, during weekends, and on holidays if staff is away from the site. Site security will be required at all times; ▪ On completion of the development phase, all temporary fences are to be removed; and ▪ The Contractor must ensure that all fence uprights are appropriately removed, ensuring that no uprights are cut at ground level but rather removed completely.					

5.6 Water Supply Management

Management Outcome: Undertake responsible water usage.					
Impact Management Actions	**Implementation**		**Monitoring**		
	Responsible Person/s	**Method of Implementation**	**Responsible Person**	**Frequency**	**Evidence of Compliance**
▪ All abstraction points or boreholes must be registered with the DWS and suitable water meters installed to ensure that the abstracted volumes are measured daily (not applicable); ▪ The Contractor must ensure the following: a) The vehicle abstracting water from a river does not enter or cross it and does not operate from within the river (not applicable); b) No damage occurs to the riverbed or banks, and that the abstraction of water does not entail stream diversion activities (not applicable); and c) All reasonable measures to limit pollution or sedimentation of the downstream watercourse are implemented.	Contractor	Water from appropriately licensed sources Environmental awareness training	ECO & dEO	Monthly	Site inspection

Management Outcome: Undertake responsible water usage.					
Impact Management Actions	**Implementation**		**Monitoring**		
	Responsible Person/s	**Method of Implementation**	**Responsible Person**	**Frequency**	**Evidence of Compliance**
▪ Ensure water conservation is being practiced by: a) Minimising water use during cleaning of equipment; b) Undertaking regular audits of water systems; c) Including a discussion on water usage and conservation during environmental awareness training; and d) The use of greywater is encouraged.					

5.7 Storm and Wastewater Management

Management Outcome: Impacts to the environment caused by stormwater and wastewater discharges during construction are avoided.					
Impact Management Actions	**Implementation**		**Monitoring**		
	Responsible Person/s	**Method of Implementation**	**Responsible Person**	**Frequency**	**Evidence of Compliance**
▪ Runoff from the cement/ concrete batching areas must be strictly controlled; ▪ Contaminated water must be collected, stored, and either treated or disposed of off-site, at a location approved by the Project Manager (not applicable); ▪ All spillage of oil onto concrete surfaces must be controlled by the use of an approved absorbent material and the used absorbent material disposed of at an appropriate waste disposal facility; ▪ Natural 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; and ▪ Water contaminated with suspended solids, such as soils and silt, may be released into watercourses or water bodies only once suspended solids have been removed from the water by settling these solids in settlement ponds. The release of settled	Contractor, PM & cEO	Stormwater Management Plan (SWMP)	ECO & dEO	Monthly Compliance with the SWMP	Site inspection Approved Method Statement

Management Outcome: Impacts to the environment caused by stormwater and wastewater discharges during construction are avoided.					
Impact Management Actions	**Implementation**		**Monitoring**		
	Responsible Person/s	**Method of Implementation**	**Responsible Person**	**Frequency**	**Evidence of Compliance**
water back into the environment must be subject to the Project Manager's approval and support by the ECO.					

5.8 Solid and Hazardous Waste Management

Management Outcome: Wastes are appropriately stored, handled, and safely disposed of at a recognised waste facility.					
Impact Management Actions	**Implementation**		**Monitoring**		
	Responsible Person/s	**Method of Implementation**	**Responsible Person**	**Frequency**	**Evidence of Compliance**
▪ All measures regarding waste management must be undertaken using an integrated waste management approach; ▪ Sufficient, covered waste collection bins (scavenger and weatherproof) must be provided; ▪ A suitably positioned and clearly demarcated waste collection site must be identified and provided; ▪ The waste collection site must be maintained in a clean and orderly manner; ▪ Waste must be segregated into separate bins and clearly marked for each waste type for recycling and safe disposal; ▪ Staff must be trained in waste segregation; ▪ Bins must be emptied regularly; ▪ General waste produced on-site must be disposed of at registered waste disposal sites/ recycling companies; ▪ Hazardous waste must be disposed of at a registered waste disposal site; ▪ Certificates of safe disposal for general, hazardous, and recycled waste must be maintained.	Contractor & cEO	General camp house-keeping Provision of bins Awareness training on waste minimisation and re-use	dEO ECO	Weekly Bi-monthly	Provision of waste disposal facilities (bins & skips) Proof of Safe Disposal Certificates

5.9 Protection of Watercourses and Estuaries

Management Outcome: Pollution and contamination of the watercourse environment and or estuary erosion are prevented.					
Impact Management Actions	**Implementation**		**Monitoring**		
	Responsible Person/s	**Method of 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; ▪ In the event of a spill, prompt action must be taken to clear the polluted or affected areas; ▪ Where possible, no development equipment must traverse any seasonal or permanent wetland; ▪ No return flow into the estuaries must be allowed, and no disturbance of the Estuarine functional Zone should occur - not applicable; ▪ Development of permanent watercourse or estuary crossing must only be undertaken where no alternative access to tower position is available; ▪ There must not be any impact on the long-term morphological dynamics of watercourses; ▪ Existing crossing points must be favoured over the creation of new crossings (including temporary access); ▪ When working in or near any watercourse, the following environmental controls and considerations must be taken: a) Water levels during the period of construction; No altering of the bed, banks, course, or characteristics of a watercourse; b) During the execution of the works, appropriate measures to prevent pollution and contamination of the riparian environment must be implemented, e.g., including ensuring that construction equipment is well maintained; c) Where earthwork is being undertaken in close proximity to any watercourse, slopes must be stabilised using suitable	Contractor & cEO	Method Statement for Working in Watercourses (if applicable)	dEO ECO	Weekly Bi-monthly	Approval and compliance with the Method Statement (if applicable)

Management Outcome: Pollution and contamination of the watercourse environment and or estuary erosion are prevented.					
Impact Management Actions	**Implementation**		**Monitoring**		
	Responsible Person/s	**Method of Implementation**	**Responsible Person**	**Frequency**	**Evidence of Compliance**
materials, i.e., sandbags or geotextile fabric, to prevent sand and rock from entering the channel; and d) Appropriate rehabilitation and re-vegetation measures for the watercourse banks must be implemented timeously. In this regard, the banks should be appropriately and incrementally stabilised as soon as development allows.					

5.10 Vegetation Clearing

Management Outcome: Vegetation clearing is restricted to the authorised development footprint of the proposed infrastructure.					
Impact Management Actions	**Implementation**		**Monitoring**		
	Responsible Person/s	**Method of Implementation**	**Responsible Person**	**Frequency**	**Evidence of Compliance**
General: ▪ Indigenous vegetation which does not interfere with the development must be left undisturbed; ▪ Protected or endangered species may occur on or near the development site. Special care should be taken not to damage such species; ▪ Search, rescue, and replanting of all protected and endangered species likely to be damaged during project development must be identified by the relevant specialist and completed prior to any development or clearing; ▪ Permits for removal must be obtained from the Department of Forestry, Fisheries and the Environment (DFFE) prior to the cutting or clearing of the affected species, and they must be filed; ▪ The EAR must confirm that all identified species have been rescued and replanted and that the location of replanting is compliant with conditions of approvals;	Contractor & cEO	Woking within demarcated areas Invasive Alien Plant (IAP) eradication and control	dEO ECO	Weekly Monthly	Site inspection

Management Outcome: Vegetation clearing is restricted to the authorised development footprint of the proposed infrastructure.					
Impact Management Actions	**Implementation**		**Monitoring**		
	Responsible Person/s	**Method of Implementation**	**Responsible Person**	**Frequency**	**Evidence of Compliance**
▪ Trees felled due to construction of the powerline must be documented and form part of the EAR; ▪ Rivers and watercourses must be kept clear of felled trees, vegetation cuttings, and debris; ▪ Only a registered pest control operator may apply herbicides on a commercial basis, and commercial application must be carried out under the supervision of a registered pest control operator, supervision of a registered pest control operator or is appropriately trained; ▪ A daily register must be kept of all relevant details of herbicide usage; ▪ No herbicides must be used in estuaries – not applicable; and ▪ 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***. **Servitude:** ▪ Vegetation that does not grow high enough to cause interference with overhead transmission and distribution infrastructures, or cause a fire hazard to any plantation, must not be cut or trimmed unless it is growing in the road access area, and then only at the discretion of the Project Manager; ▪ Where clearing for access purposes is essential, the maximum width to be cleared within the servitude must be in accordance to distance as agreed between the landowner and the EA holder; ▪ Alien invasive vegetation must be removed according to a plan (in line with relevant municipal and provincial procedures, guidelines, and recommendations) and disposed of at a recognised waste disposal facility;					

Management Outcome: Vegetation clearing is restricted to the authorised development footprint of the proposed infrastructure.					
Impact Management Actions	**Implementation**		**Monitoring**		
	Responsible Person/s	**Method of Implementation**	**Responsible Person**	**Frequency**	**Evidence of Compliance**
▪ Vegetation must be trimmed where it is likely to intrude on the minimum vegetation clearance distance (MVCD) or will intrude on this distance before the next scheduled clearance. ▪ MVCD is determined from SANS 10280; ▪ Debris resulting from clearing and pruning must be disposed of at a recognised waste disposal facility unless the landowners wish to retain the cut vegetation; ▪ In the case of the development of new overhead transmission and distribution infrastructures, one metre “trace-line” must be cut through the vegetation for stringing purposes only, and no vehicle access must be cleared along the “trace-line”; and ▪ Alternative methods of stringing that limit the impact on the environment must always be considered.					

