
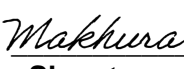




**INTERNAL ENVIRONMENTAL
MANAGEMENT PROGRAMME (EMPr)
FOR
TOWER ANTI-THEFT VIBRATION SENSOR
AND ALARM SYSTEM IN THE TRANSMISSION
GRID AND TELECOMS**

DOCUMENT CONTROL

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REVISION AND AMENDMENTS

DATE	NO.	DESCRIPTION OF REVISION OR AMENDMENT
August 2023	01	New Document

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1 INTRODUCTION

1.1 BACKGROUND

Eskom is obliged to comply with the provisions of the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993) and the Critical Infrastructure Protection Act, 2019 (Act No. 8 of 2019). The safety of people, the integrity of assets and information are key priorities in enabling Eskom to meet its obligations and deliver on its mandate.

Due to the constant changes in the risk profiles of Eskom assets and installations, the review of physical security measures is necessary to ensure that current threats are appropriately mitigated, through the implementation of suitable site-specific protection measures, systems and procedures.

The Tower Anti-Theft Vibration Sensor and Alarm System shall consist of the vibration detection system on the transmission towers, communication system, and data monitoring system with the provision of interfaces to be integrated into a Physical Security Information Management (PSIM).

1.2 REFERENCE DOCUMENTS

The following are the documents that shall be read together with this Construction Environmental Management Programme. It shall be noted that these documents are to be used concurrently and there is no one that supersedes the other.

- 1.2.1 Eskom Waste Management Standard: 32-245
- 1.2.2 Eskom Transmission Industry Waste Management Plan: 240-98818649
- 1.2.3 Eskom Environmental Incident Management Procedure: 240-133087117
- 1.2.4 Environmental Requirements for Contractors and/or Suppliers: 240-180100134

1.3 SCOPE OF THE CONSTRUCTION ENVIRONMENTAL MANAGEMENT PROGRAMME (CEMPr)

This CEMPr has been compiled to address the potential environmental impact that may occur during the installation of the Tower Anti-Theft Vibration Sensor and Alarm System project. This document serves as the environmental specification to Eskom personnel and contractors with regards to addressing the potential environmental issues identified prior to and during the construction phase. It is the responsibility of the Project Manager (PM), Contractors and Environmental Practitioners to ensure compliance with all the environmental specifications in this document, Transmission Environmental Requirements for Contractors and/or Suppliers as well as the relevant compliance obligations.

This EMPr should also ensure the sustainable management of the environment whilst the installation of the Tower Anti-Theft Vibration Sensor and Alarm System is being undertaken. This EMPr must be viewed as a contract document to which all Eskom employees and contractors involved should adhere to.

NB: This EMPr document only caters for the scope of work contained in it. Any activities outside the given scope of work will need to be addressed through the correct process (i.e., method statements).

1.4 ROLES AND RESPONSIBILITIES

FUNCTION	ROLES AND RESPONSIBILITIES
Eskom Environmental Practitioner	<ul style="list-style-type: none"> • To ensure that a Construction Environmental Management Programme (EMPr) for the project is compiled and approved. • To ensure that all conditions stipulated in the EMPr are met. • To conduct audit, monitor or provide assurance before, during and post construction
Eskom Project Manager/ Site Manager	<ul style="list-style-type: none"> • Ensure that implementation of EMPr is executed as planned. • Ensure that conditions in this EMPr are fulfilled before the contractor occupies the site.
Contractor Environmental Officer (CEO)	<ul style="list-style-type: none"> • Ensures that all Sub-contractors (if any) working under the Principal Contractor abide by the requirements of the EMPr. • Be on site throughout the duration of the project and be dedicated to the project. • Ensure all staff are aware of the environmental requirements, conditions and constraints with respect to all of their activities on site. • Implementing the environmental conditions, guidelines and requirements as stipulated within the EMPr and Method Statements • Undertaking corrective actions where non-compliances are registered within the stipulated timeframes. • Assist the Eskom environmental practitioner in maintaining all the site documentation. • Prepare site inspection reports and corrective action reports for submission to the Eskom
Contractor Project Manager/ Site Manager	<ul style="list-style-type: none"> • To provide all necessary supervision during the execution of the project. He/ She should be available on site all the time. • To appoint a competent Environmental Officer

