



1st AUDIT REPORT
For
FREEDOM PARK SUBSTATION AND 160M 88KV LOOP IN-OUT POWERLINE
NEAR RUSTENBURG, NORTH WEST PROVINCE

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Abbreviations

EMPr	Environmental Management Programme
DEA	Department of Environmental Affairs
DWS	Department of Water Affairs and Sanitation
ECO	Environmental Control Officer
EO	Environmental Officer
ELO	Environmental Liaison Officer
MC	Main Contractor
OHSA	Occupational Health & Safety Act
PPE	Personal Protective Equipment
EA	Environmental Authorisation

1. Introduction

Envirolution Consulting (Pty) Ltd, as independent environmental consultants, was appointed by Eskom Distribution to undertake a monthly Environmental Management Programme (EMPr) and EA compliance audit on the construction work of Freedom Park Substation and Power line which involves the construction of one substation and an approximately 160 m loop in loop out 88kV overhead power line.

The aim of this independent compliance audit is to review existing processes, document the potential areas of non-compliance, and determine potential improvements that can be made to ensure compliance with the EMPr compiled for the project and also avoid, where possible, negative impacts on project-affected ecosystems and communities. Where impacts are unavoidable, they should be reduced, mitigated, and/or compensated for appropriately as per the EMPr specifications compiled for the project.

In order to address the requirements of both Eskom and the Competent Authority, a Checklist has been prepared to discuss the findings on each of the specific areas within the construction site servitude of the Freedom Park Substation and power line. Environmental specifications included in the audit checklist were based on the Environmental Management Programme (EMPr), Environmental Authorisation and Eskom's Environmental Specifications applicable to the project.

The checklist consists of a rating column and a compliance status report, which will indicate or reflect the level of compliance of the project to the EMPr and EA. The rating column is ranked from **0 - 2**, where:

- **0** will imply that the Contractor is not complying with the requirements of the EMPr at all, and is not making any efforts/no evidence to remediate the situation.
- **1** will be applicable in areas where the Contractor has partially complied and are aware but has not fully complied with the EMPr, and is effectively making efforts to remediate the situation;
- **2** mean that the Contractor has fully complied with all EMPr requirements (and specifications and to the satisfaction of the ECO)

The compliance status reports will generally show the number of compliances and non-compliances per audit. The status report will also indicate the number of conformances versus non-conformances of the audit for the site. Please note that the audit process will classify activities/sections as **N/A** if the activity has not commenced or could not be determined by the auditors at the time this audit was undertaken.

The audit will also rate and consider some specifications as Work in progress (WIP). WIP will in this audit refer to an activity that has been started as an attempt by the Contractor to effectively curb, mitigate or address a particular environmental issue but had not fully completed by the time of the audit. All WIP's will not be scored/rated for the purposes of this audit.

This report intends to provide information demonstrating the EMPr compliance of the project; the report contains the narrative on the status quo of the health, safety and environmental compliance on site during the inspection.

For the purposes of this audit, the description of the scoring methodology in terms of the overall compliance is briefly explained as follows:

Description	Percentage Rating
Non compliant	<50%
Satisfactory	>50% - <90%
Well compliant	>90%
Fully compliant	100%

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Mr Thabang Sekele holds a BA (Environmental Management) with major in Geography from University of South Africa. Thabang's key focus is on strategic environmental assessment and advice; management and co-ordination of environmental projects, which includes integration of environmental studies and environmental processes into larger engineering-based projects and ensuring compliance to legislation and guidelines; environmental auditing and compliance reporting; the identification of environmental management solution and mitigation/risk minimising measures. Thabang is currently a Project Manager and Environmental Consultant at Envirovolution Consulting (Pty) Ltd. He is currently involved in several EIA energy projects across the country.

2. SCOPE OF THE AUDIT

The scope of this audit was limited to the **construction stage** compliance against the conditions and requirements of the EA and EMPr as construction is currently in the early stages, the current activities taking place is the removal of turf soil and bringing G5 soil to compact to ground level.

