



**NORTH WEST OPERATING UNIT
LAND DEVELOPMENT
ENVIRONMENTAL MANAGEMENT**

ENVIRONMENTAL MANAGEMENT PROGRAMME (EMPr) FOR RAKGWEDI RIETKUIL ELECTRIFICATION PROJECT



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Project Name:	Rakgweri Rietkuil Electrification
Project Number:	NW-EBC-2406- 368130 -00001
Project Scope of Work:	<p>The aim of this project is the electrification of 17 stands at Rietkuil Rakgweri village. Electrical reticulation, i.e. conductor network, will be provided which can deliver 1.2kVA per stand. The supply to Rietkuil Rakgweri village shall be from the existing 11kV Renoster feeder supplied from Hirbenia Substation by means of a tee-off from pole HBR66-9-5 with 3ph Fox conductor.</p> <p>The infrastructure shall consist of 3-phase overhead MV Fox conductor supported on 11m wooden poles and LV comprising 3-phase 35mm² ABCs with bare neutral supported on 7m wooden poles. Delta with 2m steel crossarm (D-DT-1870) shall be used for MV intermediates and Delta with double 2.5m wood crossarms (D-DT-1743; 1744; 1746 and 1804) shall be used for MV strain and tee-off structures. Pole mounted transformer of SANS780 type, 50kVA, shall be used. MV and LV infrastructure shall run street-front. Each LV feeder shall be individually fused at the transformer structure and transformer shall be protected against overloading by means of 80A MCCB's.</p> <p>The house connections shall be overhead with 6mm² Tinned CU Steel concentric cables. Meters shall be of prepayment smart type, with Energy Management Unit (EMU) installed inside the pole-top box, the Customer Interface Unit (CIU) handed over to customers and a ready-board shall be installed inside the dwellings. Data Concentrators shall be installed for every transformer zone. Blanket 20A connections shall be made.</p>
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ACRONYMS

EMPr	Environmental Management Programme
EO	Environmental Officer
DWA	Department of Water Affairs
DEA	Department of Environmental Affairs
SAHRA	South African Heritage Resource Agency
PPE	Personal Protective Equipment
OHSA	Occupational Health and Safety Act
SAPS	South African Police Services

GLOSSARY

Environmental Authority: 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.

Environmental Impact: Any change to the environment, whether adverse or beneficial, wholly or partially resulting from an organization's activities, products or services.

Environmental Management Programme (EMPr): A programme that guarantees 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.

Eskom Environmental Officer: An individual appointed by Eskom to implement and monitor compliance to the EMPr.

Contractor: A person or company appointed by Eskom to carry out stipulated activities.

Environment: Surroundings in which an organisation operates, including air, water, land, natural resources, flora, fauna, humans and their interactions.

Environmental issues (aspect): Elements of an organization's activities, products or services which can interact with the environment.

Mitigate: The implementation of practical measures to reduce adverse impacts or enhance beneficial impacts of an action.

Monitoring: An activity which ensures that the requirements of the Environmental Management Programme are met.

1. INTRODUCTION

This project is an Eskom Greenfield Electrification Project. The development Rietkuil Rakgwedi falls under Lichtenburg CNC and the Ditsobotla Local Municipality. It is part of the 2022/2023 Electrification Plan. The development consists of 17 stands. The houses are of Brick and Tin types. There are no services installed, with electricity to be supplied by Eskom.

2. SCOPE OF EMPr

The Environmental Management Programme (EMPr) scope for Rietkuil Rakgwedi Distribution Electrification project provides guidelines for environmental best practice, to the Contractor commissioned to construct the proposed distribution line. This document shall be seen as part of the contract. The document describes how activities that could have a negative impact on the environment will be managed, monitored and impacted areas rehabilitated.

This Environmental Management Programme ultimately has a long-term objective to ensure that a cradle to grave approach is implemented through ensuring that environmental management considerations are implemented throughout the life-span of the project.

2.1. Purpose

This Environmental Management Programme (EMPr) describes how activities that could have a negative impact on the environment will be managed and monitored. This EMPr will ensure that all electrification projects are constructed in an environmentally friendly manner.

2.2. EMPr Objectives

Its aim is to ensure that the following are in place:

- There is a process to identify existing or to predict potential negative environmental impacts;
- Objectives and targets are set to ensure negative impacts are mitigated and existing impacts rehabilitated;
- Resources and responsibilities are allocated to each target;
- 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.