	<ul style="list-style-type: none"> • To ensure that implementation is conducted in an environmentally acceptable manner. • To fulfil all obligations as per the agreed contract • To inform and educate all employees about the environmental risks associated with the different activities that should be avoided during the construction process and lessen significant impacts to the environment.
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1.5 LEGISLATIVE CONTEXT

The following National Environmental related legislations, regulations, guidelines standards were considered in the compilation of this EMPr:

- National Environmental Management Act, 1998 (NEMA) (Act No 107 of 1998), and all amendments and supplementary listings and/or regulations.
- Environment Conservation Act, 1989 (ECA) (No 73 of 1989) and amendments.
- National Environmental Management: Waste Act, 2008 (NEMWA, Act 59 of 2008).
- National Environmental Management: Biodiversity Act, 2004 (NEM:BA) (Act No. 10 of 2004) and amendments.
- National Forest Act, 1998 (NFA) (No 84 of 1998).
- National Veld and Forest Fire Act, 1998 (Act No. 101 of 1998).
- Conservation of Agricultural Resources Act, 1983 (CARA) (Act No. 43 of 1983) and amendments.
- National Heritage Resources Act, 1999 (Act 25 of 1999).
- National Water Act, 1998 (Act 36 of 1998).
- The Occupational Health and Safety Act, 1993 (Act No. 85 of 1993).
- The National Fencing Act, 1963 (Act No 31 of 1963) as amended by Act 108 of 1991.
- The National Environmental Management: Protected Areas Act, 2003 (Act No. 57 of 2003) and its Regulations.
- The National Environmental Management: Air Quality Act, 2004 (Act 39 of 2004).

1.6 PROJECT SPECIFIC SCOPE OF WORK AND DESIGN

- a) The Tenderer shall design, supply, install, refurbish, and maintain the Tower Anti-Theft Vibration Sensor and Alarm System in the Transmission Grid and Telecoms for a period of 5 years. The total solution is to be fully owned by Eskom including any perpetual licenses that are required.
- b) The system shall comply with the requirements of 240-170000156, consisting of the vibration detection system on the transmission towers, communication system, and data monitoring system with the provision of interfaces for integration into Eskom's PSIM.
- c) Data monitoring system shall comply with the requirements of IT-Infrastructure as per LAD for Vibration Sensor and Alarm System.
- d) The tenderer will be required to document the maintenance strategy/standard of all software and hardware provided as part of the scope of work.

Note: Please refer to document 240-170001079 for detailed scope of work.

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2 PROJECT SPECIFIC ENVIRONMENTAL CONTROLS

This section specifies standard mitigation measures to be followed by the parties responsible for environmental management during the above scope execution for the installation of Tower Anti-Theft Vibration Sensor and Alarm System in the Transmission Grid and Telecoms.

MITIGATION MEASURE	MANAGEMENT OBJECTIVES	MEASURABLE TARGETS	FREQUENCY OF ACTION	RESPONSIBLE PARTY
3.1 Project Contract and programme <ul style="list-style-type: none"> The EMPr must be issued to the Contractor before installation of Tower Anti-Theft Vibration Sensor and Alarm System as it forms part of the environmental requirements for the project. A copy of this EMPr must be always available at the construction site. The Contractor shall ensure that all the personnel on site, sub-contractors and their teams, suppliers, etc. are familiar with and understand the specifications contained in this EMPr. A contractor shall have a competent environmental officer/ SHE officer on site to monitor compliance as per the Environmental Requirements for Contractor's Standard (240-1801001340). 	<p>Contingencies for minimising negative impacts anticipated to occur during the construction phase.</p> <p>Ensure environmental awareness and formalize environmental responsibilities and implementation.</p> <p>Regular compliance monitoring and/or inspection on site</p>	<p>Contract records Signed declaration pro-forma as per Environmental Requirements for Contractors and/or Suppliers Standard.</p> <p>Project performance reporting</p>	<p>During tender stage</p> <p>During construction</p>	<p>Contractor & Transmission Projects Delivery</p>