This is report number one (1) of the audit reports that will be produced following monthly site visits for the construction phase until project completion. The environmental compliance audit represented in this report was performed on the 03rd March 2016. The following activities were undertaken during the audit

- » Document Review;
- » Environmental Awareness training and:
- » Site Inspection

The audit report will include relevant supporting information such photographs of the site. The photographs are included in a photoplate. A full photograph plate of the site visits can be produced on request.

3. SUMMARY OF FINDINGS AND DISCUSSIONS

At the time of the audit, construction had commenced and the project team was still in the early construction phase of the development. The current activities taking place is the removal of turf soil and bringing G5 soil to compact to ground level. An environmental induction meeting was held on the 3rd of March 2016 at the site camp location outside Rustenburg, North West Province where issues relating to the development were discussed. It must be noted that there are currently two contractors on site. The first contractor is SSC who is responsible for the earthworks and the second is Ezindaleni Power Solutions who is responsible for the foundations, steel & civil works. The ECO conducted an Environmental Awareness training presentation on 03 March 2016 to the two contractor teams including the Project Manager and Site Supervisor for Ezindaleni and the Site Supervisor for SSC at the site camp location. The Eskom Environmental Officer was also present during the Environmental Awareness training presentation.

The contractor that will be responsible for the power line development is currently not yet commissioned as the power line development phase of this project has not yet been reached. The ECO will have to conduct an Environmental Awareness Training presentation to this power line contractor's entire team before they can commence with their activities once they have been commissioned. It must be noted that at this stage of the development that Ezindaleni is contracted to construct the substation only.

The Ezindaleni Project Manager indicated that he is in the process of obtaining a safe disposal permit document for the disposal of the excavated turf soil from the nearby licensed disposal facility in Phokeng. This is so that the loads of the excavated turf soils can be safely disposed at the licensed disposal facility.

At the time of the audit it was discovered that there was no Oil Spill Kit present at the site camp. The Ezindaleni Project Manager however indicated that he has ordered the spill kit and is awaiting delivery.

It was agreed that contractor is to provide an agreement document from the local municipality indicating that the chemical toilet service provider will be safely disposing the chemical toilet wastes as prescribed by the local municipality. The contractor is also to source maintenance slips from the toilet service provider.

Further discussions in the meeting entailed the necessity for the Contractors (Ezindaleni and SSC) to conduct Environmental Awareness training to future newly recruited contractor workforce members prior to the commencement of their construction duties as the contract progresses. It was agreed that the ECO will only conduct an Environmental Awareness presentation once and that it would be the responsibility of the Contractor to conduct future presentations to new staff. Overall compliance for the audit conducted is **80%**

3.1 Visual Assessment

3.1.1 Site location

The ECO and Eskom Environmental Officer took a drive within the vicinity of the power line alignment and took a visual assessment of the Loop In-Out alignment that is to be constructed and of the substation area to be constructed.

3.2 Receiving environment

The ECO noted that the majority of the receiving environment along the power line alignment is situated open bush veld of which is dominated by open karoo woodlands that fall under the savanna biome. The entire development is adjacent the Freedom Park township settlement within the jurisdiction of Rustenburg Local Municipality. No protected trees are within the development footprint.

Table 1: A Compliance Status Report for the pre-construction phase

Eskom: Freedom Park Substation and power line		
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	Compliances	13
	Partial Compliances	3
	Non compliances	2
	Work in progress	1
	Not Applicable	1
	*Total aspects audited (excl. N/A & WIP)	18
	*Total aspects audited (incl. N/A& WIP)	20
	*Total Score Obtained (compliances + partial compliance)	29
	*Total Potential Score (= to sum of all compliances excl. N/A & WIP)	36
	Percentage Score %	80%

* **Total aspects** are the sum of all the environmental aspects (compliances, non compliances, WIP and N/A) that are listed in the checklist

* **Total Score obtained** would include the sum of compliances, partial and non-compliances that were audited during the time of the audit

***Total Potential Score** is the sum of the total possible score excluding the N/A

4. RECOMMENDATIONS

- The contractor should create an environmental file to store and record all environmental documentation.
- A dedicated store area for hazardous materials should be built.
- An alien invasive plan should be created and implemented.
- Integrated waste management must be practised to encourage the principle of incorporating reduction, recycling, re-use. Also, waste bins must have lids.
- The EMPr and the EA must be used as a blue print, to ensure sound environmental management of this development takes place.