5.11 Protection of Fauna

Management Outcome: Disturbance to fauna is minimised.					
Impact Management Actions	**Implementation**		**Monitoring**		
	Responsible Person/s	**Method of 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; ▪ The breeding sites of raptors and other wild birds species must be taken into consideration during the planning of the development programme; ▪ Breeding sites must be kept intact, and disturbance to breeding birds must be avoided. Special care must be taken where nestlings or fledglings are present; ▪ Nesting sites on existing parallel lines must be documented;	Contractor & cEO	Awareness training Injuring, capturing, killing of fauna identified on-site must be reported	dEO & ECO	Monthly	Training material related to faunal management

Management Outcome: Disturbance to fauna is minimised.					
Impact Management Actions	**Implementation**		**Monitoring**		
	Responsible Person/s	**Method of Implementation**	**Responsible Person**	**Frequency**	**Evidence of Compliance**
▪ Special recommendations of the avian specialist must be adhered to at all times to prevent unnecessary disturbance of birds; ▪ Bird guards and diverters must be installed on the new line as per the recommendations of the specialist; ▪ No poaching must be tolerated under any circumstances. All animal dens in close proximity to the works areas must be marked as Access restricted areas; ▪ No deliberate or intentional killing of fauna is allowed; ▪ In areas where snakes are abundant, snake deterrents to be deployed on the pylons to prevent snakes climbing up, being electrocuted, and causing power outages; and ▪ No Threatened or Protected species (ToPs) and/ or protected fauna as listed according to NEMBA (Act No. 10 of 2004) and relevant provincial ordinances may be removed and/ or relocated without appropriate authorisations/ permits.					

5.12 Protection of Heritage Resources

Management Outcome: Impact to heritage resources is minimised.					
Impact Management Actions	**Implementation**		**Monitoring**		
	Responsible Person/s	**Method of 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***; ▪ Carry out general monitoring of excavations for potential fossils, artifacts, and material of heritage importance; and ▪ 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	Contractor & cEO	Working within approved areas for construction	dEO & ECO	Monthly	Site inspection

Management Outcome: Impact to heritage resources is minimised.					
Impact Management Actions	**Implementation**		**Monitoring**		
	Responsible Person/s	**Method of Implementation**	**Responsible Person**	**Frequency**	**Evidence of Compliance**
the nearest museum, archaeologist/ palaeontologist (or the South African Police Services) so that a systematic and professional investigation can be undertaken. Sufficient time must be allowed to remove/ collect such material before development recommences.					

5.13 Safety of the Public

Management Outcome: All precautions are taken to minimise the risk of injury, harm, or complaints.					
Impact Management Actions	**Implementation**		**Monitoring**		
	Responsible Person/s	**Method of 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.; ▪ All unattended open excavations must be adequately fenced or demarcated; ▪ Adequate protective measures must be implemented to prevent unauthorised access to and climbing of partly constructed towers and protective scaffolding; ▪ Ensure structures vulnerable to high winds are secured; and ▪ Maintain an incidents and complaints register in which all incidents or complaints involving the public are logged.	Contractor	Compilation of Health and Safety Plan Maintain Health and Safety File	Occupation Health & Safety Officer	Monthly	Health and safety inspections Investigation of major accident/ incidents

5.14 Sanitation

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/s	**Method of Implementation**	**Responsible Person**	**Frequency**	**Evidence of Compliance**
▪ Mobile chemical toilets are installed on-site if no other ablution facilities are available; ▪ The use of ablution facilities and or portable toilets must be used at all times, and no indiscriminate use of the veld for the purposes of ablutions must be permitted under any circumstances; ▪ Where mobile chemical toilets are required, the following must be ensured: a) Toilets are located no closer than 100m to any watercourse or water body; b) Toilets are secured to the ground to prevent them from toppling due to wind or any other cause; c) No spillage occurs when the toilets are cleaned or emptied, and the contents are managed in accordance with the EMPr; d) Toilets have an external closing mechanism and are closed and secured from the outside when not in use to prevent toilet paper from being blown out; e) Toilets are emptied before long weekends and workers holidays and must be locked after working hours; f) Toilets are serviced regularly, and the ECO must inspect toilets to ensure compliance to health standards; and ▪ A copy of the waste disposal certificates must be maintained.	Contractor	Provision of ablution facilities during construction Management of facilities	dEO ECO	Weekly Monthly	Proof of servicing and safe disposal

5.15 Prevention of Disease

Management Outcome: All necessary precautions linked to the spread of disease are taken.					
Impact Management Actions	**Implementation**		**Monitoring**		
	Responsible Person/s	**Method of Implementation**	**Responsible Person**	**Frequency**	**Evidence of Compliance**
▪ Undertake environmentally-friendly pest control in the camp area; ▪ Ensure that the workforce is sensitised to the effects of sexually transmitted diseases, especially HIV AIDS; ▪ The Contractor must ensure that information posters on AIDS are displayed in the Contractor camp area; ▪ Information and education relating to sexually transmitted diseases to be made available to both construction workers and local community, where applicable; ▪ Free condoms must be made available to all staff on-site at central points; ▪ Medical support must be made available; and ▪ Provide access to Voluntary HIV Testing and Counselling Services.	Contractor	Compilation of Health and Safety Plan Maintain Health and Safety File	Occupation Health & Safety Officer	Monthly	Health and safety inspections

5.16 Emergency Procedures

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/s	**Method of Implementation**	**Responsible Person**	**Frequency**	**Evidence of Compliance**
▪ Compile an Emergency Response Action Plan (ERAP) prior to the commencement of the proposed project; ▪ The Emergency Plan must deal with accidents, potential spillages, and fires in line with relevant legislation; and ▪ All staff must be made aware of emergency procedures as part of environmental awareness training;	Contractor	ERAP Awareness Training	ECO	Monthly	Approved ERAP & training records

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/s	**Method of Implementation**	**Responsible Person**	**Frequency**	**Evidence of Compliance**
▪ The relevant local authority must be made aware of a fire as soon as it starts; and ▪ In an emergency, necessary mitigation measures to contain the spill or leak must be implemented ***(Section 5.17: Hazardous Substances)***.					