MITIGATION MEASURE	MANAGEMENT OBJECTIVES	MEASURABLE TARGETS	FREQUENCY OF ACTION	RESPONSIBLE PARTY
3.2 Method Statements <ul style="list-style-type: none"> All activities which require method statements may only commence once the method statements have been approved by the Project Manager and the responsible Environmental Advisor. Where applicable, the contractor shall provide job-specific training on an <i>ad hoc</i> basis when workers are engaged in activities, which require method statements (i.e., toolbox talks and inductions). It must be ensured that Eskom policies, guidelines and standards are consulted to ensure that method statements meet requirements as set out in these documents. 	Contingencies for minimising negative impacts anticipated to occur during the construction phase.	<p>Approved method statements and relevant proforma documents</p> <p>Training records</p>	As and when required	Contractor
3.3 Site demarcation and development <ul style="list-style-type: none"> All conditions contained in this EMP must be adhered to and considered when site demarcation and development takes place. No activities will be allowed outside the demarcated area. Wetlands (if any) shall be demarcated with signage as no-go area.. 	Contingencies for minimising negative impacts anticipated to occur during the construction phase.	Demarcated area's filled in section of this document.	Before construction and as and when required	Contractor and Eskom
3.4 Environmental Awareness	Environmental training and awareness of construction staff contribute to	Environmental impact because of construction activities is minimised through	As and when required	Contractor and Eskom

MITIGATION MEASURE	MANAGEMENT OBJECTIVES	MEASURABLE TARGETS	FREQUENCY OF ACTION	RESPONSIBLE PARTY
<ul style="list-style-type: none"> • All staff (employer and contractor) should receive environmental awareness/ training. • Refresher environmental awareness/training shall be available as and when required. • All staff shall be made aware of the conditions and controls linked to the EMPr. • All staff are made aware of their individual roles and responsibilities in achieving compliance with the EMPr (Legal liabilities). • The Contractor shall erect and maintain information posters at key locations on site. <p>Environmental awareness/training should include as a minimum the following:</p> <ul style="list-style-type: none"> • Description of significant environmental impacts, actual or potential, related to their work activities. • Mitigation measures to be implemented when carrying out specific activities. • Emergency preparedness and response procedures. • Working on or near sensitive areas (wetlands, conservation areas, heritage resources) • Wastewater management procedures. • Water usage and conservation. • Solid waste management procedures. 	<p>minimisation of the occurrence of environmental impact to the work area.</p>	<p>the development of effective environmental awareness training material and execution of environmental awareness training for all staff</p>		

MITIGATION MEASURE	MANAGEMENT OBJECTIVES	MEASURABLE TARGETS	FREQUENCY OF ACTION	RESPONSIBLE PARTY
<ul style="list-style-type: none"> Sanitation procedures Chance finds procedure for archaeological/paleontological/historical sites unearthed during construction. <p>Records of all environmental awareness undertaken as part of the EMPr must be available and kept on site file.</p>				
<p>3.5 Site Establishment</p> <ul style="list-style-type: none"> A site establishment method statement shall be provided by the contractor prior to any onsite activity that includes the layout of the construction camp in the form of a plan showing the location of key infrastructure and services (where applicable), including but not limited to offices, vehicle parking areas, stores, the workshop, stockpile and lay down areas, hazardous materials storage areas (including fuels), the batching plant (if one is located at the construction camp), designated access routes, equipment cleaning areas, ablution facilities, waste and wastewater management; Location of construction camps must be carefully considered and approved by Eskom to ensure that the site does not impact on sensitive areas. Sites should be located where possible on previously disturbed areas. 	<p>Ensure that environmental issues are taken into consideration in the planning and construction of site establishment</p>	<p>Impact to the environment during site establishment is minimised.</p>	<p>When the project starts</p>	<p>Contractor, Transmission Projects and the</p>