5. CONCLUDING REMARKS

In conclusion, the project scored 80% during this audit. The project is satisfactorily compliant to the requirements of the EMPr and EA. It is recommended that since this is the initial early construction based audit report, the developer must aim to improve the satisfactory environmental record of compliance and by ensuring that construction activities are conducted in compliance to the EMPr and EA. The recommendations provided in this report will assist the

contractor to ensure they retain the good environmental management standards observed on site.

Photo-Plate

Photo	Description
	Photo 1: Good demarcation/barrication and warning signage
	Photo 2: Provision of hazardous waste bin, however its not covered with a lid.



Photo 3: A self-contained bundled diesel bowser.



Photo 4: Topsoil stockpile stacked away

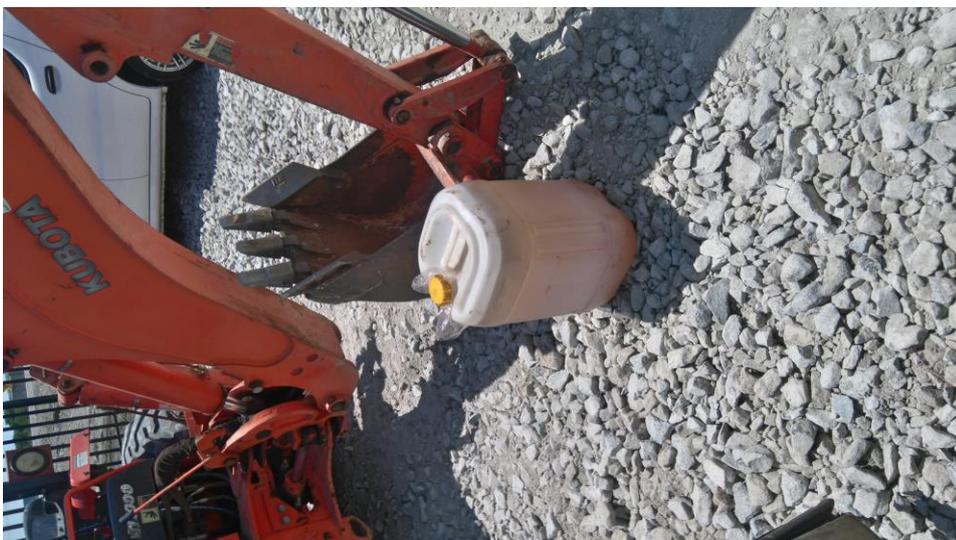


Photo 5: Diesel container stored on the ground due to lack of hazardous materials facility.

Table 2: Summary of the audit Findings

Rating Scale	<p>2 – Fully compliant;</p> <p>1 – Partially compliant;</p> <p>WIP - Work in progress</p> <p>0 – Non compliant;</p> <p>N/A - Could not Be determined</p>					
Freedom Park Substation and Power line						
Activity/ issue	Action required	Responsibility	Compliance Status	Findings	Comments	Rating
Appoint construction team and suitable manager	Appoint an Environmental Control Officer and Environmental Liaison Officer. The ELO is appointed on the contractor's behalf while the ECO is appointed on the proponent's behalf.	Developer, Contractor, ELO, ECO	In Place		An independent ECO from Envirolution Consulting (Pty) Ltd has been appointed to audit the project's compliance to the EA and EMP.	2
	The Contractor must draw up method statements for relevant construction activities. The ECO must approve all of the method statements.	Contractor	WIP		The Contractors method statements will be provided on the next audit.	WIP
Document Review and appointment of ECO	An Environmental File must be created to record all environmentally related documentation	Developer, Contractor, ELO, ECO	Non-compliant	No environmental file in place.	The contractor committed to creating a file that will include all relevant documentation.	0
	The Environmental Management Programme must be available and kept on site at all times.	Contractor	In Place		In place	2