5.17 Hazardous Substances

Management Outcome: Safe storage, handling, use, and disposal of hazardous substances.					
Impact Management Actions	**Implementation**		**Monitoring**		
	Responsible Person/s	**Method of 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; ▪ All hazardous substances must be stored in suitable containers as defined in the Method Statement; ▪ Containers must be clearly marked to indicate contents, quantities, and safety requirements; ▪ All storage areas must be bunded. The bunded area must be of sufficient capacity to contain a spill/ leak from the stored containers; ▪ Bunded areas to be suitably lined with a SABS approved liner; ▪ An Alphabetical Hazardous Chemical Substance (HCS) control sheet must be drawn up and kept up to date continuously; ▪ All hazardous chemicals that will be used on-site must have Material Safety Data Sheets (MSDS); ▪ All employees working with HCS must be trained in the safe use of the substance and according to the safety data sheet;	Contractor	Method Statement for the handling, storage, use, and disposal of hazardous substances	ECO	Monthly	Site inspection of hazardous storage areas and inspection of drip trays and impervious surfaces

Management Outcome: Safe storage, handling, use, and disposal of hazardous substances.					
Impact Management Actions	**Implementation**		**Monitoring**		
	Responsible Person/s	**Method of Implementation**	**Responsible Person**	**Frequency**	**Evidence of Compliance**
▪ Employees handling hazardous substances/ materials must be aware of the potential impacts and follow appropriate safety measures. Appropriate personal protective equipment must be made available; ▪ The Contractor must ensure that diesel and other liquid fuel, oil, and hydraulic fluid is stored in appropriate storage tanks or bowsers; ▪ The tanks/ bowsers must be situated on a smooth, impermeable surface (concrete) with a permanent bund. The impermeable lining must extend to the crest of the bund, and the volume inside the bund must be 130% of the total capacity of all the storage tanks/ bowsers (110% statutory requirement plus an allowance for rainfall); ▪ The floor of the bund must be sloped, draining to an oil separator; ▪ Provision must be made for refuelling at the storage area by protecting the soil with an impervious ground cover. Where dispensing equipment is used, a drip tray must be used to ensure small spills are contained; ▪ All empty externally dirty drums must be stored on a drip tray or within a bunded area; ▪ No unauthorised access into the hazardous substances storage areas must be permitted; ▪ No smoking must be allowed within the vicinity of the hazardous storage areas; ▪ Adequate fire-fighting equipment must be made available at all hazardous storage areas; ▪ Where 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;					

Management Outcome: Safe storage, handling, use, and disposal of hazardous substances.					
Impact Management Actions	**Implementation**		**Monitoring**		
	Responsible Person/s	**Method of Implementation**	**Responsible Person**	**Frequency**	**Evidence of Compliance**
▪ An appropriately sized spill kit kept on-site relevant to the scale of the activity (ies) involving the use of hazardous substances must be available at all times; ▪ The responsible operator must have the required training to make use of the spill kit in emergencies; ▪ An appropriate number of spill kits must be available and must be located in all areas where activities are being undertaken; and ▪ 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 Storm and Wastewater Management*** and ***Section 5.8 for Solid and Hazardous Waste Management***.					

5.18 Workshop, Equipment Maintenance and Storage

Management Outcome: Soil, surface water, and groundwater contamination is minimized.					
Impact Management Actions	**Implementation**		**Monitoring**		
	Responsible Person/s	**Method of Implementation**	**Responsible Person**	**Frequency**	**Evidence of Compliance**
▪ Where possible and practical, all maintenance of vehicles and equipment must take place in the workshop area; ▪ When servicing vehicles or equipment, especially where emergency repairs are effected outside the workshop area, a suitable drip tray must be used to prevent spills onto the soil. The relevant local authority must be made aware of a fire as soon as it starts; ▪ Leaking equipment must be repaired immediately or be removed from the site to facilitate repair; ▪ Workshop areas must be monitored for oil and fuel spills;	Contractor	Method Statement for the workshop, equipment maintenance, and storage	ECO	Monthly	Site inspection

Management Outcome: Soil, surface water, and groundwater contamination is minimized.					
Impact Management Actions	**Implementation**		**Monitoring**		
	Responsible Person/s	**Method of Implementation**	**Responsible Person**	**Frequency**	**Evidence of Compliance**
▪ Appropriately sized spill kit kept on-site relevant to the scale of the activity taking place must be available; ▪ The workshop area must have a bunded concrete slab that is sloped to facilitate runoff into a collection sump or suitable oil/ water separator where maintenance work on vehicles and equipment can be performed; and ▪ Water drainage from the workshop must be contained and managed in accordance with ***Section 5.7: Storm and Wastewater Management***.					

5.19 Batching Plants

Management Outcome: Minimise spillages and contamination of soil, surface water, and groundwater					
Impact Management Actions	**Implementation**		**Monitoring**		
	Responsible Person/s	**Method of Implementation**	**Responsible Person**	**Frequency**	**Evidence of Compliance**
▪ Concrete mixing must be carried out on an impermeable surface; ▪ Batching plants areas must be fitted with a containment facility for the collection of cement-laden water. ▪ Dirty water from the batching plant must be contained to prevent soil and groundwater contamination; ▪ Bagged cement must be stored in an appropriate facility and at least 10m away from any watercourses, gullies, and drains; ▪ A washout facility must be provided for washing concrete associated equipment. Water used for washing must be restricted; ▪ Hardened concrete from the washout facility or concrete mixer can either be reused or disposed of at an appropriately licensed disposal facility;	Contractor	Method Statement for batching activities	ECO	Monthly	Site inspection

Management Outcome: Minimise spillages and contamination of soil, surface water, and groundwater					
Impact Management Actions	**Implementation**		**Monitoring**		
	Responsible Person/s	**Method of Implementation**	**Responsible Person**	**Frequency**	**Evidence of Compliance**
▪ Empty cement bags must be secured with adequate binding material if these will be temporarily stored on-site; ▪ Sand and aggregates containing cement must be kept damp to prevent the generation of dust (Refer to ***Section 5.20: Dust Emissions***); ▪ Any excess sand, stone, and cement must be removed or reused from the site on completion of the construction period and disposed at a registered disposal facility; and ▪ Temporary fencing must be erected around batching plants in accordance with ***Section 5.5: Fencing and Gate Installation***.					

5.20 Dust Emissions

Management Outcome: Dust prevention measures are applied to minimise the generation of dust.					
Impact Management Actions	**Implementation**		**Monitoring**		
	Responsible Person/s	**Method of 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; ▪ Removal of vegetation must be avoided until soil stripping is required and similarly exposed surfaces must be revegetated or stabilised as soon as is practically possible; ▪ Excavation, handling, and transport of erodible materials must be avoided under high wind conditions or when a visible dust plume is present; ▪ During high wind conditions, the ECO must evaluate the situation and make recommendations as to whether dust-damping measures are adequate or whether working will cease altogether until the wind speed drops to an acceptable level;	Contractor	Regular dust suppression Maintaining a dust suppression register	dEO ECO	Daily Monthly	Site inspection Dust suppression register Inspection of Complaints Register relating to dust

Management Outcome: Dust prevention measures are applied to minimise the generation of dust.					
Impact Management Actions	**Implementation**		**Monitoring**		
	Responsible Person/s	**Method of Implementation**	**Responsible Person**	**Frequency**	**Evidence of Compliance**
▪ Where possible, soil stockpiles must be located in sheltered areas where they are not exposed to the erosive effects of the wind; ▪ Where erosion of stockpiles becomes a problem, erosion control measures must be implemented at the discretion of the ECO; ▪ Vehicle speeds must not exceed 40km/h along dust roads or 20km/h when traversing unconsolidated and non-vegetated areas; ▪ Straw stabilisation must be applied at a rate of one bale/ 10m² and harrowed into the top 100mm of top material for all completed earthworks (not applicable); and ▪ For significant areas of excavation or exposed ground, dust suppression measures must be used to minimise the spread of dust.					

5.21 Blasting

Management Outcome: Impact to the environment is minimised through a safe blasting practice.					
Impact Management Actions	**Implementation**		**Monitoring**		
	Responsible Person/s	**Method of Implementation**	**Responsible Person**	**Frequency**	**Evidence of Compliance**
▪ A suitably licensed blasting contractor must conduct any blasting activity; and ▪ Notification of surrounding landowners, emergency services site personnel of blasting activity 24 hours before such activity occurs on-site.	Not applicable				

5.22 Noise

Management Outcome: Unnecessary noise is prevented by ensuring that noise from construction activities is mitigated.					
Impact Management Actions	**Implementation**		**Monitoring**		
	Responsible Person/s	**Method of 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; ▪ All vehicles and machinery must be fitted with appropriate silencing technology and must be properly maintained; ▪ Any complaints received by the Contractor regarding noise must be recorded and communicated. Where possible or applicable, provide transport to and from the site daily for construction workers; and ▪ Develop a Code of Conduct for the construction phase in terms of the 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.	Contractor	Compliance with SANS 10103 and OHS Act	dEO ECO	Daily Monthly	Inspection of Complaints Register

5.23 Fire Prevention

Management Outcome: Prevention of uncontrollable fires.					
Impact Management Actions	**Implementation**		**Monitoring**		
	Responsible Person/s	**Method of Implementation**	**Responsible Person**	**Frequency**	**Evidence of Compliance**
▪ Designate smoking areas where the fire hazard could be regarded as insignificant; ▪ Firefighting equipment must be available on all vehicles located on-site; ▪ The local Fire Protection Agency (FPA) must be informed of construction activities;	Contractor	Fire Prevention Plan	ECO	Monthly	Compliance with Fire Prevention Plan

Management Outcome: Prevention of uncontrollable fires.					
Impact Management Actions	**Implementation**		**Monitoring**		
	Responsible Person/s	**Method of Implementation**	**Responsible Person**	**Frequency**	**Evidence of Compliance**
▪ Contact numbers for the FPA and emergency services must be communicated in environmental awareness training and displayed at a central location on-site; and ▪ Two-way swop of contact details between ECO and FPA.					