MITIGATION MEASURE	MANAGEMENT OBJECTIVES	MEASURABLE TARGETS	FREQUENCY OF ACTION	RESPONSIBLE PARTY
<ul style="list-style-type: none"> The construction camp shall be fenced 				
3.6 Environmental emergencies <ul style="list-style-type: none"> Compile an Emergency Response Plan prior to the commencement of the proposed project. The Emergency Plan must deal with accidents harsh weather conditions, disasters, wildlife interactions, potential chemical spillages, and fires in line with relevant legislation. All staff shall be made aware of emergency procedures as part of environmental awareness training. The relevant local authority shall be made aware of a fire as soon as it starts. In the event of emergency necessary mitigation measures to contain the chemical spill or leak shall be implemented 	Emergency procedures are in place to enable a rapid and effective response to all types of environmental emergencies.	All emergency situations are managed in accordance with the emergency procedures.	As and when required	Contractor and Project Delivery Team
3.7 Hazardous Chemical Substances (incl. oil) <ul style="list-style-type: none"> The contractor must provide method statements for the “handling & storage of hazardous chemical substances”, “fire”, and “emergency spills procedures”. The substances must be confined to specific and secured areas within the contractor’s site, and in a way that does not pose a danger of pollution even during times of high rainfall. These areas 	Prevention of pollution of the environment Minimise chances of transgression of the acts controlling pollution	No pollution of the environment No litigation due to transgression	Daily	Contractor

MITIGATION MEASURE	MANAGEMENT OBJECTIVES	MEASURABLE TARGETS	FREQUENCY OF ACTION	RESPONSIBLE PARTY
<p>must be imperviously bunded with adequate containment (<i>at least 1.5 times the volume of the fuel</i>) for potential spills or leaks</p> <ul style="list-style-type: none"> • Drip trays (<i>minimum of 10cm deep</i>) must be placed under all vehicles, including plant and equipment that stand for more than 24 hours. Vehicles suspected of leaking must not be left unattended, drip trays must be utilised. • Safety Data Sheets (SDS) must be prepared for all hazardous substances on site and supplied by the supplier where relevant. SDS's must be updated as required 		<p>of pollution control acts No complaints from I & AP's Method statements</p>		
<p>3.8 Eating Area</p> <ul style="list-style-type: none"> • The Contractor shall, in conjunction with the environmental and/or safety & health advisors or PM designate restricted eating areas for eating during normal working hours. • Adequate closed refuse bins must be provided. 	<p>Control potential influx of vermin and flies.</p> <p>Neat workplace and hygienic environment.</p>	<p>No visual sign of vermin and flies</p>	<p>Monitor daily</p>	<p>Contractor</p>

