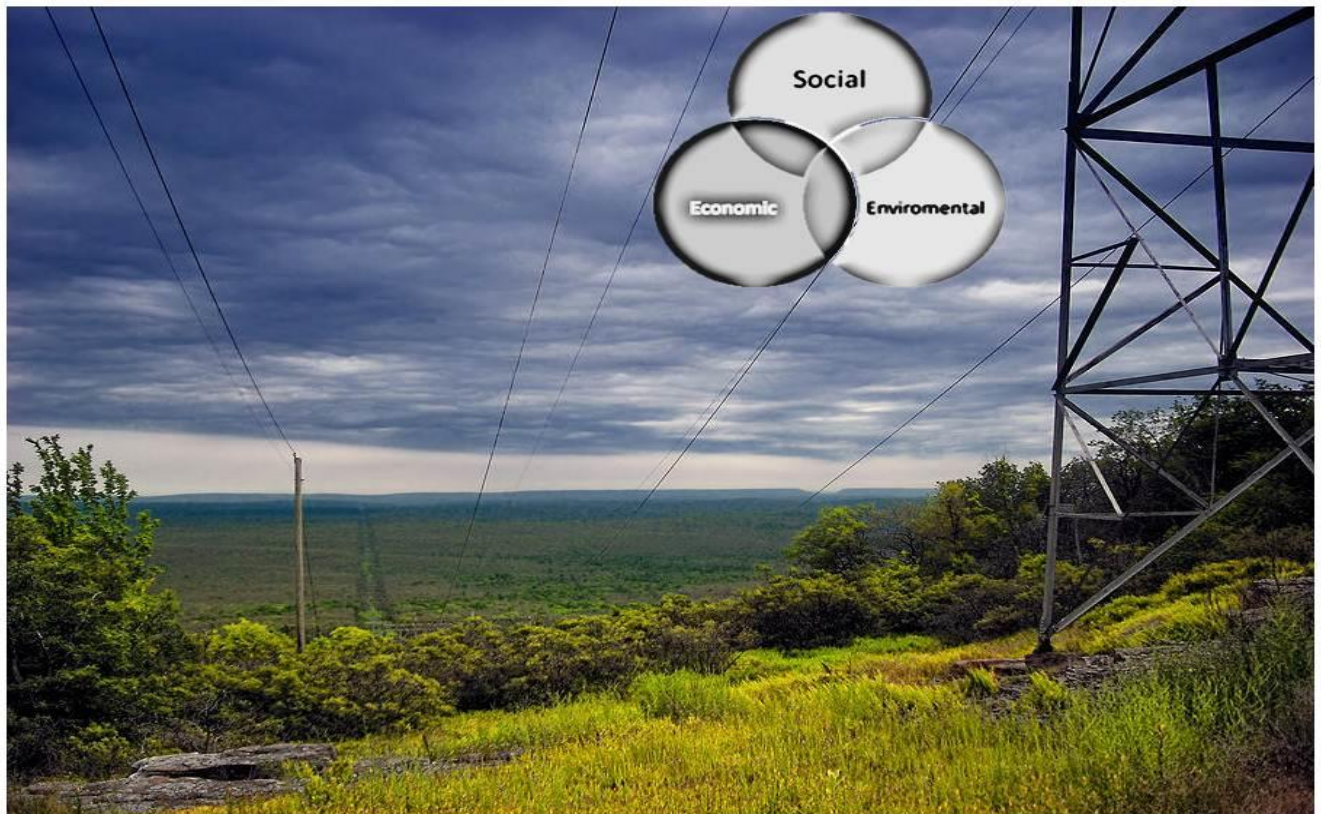


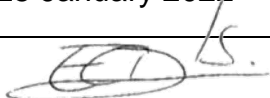


**FREE STATE OPERATING UNIT  
LAND DEVELOPMENT  
ENVIRONMENTAL MANAGEMENT**

**ENVIRONMENTAL MANAGEMENT PLAN (EMP) FOR  
TABANE TRUST ELECTRIFICATION**



Report Date: 8 February 2022

Environmental Officer:	Earl Daniels  051 404 5759  0736263503  danielec@eskom.co.za
Project Name:	Job: <b>Tabane electrification</b>
Project Number:	<b>FS-EBC-1105-530035</b>
Scope of work:	Job ID: <b>FS-EBC-1105-530035</b>  1) Construct LV network 2) Connect stands to network
Property Name:	Thaba nchu RD 404
Landowner:	Tabane Tribunal land
Local Municipality:	Mangaung Metro Municipality
EMP handover Date:	25 January 2022
Signature	

## TABLE OF CONTENTS

1. Introduction	5
2. Scope of EMP	5
3. Environmental legislation framework	8
4. Eskom Policies and Procedures	10
5. Common Environmental aspects	12
6. Impact assessment criteria	18
7. ENVIRONMENTAL MANAGEMENT AND MONITORING PLAN	21
8. Conclusion	41
9. Important Recommendations	41
10. ANNEXURE A: GENERAL CONDITIONS, PROCEDURE: SCSPVABP7	41

## ACRONYMS

<b>EMP</b>	Environmental Management Plan
<b>EO</b>	Environmental Officer
<b>DWS</b>	Department of Water Affairs and Sanitation
<b>DEA</b>	Department of Environmental Affairs
<b>SAHRA</b>	South African Heritage Resources Agency
<b>PPE</b>	Personal Protective Equipment
<b>OHS Act</b>	Occupational Health and Safety Act
<b>SAPS</b>	South African Police Services
<b>DAFF</b>	Department of Agriculture, Forestry and Fisheries
<b>PM</b>	Project Manager
<b>PC</b>	Project Co-ordinator
<b>LD&amp;E</b>	Land development and Environmental management
<b>SS</b>	Senior Supervisor

## GLOSSARY

<b>Environmental Authority:</b> Statutory body that governs and prescribes the processes that needs to be undertaken for certain construction activities. They are also the decision making authority granting authorisation for specific projects.
<b>Environmental Impact:</b> Any change to the environment, whether adverse or beneficial, wholly or partially resulting from an organisation's activities, products or services.
<b>Environmental Management Plan (EMP):</b> a programme that developed to reach the desired end state of the environment and describes how activities, that could have a negative impact, will be managed and monitored and impacted areas rehabilitated.
<b>Eskom Environmental Officer:</b> An individual appointed by Eskom to implement and monitor compliance to the EMP
<b>Contractor:</b> A person or company appointed by Eskom to carry out stipulated activities.
<b>Environment:</b> Surroundings in which an organisation operates, including air, water, land, natural resources, flora, fauna, humans and their interactions.
<b>Environmental Issues (Aspect):</b> Elements of an organisation's activities, products or services which can interact with the environment.
<b>Mitigate:</b> The implementation of practical measures to reduce adverse impacts or enhance beneficial impacts of an action.
<b>Monitoring:</b> An activity which ensures that the requirements of the Environmental management Plan is met

## 1. Introduction

As part of Eskom's strategy to protect the environment through the sustainable management of its activities, it is required that an Environmental Management System (EMS) be developed and implemented. Part and parcel of the EMS is the development and implementation of environmental management programmes (EMPs) according to EPC 32-248. These programmes are essentially plans of action which outline how activities that have the potential to have negative impacts on the environment will be managed and monitored as well as how areas that were affected will be rehabilitated.

This particular Environmental Management Plan (EMP) is aimed at identifying negative environmental activities and any proposed management, mitigation, protection or remedial measures that will be undertaken to address the environmental impacts that have been identified with regards to activities associated with the **electrification of Tabane trust** as per Section 24N (2) of National Environmental Management Act 107 of 1998 on integrated environmental management. **This EMP must form part of the contractual agreement between Eskom and the contractor.**

Recommendations are made on management and monitoring of such activities in order to “**maximise the benefit and minimise the damage**” to the environment and society. The content of this document will also outline the monitoring and management recommendations related to the life cycle of the project's activities in order to ensure that minimal environmental damage is caused and even avoided.

