

NORTH WEST OPERATING UNIT LAND DEVELOPMENT ENVIRONMENTAL MANAGEMENT

ENVIRONMENTAL MANAGEMENT PROGRAMME (EMPr) FOR WITPAN ELECTRIFICATION PROJECT



Environmental Officer:	Name: Rosina Ndou Tel: 018 464 6992 Cell: 071 370 6017 Ndours@eskom.co.za	
Project Name:	Witpan electrification project	
Project Number:	NW-EBC-0206-565958-0001	
Project Scope of Work:	Install a new overhead MV & LV infrastructure and supply 94 stands with service connections by installing the following: 22kV MV Infrastructure: String 7513m Fox conductor : 48 x 11m, 160-179mm Wood Poles : 3 x 11m 180-199mm Wood Pole : 3 x Fused Links, 2 x Solid Links & 1 x Gang Link LV Infrastructure: String 227m x 35mm² 2ph ABC Conductor. : String 3650m x 35mm² 3ph ABC Conductor. : 27 x 5m 80-100mm Wood Poles : 111 x 7m 120-139mm Wood Poles Auxiliary Equipment: 94 Ready Board & 94 Smart Meters : 44 x 2-way & 15 x 4-way P/T boxes. : 1 x 50kVA & 2 x 100kVA Transformers : 2 x 63A LV fuse & 1 x 80A MCCB : 4 x 125A LV fuse & 2 x 150A MCCB : 3379m x 6mm2 Tinned CU concentric cable. Dismantling: 800m ABC 35 2ph, 290m Fox, 1051m Airdac, 10 PTB, 9 x LV Stays, 8 x 7m Poles, 8 x 11m Poles, 1 x 32kVA TRFR, 2 x MV stay, 1 x MV strut, 1 x Strut	
EMPr Handover Date:	07 April 2022	
Signature:	Andre .	

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ACRONYMS		
AORONTINO		
EMPr	Environmental Management Programme	
EO DWA	Environmental Officer Department of Water Affairs	
DEA	Department of Water Analis 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	
DAFF	Department of Agriculture Forestry and Fisheric	es
PM	Project Manager	
PC	Project Co-ordinator	
LD SS	Land Development	
33	Senior Supervisor	

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 plan 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 EMP.

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 Plan is met.

1. INTRODUCTION

As part of Eskom's Integrated Environmental Management System (ISO14001), there is a commitment to the development & implementation of an Environmental Management Programme (EMPr) for all Eskom Projects.

PLEASE NOTE THAT THIS IS JUST AN EMPr FOR THE ELECTRIFICATION PROJECT. THIS EMPr DOES NOT INCLUDE ENVIRONMENTAL AUTHORISATION, GENERAL AUTHORISATION CONDITIONS AND TREE PERMIT CONDITIONS.

2. SCOPE OF EMP

The scope of this Environmental Management Programme (EMPr) is specifically for this electrification project is to give 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 and monitored and impacted areas rehabilitated.

Further, this document will subsequently be used by Eskom staff that will be in charge of maintenance of the substation. This Environmental Management Programme will ensure that all infrastructures is inspected and maintained correctly and effectively.

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) is specific for this electrification project describes how activities that could have a negative impact on the environment will be mitigated, managed and monitored. This EMPr indicates if areas are impacted, how they should be rehabilitated. This maintenance EMPr will ensure that all power lines are inspected and maintained correctly and effectively.

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. EMP 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 to be given by contractor
 to their people or Eskom EO if requested to assist.
- An Environmental Register is to be kept on site at all times.
- The EMPr must be available at all time on the construction site.
- The contractor must read and understand the EMP before they commence with the project

2.4. Project Responsibilities

ESKOM ENVIRONMENTAL PROJECT CO-ORDINATOR CONTRACTOR **OFFICER** The Project Co-ordinator The EO is responsible for the The Contractor is responsible for the is responsible implementation of the EMPr during overall execution of the activities in for overall management of project and EMPr the construction phase as well as the construction phase including the implementation. The following liaison and reporting to Eskom, implementation and compliance at all tasks will fall within his / her Contractor, and Landowners. The times with recommendations and following tasks will fall within his / conditions of the EMPr as well as responsibilities: her responsibilities: implementation of finding during audits by the EO. Maintain an Be familiar with the environmental register which keeps a recommendations familiar and Be with the record of all incidents which occur on mitigation measures of this recommendations and the site during construction. These EMPr, and implement these mitigation measures of this incidents include: EMPr. measures. Conduct during construction Monitor site activities on a daily Public involvement / complaints basis for compliance. audits and compile reports. Educate about the management · Conduct internal audits of the Health and safety incidents construction site against the measures of the EMPr. Incidents involving Hazardous EMPr. materials stored on site Liaise with the construction Confine the construction site to team and the Project Manager. Non-compliance incidents the demarcated area.