<p>3.9 Waste Management</p> <ul style="list-style-type: none"> • All measures regarding waste management shall be undertaken using an integrated waste management approach. • Sufficient, covered waste collection bins (scavenger and weatherproof) shall be provided. • A suitably positioned and clearly demarcated waste collection site shall be identified and provided. • The waste collection site shall be maintained in a clean and orderly fashion. • Waste shall be segregated into separate bins and clearly marked for each waste type. • Staff shall be trained in waste segregation. • Recycling of waste types shall be maximised. • Bins shall be emptied regularly. • General waste shall be disposed of at recognised and registered waste disposal sites/ recycling company. • Hazardous waste shall be disposed of at a registered waste disposal site. • Certificates of disposal for general, hazardous, and recycled waste shall be maintained. • Under no circumstances shall any waste be disposed of, burned or buried on site. 	<p>To avoid, manage and mitigate potential impacts to the environment caused by the incorrect storage, handling, and disposal of general and hazardous solid waste.</p>	<p>Solid waste management is undertaken in accordance with relevant national and provincial legislation and local by-laws.</p>	<p>Daily</p>	<p>Contractor</p>
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MITIGATION MEASURE	MANAGEMENT OBJECTIVES	MEASURABLE TARGETS	FREQUENCY OF ACTION	RESPONSIBLE PARTY
<ul style="list-style-type: none"> Litter (even if originating outside the camp) and concrete bags etc. must be picked up daily and put into suitably closed bins. 				
<p>3.10 Sanitation</p> <ul style="list-style-type: none"> Mobile chemical toilets shall be made available onsite if no other ablution facilities are available. Ablution facilities and/or mobile toilets shall always be used and no indiscriminate use of the veld for the purposes of ablutions shall be permitted under any circumstances. Ablution facilities shall be located within 100 m of any workplace and shall be numerous enough to accommodate the workforce (minimum requirement of 1:15 workers on site) Where mobile chemical toilets are required, the following shall be ensured: <ol style="list-style-type: none"> Toilets are located no closer than 100 m to any watercourse or water body. Toilets are secured to the ground to prevent them from toppling due to wind or any other cause. No spillage occurs when the toilets are cleaned or emptied, and the contents are managed in accordance with the EMP and Hygiene requirements. Toilets have an external closing mechanism and are closed and secured 	<p>An abundant supply of suitably located clean and well-maintained toilet facilities are available to all staff to minimise the risk of disease and impact to the environment.</p>	<p>No pollution or disease arises on-site because of sanitation facilities or lack thereof.</p>	<p>Daily</p>	<p>Contractor</p>

MITIGATION MEASURE	MANAGEMENT OBJECTIVES	MEASURABLE TARGETS	FREQUENCY OF ACTION	RESPONSIBLE PARTY
<p>from the outside when not in use to prevent toilet paper from being blown out.</p> <p>e) Toilets are emptied before long weekends and workers holidays and shall be locked after working hours.</p> <p>f) Toilets are serviced regularly and the</p> <ul style="list-style-type: none"> • A copy of the waste disposal certificates shall be maintained. 				
<p>3.11 Noise Management</p> <ul style="list-style-type: none"> • All construction vehicles and plant must be in a good working order to reduce possible noise pollution. • Noise reduction is essential, and Contractors shall endeavour to limit unnecessary noise, especially loud talking, shouting, or whistling, radios, sirens or hooters, motor revving, etc. The use of silent compressors is a specific requirement. • Noisy activities shall take place only during normal working hours. The surrounding Eskom management and landowners must be informed in writing within 24 hours prior to any planned activities that will be unusually noisy or any other activities that could reasonably have an impact on the adjacent sites. These activities could include, but are not limited to, blasting, 	<p>To prevent unnecessary noise to the environment by ensuring that noise from construction activity is mitigated</p>	<p>Noise management is undertaken in accordance with SANS 10103 and requirements of the EMPr</p> <p>No complaints from surrounding landowners</p>	<p>Daily</p>	<p>Contractor</p>

MITIGATION MEASURE	MANAGEMENT OBJECTIVES	MEASURABLE TARGETS	FREQUENCY OF ACTION	RESPONSIBLE PARTY
piling, use of pneumatic jackhammers and compressors. <ul style="list-style-type: none"> All construction activities shall be limited to normal working hours unless otherwise. 				
3.12 Water management <ul style="list-style-type: none"> The Contractor shall ensure that drinking water is available for all staff on site. If no potable water source is available on site at any time, then the Contractor shall import drinking water to the site. All chemical spillage of oil onto concrete surfaces shall be controlled using an approved absorbent material and the used absorbent material disposed of at an appropriate waste disposal facility. 	To avoid, manage and mitigate potential impacts to the environment caused by wastewater discharge during construction.	Wastewater management is undertaken in accordance with relevant national and provincial legislation and local by-laws.	Daily	Contractor
3.14 Workshop, equipment maintenance and storage <ul style="list-style-type: none"> Where possible and practical all maintenance of vehicles and equipment must take place in the workshop area. During servicing of vehicles or equipment, especially where emergency repairs are affected outside the workshop area, a suitable drip tray must be used to prevent spills onto the soil. 	The control operation, maintenance and storage of equipment prevents soil, surface water and groundwater contamination	Soil, surface water and groundwater contamination are prevented as due to adherence of CEMPr requirements	Daily	Contractor