5.24 Stockpiling and Stockpile Areas

Management Outcome: Erosion and sedimentation as a result of stockpiling are reduced.					
Impact Management Actions	**Implementation**		**Monitoring**		
	Responsible Person/s	**Method of 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 to minimise impacts to watercourses, wetlands, and water bodies; ▪ All stockpiled material must be maintained and kept clear of weeds and alien vegetation growth by undertaking regular weeding and control methods; ▪ Stockpiles must not exceed 2m in height; ▪ During periods of strong winds and heavy rain, the stockpiles should be covered with appropriate material (e.g., cloth, tarpaulin, etc.); and ▪ Where possible, sandbags (or similar) should be placed at the bases of the stockpiled material to prevent erosion of the material.	Contractor	Method Statement to be compiled for stockpile management	dEO ECO	Daily Bi-monthly	Site inspection and compliance with Method Statement

5.25 Finalising Tower Positions

Management Outcome: No environmental degradation occurs as a result of the survey and pegging operations.					
Impact Management Actions	**Implementation**		**Monitoring**		
	Responsible Person/s	**Method of Implementation**	**Responsible Person**	**Frequency**	**Evidence of Compliance**
▪ No vegetation clearing must occur during survey and pegging operations; ▪ No new access roads must be developed to facilitate access for survey and pegging purposes; ▪ Project Manager, Botanical specialist, and Contractor to agree on final tower positions based on the survey within assessed and approved areas; and ▪ The surveyor is to demarcate (peg) access roads/ tracks in consultation with ECO. No deviations will be allowed without prior written consent from the ECO.	PM Botanical specialist Contractor	Method Statement for survey and pegging operations	dEO ECO	Once-off	Site inspection and compliance with Method Statement

5.26 Excavation and Installation of Foundations

Management Outcome: No environmental degradation occurs as a result of the excavation or installation of foundations.					
Impact Management Actions	**Implementation**		**Monitoring**		
	Responsible Person/s	**Method of Implementation**	**Responsible Person**	**Frequency**	**Evidence of Compliance**
▪ All excess spoil generated during foundation excavation must be disposed of appropriately and at a recognised disposal site, if not used for backfilling purposes; ▪ Spoil can, however, be used for landscaping purposes and must be covered with a layer of 150mm topsoil for rehabilitation purposes; ▪ Management of equipment for excavation purposes must be undertaken in accordance with ***Section 5.18: Workshop Equipment Maintenance and Storage***; ▪ Hazardous substance spills from equipment must be managed in accordance with ***Section 5.17: Hazardous Substances***.	Contractor cEO	Method Statement for excavation and installation of foundations	dEO ECO	Daily Monthly	Site inspection Approved Method Statement

Management Outcome: No environmental degradation occurs as a result of the excavation or installation of foundations.					
Impact Management Actions	**Implementation**		**Monitoring**		
	Responsible Person/s	**Method of Implementation**	**Responsible Person**	**Frequency**	**Evidence of Compliance**
▪ Batching of cement to be undertaken in accordance with ***Section 5.19: Batching Plants***; and ▪ Residual cement must be disposed of in accordance with ***Section 5.8: Solid and Hazardous Waste Management***.					

5.27 Assembly and Erecting Towers

Management Outcome: No environmental degradation occurs as a result of the assembly and erecting of towers.					
Impact Management Actions	**Implementation**		**Monitoring**		
	Responsible Person/s	**Method of Implementation**	**Responsible Person**	**Frequency**	**Evidence of Compliance**
▪ Prior to the erection, assembled towers and tower sections must be stored on an elevated surface (suggest wooden blocks) to minimise damage to the underlying vegetation; ▪ In sensitive areas, tower assembly must take place off-site or away from sensitive positions; ▪ The crane used for tower assembly must be operated in a manner that minimises impact to the environment; ▪ The number of crane trips to each site must be minimised; ▪ Wheeled cranes must be utilised in preference to tracked cranes; ▪ Consideration must be given to erecting towers by helicopter or by hand where it is warranted to limit the extent of environmental impact; ▪ Access to tower positions to be undertaken in accordance with access requirements specified in ***Section 5.4: Access Roads***; ▪ Vegetation clearance to be conducted in accordance with general vegetation clearance requirements specified in ***Section 5.10: Vegetation Clearing***;	Contractor cEO	Method Statement for assembly and erection of towers	ECO dEO	Bi-monthly	Site inspection Approved Method Statement

Management Outcome: No environmental degradation occurs as a result of the assembly and erecting of towers.					
Impact Management Actions	**Implementation**		**Monitoring**		
	Responsible Person/s	**Method of Implementation**	**Responsible Person**	**Frequency**	**Evidence of Compliance**
▪ No levelling at tower sites must be permitted unless approved by the Development Project Manager or Developer Site Supervisor; ▪ Topsoil must be removed separately from subsoil material and stored for later use during the rehabilitation of such tower sites; ▪ Topsoil must be kept in heaps not higher than 1m to prevent the destruction of the seed bank within the topsoil; ▪ Excavated slopes must be no greater than 1:3, but where this is unavoidable, appropriate measures must be undertaken to stabilise the slopes; ▪ Fly rock from blasting activity must be minimised, and any pieces greater than 150mm falling beyond the Working Area must be collected and removed; ▪ Only existing disturbed areas are utilised as spoil areas; ▪ Drainage is provided to control groundwater exit gradient with the spill areas such that migration of fines is kept to a minimum; ▪ Surface water runoff is appropriately channelled through or around spoil areas; ▪ During backfilling operations, care must be taken not to dump the topsoil at the bottom of the foundation and then put spoil on top of that; ▪ The surface of the spoil is appropriately rehabilitated in accordance with the requirements specified in ***Section 5.31: Landscaping and Rehabilitation***; and ▪ The retained topsoil must be spread evenly over areas to be rehabilitated and suitably compacted to effect revegetation of such areas to prevent erosion as soon as construction activities on the site are complete. Spreading of topsoil must not be undertaken at the beginning of the dry season.					

5.28 Stringing

Management Outcome: No environmental degradation occurs as a result of stringing.					
Impact Management Actions	**Implementation**		**Monitoring**		
	Responsible Person/s	**Method of Implementation**	**Responsible Person**	**Frequency**	**Evidence of Compliance**
▪ Where possible, previously disturbed areas must be used for the siting of winch and tensioner stations. In all other instances, the siting of the winch and tensioner must avoid Access restricted areas and other sensitive areas; ▪ The winch and tensioner station must be equipped with drip trays to contain any fuel, hydraulic fuel, or oil spills and leaks; ▪ Refuelling of the winch and tensioner stations must be undertaken in accordance with ***Section 5.17: Hazardous Substances***; ▪ In the development of overhead transmission and distribution infrastructure, one metre "trace-line" may be cut through the vegetation for stringing purposes only, and no vehicle access must be cleared along "trace-lines." ▪ Vegetation clearing must be undertaken by hand, using chainsaws and hand-held implements, with the vegetation being cut off at ground level. No tracked or wheeled mechanised equipment must be used; ▪ Alternative methods of stringing which limit the impact to the environment must always be considered, e.g., by hand or by using a helicopter; ▪ Where the stringing operation crosses a public or private road or railway line, the necessary scaffolding/ protection measures must be installed to facilitate access. If for any reason, such access has to be closed for any period(s) during development, the persons affected must be given reasonable notice, in writing; ▪ No services (electrical distribution lines, telephone lines, roads, railways lines, pipelines, fences, etc.) must be damaged because of stringing operations. Where disruption to services	Contractor cEO	Method Statement for stringing of towers	dEO ECO	Monthly	Site inspection Approved Method Statement

Management Outcome: No environmental degradation occurs as a result of stringing.					
Impact Management Actions	**Implementation**		**Monitoring**		
	Responsible Person/s	**Method of Implementation**	**Responsible Person**	**Frequency**	**Evidence of Compliance**
is unavoidable, persons affected must be given reasonable notice, in writing; ▪ Where stringing operations cross cultivated land, damage to crops is restricted to the minimum required to conduct stringing operations, and reasonable notice (10 workdays minimum), in writing, must be provided to the landowner; and ▪ Necessary scaffolding protection measures must be installed to prevent damage to the structures supporting certain high-value agricultural areas such as vineyards, orchards, nurseries.					