- Rectify transgressions through the implementation of corrective action.
- Recommend corrective action for non-compliance incidents on the construction site.

3. ENVIRONMENTAL LEGISLATION FRAMEWORK

LEGISLATION	SECTION	RELATES TO
	Chapter 2	Bill of Rights.
The Constitution of South Africa	Section 24	Environmental rights.
	Section 25	Rights in property.
National Environmental Management Act No. 107 of 1998 (NEMA)	Section 2	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.
	Section 24 (a), (d) & (5)	Listed activities and Regulations
	Section 28	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 fuels. 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 15	Prohibits the destruction/removal of protected trees
Hazardous Substances Act 15 of 1973	Section 4	To provide for the control of substances which may cause injury or ill-health to or death of human beings by reason of their toxic, corrosive, irritant, strongly sensitizing or flammable nature or the generation of pressure thereby in certain circumstances, and for the control of certain electronic products; To provide for the division of such substances or products into groups in relation to the degree of danger; to provide for the prohibition and control of the importation, manufacture, sale, use, operation, application, modification, disposal or dumping of such substances and products; and to provide for matters connected therewith.
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	Reporting, Recording, Investigating, Costing and Following up of Incidents/Accidents
EPC 32-303	Requirements for the Safe Processing, Storing, Removing and Handling of Asbestos or Asbestos containing material.
DISASAAT8	Provision and Use of Personal Protective Equipment (PPE)
EPC32-245	Environmental Procedure: Waste Procedure
EPC32-247	Environmental Procedure: Procedure for vegetation clearance and maintenance within overhead power line servitudes and on Eskom owned land.
DST34-440	Selection Purchase and Storage of Hazardous Material.
EPC 727	

5. GENERAL CONDITIONS AND CONTROL MEASURES

rehabilitate the site may lead to NCR.

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** The Constitution (Act No 108 of 1996) - Chapter 2, 24 **Wayleave Agreements** and 25. Servitudes • The Eskom project manager or co-ordinator shall be responsible for ensuring that the land owners have been informed before any **LANDOWNERS** work is carried out on site. Contractors shall find out if the land owners have been informed before moving onto site, this maybe done during kick off meeting. • The project manager must coordinate with other parties working on site regarding: site management, timing of works, clearing the site, materials ordering, waste management, access, deliveries and construction areas National Environmental Management Act (No 107 of **EPC 32 94** 1998) CONSTRUCTION Choice of site for the Contractor's camp requires the EOs permission and must take into account location of local residents and / or ecologically sensitive areas, including flood zones and slip / unstable zones. CAMP

• Construction camp site must be clearly demarcated and visible by putting necessary board and signs indicating that the area is a construction camp site and access is denied. No materials will be left onsite after the construction of the project and failure to

CONSTRUCTION PHASE

Aspect and Impact	Applicable Legislation	Applicable Eskom Standards	
	Occupational Health and Safety Act 85 of 1993	EPC 32-245.	
SANITATION AND ABLUTION FACILITIES	 The contractor can make use of the existing pit toilet within the village. Chemical/portable toilets can be provided if the contractor cannot have access to the existing pit toilets and such facilities shall, Comply with Eskom standards and shall have the approval of the land owner. Portable toilets must be available to staff. Staff shall be sensitised to the fact that they should use these facilities at all times. These facilities shall be within 100m from workplaces but not closer than 50m from any natural water bodies. The toilets must be discharged and cleaned every week. Cleaning of the toilets must be done through the certified service provider and proof of every discharge must be filled appropriately. 		
STORAGE OF MATERIALS	Occupational Health and Safety Act 85 of 1993, Hazardous Substances Act	DST34-440	
(HAZARDOUS AND NON-HAZARDOUS	 Storage of equipment and facilities should be designed to ensure safety of goods. All hazardous materials must be stored on a non-permeable surface. 		
LICAL TH AND	Occupational Health and Safety Act 85 of 1993	EPC 32-95	
HEALTH AND SAFETY	 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. A health and safety officer must be appointed. 		
	NEMA	EPC 32- 247	
CLEARING/REMOVA L OF VEGETATION	 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. Removal of vegetation or vegetation management must be done in accordance with Eskom Vegetation Management Standard Procedure and the servitude dimensions must be adhered to. No cutting of protected trees is permitted without the tree cutting permit and guidance from the Eskom EO Contractor must contact Eskom EO for advice if they are not sure about the protection status of the tree that needs to be cut. There are shepherd trees and camel thorn trees onsite which are protected. They must not be disturbed without a permit. 		