MITIGATION MEASURE	MANAGEMENT OBJECTIVES	MEASURABLE TARGETS	FREQUENCY OF ACTION	RESPONSIBLE PARTY
<ul style="list-style-type: none"> Leaking equipment must be repaired immediately or be removed from site to facilitate repair. Workshop areas must be monitored for oil and fuel spills. Appropriately sized spill kit kept on site relevant to the scale of the activity taking place shall be available. 				
3.15 Access Management <ul style="list-style-type: none"> Existing roads and services to the construction site must be utilised as far as possible. No unauthorised access is permitted. Every individual coming or visiting the site shall report to the security and their details recorded. Any damage or degradation will be investigated, and fines may be issued, the affected areas must be immediately rehabilitated. No driving off from the marked roads is permitted and designated parking areas must be identified and demarcated with applicable signage. 	<p>Minimise loss of topsoil and enhancement of erosion</p> <p>Minimise fauna and flora displacement by destruction of natural habitats.</p>	<p>No erosion on access roads after completion of construction</p> <p>No loss of topsoil due to runoff water on access roads</p>	<p>As required, monitor daily</p>	<p>Contractor</p>
3.16 Fauna/Animal Management <ul style="list-style-type: none"> Focus on animals such as snakes and other reptiles that often generate fear by informing the labour force how to move 	<p>Minimise disturbance to animals.</p> <p>Minimise interruption of breeding patterns of birds</p>	<p>No measurable or visible signs of habitat destruction</p>	<p>Monitor daily</p>	<p>Contractor</p>

MITIGATION MEASURE	MANAGEMENT OBJECTIVES	MEASURABLE TARGETS	FREQUENCY OF ACTION	RESPONSIBLE PARTY
<p>safely away and to whom they report the sighting of such animals.</p> <ul style="list-style-type: none"> • The labour force should also be informed where snakes most often hide so that they can be vigilant when lifting stones or materials etc. • Employees must be trained on how to deal with fauna species as intentional killing will not be tolerated. 	Minimise destruction of habitat			
<p>3.17 Flora/ Vegetation Management</p> <ul style="list-style-type: none"> • The contractor must rehabilitate the construction camp and any other disturbed areas once construction activities have terminated. Compacted areas will be ripped and mulched to ensure recovery of the natural vegetation cover. • Once construction is complete, rehabilitation of un-built areas must be undertaken to restore the aesthetic & ecological value of the area. • Active re-vegetation must take place with local indigenous vegetation 	Minimal disturbance to vegetation where such vegetation does not interfere with construction in terms of approvals from the relevant authority.	<p>The footprint has not exceeded the agreed boundaries.</p> <p>All damaged areas successfully rehabilitated.</p>	As and when required	Contractor
<p>3.18 Fire Management</p> <ul style="list-style-type: none"> • Designate smoking areas where the fire hazard could be regarded as insignificant. • Educate workers on the dangers of open and/or unattended fires. 	To minimise the risk of fire during construction	Fire prevention measures are carried out in accordance with the National Veld and Forest Fire Act, 101 of 1998	When necessary	Contractor and Eskom