## 2. Scope of EMP

The development of the Environmental Management Programme is in accordance with the Eskom EMP procedure [EPC 32-248](#). In reference to it, EMPs developed and implemented need to take into consideration all significant environmental issues and they are to be included in the document.

The scope of this Environmental Management Plan (EMP) for a township electrification project and is to give **guidelines for environmental best practice**, to the contractor commissioned to construct the proposed infrastructure for electrification purposes. This EMP document should be regarded as part of the contract. This EMP will ensure that all proposed infrastructure is environmentally correctly and effectively constructed.

Furthermore, an EMP must be carried out in terms of the relevant line division's Environmental Management System. This is applicable to all of Eskom's future and present servitudes as well as to projects for which an environmental impact assessment (EIA) or environmental screening was done.

This EMP ultimately has a long term objective to ensure that this project is approached with a cradle to the grave perspective and will be followed throughout the full life cycle of the project.

The Environmental Management Programme Procedure [EPC 32-248](#) complies with national environmental legislation such as the National Environmental Management Act (NEMA) act 107 of 1998 under which the provision for EMPs is made in [Section 11: Environmental Implementation Plans and Management Plans](#). In compliance with the above mentioned requirements, an EMP had to be developed for the **electrification of Thabane trust**.

## 2.1. EMP Objectives

The EMP aims to establish the following:

- A process to identify existing or to predict potential negative environmental impacts resulting from the electrification project at **Thabane trust**.
- Objectives and targets are set to ensure negative impacts are mitigated and existing impacts rehabilitated;
- Resources and responsibilities are allocated to each target; and
- Actions are implemented to mitigate the identified negative environmental impacts; and Monitoring programmes are developed to track the actions that have been implemented so as to ensure the effectiveness of the action.

## 2.2. EMP Compliance

The following are required for compliance with the EMP:

- Environmental training to be given to all resources working on project to understand what the possibly environmental impacts will be. This training to be given by the contractor to their employees.
- An Environmental register is to be kept on site at all times.
- The EMP must be available at all times on the construction site.

### 2.3. Project Responsibilities

PROJECT MANAGER	ESKOM ENVIRONMENTAL OFFICER	CONTRACTOR
<p>The project manager is responsible for overall management of project and EMP implementation.</p> <p>The following tasks will fall within his/her responsibilities:</p> <ul style="list-style-type: none"> <li>• Be familiar with the recommendations and mitigation measures of this EMP, and implement these measures.</li> <li>• Monitor site activities on a daily basis for compliance</li> <li>• Conduct internal audits of the construction site against the EMP</li> <li>• Confine the construction site to the demarcated area.</li> <li>• Rectify transgressions through the implementation of corrective actions</li> </ul>	<p>The EO is responsible for the implementation of the EMP during the construction phase as well as liaison and reporting to Eskom, contractor and land owners, the following:</p> <ul style="list-style-type: none"> <li>• Be familiar with the recommendations and mitigation measures of this EMP</li> <li>• Conduct during construction audits and compile reports.</li> <li>• Educate on the management measures of the EMP.</li> <li>• Liaise with the construction team and project manager.</li> <li>• Recommend corrective action for non-conformance incidents on the construction site.</li> </ul>	<p>The contractor is responsible for the overall execution of the activities in the construction phase including the implementation and compliance at all times with recommendations and conditions of the EMP as well as implementation of findings during audits by the EO. Maintain an environmental register which keeps record of all incidents which occur on the site during construction.</p> <p>These incidents include:</p> <ul style="list-style-type: none"> <li>• Public involvement/ complaints</li> <li>• Health and safety incidents.</li> <li>• Incidents involving Hazardous materials stored on site.</li> <li>• Non-compliance incidents.</li> </ul>

### 3. Environmental legislation framework

LEGISLATION	SECTION	RELATES TO
The constitution of South Africa	Chapter 2 Section 24 Section 25	<ul style="list-style-type: none"> <li>• Bill of Rights</li> <li>• Environmental rights</li> <li>• Rights in property</li> </ul>
National Environmental Management Act No. 107 of 1998 (NEMA)	Section 2  Section 24 (a), (d) & (5)  Section 28	<ul style="list-style-type: none"> <li>• Defines the strategic environmental management goals and objectives of the government. Applies throughout the Republic to the actions of all organs of state that may affect the environment detrimentally.</li> <li>• Listed activities and Regulations</li> <li>• The developer has a general duty of care for the environment and to institute such measures as needs be to demonstrate duty of care</li> </ul>
Conservation of Agricultural Resources Act No. 43 of 1983	Section 6	<ul style="list-style-type: none"> <li>• Implementation of control measures for alien and invasive plant species</li> </ul>
National Heritage Resources Act No. 25 of 1999	The general principles for governing heritage resources in South Africa.	<ul style="list-style-type: none"> <li>• Provides general principles for governing heritage resources management throughout South Africa including national and provincial heritage sites, burial grounds and graves; archaeological and palaeontological sites, and public monuments and memorials.</li> </ul>
National Water Act No. 36 of 1998	Section 14 Section 19 Section 21	<ul style="list-style-type: none"> <li>• Water pollution prevention and regulation of water uses</li> </ul>
National Environmental Management Air Quality Act No. 39 of 2004	Sections 26-27 Section 32	<ul style="list-style-type: none"> <li>• Control of fuels</li> <li>• Control of dust</li> </ul>
Occupational Health and Safety Act No. 85 of 1993	Section 8	<ul style="list-style-type: none"> <li>• General duties of employers to their employees.</li> </ul>

	Section 9 Section 14 Section 24	<ul style="list-style-type: none"> <li>• General duties of employers and self-employed persons to persons other than their employees.</li> <li>• General duties of employees at work</li> <li>• Reporting of incidents</li> </ul>
Noise control regulations of Environmental Conservation Act No. 73 of 1989	Section 25	<ul style="list-style-type: none"> <li>• Control of Noise</li> </ul>
National Forest Act No. 84 of 1998	Section 15	<ul style="list-style-type: none"> <li>• Declaration of protected trees</li> </ul>
Hazardous Substances Act		<ul style="list-style-type: none"> <li>•</li> </ul>
Fencing Act 31 of 1963	Sections 17 Section 22	<ul style="list-style-type: none"> <li>• Any person erecting a boundary fence may clean any bush along the line of the fence up to 1.5 metres on each side thereof and remove any tree standing in the immediate line of the fence</li> <li>• Any person who opens and leaves a gate open or unfastened or finding a gate open on passing through, neglects to shut and fasten a gate shall be guilty of an offence and liable for conviction.</li> </ul>
National Roads Act 54 of 1971	Section 16	<ul style="list-style-type: none"> <li>• Prohibits the dumping of material on or near a national road</li> </ul>
National Environmental Management: Biodiversity Act 10 of 2004		<ul style="list-style-type: none"> <li>• Provides for the provisions of the protection of South African flora, fauna and microorganisms.</li> </ul>

#### 4. Eskom Policies and Procedures

PROCEDURES	DESCRIPTION
EPL 32-727	SHEQ POLICY
EPL 32-97	LAND MANAGEMENT POLICY
EPL 32-114	ESKOM SPOKESPERSON POLICY
EPL 32-1163	ESKOM WATER MANAGEMENT POLICY
STANDARDS	
SANS ISO 14001:2015	ENVIRONMENTAL MANAGEMENT SYSTEMS-REQUIREMENTS WITH GUIDENCE FOR USE
SANS ISO 9001:2015	QUALITY MANAGEMENT SYSTEM
41-120	ESKOM REQUIREMENTS FOR PROCUREMENT OF ASSETS, GOODS AND SERVICES
GUIDELINES	
EGL 32-273	GUIDELINE FOR THE REHABILITATION AND VEGETATION MANAGEMENT OF HERBICIDE TREATED SITES
ADDENDUM 1	GUIDENCE ON OFF-SETS: APPROACH OF DAA FORESTRY REGARDING OFF-SETS AS CONDITION FOR THE LICENCING OF DESTRUCTION OF PROTECTED TREES AND NATURAL FORESTS
PROCEDURES	
EPL 32-6	PROCEDURE FOR DOCUMENTS AND RECORDS MANAGEMENT
EPC 32-644	ESKOM DOCUMENTATION MANAGEMENT STANDARD
240-53464409	CORRECTIVE AND PREVENTATIVE ACTION PROCEDURE