CONSTRUCTION PHASE

Aspect and Impact	Applicable Legislation	Applicable Eskom Standards
	NEMA	SHEQ Policy EPC 727
ENVIRONMENTAL TRAINING	 Ensure that all site personnel 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 are being followed. Environmental Awareness Training must be conducted prior to construction by the contractor or Eskom EO if requested to do by the contractor. 	
	Occupational Health and Safety Act 85 of 1993, National Veld and Forest Act No. 101 of 1998	EPC 32-245
FIRES	 No open fires are permitted on private property, on site or in the veld. In the event that equipment that might pose a fire hazard is used in the construction process, suitable fire fighting equipment is 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 A). 	
	NEMA: Waste Act	EPC32-245
WASTE MANAGEMENT	 A Waste Management Plan must be developed and adhered to or implement the waste management plan form Eskom. The Contractor is responsible for developing the Waste Management Plan. Waste disposal methods will depend upon the location of the construction camps. This entails that sufficient waste bins are available on site and in the construction camp. Waste bins must be clearly marked to indicate the type of waste to be disposed off. The waste must be disposed of 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. NO BURNING OF WASTE. IT IS A LEGAL OFFENCE. 	
Hazardous Substances Act		EPC 32-245, EPC 32-95
HAZARDOUS SUBSTANCES	it on, aloos or other original and aloos and aloos and aloos and aloos	

	 The storage area must be properly demarcated and cordoned. Drip trays must be used for stationary trunks. 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. Oil spill cleaning kit must be onsite at all times. 		
	NEMA: Waste Act	EPC 32-245	
SCRAP	 All scrap steel shall be stacked neatly and any disused and broken insulators shall be stored in containers. Once material has been scrapped and the contractor has been placed for removal, the contractor shall ensure that any equipment containing substances causing pollution is removed 		
	 National Environmental Management Biodiversity Act 10 of 2004 Only bird friendly structures must be used during contraction. Should a non-bird friendly structure be used on site, Non Conformance Report must be raised against the contractor and PC immediately. The contractor must build according the design. 		
BIRD FRIENDLY STRUCTURE			
Occupational Health and Safety Act 85 of 1993 DISASAAT8		DISASAAT8	
PERSONAL PROTECTIVE EQUIPTMENT	 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 pair. All the PPE purchased shall be in accordance with the Distribution Specification on PPE. COVID19 PPE must be given to all employees. 		
	Occupational Health and Safety Act 85 of 1993	EPC 32- 95 EPC 32- 245	
DUST CONTROL	 Drive at moderate speed on site access roads to minimise or avoid dust pollution. If there is dust due to loose soil, the contractor must mitigate by spraying with water. Water must not be obtained from and natural water resource, it must be water from the communal taps or municipal water. 		

	Occupational Health and Safety Act 85 of 1993	EPC 32-95
COMMUNITY ISSUES	 Property owners and local residents shall be treated with respect at all times. The contractor must be extra vigilant while driving around to avoid collision with domestic animals around. All complaints shall be reported, recorded (Public complaints register) and investigated in compliance with the relevant BU procedure (EPC 32-95). All the closed gates must be kept closed at all times during construction 	
	National Heritage Resources Act No. 25 of 1999	EPC 32-95
HERITAGE	immediately	report to the EO and all construction activities be stopped egally binding and must be adhered to prior and during contractor specifically on the SAHRA Permit.
	Occupational Health and Safety Act 85 of 1993	EPC32-245
OIL MANAGEMENT	the incident must be reported to the EO.	se of an oil spill. spill mop kits, an oil spill contractor must be contacted (Annexure A) and register and a Non Conformance Report must be raised against the
	Occupational Health and Safety Act 85 of 1993, Hazardous Substances Act 15 of 1973	DST34-440, EPC 32-247
MATERIALS STORAGE		lesigned to ensure Safety of goods. Equipment shall be tested according Hazardous Substances Act 15 of 1973 and shall be maintained so as to ated.