MITIGATION MEASURE	MANAGEMENT OBJECTIVES	MEASURABLE TARGETS	FREQUENCY OF ACTION	RESPONSIBLE PARTY
<ul style="list-style-type: none"> No open fires shall be allowed on site under any circumstances. Firefighting equipment shall be available on vehicles located on site. Initiation School shall advise of a danger of uncontrolled burning of their shacks. Contact numbers for the Fire protection Agencies and emergency services must be communicated in environmental awareness training and displayed at a central location on site. 				
<p>3.1.27 No-go / sensitive areas</p> <ul style="list-style-type: none"> All construction activities must remain within the boundaries of the development area, as demarcated at the start of construction. The construction footprint must be kept to a minimum by constructing boundaries and demarcated around areas not to be disturbed thus reducing the infringement of the development on natural habitat. No-go areas must be demarcated with fencing/warning tape and signs before any construction activities commence. Vehicles are only to access the site via the existing access road. No one is allowed to go beyond the demarcated areas. 	<p>Minimise the potential for the spread of the construction footprint.</p> <p>Reduce loss of fauna and flora habitat.</p> <p>Minimise the potential for loss of protected and or endangered fauna and flora species.</p>	<p>No sign of movement through “no go” areas.</p> <p>Containment of footprint</p>	<p>Monitor daily</p>	<p>Contractor and Eskom</p>

MITIGATION MEASURE	MANAGEMENT OBJECTIVES	MEASURABLE TARGETS	FREQUENCY OF ACTION	RESPONSIBLE PARTY
3.17 Installation of equipment <ul style="list-style-type: none"> • Management of dust shall be conducted in accordance with Dust management section. • Management of equipment used for installation shall be conducted in accordance Workshop equipment maintenance and storage section. • Management hazardous substances and any associated spills shall be conducted in accordance with Hazardous substances section; 	Impact to the environment to be minimised during the installation of equipment	Impact to the environment is minimised through adherence to EMP requirements	Daily	Contractor

<p>3.18 Fuel storage and oils (if applicable)</p> <ul style="list-style-type: none"> • The contractors must provide and maintain a method statement for “fuel tanks and refuelling procedures”. • Fuel storage tanks on the site shall be on an impervious surface that is bunded and able to contain at least 110% of the volume of the tanks. • The filler tap must be inside the bunded area where possible and the bund wall. • A Flammable Liquid License must be obtained for diesel volumes that trigger license requirement. • An authorisation is required for volumes greater than 80 cubic metres combined that are stored on site. 	<p>Prevention of pollution of soil, surface, and ground water resources in the immediate and surrounding environments.</p> <p>Minimise chances of transgression of the acts controlling pollution.</p>	<p>No visible signs of pollution.</p> <p>No litigation due to transgression of pollution control acts.</p> <p>Method statement.</p>	<p>Once off, as required</p>	
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<p>3.18 Equipment and vehicles, Emergency repairs</p> <ul style="list-style-type: none"> • Daily checklists must be completed by drivers and operators before the vehicles and equipment are used. • All vehicles and equipment will be kept in good working order and serviced regularly. • No maintenance of vehicles and equipment must take place on site. • Only emergency repairs on vehicles or equipment are allowed to be carried out on site, a suitable drip tray must be used to prevent spills onto the soil. • Leaking equipment must be repaired immediately or be removed from site to facilitate repair. • Appropriately sized spill kits kept on site relevant to the scale of the activities taking place shall be made available. • The responsible operator of equipment must have the required awareness training to make use of the spill kit in emergency situations. • No washing of plant may occur on the construction site. 	<p>The control operation, maintenance and storage of equipment prevents soil, surface water and groundwater contamination.</p>	<p>Soil, surface water and groundwater contamination is prevented as due to adherence of CEMPr requirements.</p> <p>Proof of awareness training of use of spill kits and drip trays.</p> <p>Recorded evidence of spillages - register.</p>	<p>As and when required</p>	
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<p>3.19 Heritage</p> <ul style="list-style-type: none"> • In terms of the National Heritage Act, 1999 (Act No. 25 of 1999), construction personnel must be alert and must inform the local authorities should they come across any findings of heritage resources within 24 hours if the area has been removed. • Should any archaeological artefacts be exposed during construction activities, work on the area where the artefacts were found shall cease immediately and the South African Heritage Resources Agency shall be notified within 24 hours. • Under no circumstances shall archaeological artefacts be removed, destroyed, or interfered. • Any archaeological sites exposed during construction activities must not be disturbed prior to authorisation by the South African Heritage Resources Agency or the appropriate provincial heritage resource agency. • No building, structure, or fitting on the site older than 60 years shall be removed or demolished without the appropriate license from SAHRA. • Should any remains be found on site that is potentially human remains, the South African Police Service and archaeologist should also be contacted. 	<p>Limit the destruction of the country's heritage resources.</p> <p>The preservation and appropriate management of new archaeological finds should these be discovered during construction.</p>	<p>No destruction of or damage to known archaeological sites</p>	<p>Monitor Daily</p>	
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<p>3.20 Erosion and sedimentation</p> <ul style="list-style-type: none"> • All slopes that are disturbed during construction shall immediately be stabilised to prevent erosion. Where re-vegetation of slopes is undertaken, this shall be done in accordance with the landscape architect where applicable (or appointed landscaper). • To reduce the loss of material by erosion, the contractor shall ensure that disturbance on site is kept to a minimum. • The contractor shall be responsible for rehabilitating all eroded areas in such a way that the erosion potential is minimised after construction has been completed. • All disturbed areas will require rehabilitation and must be mulched to encourage vegetation re-growth. Mulch used must be free from alien seed. • These areas must be cordoned off so that vehicles or construction personnel cannot gain access to these areas. 	<p>Minimise erosion damage.</p> <p>Minimise impeding the natural flow of water.</p> <p>Minimise scarring of the soil surface and land features.</p> <p>Minimise disturbance and loss of topsoil.</p> <p>Re-growth of disturbed areas.</p>	<p>No erosion scars.</p> <p>No loss of topsoil.</p> <p>No interference with the natural flow of water.</p> <p>No visible erosion scars once construction is completed.</p> <p>The footprint has not exceeded the agreed boundaries.</p> <p>All damaged areas successfully rehabilitated.</p>	<p>As and when required</p>	<p>Contractor</p>