EPC 32-245	WASTE MANAGEMENT PROCEDURE
EPC 32-247	BUSH CLEARING AND MAINTENANCE WITHIN OVERHEAD POWER LINE SERVITUDES
EPC 32-248	EMP GUIDELINE
EPC 32-246	REPORTING ON ENVIROINMENTAL EXPENDITURE
240-44175038	CONTROL OF NON-CONFORMING PRODUCTS OR SERVICE PROCEDURE
342-2	DISTRIBUTION PROCEDURE FOR THE HANDLING OF NON-CONFORMANCE
TECHNICAL BULLETIN	
02TB 023	COVERING OF JUMPERS ON MV AUXILIARY STRUCTURES
03TB-026	VULTURE ELECTROCUTION RISK AREAS
10TB-017	HV INSULATION COVER APPLICATION FOR EXISTING DISTRIBUTION TOWERS (44-88Kv)

## 5. Common Environmental aspects

### Receiving Environment

The site is located in the Mangaung Metro Municipality. The area is located in the grassland biome, which is mostly covered with different types of grasses and veldt plants. There were no high trees observed on site. The area is mainly used for agricultural activities and residential use. The area is undulating with hills on the outskirts of the residential area. There are crop farming practices on the outskirts of the village. The trust has an existing community living in brick houses mainly (See image 1 and 2). There is an existing electrical network which is going to be extended in the same trust village

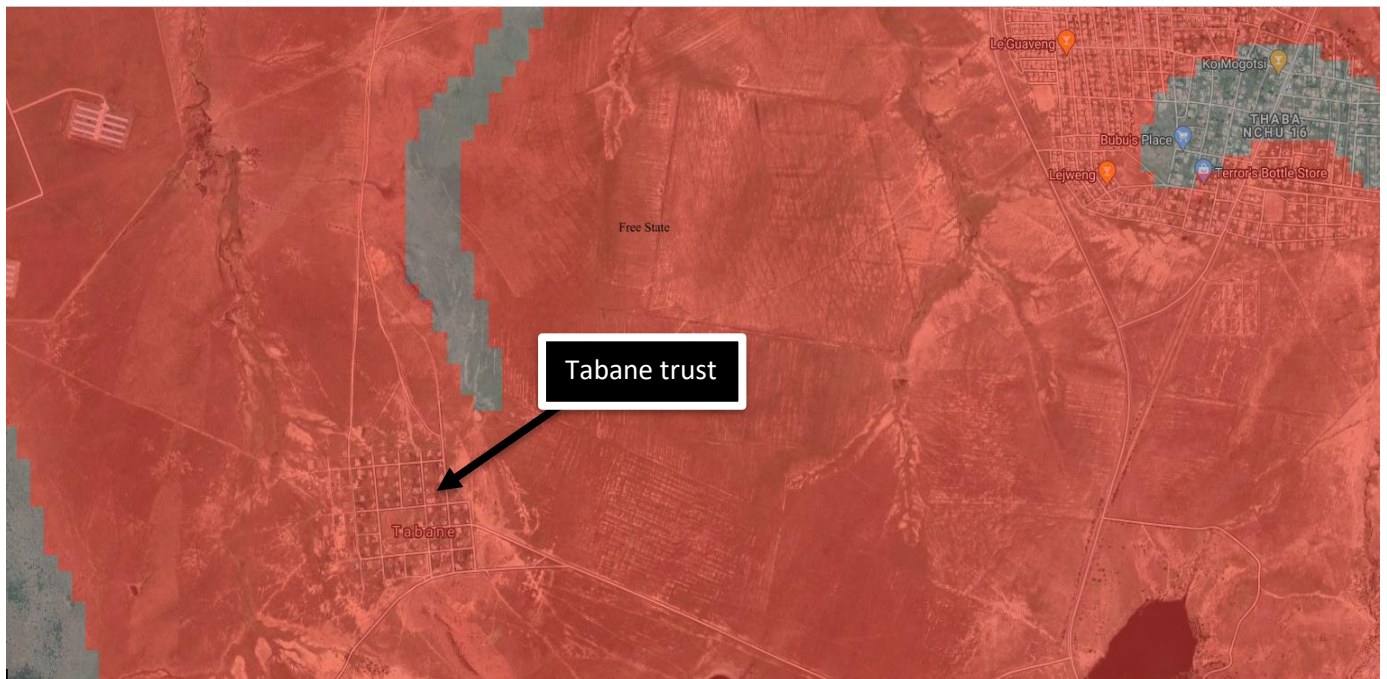


**FIGURE 1: STANDS OF SUBSISTENCE FARMING COMMUNITY**



**FIGURE 2: MIXTURE OF BRICK HOUSES AND SHACKS FOUND IN THE VILLAGE WITH GRAVEL ROADS**

The trust is located in an area identified as being highly palaeontological sensitive as per the paleo map found on South African Heritage Resources Agency (SAHRA) website (See image below). Eskom must appoint a palaeontologist to conduct palaeontology study which must be submitted to SAHRA for approval of the project in this area.



**FIGURE 3: TABANE TRUST IS THE RED (HIGH PALAEOLOGY SENSITIVE AREA)**

## Access

- ❖ Private and commercial entrances must not be obstructed.
- ❖ No property may be accessed after normal working hours, except with prior permission of the landowner.
- ❖ Privacy of surrounding landowners must be respected at all times.
- ❖ No wandering on properties of landowners under any circumstances. Construction activities are to be confined to the way-leave area or as negotiated with the landowner. Access to the site will be from the cleared line from the existing roads and tracks.
- ❖ No earth moving equipment may be used to make access roads, except in challenging terrain and such use must be authorised by the project manager or his delegate.

## Oil

- ❖ It is recommended that the PCB status of all oil containing equipment be verified before removal and/ or installation. If PCB is confirmed, the environmental section needs to be contacted: Earl Daniels (051) 404 5759.
- ❖ **Non PCB oils** can be disposed of at a **registered class H: H hazardous waste site**. Records of quantities disposed, disposal sites, disposal dates, transporters used and safe disposal certificate must be kept and copies submitted to the environmental section after project completion.
- ❖ As per the technical instruction NWRTI001/08, **hazardous material identified for disposal must not be stored for more than 60 days while preparations are made for final disposal**. If there is a possibility for such equipment having to be stored for longer than 60 days, the environmental section needs to be notified at the following number: 051 4042980/ 2287.
- ❖ All fuel containing equipment must be labelled with its PCB status. **Please note that no PCB oil should be sold.**
- ❖ Information on any sale of redundant oil can be obtained from Maxi Wesi, Asset Disposal 051 404 2310.
- ❖ **Emergency plans must be in place prior to the transportation of fuel filled equipment**. Information on travel routes, emergency services numbers along route; oil spill clean-up consultants contact information must be available and easily accessible.
- ❖ The **supplier used to transport hazardous material must provide** such an **emergency plan** to the Eskom representative. Vehicles transportation must be road worthy and also free from oil leaks. All traffic rules and road signs should be adhered to and the equipment to be transported should ideally be placed in drip trays if they have the potential to leak.