5.29 Socio-economic

Management outcome: Socio-economic development is enhanced.					
Impact Management Actions	**Implementation**		**Monitoring**		
	Responsible Person/s	**Method of Implementation**	**Responsible Person**	**Frequency**	**Evidence of Compliance**
▪ Develop and implement communication strategies to facilitate public participation; ▪ Develop and implement a collaborative and constructive approach to conflict resolution as part of the external stakeholder engagement process; ▪ Sustain continuous communication and liaison with neighbouring owners and residents; ▪ Create work and training opportunities for local stakeholders; and ▪ Where feasible, no workers, except for security personnel, must be permitted to stay overnight on the site. This would reduce the risk to local farmers.	Contractor	Communication Plan	ECO	Bi-monthly	Site inspection Approved Communication Plan

5.30 Temporary Site Closure

Management Outcome: Minimise the risk of environmental impact during periods of site closure greater than five days.					
Impact Management Actions	**Implementation**		**Monitoring**		
	Responsible Person/s	**Method of Implementation**	**Responsible Person**	**Frequency**	**Evidence of Compliance**
▪ Bunds must be emptied (where applicable) and need to be undertaken in accordance with the impact management actions included in ***Sections 5.17: Management of Hazardous Substances and 5.18: Workshop, Equipment Maintenance and Storage***; ▪ Hazardous storage areas must be well ventilated; ▪ Fire extinguishers must be serviced and accessible. Service records to be filed and audited at last service; ▪ Emergency and contact details displayed must be displayed; ▪ Security personnel must be briefed and have the facilities to contact or be contacted by relevant management and emergency personnel; ▪ Night hazards such as reflectors, lighting, traffic signage, etc. must have been checked; ▪ Fire hazards identified, and the local authority must have been notified of any potential threats, e.g., large brush stockpiles, fuels, etc.; ▪ Structures vulnerable to high winds must be secured; ▪ Wind and dust mitigation must be implemented; ▪ Cement and materials stores must have been secured; ▪ Toilets must have been emptied and secured; ▪ Refuse bins must have been emptied and secured; and ▪ Drip trays must have been emptied and secured.	Contractor cEO	Method Statement for site closure greater than five (5) days	ECO dEO	Bi-monthly	Site inspection Approved Method Statement

5.31 Landscaping and Rehabilitation

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/s	**Method of Implementation**	**Responsible Person**	**Frequency**	**Evidence of Compliance**
▪ All areas disturbed by construction activities must be subject to landscaping and rehabilitation; All spoil and waste must be disposed to a registered waste site and certificates of disposal provided; ▪ All slopes must be assessed for contouring and to contour only when the need is identified in accordance with the Conservation of Agricultural Resources Act, No 43 of 1983; ▪ All slopes must be assessed for terracing, and to terrace only when the need is identified in accordance with the Conservation of Agricultural Resources Act, No 43 of 1983; ▪ Berms that have been created must have a slope of 1:4 and be replanted with indigenous species and grasses that approximates the original condition; ▪ Where new access roads have crossed cultivated farmlands, that lands must be rehabilitated by ripping, which must be agreed to by the holder of the EA and the landowners; ▪ Rehabilitation of tower sites and access roads outside of farmland; ▪ Indigenous species must be used for with species and/ grasses to where it compliments or approximates the original condition; ▪ Stockpiled topsoil must be used for rehabilitation (refer to ***Section 5.24: Stockpiling and Stockpiled Areas***); ▪ Stockpiled topsoil must be evenly spread to facilitate seeding and minimise loss of soil due to erosion; ▪ Before placing topsoil, all visible weeds from the placement area and the topsoil must be removed; ▪ Subsoil must be ripped before topsoil is placed; ▪ The rehabilitation must be timed so that rehabilitation can take place at the optimal time for vegetation establishment;	Contractor cEO	Method Statement for landscaping and rehabilitation	ECO dEO	Monthly	Site inspection Approved Method Statement

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/s	**Method of Implementation**	**Responsible Person**	**Frequency**	**Evidence of Compliance**
▪ Where impacted through construction-related activity, all sloped areas must be stabilised to ensure proper rehabilitation is effected and erosion is controlled; ▪ Sloped areas stabilised using design structures or vegetation as specified in the design to prevent erosion of embankments. ▪ The contract design specifications must be adhered to and implemented strictly; ▪ Spoil can be used for backfilling or landscaping as long as it is covered by a minimum of 150mm of topsoil. Where required, re-vegetation, including hydro-seeding, can be enhanced using a vegetation seed mixture as described below. A mixture of seeds can be used provided the mixture is carefully selected to ensure the following: a) Annual and perennial plants are chosen; b) Pioneer species are included; c) Species chosen must be indigenous to the area with the seeds used coming from the area; d) Root systems must have a binding effect on the soil; and e) The final product must not cause an ecological imbalance in the area.					

6 ACCESS TO THE GENERIC EMPr

Once completed and signed, to allow the public access to the generic EMPr, the holder of the EA must make the EMPr available to the public in accordance with regulation 26 (h) of the Environmental Impact Assessment Regulations, 2014 as amended.

PART B: SECTION 2

7 SITE-SPECIFIC INFORMATION AND DECLARATION

7.1 Sub-section 1: Contact Details and Description of the Project

7.1.1 Details of the applicant:

Name of applicant: **Willem den Heijer**
E-mail address: **Willem.denheijer@samancorcr.com**
Tel No: **083 256 9640**
Fax No: **Not Applicable**
Postal Address:
Physical Address: **Block A, Cullinan Place, Cullinan Close, Morningside, Sandton, 2196**

7.1.2 Details and expertise of the EAP:

Name of applicant: **Prashika Reddy (Royal HaskoningDHV)**
E-mail address: **prashika.reddy@rhdhv.com**
Tel No: **087 352 1577**
Fax No: **Not applicable**
The expertise of the EAP (Curriculum Vitae included): **Prashika Reddy is a Senior Environmental Scientist with 22 years of experience in various environmental fields, including EIAs, EMPrs, PPP, and environmental monitoring and audits. She is/ has been part of numerous multi-faceted large-scale projects, including the establishment of linear developments (roads and powerlines), industrial plants, electricity generation plants, mixed-use developments, and mining projects. She is a Professional Natural Scientist (400133/10) with the South African Council for Natural Scientific Professions and a registered EAP with EAPASA.**

7.1.3 Project name:

Development of a 40MW Photovoltaic Plant across Sites 2b, 3b, 3c, 4b and 5b associated with the Tubatse Ferrochrome Plant, Steelpoort, Fetakgomo Tubatse Local Municipality (Ref 12/1/9/2-GS88)

7.1.4 Description of the project:

Samancor Chrome Ltd's core business is the mining and smelting of chrome ore. With an annual production capacity of 2.4 million tons of ferrochrome, Samancor Chrome is one of the largest integrated ferrochrome producers in the world. The ferrochrome produced is used in areas of the stainless-steel smelting process. Samancor Chrome has been, and continues to be, a major player in ferrochromium production. The company's total chromite resources exceed 900 million tons and are expected to support current mining activity for well over 100 years at the current rate of extraction. Some ores and concentrates are exported, but main allotments are destined for conversion into ferrochrome at the alloy plants.

The Tubatse Ferrochrome (TFC) Smelter was initially built as a three-furnace operation in 1975 as a joint venture between Gencor Ltd and Union Carbide Inc. (USA). In the same year, the Union Carbide Inc. shareholding was taken over by Samancor Chrome, and in 1989, Samancor Chrome acquired the Gencor Ltd shareholding. During the years 1989 – 1990, the plant was expanded to five furnaces with the sixth furnace being built in 1996. The plant is situated in Steelpoort, Limpopo Province and is in close proximity

to the Eastern Chrome Mines. The core business of the operation is the production of charge chrome using six Submerged-Arc Furnaces, one metal recovery plant, and a Pellet and Sintering Plant.