Site demarcation and compliance	Before construction begins, all areas to be developed must be clearly demarcated with fencing or orange construction barrier where applicable. All no-go areas on the servitude must be properly fenced off and signage placed prior to the onset of construction.	Developer, Contractor, ELO, ECO	In place		The main contractor has fully demarcated all areas of development.	2
	All Construction Camps are to be fenced off in such a manner that unlawful entry is prevented and access is controlled. Signage shall be erected at all access points in compliance with all applicable occupational health and safety requirements. All access points to the Construction Camp should be controlled by a guard or otherwise monitored, to prevent unlawful access.	Developer, Contractor, ELO, ECO	In place		A 24hr security is in place and all access to the camp is controlled. Signage is in place.	2
	The authorised activity must not commence within twenty (20) days of the date of signature of the environmental authorisation	Developer, Contractor	In place		Activity did not commence within 20 days of environmental authorisation.	2
	Not less than fourteen (14) days written notice must be given to the Department that the activity will commence.	Developer	In place		It was discussed in the initial meeting that a notice has been sent to the Department.	2
	Records of compliance / non-compliance with the conditions of the authorisation must be kept and be available on request. Also, Records of all environmental incidents must be maintained and a copy of these records be made available to provincial department on request throughout the project execution.	Developer, Contractor, ELO, ECO	N/A			N/A
Labour	All unskilled labourers should be drawn from the local market and where possible use should be made of local semiskilled and skilled personnel.	Developer, Contractor	In place		Meeting with the local councillor is scheduled to take place relating to sourcing from local market	2

Training of Site Staff	Environmental awareness training for all construction staff must be undertaken by the ELO prior to construction starting. The ECO must undertake training of the contractor and other main contractors (training of other staff is the responsibility of the ELO.	Developer, Contractor, ELO, ECO	In place		The environmental awareness has taken place	2
	No operator shall be permitted to operate critical items of mechanical equipment without having been trained by the Contractor and certified competent by the Project Manager.	Contractor, ELO	In place			2
Construction Camp	The contractor shall establish his construction camps, offices, workshops and any other infrastructure in a manner that does not adversely affect the environment. Site establishment shall take place in an orderly manner and all required amenities shall be installed at camp sites before the main workforce move onto site. The construction camp shall have the necessary facilities required for the day to day running of the site.	Developer, Contractor, ELO	Partially compliant		Site camp position does not adversely affect environment and is not going over demarcation. However, a hazardous storage facility is yet to be created.	1
Site clearing	Site clearing must take place in a phased manner, as and when required. The area to be cleared must be clearly demarcated and this footprint strictly maintained. Topsoil must be neatly stockpiled to adjacent to excavations. No tree or shrub outside the area of the Works shall be felled, topped, cut or pruned until it has been clearly marked for this purpose by the Project Manager.	Developer, Contractor, ELO, ECO	In place		No blanket clearing was observed	2
Access routes	Existing access routes are to be utilized during construction that is the tarred secondary road and the gravel road leading to the mine dump. Should additional access be required, this should be done in an environmental friendly manner and in consultation with the relevant land/property owner.	Developer, Contractor, ELO, ECO	In place		No unnecessary creation of access routes was observed	2
Alien Invasive Management Plan	Areas exposed for the substation construction and the servitude for the power line are prone for invasion by alien species and a plan to manage this therefore in	Developer, Contractor,	Non-compliant	An alien invasive plan has not been provided.	It is recommended that an alien invasive plan be created.	0

	line.					
Noise	All noisy construction activities should only occur during daylight hours if possible	Developer, Contractor, ELO	In place		In place	2
Waste Management	An integrated waste management approach must be implemented that is based on waste minimisation and must incorporate reduction, recycling, re-use and disposal where applicable. Any solid waste shall be disposed at a licenced landfill.	Developer, Contractor, ELO, ECO	Partially compliance		Waste bins (General and Hazardous) are in place, however they do not have cover lids.	1
Burrow Materials	Burrow materials must be obtained only from authorized and permitted sites	Developer, Contractor	Partially compliance		The Ezindaleni PM indicated that they source their fill material from legal source, however proof of legal source was not documented.	1
Chemical Toilets	Chemical toilets must be provided to a ratio of 1 toilet per 18 workers.	Developer, Contractor	In place		In place	2