- ❖ **Oil spills must be reported** according to the Procedure for the effective Management of safety, health and environmental related incidents [EPC 32-95](#) section 4.2

**“Notification (Initial reporting) All incidents must be reported, regardless of the severity of the incident. Once an employee identifies that an incident has occurred, he/she must immediately notify his/her supervisor of such an incident, regardless of its severity, so that an appropriate and timely response can be made, an initial evaluation conducted, and an incident classification made. The employee must also inform the health and safety representative of such incident. Initial reports must be brief and limited to an outline of the known facts (e.g. date, time, place, what happened and the immediate actions taken.) as stipulated in the minimum requirements for flash reports”**

- ❖ Oil spill clean-up should be conducted according to the **Eskom standard: Oil spill clean-up & rehabilitation**, [ESKASABT0](#). An oil spill kit should be kept on site during construction and in vehicles transporting oil filled equipment.
- ❖ **For major oil spills** an oil spill clean-up consultant should be called in, project coordinator or Clerk of works to make environmental section aware of any major oil spill on site:

**TABLE 1: DETAILS OF OIL SPILL CLEAN-UP CONSULTANTS**

NAME OF ORGANIZATION / COMPANY	ADDRESS	CONTACT DETAILS
EnviroServ Waste Management (Pty) Ltd	Bloemfontein	Ralph Lucas 071 609 6414 0800-192-783 ralphl@enviroserv.co.za
DRIZIT Environmental	Bloemfontein	Lucas Groenewald 051 492 4134 / 082 851 8024 0800 202 202 lucas@drizit.com / lucas@drizit.co.za
VDH Industrial Hygiene	Bloemfontein	051 446 1358 / 083 276 8124 vdhih@iafrica.com

## **Waste**

- ❖ Waste generated on Eskom Holding SOC Ltd project construction sites are only dispose of at registered waste disposal sites
- ❖ According to [Section 24\(a\) of the Constitution](#), [The National environmental management Waste Act 58 of 2008](#) and [Eskom procedures on the handling, storing and disposing of waste on Eskom sites](#), **Effective waste management** will apply throughout the Eskom business and its subsidiaries where Eskom has an interest in.
- ❖ **The purpose of waste management** is to commit to waste reporting and tracking to ensure the protection of the environment. A waste management plan

should therefore be used in order to minimize and manage waste and the associated risks in an environmental friendly and cost-effective manner through the reduction of waste generation and the conservation of resources must be promoted through judicious resource utilization, recycling, reuse and the disposal of waste (EPC 32-245).

- ❖ [The standard on the selection, purchase and storage of hazardous material \(34-440 4.5.1\)](#) states that the procurement department in consultation with Regional Risk Management (Environmental) shall be responsible for developing a contract with an authorized company/ organization for the disposal of hazardous waste material and/or contaminated containers.
- ❖ **Waste on site should be managed and disposed of according to the procedures** in place and good housekeeping shall be conducted on site in order to sustain the health and safety of all employees, the public and the environment.
- ❖ **LICENSED WASTE SITES:** Any waste disposal site established in the Region can only be operated once a permit has been issued by the Department of Water and Environment
- ❖ Find the table below with information regarding the licence holder and take note that the **contractors on site should obtain permission from the licence holder of waste landfill sites to dispose of waste at the mentioned sites.**
- ❖ The quantities of different types of waste disposed off should be recorded and reported on a monthly basis by the contractor to the SHEQS Environmental manager (Benito Williams – 051 404 2983).
- ❖ **Empty cement bags should be treated as hazardous waste on the project.**
- ❖ **Cement bags must be washed with water in containers and stored in labelled closed containers or waste bags in a barricaded area until it is dry.**
- ❖ **The dry cement bags can then be disposed of at a licenced general waste disposal site.**
- ❖ **The grey water can be utilised in construction processes thereafter.**
- ❖ **Workers who handle the cement bags should wear appropriate PPE, gloves and facial masks.**

**See below information and contact details of registered waste disposal sites:**

**Hazardous waste landfill sites**

- ❖ Holfontein Landfill +2713 661 9000
- ❖ Roodepoort Incinerator +2771 683 4458
- ❖ Vissershoeck Landfill +2721 557 6160
- ❖ Mangaung WWTW 051 405 8911

**TABLE 2: TABLE OF REGISTERED WASTE DISPOSAL SITES**

LICENCE HOLDER	LICENCE NUMBER	CLASS OF WASTE	WASTE DISPOSAL FACILITY	ADDRESS
Mangaung Metro Municipality	16/2/7/C521/D2 (22-09-2004)  WML/BAR/02/2013	G:C:B-	Thaba Nchu Landfill site (C)	Bram Fischer Building, Nelson Mandela Drive & Markgraaff Street, Bloemfontein

### Environmental incidents

- ❖ **The distribution procedure on reporting, recording, investigating, costing and following up of incidents/ accidents, DPC 34-350 (flash report system),** should be used for the reporting of all environmental incidents such as bird kills, vegetation destruction, oil spills, erosion, herbicide spillages etc. within 24 hours of the incidence occurring or being discovered.

### Training

- ❖ The NEMA and Eskom SHEQ policy is mandating that resources used to carry out work that might result in environmental damage should be made available and adequate training should be provided to minimise the risk of environmental damage.
- ❖ It is important for personnel to be trained and informed regarding the content of the EMP and the activities that could be damaging the environment. Personnel should be equipped with an oil spill kit to treat minor spills.
- ❖ All site personnel must have a basic level of environmental awareness training.
- ❖ The contractor must monitor the performance of construction workers to ensure that the points relayed during their introduction have been properly understood and being adhered to.

## 6. Impact assessment criteria

**Refer to clause 4.3.1. of the EMS Procedure (34-260) for determining environmental significance.**

The criterion below was used to assess the significance of the impacts. The significance ratings in relation to characteristics of township electrification activities are determined. These ratings are defined in terms of the magnitude, Likelihood, Business risks, Regulatory scrutiny and Stakeholder interest.

LIKELIHOOD	MAGNITUDE
<p><b>High (3):</b> Routine or ongoing activity or impact. Is known to have occurred on routine basis in the past. Impacts associated with the aspects are likely to emerge soon. Impacts are known.</p> <p><b>Medium (2):</b> Periodically occurs once or twice a year. Impacts that are likely to occur within one year.</p> <p><b>Low (1):</b> Very infrequent, every several years. Impacts associated with the aspects are several years away</p>	<p><b>High (3):</b> Aspect has a recognized global environmental impact. Widespread or permanent ecological damage locally. Remediation would take longer than one year. Could result in a major public health hazard.</p> <p><b>Medium (2):</b> Aspect could result in a major uncontained or sustained environmental release impacting on a regional or local environment only. Ecological damage can be remedied within one year. Health hazard to humans in the immediate vicinity, but not resulting in .critical or fatal.</p> <p><b>Low (1):</b> Little or no ecological effect and no measurable impact on human health.</p>

BUSINESS RISK/ BENEFITS	REGULATORY SCRUTINY	STAKEHOLDER INTEREST
<p><b>High (3):</b></p> <p>Aspect poses significant risk. Early response necessary. Industrial initiatives underway/developed. May have major impact on competitive position. May have a significant impact on value of Eskom's assets.</p> <p><b>Medium (2):</b></p> <p>Aspect is likely to pose risk.</p> <p><b>Low (1):</b></p> <p>Aspect does not pose significant risk. No need for early response. No industry initiative associated with aspect. Does not threaten competitive position. Does not affect values of Eskom assets</p>	<p><b>High (3):</b></p> <p>Regulated by Legislation. High potential for regulatory action or limitations to operate (subject to regulatory inspections &amp; historical compliance problems)</p> <p><b>Medium (2):</b></p> <p>Regulated &amp; Legislated, however not a priority in terms of enforcement</p> <p><b>Low (1):</b></p> <p>Relatively unimportant, Little or no potential for regulatory action (e.g. not regulated; not a target of enforcement).</p>	<p><b>High (3):</b></p> <p>Very important to public and customers. Aspect has the potential to cause damage to corporate reputation. Ongoing dialogue has begun; negative perception, possibility for third party lawsuits. Customers expect superior performance by Eskom in managing this aspect.</p> <p><b>Medium (2):</b></p> <p>Important to the public and customers. The aspect is likely to cause damage to corporate reputation.</p> <p><b>Low (1):</b></p> <p>Relatively unimportant; the public is unaware or is aware but it is not an issue. No threat to corporate image. It is not an issue with customers.</p>

### **SIGNIFICANCE OF THE IMPACTS:**

The significance of the unmanaged and managed impacts has been assessed through consideration of the likelihood of the impact occurring, the magnitude over which the impact will be experienced, and the level of business risk, regulatory scrutiny and stakeholders interest the impact will have on the environment.