The climate change concerns and rising electricity tariffs in South Africa, combined with the increasingly severe load shedding patterns experienced across the country, has a negative impact on the production and revenue of Samancor Chrome's business. This together with the recent announcement by the President of South Africa to allow for an increase to 100MW embedded generation threshold has motivated Samancor Chrome to consider renewable energy generation at their smelter plants. Implementing solar Photovoltaic (PV) generation will result in improved availability of supply and reduced utility bills as well as going 'green' in terms of environmental considerations.

In 2021, a Special Purpose Vehicle (SPV), TFC Solar (Pty) Ltd (hereafter referred to as TFC Solar, proposed the development of a Solar PV facility of up to 100 Megawatt (MW) generation capacity over five (5) sites: 1, 2, 3, 4 and 5. These five (5) sites were subject to an Environmental Impact Assessment (EIA) and an Environmental Authorisation (EA) was granted on 25 April 2022 from the Department of Forestry, Fisheries and the Environment (DFFE) (DFFE Ref: 14/12/16/3/3/2/2079). A General Authorisation was received from the Department of Water and Sanitation (DWS) on 28 March 2022. Site 1 is no longer considered for the Solar PV development.

A total of 60MW output can be achieved from the previously authorised Sites 2 – 5. Additionally, TFC Solar, propose the development of a 40MW Solar PV facility to be developed on Site 2B, 3B, 3C, 4B and 5B. All previously authorised Sites 2, 3, 4 and 5 as well as new Sites 2B, 3B, 3C, 4B and 5B would achieve a total of 100MW.

7.1.5 Project location:

Sites 2B, 3B, 3C, and 4B are located to the south of the R555, whilst Site 5B is located to the north of the R555 and to the south of the Steelpoort River, Limpopo Province. The project area falls within the Sekhukhune District Municipality (SDM) and the Fetakgomo Tubatse Local Municipality (FGTM). Small settlements of Pelaneng (located to the north), Stocking, Matholeng and Mohlakwana (located to the east) exist within the project area. The town of Steelpoort is located to the east of the TFC Plant.

The details regarding the proposed sites are provided Table 2 and project coordinates in Table 3.

Table 2: Property details of the PV plant

Site	Size (ha)	Property Name	SG code	Property Owner	Zoning
2B	47,49	Goudmyn No.337 KT Portion 1	T0KT00000000033700001	Samancor Chrome Ltd	Agriculture/Mining
		Goudmyn No.337 KT Portion 10	T0KT00000000033700010	Goldbroz Inv Pty Ltd	Possible Agriculture
3B	2,37	Goudmyn No.337 KT Portion 0	T0KT00000000033700000	Samancor Chrome Ltd	Industrial
3C	1,71	Goudmyn No.337 KT Portion 0	T0KT00000000033700000	Samancor Chrome Ltd	Industrial
4B	5,52	Goudmyn No.337 KT Portion 0	T0KT00000000033700000	Samancor Chrome Ltd	Industrial

Site	Size (ha)	Property Name	SG code	Property Owner	Zoning
5B	2,14	Goudmyn No.337 KT Portion 0	T0KT00000000033700000	Samancor Chrome Ltd	Agriculture
		Goudmyn 337 KT Portion 6	T0KT00000000033700006	Samancor Chrome Ltd	Agriculture

Table 3: Project coordinates

Route	Latitude (S)			Longitude (E)		
Powerline 50m Assessment Corridor - Main						
Start point of the activity	24˚	45'	5"	30˚	11'	8"
Point 1 (Bend Point)	24°	45'	1"	30°	11'	10"
Point 2 (Bend Point)	24°	44'	59"	30°	11'	10"
Point 3	24°	44'	55"	30°	11'	17"
Point 4 (Bend Point)	24°	44'	52"	30°	11'	23"
Point 5 (Bend Point)	24°	44'	51"	30°	11'	23"
Point 6 (Bend Point)	24°	44'	51"	30°	11'	23"
Point 7	24°	44'	51"	30°	11'	25"
Point 8 (Bend Point)	24°	44'	51"	30°	11'	26"
Point 9 (Bend Point)	24°	44'	46"	30°	11'	32"
Point 10 (Bend Point)	24°	44'	44"	30°	11'	36"
Point 11 (Bend Point)	24°	44'	40"	30°	11'	36"
Point 12 (Bend Point)	24°	44'	39"	30°	11'	36"
Point 13 (Bend Point)	24°	44'	38"	30°	11'	40"
Point 14	24°	44'	36"	30°	11'	46"
Point 15 (Bend Point)	24°	44'	34"	30°	11'	50"
Point 16 (Bend Point)	24°	44'	32"	30°	11'	51"
Point 17 (Bend Point)	24°	44'	28"	30°	11'	55"
Point 18	24°	44'	25"	30°	12'	3"
Point 19	24°	44'	22"	30°	12'	9"
Point 20 (Bend Point)	24°	44'	19"	30°	12'	14"
Point 21 (Bend Point)	24°	44'	24"	30°	12'	16"
Point 22	24°	44'	22"	30°	12'	21"
Point 23	24°	44'	21"	30°	12'	20"

Route	Latitude (S)			Longitude (E)		
Point 24 (Bend Point)	24°	44'	22"	30°	12'	17"
Point 25 (Bend Point)	24°	44'	17"	30°	12'	15"
Point 26	24°	44'	21"	30°	12'	8"
Point 27	24°	44'	24"	30°	12'	1"
Point 28 (Bend Point)	24°	44'	27"	30°	11'	54"
Point 29 (Bend Point)	24°	44'	31"	30°	11'	49"
Point 30 (Bend Point)	24°	44'	33"	30°	11'	49"
Point 31	24°	44'	35"	30°	11'	45"
Point 32 (Bend Point)	24°	44'	37"	30°	11'	39"
Point 33 (Bend Point)	24°	44'	37"	30°	11'	35"
Point 34 (Bend Point)	24°	44'	39"	30°	11'	34"
Point 35 (Bend Point)	24°	44'	43"	30°	11'	34"
Point 36 (Bend Point)	24°	44'	45"	30°	11'	31"
Point 37 (Bend Point)	24°	44'	49"	30°	11'	25"
Point 38 (Bend Point)	24°	44'	49"	30°	11'	24"
Point 39 (Bend Point)	24°	44'	50"	30°	11'	22"
Point 40 (Bend Point)	24°	44'	51"	30°	11'	22"
Point 41	24°	44'	55"	30°	11'	14"
Point 42 (Bend Point)	24°	44'	58"	30°	11'	9"
Point 43 (Bend Point)	24°	45'	1"	30°	11'	9"
End point of the activity	24°	45'	4"	30°	11'	7"
Powerline 50m Assessment Corridor - Section A within Site 2B						
Start point of the activity	24°	44'	20"	30°	12'	22"
Point 1 (Bend Point)	24°	44'	17"	30°	12'	28"
Point 2 (Bend Point)	24°	44'	19"	30°	12'	29"
End point of the activity	24°	44'	22"	30°	12'	23"
Powerline 50m Assessment Corridor - Section B within Site 2B						
Start point of the activity	24°	44'	29"	30°	12'	30"
Point 1 (Bend Point)	24°	44'	30"	30°	12'	32"
Point 2 (Bend Point)	24°	44'	31"	30°	12'	31"

Route	Latitude (S)			Longitude (E)		
End point of the activity	24°	44'	30"	30°	12'	29"

7.2 Technical Description

The infrastructure required to connect the various solar PV sites to the Samancor 33kV power grid is accommodated in the power corridors. Overhead line or underground cable technology can be used for the power evacuation in these corridors. The proposed width of the power corridors is 11m for a single corridor and 22m in cases where the corridor needs to double up to accommodate the proposed 100MW power flow. A 50m corridor has been assessed.

Where overhead AC powerlines are used, the powerlines will comprise of a wood pole tower for the 33kV powerlines. In cases where there is a double power corridor, either two wood pole lines will be used or a single steel monopole with a double circuit configuration.

The height of the single circuit wood pole construction is 11m - 13m and the steel monopoles are typically 20m tall.