NEMA		EPC 32 247, EPC 32 95
EROSION	 Reasonable measures to prevent soil erosion shall be imple Contractor must use existing road tracks in a way of avoiding Storm water run-off must be efficiently managed and must no 	g new tracks that can be susceptible to erosion.

CONSTRUCTION PHASE

Aspect and Impact	Applicable Legislation	Applicable Eskom Standards
	Occupational Health and Safety Act 85 of 1993	EPC 32 95
EXCAVATIONS	 All excavations shall be enclosed to prevent animals or peo No excavation shall be opened and left unclosed. Barricadi is practiced onsite. 	ole from accidentally falling into excavations. ng of excavations is strictly prohibited. NCR will be issued if this
	NEMA	EPC 32- 95
	A monitoring program shall be instituted.	
It is recommended that:		
MONITORING	 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 PC. A post-construction audit is 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. 	

Annexure A: Emergency Preparedness Plan



EMERGENCY PREPAREDNESS PLAN 2020-2021 NORTH WEST OPERATING UNIT

In terms of EPC 32-95, it is the responsibility of the Senior Supervisor or next in charge to report an environmental incident to the Environmental Manager (EM) of the Operating Unit. This must be done by sending an SMS to the EM on 083 9666 104 within 24 hours of the incident and then after submit a flash report detailing the nature of the incident.

Environmental Resources to be contacted:

Name	Work area	Contact Details
Lusanda Ngesi	North West	083 966 6104
Environmental Manager	Operating Unit	Maqaql@eskom.co.za
2. Mpho Sebole	Rustenburg	082 560 5447/014 565 1133
Senior Environmental	_	SeboleMD@eskom.co.za
Advisor		
Bonginkosi Sifunda	Klerksdorp	018 464 6834/ 079017 6658
Environmental Advisor		SifundBM@eskom.co.za
4. Ndou Rosina	Klerksdorp	018 464 6992 /071 370 6017
Environmental Officer	-	ndours@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.

COMPANY	CONTACT PERSON	TELEPHONE NUMBER	FAX NUMBER	24 HOUR SPILL RESPONSE
RAPID SPILL RESPONSE	CHRIS BADENHORST	086 111 3467	086 111 3509	0800 172 743
ENZA	JACO VAN DEVENTER	(011) 477 3892	086 642 8349	083 498 8798
DRIZIT ENVIRONMENTAL	MARTINUS STANDER	(011) 312 0218	0862180015	080 020 2202

Bee Removals – In the event that Bees are posing a safety issue on site, these bees must be removed by contacting Grant Arrand (Southerns Beekeepers Association) 083 652 0760

Annexure B

FLASH REPORT ESKOM EMPLOYEE INCIDENT NOTIFICATION FORM (Incidents to be reported before the end of shift or day)

OP. UNIT:	ΓMENT				
UNIT/SECTION			CC		
EXACT LOCATION OF INCIDENT:					
MANAGER/SUPERVISOR					
TELEPHONE NUMBER:	CODE	NUMBER			
FAX NUMBER:	CODE	NUMBER			
DATE OF INCIDENT:		TIME OF INCIDENT:			
INJURY TYPE: FATAL DISABLING INJURY	MEDICAL CASE	FIRST AID	OCCUPATIONAL DISEASE		
INCIDENT TYPE:					
ELECTRICAL VEHICLE CONTACT INCIDENT		RONMENTAL DENT	FIRE/EXPLOSION INCIDENT		
DAYS BOOKED OFF					
BRIEF DESCRIPTION OF INCIDENT					
FULL NAMES OF INJURED/DECEAS 1. UN		4.	UN		
2. UN 3. UN	I	5. 6.	UN UN		
FULL NAME(S) OF THE DRIVER(S): (Eskom)		(Third Party)	-		
MOTOR VEHICLE(S) REGISTRATIO (Eskom)	N NUMBER(S):	(Third Party)			
WITNESSES:					
1. 2.		3. 4.			
SUBSTANCE ABUSE TEST RESULT	r'S	Positive	Negative		
Reported by	Tel n	0	Date		