2.3. EMPr Compliance

The following are required for the compliance with the EMPr:

- Environmental Training to be given to all resources working on project to understand what the possible environmental impacts will be.
- This training is to be given by the responsible EO for the project.
- An Environmental incident register is to be kept on site at all times.
- The EMPr must be available at all time on the construction site.

2.4. Project Responsibilities

PROJECT MANAGER/ CO-ORDINATOR	ESKOM ENVIRONMENTAL OFFICER	CONTRACTOR
<p>The Project Manager/ Coordinator is responsible for overall management of project and EMPr implementation. The following tasks will fall within his / her responsibilities:</p> <ul style="list-style-type: none"> ○ Be familiar with the recommendations and mitigation measures of this EMPr, and implement these measures. ○ Ensure that site activities on a daily basis comply with the EMPr. ○ Confine the construction site to the demarcated area. ○ Rectify transgressions through the implementation of corrective action. 	<p>The EO is responsible for the implementation of the EMPr during the construction phase as well as liaison and reporting to Eskom & Contractor. The following tasks will fall within her responsibilities:</p> <ul style="list-style-type: none"> ○ Conduct audits during construction and compile reports ○ Liaise with the construction team and the Project Manager ○ Recommend corrective action for non-compliance incidents on the construction site ○ Ensure that the corrective measures are implemented. 	<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 EMPr as well as implementation of findings during audits by the EO. Maintain an environmental register which keeps a record of all incidents which occur on the site during construction. These incidents include:</p> <ul style="list-style-type: none"> ○ Public involvement / complaints ○ Health and safety incidents ○ Incidents involving Hazardous materials stored on site

3. ENVIRONMENTAL LEGISLATION FRAMEWORK

LEGISLATION	SECTION	RELATES TO
The Constitution of South Africa	Chapter 2 Section 24 Section 25	Bill of Rights. Environmental rights. Rights in property.
National Environmental Management Act No. 107 of 1998 (NEMA)	Section 2 Section 24 (a), (d) & (5) Section 28	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 significantly affect the environment. Listed activities and Regulations The developer has a general duty to care for the environment and to institute such measures as may be needed to demonstrate such care.
Conservation of Agricultural Resources Act No. 43 of 1983.	Section 6	Implementation of control measures for alien and invasive plant species.
National Heritage Resources Act No. 25 of 1999	The general principles for governing heritage resources in South Africa	Provides general principles for governing heritage resources management throughout South Africa including national and provincial heritage sites, burial grounds and graves; archaeological and paleontological sites, and public monuments and memorials
National Water Act No. 36 of 1998	Section 19 Section 14	Pollution prevention and Water use.
National Environmental Management: Air Quality Act No. 39 of 2004	Sections 26-27 Section 32	Control of dust.
Occupational Health & Safety Act No. 85 of 1993	Section 8 Section 9	General duties of employers to their employees. General duties of employers and self-employed persons to persons other than their employees.
Noise Control Regulations of the Environmental Conservation Act No. 73 of 1989.	Section 25	Control of noise.
Fertilisers, Farm Feeds, Agricultural Remedies and Stock Remedies Act No. 36 of 1947	Sections 3-10.	Control of the use of registered pesticides, herbicides (weed killers) and fertilizers. Special precautions must be taken to prevent workers from being exposed to chemical substances in this regard.

Nature Conservation Ordinance (Transvaal) Act No. 12 of 1983	Section 98 Section 11	Identification of any specially protected or rare and endangered species. If these are to be affected by the proposed project, a permit from the Director General, Nature Conservation should be obtained prior to removal. Prohibits the picking of all indigenous plants on public roads and nature reserves without a permit.
National Forest Act No. 84 of 1998	Section 12- 16	Prohibits the destruction/removal of protected trees without a permit.
Hazardous Substances Act	Section 3	Control of hazardous substances.
Fencing Act 31 of 1963	Section 17 Section 22	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. 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.
National Roads Act 54 of 1971	Section 16	Prohibits the dumping of material on or near a national road.
National Environmental Management Biodiversity Act 10 of 2004		Provides for the provisions of the protection of South African flora, fauna and microorganisms.