7.3 Sub-section 2: Development Footprint Site Map

This sub-section must include a map of the site sensitivity overlaid with the preliminary infrastructure layout. Once the web-based screening tool identified in regulation 16(1) (v) of the Environmental Impact Assessment Regulations, 2014 is available, the sensitivity map must be prepared from this system. The map indicates areas/ features of sensitivity based on the assessment findings and illustrated according to four tiers, Very High, High, Medium, or Low. The sensitivity map shall also identify the nature of each sensitive feature, e.g., raptor nest, threatened plant species, archaeological site, etc. Sensitivity maps shall identify features within the planned working area and any known sensitive features in the surrounding landscape. The overhead transmission and distribution profile shall be illustrated at an appropriate resolution to enable fine-scale interrogation. It is recommended that <20 m of overhead transmission and distribution length is illustrated per page in A3 landscape format. Where considered appropriate, photographs of sensitive features in the context of tower positions shall be used.

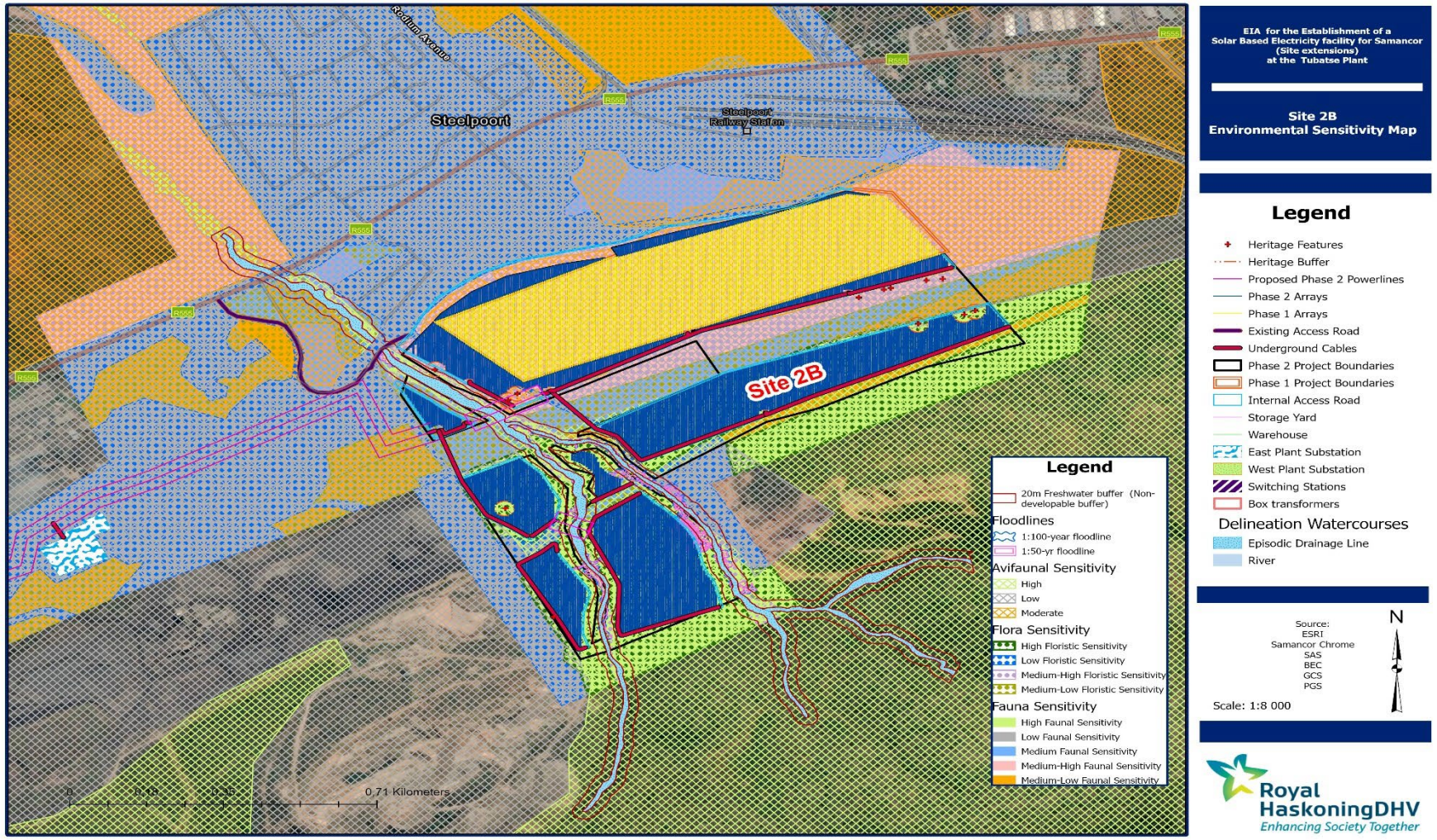

Figure 1: Sensitivity Map – Site 2B

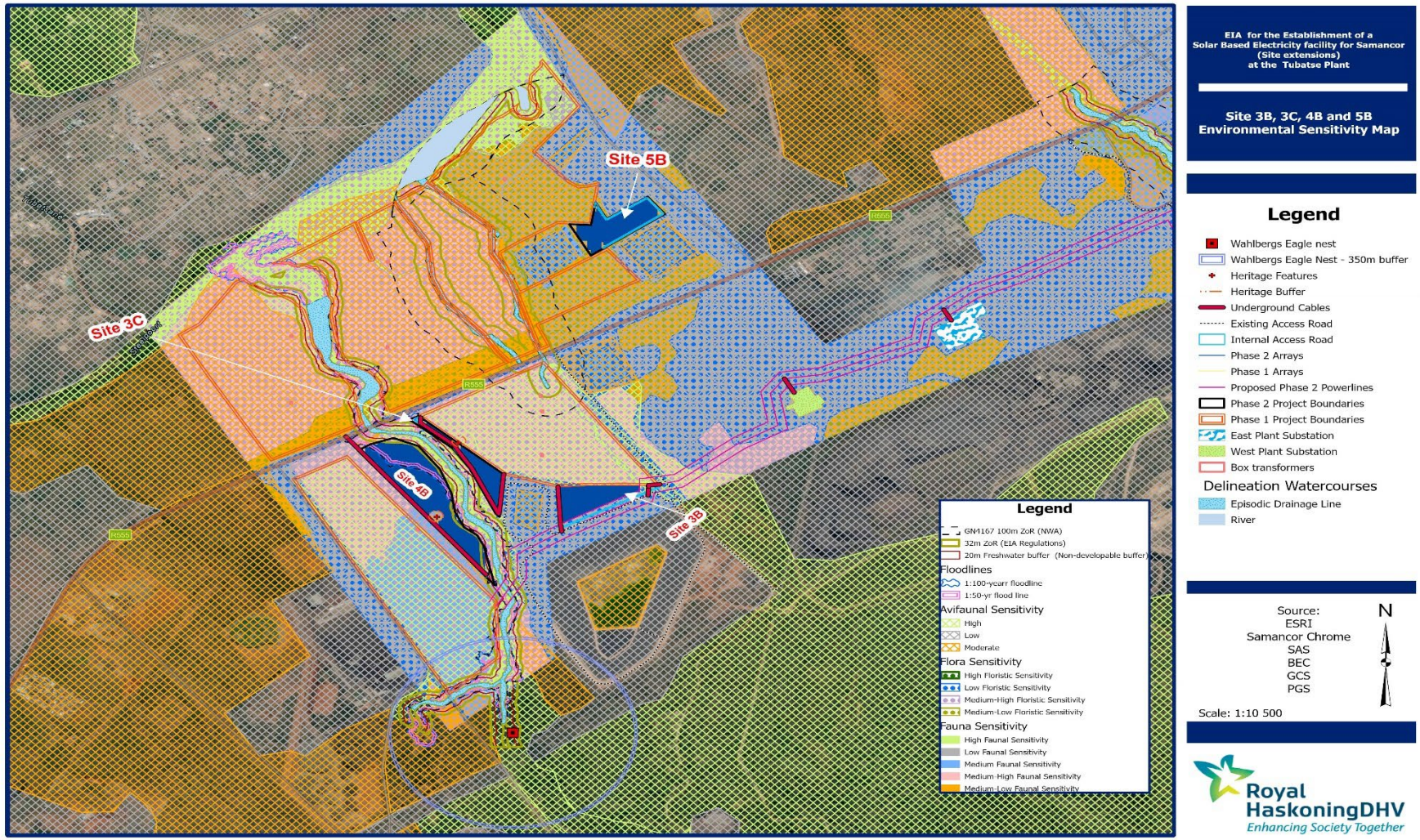

Figure 2: Sensitivity Map – Site 3B, 3C, 4B and 5B

7.4 Sub-section 3: Declaration

The proponent or applicant or holder of EA affirms that they will abide and comply with the prescribed impact management outcomes and actions as stipulated in part B, section 1 of the generic EMPr and have the understanding that the impact management outcomes and actions are legally binding.