The formula for calculating the significant environmental impacts score is:

(Likelihood **X** Magnitude)

+ Regulatory scrutiny

+ Stakeholder interest

+ Business risk/benefit

The significant rating, as determined by the Operating unit, is as follows:

- 0 – 5: Low
- 6 -10: Medium
- 11 – 18: High

Impacts with a value greater than or equal to 11 will be considered as significant.

## 7. ENVIRONMENTAL MANAGEMENT AND MONITORING PLAN

### Environmental awareness training

**Impact management outcome:** All onsite staff are aware and understands the individual responsibilities in terms of this EMP.

Impact Assessment						Implementation			Monitoring	
Aspect	Impact	Impact Significance rating	Impact Management Actions	Residual impact Significance rating	Responsible person	Method of implementation	Timeframe	Responsible Person	Frequency	Evidence of compliance
Untrained workers	Pollution Degradation Legal contravention	High	<ul style="list-style-type: none"> <li>❖ All staff must receive <b>environmental awareness training</b> prior to commencement of the activities;</li> <li>❖ The Contractor must allow for sufficient sessions to train all personnel with no more than 20 personnel attending each course;</li> <li>❖ Refresher environmental awareness training is available as and when required;</li> <li>❖ All staff are aware of the conditions and controls linked to the EA and within the EMP and made aware of their individual roles and responsibilities in achieving compliance with the EA and EMP;</li> <li>❖ The Contractor must erect and maintain information posters at key locations on site, and the posters must include the following information as a minimum:               <ul style="list-style-type: none"> <li>a) Safety notifications; and</li> <li>b) No littering.</li> </ul> </li> <li>❖ Environmental awareness training must include as a minimum the following:               <ul style="list-style-type: none"> <li>a) Description of significant environmental impacts, actual or potential, related to their work activities</li> </ul> </li> </ul>	Low	Contractor Environmental Officer	Lecture and demonstrations	Pre-project	Eskom Environmental Officer	Once-off	Attendance registers

			<p>b) Mitigation measures to be implemented when carrying out specific activities;</p> <p>c) Emergency preparedness and response procedures;</p> <p>d) Emergency procedures;</p> <p>e) Procedures to be followed when working near or within sensitive areas;</p> <p>f) Wastewater management procedures;</p> <p>g) Water usage and conservation;</p> <p>h) Solid waste management procedures;</p> <p>i) Sanitation procedures;</p> <p>j) Fire prevention; and</p> <p>k) Disease prevention.</p> <p>❖ A record of all environmental awareness training courses undertaken as part of the EMP must be available;</p> <p>❖ Educate workers on the dangers of open and/or unattended fires;</p> <p>❖ A staff attendance register of all staff to have received environmental awareness training must be available.</p> <p>❖ Course material must be available and presented in appropriate languages that all staff can understand.</p>							
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**Impact management outcome:** Impacts on the environment are minimised during site establishment and the development footprint are kept to demarcated development area.

Impact Assessment						Implementation			Monitoring	
Aspect	Impact	Impact Significance rating	Impact Management Actions	Residual impact Significance rating	Responsible person	Method of implementation	Timeframe	Responsible Person	Frequency	Evidence of compliance
Site layout, Planning, Loss of topsoil, Site camp positioning and location	Pollution  Degradation  Legal contravention, Erosion	High	<ul style="list-style-type: none"><li>❖ A <b>method statement</b> must be provided by the contractor prior to any onsite activity that includes the layout of the construction camp in the form of a plan showing the location of key infrastructure and services (where applicable), including but not limited to <b>offices, overnight vehicle parking areas, stores, the workshop, stockpile and lay down areas, hazardous materials storage areas (including fuels), the batching plant (if one is located at the construction camp), designated access routes, equipment cleaning areas and the placement of staff accommodation, cooking and ablution facilities, waste and wastewater management;</b></li><li>❖ 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 walk through;</li><li>❖ Sites must be located where possible on previously disturbed areas;</li><li>❖ No construction camp and/or storage of material and equipment under the transmission line servitude.</li><li>❖ The camp must be fenced in accordance with the section on Fencing and gate installation; and</li><li>❖ The use of existing accommodation for contractor staff, where possible, is encouraged.</li></ul>	Low	Contractor Project Manager	Execution of activities in accordance with the approved Method Statement.	Pre-project	Eskom Environmental Officer	Once-off	Daily/Weekly registers; photographs

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**Access roads**

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

Impact Assessment						Implementation			Monitoring	
Aspect	Impact	Impact Significance rating	Impact Management Actions	Residual impact Significance rating	Responsible person	Method of implementation	Timeframe	Responsible Person	Frequency	Evidence of compliance
Contractor workers, Construction activities, Equipment	Unauthorised access to site, Injuries, Damages, general disturbance	Medium	<ul style="list-style-type: none"> <li>❖ An access agreement must be formalised and signed by the EPM, Contractor and landowner before commencing with the activities;</li> <li>❖ 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</li> <li>❖ All contractors must be made aware of all these access routes.</li> <li>❖ Any access route deviation from that in the written agreement must be closed and re-vegetated immediately, at the contractor's expense;</li> <li>❖ Maximum use of both existing servitudes and existing roads must be made to minimize further disturbance through the development of new roads;</li> </ul>	Low	Eskom Project Manager	Lecture and demonstrations	Pre-project	Eskom Environmental Officer	Once-off	Signed-off access agreement

			<ul style="list-style-type: none"> <li>❖ In circumstances where private roads must be used, the condition of the said roads must be recorded in accordance with <b>section 4.9: photographic record</b>; prior to use and the condition thereof agreed by the landowner, the EPM, and the contractor;</li> <li>❖ Access roads in flattish areas must follow fence lines and tree belts to avoid fragmentation of vegetated areas or croplands</li> <li>❖ Access roads must only be developed on a pre-planned and approved roads.</li> </ul>							
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**Water Supply Management**

**Impact management outcome: Undertake responsible water usage.**

Impact Assessment						Implementation			Monitoring	
Aspect	Impact	Impact Significance rating	Impact Management Actions	Residual impact Significance rating	Responsible person	Method of implementation	Timeframe	Responsible Person	Frequency	Evidence of compliance
Water	Water resource depletion	Medium	Ensure water conservation is being practiced by: <ul style="list-style-type: none"> <li>❖ Minimising water use during cleaning of equipment;</li> <li>❖ Undertaking regular audits of water systems; and</li> <li>❖ Including a discussion on water usage and conservation during environmental awareness training.</li> <li>❖ The use of grey water is encouraged.</li> </ul>	Low	Eskom Project Manager	Written supply agreement will be entered into with a suitable supplier.	Duration of project	Eskom Environmental Officer	Once-off	Signed-off supply agreement

**Impact management outcome:** Impacts to the environment caused by storm water and wastewater discharges during construction are avoided.

Impact Assessment						Implementation			Monitoring	
Aspect	Impact	Impact Significance rating	Impact Management Actions	Residual impact  Significance rating	Responsible person	Method of implementation	Timeframe	Responsible Person	Frequency	Evidence of compliance
Contaminated water	Surface and underground water pollution, Loss of biodiversity	Medium	<ul style="list-style-type: none"><li>❖ Runoff from the cement/ concrete mixing areas must be strictly controlled, and contaminated water must be collected, stored and either treated or disposed of off-site, at a location approved by the project manager;</li><li>❖ 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;</li><li>❖ Natural storm water 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 EEO;</li><li>❖ Water that has been contaminated with suspended solids, such as soils and silt, may be released into watercourses or water bodies only once all suspended solids have been removed from the water by settling out these solids in settlement ponds. The release of settled water back into the environment must be subject to the Project Manager's approval and support by the EEO</li></ul>	Low	Contractor Project Manager and Contractor Environmental Officer	As per approved Method Statement	Duration of construction	Eskom Environmental Officer	Daily/Weekly	Daily/Weekly registers; photographs; Approved Method Statement.