4. ESKOM POLICIES AND PROCEDURES

PROCEDURE	DESCRIPTION
EPC 32-95	<i>Reporting, Recording, Investigating, Costing and Following up of Incidents/Accidents</i>
EPC 32-303	<i>Requirements for the Safe Processing, Storing, Removing and Handling of Asbestos or Asbestos containing material.</i>
DISASAAT8	<i>Provision and Use of Personal Protective Equipment (PPE)</i>
EPC 32-245	<i>Environmental Procedure: Waste Procedure</i>
EPC 32-247	<i>Environmental Procedure: Procedure for vegetation clearance and maintenance within overhead power line servitudes and on Eskom owned land.</i>
DST 34-440	<i>Selection Purchase and Storage of Hazardous Material.</i>

5. GENERAL CONDITIONS AND CONTROL MEASURES

Management of construction activities should be controlled by adhering to the Environmental control measures outlined below:

5.1 Environmental Control Measures (Pre Construction Phase, Construction Phase and Operational Phase)

PRE-CONSTRUCTION PHASE		
Aspect and Impact	Applicable Legislation	Applicable Eskom Standards
LANDOWNERS	The Constitution (Act No 108 of 1996) – Chapter 2, 24 and 25.	Wayleave Agreements Servitudes
	<ul style="list-style-type: none"> The Eskom project manager or co-ordinator shall be responsible for ensuring that the land owners have been informed before any work is carried out on site. 	
CONSTRUCTION CAMP	National Environmental Management Act (No 107 of 1998)	EPC 32- 94
	<ul style="list-style-type: none"> The camp site needs to be adequately fenced off and construction signage visibly displayed on site Camp site needs to be equipped with an emergency assembly point Emergency assembly point signage should be visibly displayed on site 	

CONSTRUCTION PHASE

Aspect and Impact	Applicable Legislation	Applicable Eskom Standards
ACCESS		EPC 32- 94
	<ul style="list-style-type: none"> No property may be accessed after normal working hours, work to be kept within normal working hours. No wandering on the surrounding property, under any circumstances. Construction activities are to be confined to the servitude/wayleave area or as negotiated with the landowner. Access to the camp site will be managed by the appointed security on guard 	
GATES		EPC 32- 95
	<ul style="list-style-type: none"> Site camp gates shall be kept closed and locked at all times. 	
ENVIRONMENTAL TRAINING		DISPVWAB1
	<ul style="list-style-type: none"> Environmental awareness training needs to be conducted prior to the project commencing on site Contractor personnel will have to implement the condition of the EMPr as per the training. 	

CONSTRUCTION PHASE

Aspect and Impact	Applicable Legislation	Applicable Eskom Standards
SITE CLEARING		EPC 32- 247
	<ul style="list-style-type: none"> Site clearing must take place in phased matter, as and when required. The area to be cleared must be clearly demarcated and this footprint strictly maintained. Under no circumstance shall open or dug holes be left on site 	
SANITATION AND ABLUTION FACILITIES		EPC 32-245
	<ul style="list-style-type: none"> Adequate ablution facilities to be readily available on site A registered service provider to be utilised Chemical toilets to be cleaned weekly Proof of waste manifest and disposal certificate to be obtained from service provider 	
STORAGE OF MATERIALS (HAZARDOUS AND NON-HAZARDOUS)	Occupational Health and Safety Act 85 of 1993, Hazardous Substances Act	DST 34-440
	<ul style="list-style-type: none"> Material to be storage within a demarcated area with like material placed within the same area. Storage of hazardous materials shall be placed in an enclosed area on a drip tray or an impermeable plastic sheet. 	
HEALTH AND SAFETY	Occupational Health and Safety Act 85 of 1993	EPC 32-95
	<ul style="list-style-type: none"> It is the responsibility of Eskom to ensure that all construction and operational processes and procedures are compliant with the relevant health and safety regulations. Contractors safety file needs to be approved prior to commencing on site 	
BARRICADING AND LIGHTING	Occupational Health and Safety Act 85 of 1993	
	<ul style="list-style-type: none"> Every excavation which is accessible to the public or which is adjacent to public roads or thoroughfares, or whereby the safety of persons may be endangered, shall be backfilled prior at the end of each working day. The practise on site is to dig and plant on the same day 	

CONSTRUCTION PHASE

Aspect and Impact	Applicable Legislation	Applicable Eskom Standards
FIRES	Occupational Health and Safety Act 85 of 1993, National Veld and Forest Act No. 101 of 1998	EPC 32-245.
	<ul style="list-style-type: none"> No open fires are permitted on site or in the veld Site camp to be equipped with sufficient fire extinguishers In the event that equipment that might pose a fire hazard are used in the construction process, suitable firefighting equipment are to be made available at the construction site and in the construction camp. Emergency preparedness for different incidents e.g. fire, oil spill incidents should be in place and be implemented if and when the need arises (see Annexure B). 	
WASTE MANAGEMENT	NEMA: Waste Act	EPC 32-245
	<ul style="list-style-type: none"> A Waste Management Plan must be developed and adhered to by the contractor. Sufficient waste bins are to be made available on site and in the construction camp which make provision for the different waste streams generated on site These need to be adequately labelled Waste generated must be disposed at an appropriate licensed waste disposal site. No containers, scrap metal, conductor etc. may be left on site. Such scrap must be removed and taken to an appropriate disposal site. 	