Signature Proponent/applicant/ holder of EA Date:

18 March 2024

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 actions must be included in this section. These specific management controls must be referenced spatially and must include impact management outcomes and actions. The management controls, including impact management outcomes and actions, must be presented in the pre-approved generic EMPr template format. This applies only to additional controls that are necessary. An EAP must prepare the information in this section, and the name and expertise of the EAP, including the curriculum vitae, are to be included.

This section will not be required should the site contain no specific environmental sensitivities or attributes. However, if Part C applies to the site, it must be submitted to the competent authority for approval before commencement of the activity. Once approved, Part C forms part of the EMPr for the site and is legally binding.

8.1 Vegetation Clearing

Management Outcome: Vegetation clearing is restricted to the authorised development footprint of the proposed infrastructure. All construction work must comply with the conditions of the relevant authorisations, licences and permits.					
Impact Management Actions	**Implementation**		**Monitoring**		
	Responsible Person/s	**Method of Implementation**	**Responsible Person**	**Frequency**	**Evidence of Compliance**
▪ Prior to site clearance, a detailed 'walkthrough' must be conducted to ascertain the number, abundance and physical conditions of all protected tree species (*Balanites maughamii, Boscia albitrunca, and Sclerocarya birrea subsp. caffra)* were observed in the project area) to assist with permit application (DFFE). ▪ Prior to site clearance, conduct a detailed 'walkthrough' of the proposed site to ascertain the number, abundance and physical conditions of all protected plant species (*Adenia fruticosa*, *Aloe wickensii, Eulophia petersii*, *Stapelia gettliffei and Spirostachys africana)* to assist with permit application	Ecologist	Walkthrough by Ecologist DFFE & LDEDET Permits Biodiversity Monitoring Programme	ECO dEO	Once-off Once-off Annual monitoring	Site inspection Walkthrough Report Annual Biodiversity Monitoring Programme

Management Outcome: Vegetation clearing is restricted to the authorised development footprint of the proposed infrastructure. All construction work must comply with the conditions of the relevant authorisations, licences and permits.					
Impact Management Actions	**Implementation**		**Monitoring**		
	Responsible Person/s	**Method of Implementation**	**Responsible Person**	**Frequency**	**Evidence of Compliance**
(Limpopo Department of Economic Development, Environment and Tourism). ▪ Develop and execute a Search and Rescue operation for certain plants/ trees as per recommendations from the Final Walkthrough Report. These plants should be relocated to a secure, suitable, and appropriate location, taking care to duplicate existing habitat conditions as far as possible. It should be noted that the transportation and relocation process of protected plant species is also subject to permitting requirements; this process should be guided by the Environmental Officer and executed by a suitable ecologist. ▪ Develop and implement a biodiversity monitoring programme to establish long-term trends of floristic and faunal diversity patterns and the latent and immediate effects of the project on these receiving environments.					

8.2 Protection of Fauna

Management Outcome: Disturbance to fauna is minimised.					
Impact Management Actions	**Implementation**		**Monitoring**		
	Responsible Person/s	**Method of Implementation**	**Responsible Person**	**Frequency**	**Evidence of Compliance**
General: ▪ Natural corridors (e.g. riparian thicket and drainage lines) must be retained between the sites to promote and allow for the movement of mobile fauna. ▪ The project footprint sites should be “screened” prior to, and during the construction phase for reptile species of conservation concern (especially for *Kinixys lobatsiana*) by a qualified herpetologist/zoologist. This person should also be capable of handling venomous snakes. All species found should be relocated to suitable habitat not more than 50km from the study sites.	Contractor cEO	Demarcation of Access restricted areas and staying within approved areas for construction Awareness training Injuring, capturing, killing of fauna	ECO dEO	Monthly	Site inspection

Management Outcome: Disturbance to fauna is minimised.					
Impact Management Actions	**Implementation**		**Monitoring**		
	Responsible Person/s	**Method of Implementation**	**Responsible Person**	**Frequency**	**Evidence of Compliance**
▪ Natural corridors (e.g. riparian thicket and drainage lines) must be retained between the sites to promote and allow for the movement of mobile fauna.		identified on-site must be reported			
Avifauna: ▪ A 350m buffer must be demarcated around the Wahlberg's Eagle nest site in which no development must occur. ▪ No commencement of construction (especially vegetation clearing and bulk earthworks) for the solar power site on Phase 1 Site 4 and and its surrounds must occur within the designated 350m buffer around the Wahlberg's Eagle nest until such time as the Wahlberg's Eagles have left the area on their northward migration in April and before their arrival in August, as stipulated in the EA Amendment for the Phase 1 Solar Development. ▪ Monitoring of the Wahlberg's Eagle nest site must continue (as part of the general recommended pre-, during- and post-construction (operational) avifaunal monitoring on the development sites and wider study area) on a yearly basis in the period prior to the start of construction, through the construction phase, and for five (5) subsequent years after the end of construction. ▪ Active protection of sensitive habitats through fencing off from public access - in the context of Phase 2 this would include the riparian zones of the drainage lines located between sites 3B/C and 4C and drainage lines located between the Site 2B development compartments and the fringing non-development buffer areas. ▪ Placing of bird flight diverters along the spans of the power line crossing the drainage lines, or located within 100m each side of the drainage line riparian zones.	Avifaunal Specialist	Bird Monitoring Programme	ECO dEO	Monthly	Bird Monitoring Reports

8.3 Protection of Water Resources

Management Outcome: Pollution, sedimentation and contamination of the watercourse environment is avoided.					
Impact Management Actions	**Implementation**		**Monitoring**		
	Responsible Person/s	**Method of Implementation**	**Responsible Person**	**Frequency**	**Evidence of Compliance**
▪ The freshwater ecosystems and their 20m non development buffers must be strictly maintained as no-go areas. ▪ No vegetation may be removed from the non-development buffer surrounding the freshwater ecosystems where no infrastructure is planned, as this vegetation provides a natural buffer zone around the freshwater ecosystems which plays a role in dispersing surface runoff into the freshwater ecosystems, and thus prevents sedimentation and erosion thereof. ▪ For the proposed internal access roads the construction footprint must be limited to a 10m wide construction Right of Way that includes the road footprint.	Contractor cEO	Demarcation of Access restricted areas and staying within approved areas for construction	ECO dEO	Monthly	Site inspection

8.4 Protection of Heritage Resources

Management Outcome: Impact to heritage resources is minimised.					
Impact Management Actions	**Implementation**		**Monitoring**		
	Responsible Person/s	**Method of Implementation**	**Responsible Person**	**Frequency**	**Evidence of Compliance**
▪ Implement a chance to find procedure in case where possible heritage finds are uncovered. ▪ Burial grounds and graves must be demarcated with a 30m buffer as a No-Go area. If this is not possible, it is recommended that the structures at TFC001, TFC004, TFC005 and Site 2-2 be investigated though test excavation to determine if there are graves. If it is found to be graves these graves including the graves at Site 2-2 must be relocated after completion of a detailed grave relocation process, that includes	Contractor & cEO Archaeological	Working within approved areas for construction Chance Find Protocol Section 35 Permits	dEO & ECO	Monthly	Site inspection

Management Outcome: Impact to heritage resources is minimised.					
Impact Management Actions	**Implementation**		**Monitoring**		
	Responsible Person/s	**Method of Implementation**	**Responsible Person**	**Frequency**	**Evidence of Compliance**
a thorough stakeholder engagement component, adhering to the requirements of Section 36 of the NHRA and its regulations as well as the National Health Act and its regulations. ▪ Monitoring during site clearing in a 20m radius from the identified archaeological sites TFC003 and Site 2-4 through the implementing of an archaeological watching brief. ▪ If palaeontological heritage is uncovered during surface clearing and excavations the Chance Find Protocol should be implemented immediately. Fossil discoveries ought to be protected and the ECO/Project Manager must report to South African Heritage Resources Agency (SAHRA) (Contact details: SAHRA, 111 Harrington Street, Cape Town. PO Box 4637, Cape Town 8000, South Africa. Tel: 021 462 4502. Fax: +27 (0)21 462 4509. Web: www.sahra.org.za) so that mitigation (recording and collection) can be carried out.					