**Solid and hazardous waste management**

**Impact management outcome:** Wastes are appropriately stored, handled and safely disposed of at a recognised waste facility.

Impact Assessment						Implementation			Monitoring	
Aspect	Impact	Impact Significance rating	Impact Management Actions	Residual impact Significance rating	Responsible person	Method of implementation	Timeframe	Responsible Person	Frequency	Evidence of compliance
Waste	Surface and underground water pollution, Loss of biodiversity	Medium	<ul style="list-style-type: none"><li>❖ All measures regarding waste management must be undertaken using an integrated waste management approach;</li><li>❖ Sufficient, covered waste collection bins (scavenger and weatherproof) must be provided;</li><li>❖ A suitably positioned and clearly demarcated waste collection site must be identified and provided;</li><li>❖ The waste collection site must be maintained in a clean and orderly manner;</li><li>❖ Waste must be segregated into separate bins and clearly marked for each waste type for recycling and safe disposal;</li><li>❖ Staff must be trained in waste segregation;</li><li>❖ Bins must be emptied regularly;</li><li>❖ General waste produced onsite must be disposed of at registered waste disposal sites/ recycling company;</li><li>❖ Hazardous waste must be disposed of at a registered waste disposal site;</li><li>❖ Certificates of safe disposal for general, hazardous and recycled waste must be maintained.</li></ul>	Low	Contractor Project Manager	Waste management done in accordance with the stated impact management actions, with emphasis on recycling where possible. Written agreements or approvals will be obtained for disposal of wastes at appropriate Licensed facilities.	Duration of construction	Eskom Environmental Officer	Daily/ Weekly	Daily/Weekly registers and photographs; Training registers; Safe disposal certificates

**Protection of watercourses and natural channels**

**Impact management outcome:** *Pollution and contamination of the watercourse environment and or natural channel erosion is prevented.*

Impact Assessment						Implementation			Monitoring	
Aspect	Impact	Impact Significance rating	Impact Management Actions	Residual impact Significance rating	Responsible person	Method of implementation	Timeframe	Responsible Person	Frequency	Evidence of compliance
Construction equipment	<ul style="list-style-type: none"><li>❖ Surface and underground water pollution. Loss of biodiversity.</li><li>❖ Altering of banks and beds of watercourses</li></ul>	Medium	<ul style="list-style-type: none"><li>❖ 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;</li><li>❖ In the event of a spill, prompt action must be taken to clear the polluted or affected areas;</li><li>❖ Where possible, no development equipment must traverse any seasonal or permanent wetland</li><li>❖ There must not be any impact on the long term morphological dynamics of watercourses.</li></ul>	Low	Contractor Project Manager	Water management must be done in accordance with the existing electrification EMP and stated impact management actions.	Duration of construction	Eskom Environmental Officer	ongoing	Daily/Weekly registers and photographs

Protection of fauna

**Impact management outcome:** Disturbance to fauna, loss of biodiversity and habitat is minimised.

Impact Assessment						Implementation			Monitoring	
Aspect	Impact	Impact Significance rating	Impact Management Actions	Residual impact  Significance rating	Responsible person	Method of implementation	Timeframe	Responsible Person	Frequency	Evidence of compliance
Construction equipment and workers	❖ Loss of fauna ❖ Disturbance of habitat ❖ Legal contravention	Medium	<ul style="list-style-type: none"><li>❖ No interference with livestock must occur without the site or adjacent landowners' written consent and with the landowner or a person representing the landowner being present;</li><li>❖ The breeding sites of raptors and other wild birds species must be taken into consideration during the planning of the development program;</li><li>❖ 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;</li><li>❖ Special recommendations of an avian specialist must be obtained, if required, and adhered to at all times to prevent unnecessary disturbance of birds;</li><li>❖ 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;</li><li>❖ No deliberate or intentional killing of fauna is allowed;</li><li>❖ In areas where snakes are abundant, snake deterrents to be deployed to prevent snakes climbing onto or into infrastructure and being electrocuted, potentially also causing power outages; and</li><li>❖ 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</li></ul>	Low	Contractor Project Manager	Prohibiting any hunting or killing of faunal species through training program.	Duration of construction	Eskom Environmental Officer	Ongoing	Training

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

Impact Assessment						Implementation			Monitoring	
Aspect	Impact	Impact Significance rating	Impact Management Actions	Residual impact  Significance rating	Responsible person	Method of implementation	Timeframe	Responsible Person	Frequency	Evidence of compliance
Construction equipment and workers	❖ Injury and/or harm to public members. ❖ Damage to Eskom Image	Medium	❖ 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; Maintain an incidents and complaints register in which all incidents or complaints involving the public are logged	Low	Contractor Project Manager and Health & Safety Officer	As per the Health & Safety Plan	Duration of construction	Health & Safety Officer	Daily/Weekly	Daily/Weekly registers and photographs.  Approved Health and Safety Plan. Complaints and Incident register

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

Impact Assessment						Implementation			Monitoring	
Aspect	Impact	Impact Significance rating	Impact Management Actions	Residual impact Significance rating	Responsible person	Method of implementation	Timeframe	Responsible Person	Frequency	Evidence of compliance
Human waste	❖ Human health risk ❖ Ecological impact	Medium	<ul style="list-style-type: none"> <li>❖ Mobile chemical toilets are installed onsite if no other ablution facilities are available;</li> <li>❖ The use of ablution facilities and or mobile toilets must be used at all times and no indiscriminate use of the veld for the purposes of ablutions must be permitted under any circumstances;</li> <li>❖ Where mobile chemical toilets are required, the following must be ensured:                             <ul style="list-style-type: none"> <li>a) Toilets are located no closer than 100 m to any watercourse or water body;</li> <li>b) Toilets are secured to the ground to prevent them from toppling due to wind or any other cause;</li> <li>c) No spillage occurs when the toilets are cleaned or emptied and the contents are managed in accordance with the EMP;</li> <li>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;</li> <li>e) Toilets are emptied before long weekends and workers holidays, and must be locked after working hours;</li> </ul> </li> </ul>	Low	Contractor Project Manager	Chemical toilets will be placed and maintained by a service provider in accordance with contract between contractor and the supplier.	Duration of construction	Eskom Environmental Officer and Health & Safety Officer	Daily/Weekly	Daily/Weekly registers;  Copies of signed service certificates

			<p>f) Toilets are serviced regularly and the ECO must inspect toilets to ensure compliance to health standards;</p> <p>g) A copy of the waste disposal certificates must be maintained.</p>							
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Prevention of disease

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

Impact Assessment						Implementation			Monitoring	
Aspect	Impact	Impact Significance rating	Impact Management Actions	Residual impact Significance rating	Responsible person	Method of implementation	Timeframe	Responsible Person	Frequency	Evidence of compliance
Virus/ Disease	<ul style="list-style-type: none"> <li>❖ Human health risk</li> <li>❖ Ecological impact</li> </ul>	Medium	<ul style="list-style-type: none"> <li>❖ Undertake environmentally-friendly pest control in the camp area;</li> <li>❖ Ensure that the workforce is sensitised to the effects of sexually transmitted diseases, especially HIV AIDS;</li> <li>❖ The Contractor must ensure that information posters on AIDS are displayed in the Contractor Camp area;</li> <li>❖ Information and education relating to sexually transmitted diseases to be made available to both construction workers and local community, where applicable;</li> <li>❖ Free condoms must be made available to all staff on site at central points;</li> <li>❖ Medical support must be made available;</li> <li>❖ Provide access to Voluntary HIV Testing and Counselling Services.</li> </ul>	Low	Contractor Project Manager and Health & Safety Officer	As per the Health & Safety Plan	Duration of construction	Eskom Environmental Officer and Health & Safety Officer	Daily/Weekly	Daily/Weekly registers; photographs.  Health & Safety Plan