CONSTRUCTION PHASE

Aspect and Impact	Applicable Legislation	Applicable Eskom Standards
HAZARDOUS SUBSTANCES	Hazardous Substances Act	EPC 32-245, EPC 32-95
	<ul style="list-style-type: none"> • No oil, diesel or other chemicals may be spilled or discarded anywhere. The site camp should be equipped with an oil spill mop up kit and personnel trained on its use. • If an accidental spill occurs, it must be reported immediately to the site supervisor, clerk of work and the responsible Eskom environmental personnel by means of a flash report (Annexure A) and cleaned to the satisfaction of ESKOM and the landowner. • All hazardous waste must be suitably enclosed, labelled, stored and removed as per legal guidelines. • The storage area must be properly demarcated and cordoned. • Drip trays must be used for stationary construction vehicles and for oil containing equipment e.g. transformers • These hazardous materials may not be disposed of with regular domestic waste. All excess material must be removed upon completion of any work performed and disposed of in a suitable manner by the respective Contractor. 	
PERSONAL PROTECTIVE EQUIPMENT	Occupational Health and Safety Act 85 of 1993	DISASAAT8
	<ul style="list-style-type: none"> • Employees shall take reasonable care of their own health and safety. • Employees shall cooperate with the employer to ensure that the requirements as set out in the Occupational Health and Safety Act and the Regulation fulfilled. • Employees shall maintain each item of personal protective equipment provided to them and keep it clean and hygienic and in good state of repair. • All the PPE purchased shall be in accordance with the Distribution Specification on PPE. 	
WATER MANAGEMENT	National Water Act No. 36 of 1998	
	<ul style="list-style-type: none"> • There are no water resources within close proximity of the construction site • Waste generated shall not be disposed of in any water resources • No extraction of water from any water resource is permitted 	

CONSTRUCTION PHASE

Aspect and Impact	Applicable Legislation	Applicable Eskom Standards
DUST CONTROL	Occupational Health and Safety Act 85 of 1993	EPC 32- 95 EPC 32- 245
	<ul style="list-style-type: none"> The contractor to drive at moderate speed to minimise or avoid dust pollution. When undertaking dust prone activities personnel shall be provided with adequate PPE e.g dust masks 	
NOISE CONTROL	Occupational Health and Safety Act 85 of 1993	EPC 32- 95
	<ul style="list-style-type: none"> Noise levels will be more prominent during construction however it will be kept localised to the construction site and kept to stipulated site hours. 	
COMMUNITY ISSUES	Occupational Health and Safety Act 85 of 1993	EPC 32-95
	<ul style="list-style-type: none"> Property owners and local residents shall be treated with respect at all times. All complaints shall be reported, recorded (Public complaints register) and investigated in compliance with the NWOU procedure (EPC 32-95). 	
BIRD INTERACTIONS		EPC 32- 95
	<ul style="list-style-type: none"> Only bird friendly structures shall be utilised for the project In the event of bird incidents, the ESKOM EO must be contacted and an investigation conducted The EO will liaise with appropriate experts (EWT) on bird behaviour to identify and mitigate problem areas by recommending appropriate action. 	

CONSTRUCTION PHASE

Aspect and Impact	Applicable Legislation	Applicable Eskom Standards
BUSH CLEARANCE	National Forestry Act No. 84 of 1998	EPC 32-247
	<ul style="list-style-type: none"> Tree and bush clearance will be strictly limited to the minimum specified in Eskom construction specifications. Bush clearing will be kept within the projects foot print and unnecessary clearing will be prohibited. No vegetation will be left lying around on site. No vegetation clearing in the form of de-stumping, scalping or uprooting shall be allowed. 	
OIL MANAGEMENT	Occupational Health and Safety Act 85 of 1993	EPC 32-245
	<ul style="list-style-type: none"> Oil spill mop up kits must be kept on site and used in the case of an oil spill. In the event where the spill is too large to treat with the oil spill mop kits, a registered oil spill contractor must be contacted (Annexure B) and the incident must be reported to the EO. All spills to be recorded on the Environmental Incidences register. 	