<p>3.21 Rehabilitation</p> <ul style="list-style-type: none"> • All areas disturbed by construction activities shall be subject to landscaping and rehabilitation. • Method of rehabilitation measures shall be applied as construction progresses and not left until the end of construction activities. • Rehabilitation method statement shall be approved by the ECO and the Project Team 	<p>Areas disturbed during construction are returned to a state that approximates the state which they were before disruption</p>	<p>Landscaping and rehabilitation are undertaken in accordance with the approved rehabilitation plan/specification</p>	<p>During rehabilitation phase</p>	<p>Contractor</p>
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4 CONCLUSION

This Environmental Management Programme report should be used as an on-site reference document during all phases of this project, and monitoring of compliance may be done through auditing the contractor against the requirements of this CEMPr. Parties responsible for transgression of this CEMPr should be held responsible for any rehabilitation that may need to be undertaken. Parties responsible for environmental degradation through irresponsible behaviour / negligence should receive penalties as stipulated in TPD Environmental Requirements for Contractors and/or Suppliers Standard (TPDMAN-ST-37).

The EMPr has facilitated the identification of relevant and practical mitigation measures, which may be used by the construction team and Eskom to draw up and respond to tender documentation. It is prudent that this document is included during tendering to allow all potential bidders for the project to critically consider and cost for such mitigation. This will ensure that the document receives the necessary buy in that it requires from the onset of the project.

To have records of environmental incidences and the handling thereof, it is suggested that incidence logs be filled in by the CEO. The project manager needs to be informed of such incidences and further actions need to be taken, should the need arise.

It is imperative that precautions are taken to ensure that environmental degradation is minimized while the project is undertaken. This will take a concerted effort from the project team with proper planning being of utmost importance.