Emergency procedures

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

Impact Assessment						Implementation			Monitoring	
Aspect	Impact	Impact Significance rating	Impact Management Actions	Residual impact  Significance rating	Responsible person	Method of implementation	Timeframe	Responsible Person	Frequency	Evidence of compliance
Environmental Emergency situations	❖ Human health risk ❖ Ecological impact	Medium	❖ 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; ❖ All staff must be made aware of emergency procedures as part of environmental awareness training; ❖ The relevant local authority must be made aware of a fire as soon as it starts; ❖ In the event of emergency necessary mitigation measures to contain the spill or leak must be implemented (see <b>Hazardous Substances section</b> ).	Low	Contractor Project Manager	Adherence to the Eskom Distribution Grid's Emergency Preparedness Plan or development and implementation of a project-specific Emergency Response Action Plan (if required).	Duration of construction	Eskom Environmental Officer and Health and Safety Officer	Daily/Weekly	Daily/Weekly registers; photographs.  Training registers

**Hazardous substances**

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

Impact Assessment						Implementation			Monitoring	
Aspect	Impact	Impact Significance rating	Impact Management Actions	Residual impact  Significance rating	Responsible person	Method of implementation	Timeframe	Responsible Person	Frequency	Evidence of compliance
Uncontrolled hazardous substances	<ul style="list-style-type: none"><li>❖ Human health risk</li><li>❖ Ecological impact</li><li>❖ Legal contravention</li></ul>	High	<ul style="list-style-type: none"><li>❖ The use and storage of hazardous substances to be minimised and non-hazardous and non-toxic alternatives substituted where possible;</li><li>❖ All hazardous substances must be stored in suitable containers as defined in the Method Statement;</li><li>❖ Containers must be clearly marked to indicate contents, quantities and safety requirements;</li><li>❖ All storage areas must be bunded. The bunded area must be of sufficient capacity to contain a spill / leak from the stored containers;</li><li>❖ Bunded areas to be suitably lined with a SABS approved liner;</li><li>❖ An Alphabetical Hazardous Chemical Substance (HCS) control sheet must be drawn up and kept up to date on a continuous basis;</li><li>❖ All hazardous chemicals that will be used on site must have Material Safety Data Sheets (MSDS's);</li><li>❖ All employees working with HCS must be trained in the safe use of the substance and according to the safety data sheet;</li><li>❖ 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;</li><li>❖ The Contractor must ensure that diesel and other liquid fuel, oil and hydraulic fluid is stored in appropriate storage tanks or in bowzers;</li></ul>	Low	Contractor Project Manager	As per the Construction Method Statement and relevant Impact Management Actions	Duration of construction	Eskom Environmental Officer and Health and Safety Officer	Daily/Weekly	Daily/Weekly registers; photographs; Training registers

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|  |  |  | <ul style="list-style-type: none"> <li>❖ The tanks/ bowsters 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/ bowsters (110% statutory requirement plus an allowance for rainfall);</li> <li>❖ The floor of the bund must be sloped, draining to an oil separator;</li> <li>❖ Provision must be made for refuelling at the storage area by protecting the soil with an impermeable groundcover. Where dispensing equipment is used, a drip tray must be used to ensure small spills are contained;</li> <li>❖ All empty externally dirty drums must be stored on a drip tray or within a bunded area;</li> <li>❖ No unauthorised access into the hazardous substances storage areas must be permitted;</li> <li>❖ No smoking must be allowed within the vicinity of the hazardous storage areas;</li> <li>❖ Adequate fire-fighting equipment must be made available at all hazardous storage areas;</li> <li>❖ 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;</li> <li>❖ An appropriately sized spill kit kept onsite relevant to the scale of the activity/s involving the use of hazardous substance</li> </ul> |  |  |  |  |  |  |  |
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Dust emissions

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

Impact Assessment						Implementation			Monitoring	
Aspect	Impact	Impact Significance rating	Impact Management Actions	Residual impact  Significance rating	Responsible person	Method of implementation	Timeframe	Responsible Person	Frequency	Evidence of compliance
Falling dust particles	❖ Human health risk ❖ Ecological impact	Medium	<ul style="list-style-type: none"><li>❖ Take all reasonable measures to minimise the generation of dust as a result of project development activities to the satisfaction of the EEO;</li><li>❖ <b>Excavation</b>, handling and transport of erodible materials must be avoided under high wind conditions or when a visible dust plume is present;</li><li>❖ During <b>high wind</b> conditions, the EEO 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;</li><li>❖ Where possible, <b>soil stockpiles</b> must be located in sheltered areas where they are not exposed to the erosive effects of the wind;</li><li>❖ Where erosion of stockpiles becomes a problem, erosion control measures must be implemented at the discretion of the EEO;</li><li>❖ Vehicle speeds must not exceed <b>40 km/h</b> along dust roads or 20 km/h when traversing unconsolidated and non-vegetated areas;</li><li>❖ For significant areas of excavation or exposed ground, dust suppression measures must be used to minimise it.</li></ul>	Low	Contractor Project Manager	As per the Construction Method Statement and relevant Impact Management Actions	Duration of construction	Eskom Environmental Officer	Ongoing	Daily/Weekly registers; photographs

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

Impact Assessment						Implementation			Monitoring	
Aspect	Impact	Impact Significance rating	Impact Management Actions	Residual impact  Significance rating	Responsible person	Method of implementation	Timeframe	Responsible Person	Frequency	Evidence of compliance
Construction noise	❖ Human health risk ❖ Ecological impact	Medium	<ul style="list-style-type: none"><li>❖ The Contractor must keep noise level within acceptable limits, Restrict the use of sound amplification equipment for communication and emergency only;</li><li>❖ All vehicles and machinery must be properly maintained;</li><li>❖ Any complaints received by the Contractor regarding noise must be recorded and communicated. Where possible or applicable, provide transport to and from the site on a daily basis for construction workers;</li><li>❖ Develop a Code of Conduct for the construction phase in terms of behaviour of construction staff.</li><li>❖ Operating hours must be kept to during the construction phase.</li><li>❖ Where not defined, it must be ensured that development activities must still meet the impact management outcome related to noise management.</li></ul>	Low	Contractor Project Manager	As per Project Method Statement and Equipment Maintenance Program compliant with required impact management actions	Duration of construction	Eskom Environmental Officer	Daily/Weekly	Daily/Weekly registers; Equipment maintenance records

Fire prevention

Impact management outcome: Prevention of uncontrollable fires.

Impact Assessment						Implementation			Monitoring	
Aspect	Impact	Impact Significance rating	Impact Management Actions	Residual impact  Significance rating	Responsible person	Method of implementation	Timeframe	Responsible Person	Frequency	Evidence of compliance
Environmental Emergency situations	❖ Human health risk ❖ Ecological impact	Medium	❖ 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; ❖ Contact numbers for the FPA and emergency services must be communicated in environmental awareness training and displayed at a central location on site; ❖ Two way swop of contact details between EEO and FPA.	Low	Contractor Project Manager	As per the Eskom Distribution Emergency Preparedness Plan or Emergency Response Action Plan.	Duration of construction	Eskom Environmental Officer; Health & Safety Officer	Daily/Weekly	Daily/Weekly registers; photographs.