CONSTRUCTION PHASE

Aspect and Impact	Applicable Legislation	Applicable Eskom Standards
CULTURAL AND HERITAGE ARTEFACTS	National Heritage Resources Act No. 25 of 1999	EPC 32-95
	<ul style="list-style-type: none"> Should any human remains or artefacts be discovered during construction, construction to cease immediately and the ECO is to be notified The contractor must ensure that his workforce is aware of the necessity of reporting any possible historical or archaeological finds to the ECO so that appropriate action can be taken. 	
MONITORING	EPC 32- 95	
	<ul style="list-style-type: none"> A monitoring programme shall be instituted by the EO Eskom (Project Manager) and the contractor must establish the period and frequency. <p>It is recommended that:</p> <ul style="list-style-type: none"> This EMPr is viewed as a living document that should change to suit the needs of the project. The EMPr must be presented and explained to the Construction team and/or contractors to sensitise them to pertinent environmental agreements and conditions. That site visits be conducted at intervals for the duration of the project by the relevant EO, contractor representatives and PM. A post-construction audit will be conducted to identify non-conformance for which corrective action must be taken. Corrective action must take place before the contract is completed or signed off. The site must be reinstated and rehabilitated to its original condition. 	
FINAL SITE INSPECTION		
	<p>Final site inspection must be conducted to insure that site has been re-instated. Considering the condition of the land in the study area, upon which the development is to take place, the impact of this development seems to outweigh any negative impacts that might occur if mitigation measures are implemented effectively.</p>	



**EMERGENCY PREPAREDNESS PLAN
2021 - 2022
NORTH WEST OPERATING UNIT**

In terms of EPC 32-95, it is the responsibility of the Contractor or next in charge to report an environmental incident to the Environmental Officer (EO) for the project. This must be done by sending a flash report detailing the nature of the incident and an SMS to the EO on 076 867 7065 to assist rapidly.

ANNEXURE A: ENVIRONMENTAL RESOURCES

Name	Work area	Contact Details
1. Mpho Sebole Environmental Advisor	Rustenburg	084 504 1730/ 014 523 7079 SeboleMD@eskom.co.za
2. Oarabile Mabula Environmental Quality and Management Officer	Rustenburg	076 867 7065/ 014 565 1169 MabulaON@eskom.co.za

Oil spills - the following oil spill clean-up companies can be contacted for a quotation. This quotation must be approved by the Senior Supervisor before approval can be given to the contractor. Major oil spills under emergency conditions may be authorised directly by the relevant Sector Manager.

ANNEXURE B: OIL SPILLS

COMPANY	CONTACT PERSON	TELEPHONE NUMBER	FAX NUMBER	24 HOUR SPILL RESPONSE
ENSA	William Mafatshe	072 243 0967	086 642 8349	083 498 8798
IWS	Hugo Kotze Diana Bezuidenhout	011 826 3978		083 654 4274 083 498 8798

ANNEXURE C: REMOVAL OF SNAKES

CONTACT PERSON	AREA	CONTACT NUMBER
Gert Plom	Rustenburg	082 4488 535 014 592 7478
Paul Games	Chairman of Herp Club	083 274-4960
Gerhard		014 536-3150

ANNEXURE D: ANTIVENOM UNIT – NATIONAL HEALTH LABORATORY SERVICES

CONTACT PERSON		
Megan Saffer	Office Hours	011 386-6044
Pricilla Fleischer	Office Hours	011 386-6052
NHLS SWITCHBOARD	24 hours	011 386-6000
Dr Mark Blaylock	Emergency number for venom	083 463-3011
Dr Roger Blaylock	Emergency number for venom	083 652-0105
Cost of Antivenom:		
Office Hours:	Polyvalent R540.00 per 10ml	Monovalent R894.00 per 10ml
After Hours: <i>This includes VAT.</i>	Polyvalent R702.00 per 10ml <i>Courier will be charged separately</i>	Monovalent R1 162.00 per 10ml

ANNEXURE D: BEE REMOVAL

COMPANY	CONTACT PERSON	CONTACT NUMBER
Southerns-Beekeepers Association	Grand Arrand	083 652 0760
Removal Honey		072 142 0505

Organizations That May Need to be contacted

No	Department	Contact Details
1	Fire Department	014 590 3333
2	South African Police Services (SAPS)	08600 10 111
3	Department of Water Affairs	012 253 1093/012 253 1026
4	Department of Environmental Affairs (DEA)	012 310 3911/012 310 3137