Cabling and Stringing

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

Impact Assessment						Implementation			Monitoring	
Aspect	Impact	Impact Significance rating	Impact Management Actions	Residual impact Significance rating	Responsible person	Method of implementation	Timeframe	Responsible Person	Frequency	Evidence of compliance
Cabling and stringing waste	❖ Human health risk ❖ Ecological impact	Medium	❖ Residual solid waste (off cuts etc.) shall be recycled or disposed of in accordance with the Section on Solid waste and hazardous Management; ❖ Management of equipment used for installation shall be conducted in accordance with the contractor method statement on Management hazardous substances and any associated spills shall be conducted in accordance with the Section on Hazardous substances.	Low	Contractor Project Manager	As per the Project Method Statement and Waste Management Plan	Duration of construction	Eskom Environmental Officer; Health & Safety Officer	Daily/Weekly	Daily/Weekly registers; photographs.

Impact management outcome: Enhanced socio-economic development

Impact Assessment						Implementation			Monitoring	
Aspect	Impact	Impact Significance rating	Impact Management Actions	Residual impact Significance rating	Responsible person	Method of implementation	Timeframe	Responsible Person	Frequency	Evidence of compliance
Electrification project	❖ Positive impact through local labourer employment	Medium	❖ 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 community via ward councillor ❖ Create work and training opportunities for local stakeholders; and ❖ Where feasible, no workers, with the exception of security personnel, must be permitted to stay over-night on the site. This would reduce the risk to site and to workers	High	Contractor Project Manager	As per the Impact Management Actions	Duration of construction	Eskom Environmental Officer	Daily/Weekly	Daily/Weekly registers; photographs.

This EMP highlights the environmental issues related to the electrification of Tabane trust.

This EMP encourages easy management of activities and related impacts. In order to minimise negative environmental impacts, these recommended measures must be implemented. **The EMP is a stand-alone document, which must be used on the site throughout all development phases.** The onus set out in the EMP rests with the Eskom personnel and the contractors, who need to be environmentally responsible and demonstrate environmental commitment.

### 8. Important Recommendations

- **GA should be obtained if pole position remain as is, for construction to commence.**
- To ensure conformance to the EMP, it is recommended that a monitoring program be set up. The monitoring program can be used to monitor the effectiveness of the EMP and also identify environmental issues and impacts that have not been accounted for in the EMP, which are or could result in significant environmental impacts for which corrective action is required.
- It is important that the Environmental Management Plan be presented and explained to the Construction team and/or contractors in order to familiarise them to the environmental agreements and conditions.
- Site visits are to be conducted throughout the project by the relevant environmental practitioner, representatives from construction, project management or affected parties at predetermined intervals.
- It is recommended that emergency plans be put in place for the activities identified within the EMP in order to minimise possible impacts should incidents occur.
- Prior arrangement must be made for the timely / immediate appointment of clean-up consultant should major spill occur.
- All equipment handled must be inspected for cracks, open lids, loose screws, leaks etc. during operation, before removal and transportation.
- All assets that are to be sold must be referred to Maxi Wesi, Commercial Department and Assets Disposal. Contact number: 082 664 7755, 051 404 2310
- Any new environmental aspect identified during the project needs to be added to the EMP register above. Help in this regard can be obtained from the environmental section. Contact details: Earl Daniels (051) 404 5759
- Drive with moderate speed to minimise the risk of vehicular accidents.
- Limit the construction work to normal working hours to minimise the impact of noise on the residents in the area.

### 9. ANNEXURE A: GENERAL CONDITIONS, PROCEDURE: SCSPVABP7

Standard Conditions to be adhered to during construction and Operation.

- 1.1 The Eskom project manager or co-ordinator shall be responsible for ensuring that the land owners/ TSO/ Project co-ordinator have been informed before any work is carried out on site. Contractors shall find out if owners/ TSO/ Project co-ordinator the have been informed before moving onto site.
- 1.2 No fences, gates or locks shall be damaged to obtain access onto a line route. Arrangements shall be made in advance to obtain permission for access.

- 1.3 Use of private roads shall be arranged in advance. Any damage to private roads shall be repaired at the contractor's expense and to the satisfaction of the landowner. This shall be the responsibility of the project manager or coordinator.
- 1.4 Gates shall be left as they are found, i.e. closed gates shall be kept closed and open gates shall be left open. Gates to adjacent properties or onto public roads shall be closed at all times. Any Eskom gates installed on the line route shall be kept closed and locked except while stringing is taking place. Open gates shall be guarded to prevent animals straying and unauthorized persons and vehicles entering into adjacent camps or properties.
- 1.5 Permission shall be obtained from landowners before any water is used.
- 1.6 No fires shall be lit on private property. If fires are lit on Eskom's property or in the construction camp, provision shall be made that no accidental fires are started. No firewood shall be collected in the veld.
- 1.7 If activities that can cause a fire are carried out, fire extinguishers shall be available on site and in the construction camp.
- 1.8 No property may be accessed after normal working hours except with the permission of the landowner /TSO/ Project co-ordinator. Privacy shall be respected at all times.
- 1.9 Eskom, Eskom's contractors and their employees shall at all times be courteous towards landowners, tenants and the local community.
- 1.10 Eskom, Eskom's contractors and their employees shall not cause damage to property, crops or animals. Activities that may cause conflict with landowners, tenants, the local work force or the local community shall be avoided. Should conflict arise it shall be immediately reported to the Eskom project manager or coordinator.
- 1.11 Vehicles shall be driven at a moderate speed on private roads and stay within the statutory speed limit on public roads.
- 1.12 All movement of vehicles shall take place on the established Eskom servitude road or on private roads as agreed in advance. Keep to existing tracks. No movement shall take place through the veld. Special care shall be taken to prevent excess damage during wet weather.
- 1.13 If any vehicle should get stuck, the damage shall be repaired immediately so that no deep ruts remain.
- 1.14 Any damage to private property shall immediately be reported to Eskom and the owner. The damage shall be rectified immediately if possible and/or appropriate compensation shall be paid to the owner at the discretion of the project manager/coordinator in consultation with the property owner. A written record of damages and rectifying action shall be kept. The landowner's satisfaction with the outcome of rectifying action shall be obtained in writing.
- 1.15 A proper system of waste management shall be instituted in the construction camp. This entails that sufficient waste bins are available on site and in the construction camp. The waste shall be dumped at an approved waste disposal site. No containers, scrap metal, conductor etc. shall be left on site.  
  
All scrap shall be removed and taken to an appropriate disposal site. No oil, diesel or other chemicals shall be spilled or discarded anywhere. If an accidental spill occurs, it shall be reported immediately and cleaned to the satisfaction of Eskom and the landowner. No waste shall be left in the veld or on the line route.

- 1.16 Water and Toilet facilities shall be provided on site and in the construction camp. The facilities shall comply with Eskom standards and shall have the approval of the landowner.
- 1.17 No human excrement shall be left in the veld. If no toilet facilities are available such waste shall be buried *immediately*.
- 1.18 Herbicides shall only be applied with Eskom's permission and in accordance with the Eskom Policy on Herbicides ESKPBAAD4.
- 1.19 Camp and office sites shall be dismantled and removed after completion of the construction phase of the project. The site shall be rehabilitated to as close as possible to its original condition to the satisfaction of the landowner that shall be in writing.
- 1.20 All excavations shall be enclosed to prevent animals or people from accidentally falling into excavations.
- 1.21 No trees shall be cut or removed without prior permission from the landowner. Permits shall be obtained for the cutting and removal protected trees (protected trees shall be dealt with in 2).

## Other Documents

UNIQUE IDENTIFIER	DOCUMENT NAME
EPL 32-727	SHEQ Policy
EPC 32-245	Waste Management Procedure
32-123	Emergency Planning Standard,
SCSPVABO6	Incidents (accidents, hazardous substance spills, etc.) and near hits need to be reported to the Safety Risk Management representative as per the Distribution Standard for Reporting, Recording, Investigating, Costing and Follow-up of Incidents/Accidents.
	National Environmental Management Act 107 of 1998.
	Hazardous Chemical Substances Act
	Occupational Health & Safety Act
240-129608465	Oil spill clean-up and rehabilitation



FIGURE 4: TABANE TRUST LOCATION