CONSTRUCTION OF 2 X 1KM 88kV POWERLINES FROM BURNSTONE 88kV POWERLINE TO THE PROPOSED SIYATHEMBA SWITCHING STATION WITHIN DIPALESENG LOCAL MUNICIPALITY, MPUMALANGA PROVINCE

MONTHLY ENVIRONMENTAL COMPLIANCE AUDIT REPORT

EA ref no: 14/12/16/3/3/1/1923

OCTOBER 2020

PREPARED FOR:

Eskom Holdings SOC Limited

Department of Environment, Forestry and Fisheries

DATED:

28 October 2020

PREPARED BY:

Charmé Billing

ECO (Part-time) - NCC Environmental Services (Pty) Ltd

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1 ABBREVIATIONS

CLO	Community Liaison Officer
DARDLEA	Department of Agriculture, Rural Development, Land and Environmental Affairs
DEA	Department of Environmental Affairs
DEFF	Department of Environment, Forestry and Fisheries
DMR	Department of Mineral Resources
DPWRT	Department of Public Works, Roads and Transport
DWS	Department of Water and Sanitation
EA	Environmental Authorisation
ECO	Environmental Control Officer
EMPr	Environmental Management Programme
FC	Full Compliance
GA	General Authorisation
HAS	Hazardous Substances Act (Act 15 of 1973)
IAP	Invasive Alien Plant
LO	Landowner
MNCA	Mpumalanga Nature Conservation Act (Act 10 of 1998)
MPRDA	Mineral and Petroleum Resources Development Act (Act 22 of 2002)
MPTA	Mpumalanga Tourism and Parks Agency
MSDS	Material Safety Data Sheet
NC	Non Compliance
NEMA	National Environmental Management Act (Act No. 10 of 2004)
NEMAQA	National Environmental Management: Air Quality Act (Act 39 of 2004)
NEMBA	National Environmental Management: Biodiversity Act (Act No. 10 of 2004)
NEMWA	National Environmental Management Waste Act (Act No. 59 of 2008
NHRA	National Heritage Resources Act (Act 25 of 1999)
NWA	National Water Act (Act 39 of 1998)
PC	Partial Compliance
SAHRA	South African Heritage Resource Agency
SDC	Safe Disposal Certificate
SHE	Safety, Health and Environmental
WUL	Water Use License

2 INTRODUCTION

2.1 Background

The Dipaseleng Local Municipality applied for a 10MVA new point of electricity supply around Siyathemba/Balfour Township due to customer's expansion around the Balfour area. Consequently, Eskom proposed the development of a powerline and Siyathemba 88kV switching station in order to ensure adequate supply of electricity around Balfour, collectively referred to as the Project. The proposed Siyathemba 88kV switching station will form part of the Grootvlei 88kV network.

Upon the completion and finalisation of a basic environmental assessment process dated August 2018, conducted in terms of the 2014 NEMA EIA Regulations, an environmental authorisation (EA) was granted by the Department of Environmental Affairs on 05th December 2018. The holder of the EA is Eskom holdings SOC Limited.

Two kick-off meeting between the Eskom (the Client) and High voltage technology (the appointed Principal Contractor) was held on 04th February 2020 and 30th June 2020. NCC Environmental Services (Pty) Ltd was appointed by the Client as the Environmental Control Officer (ECO) on 29th January 2020 for the duration of the construction phase. The official commencement date of the construction contract is July 2020 with the project scheduled for a consecutive period of 9 months.

2.2 Project Location/Description

The project will be undertaken in Siyathemba (Enkanini) Extension 4, which is located within the jurisdiction of Dipaleseng Local Municipality, Ward Number 3, under the Gert Sibande District Municipality in the Mpumalanga Province, and on Portion 5 of Farm Vlakfonteing 556IR which is owned by the Dipaleseng Local Municipality.

Figure A: Locality Map for the 2 X 1km powerlines from 88kV Burnstone to the Siyathemba switching station.

3 AUDIT PROCESS

3.1 Objective

The ECO is to carry out environmental compliance monitoring twice a month at Siyathemba switching station project and submit a monthly audit report to the Department of Environment, Forestry and Fisheries (DEFF) and Eskom.

3.2 Scope

Audits are carried out in order to monitor compliance to the following:

- EA dated 05th December 2018 (Ref no: 14/12/16/3/3/1/1923)
- Construction EMPr dated August 2018

This audit was conducted on the **28th October 2020** by the NCC-appointed ECO, Charmé Billing. The Contractor SHE representative and Assistant Supervisor, Mr Wandile Mahandule and Mr Emmanual Mamogobo and the Eskom Environmental Officer, Mrs Marriam Ngwezi was present on the day of the audit. A site audit inspection around the site camp and at working areas along the switching station was conducted. Environmental matters were discussed between the above mentioned parties. Monthly progress meetings hasn't been scheduled to date due to the project being in the initial stages of construction, once ongoing, environmental matters will be raised and discussed between the respective project role-players.

In order to assign compliance scores in the ECO audit report, a checklist was prepared using the conditions of the EA and EMPr applicable to the switching station project. Compliance was rated according to the protocols illustrated in **Table 1**. The total compliance score including the breakdown of scores for is illustrated in **Section 3** and the full completed checklist included in **Appendix B**.

Table 1: Compliance Rating Protocol (EA and EMPr).

Score	Compliance Rating	Definition
4	Full Compliance (FC)	All activities relating to a condition and/or requirement have been addressed.
2	Partial Compliance (PC)	Roughly 50% of the condition met/sample to standard.
0	Non Compliance (NC)	None of the activities relating to a condition and/or requirement have been addressed.
-	Not Applicable (N/A) or; Not Yet Applicable (NYA) or; No Longer Applicable (NLA)	Activities, conditions or requirements are not or no longer applicable to the development or the current phase of construction or site specific circumstances.

3.3 Project Progress

All photographs in **Appendix A** are annotated with basic descriptions of what was observed during the monthly audit inspection. Site camp establishment activities were initiated in July 2020 and were largely complete at last month's inspection (See annotated **Figures 6 - 10**). The site camp is fenced with 24/7 security personnel. Contractor signboard with contact details and emergency assembly point present at site camp. Access to basic municipal services (electricity and water) is currently available on site (**Figure 10**). It was advised that water is tested to ensure that it is suitable for human consumption. A water meter was installed during last month's reporting period and the Contractor is keeping monthly water usage records.

The following documentation was noted available on the site file: project-specific EA and EMPr, the signed (hardcopy) method statements and internal Contractor EMP, environmental induction records, environmental awareness training, site camp layout plan, portable toilet inspection and service register for October and vehicle inspection records (**Figures 1 - 5**). Spilltech was appointed by the Contractor as hazardous waste disposal service provider. The related permits and documentation are available on site file. Environmental awareness training topics included protection of fauna and flora, sensitive/no go areas, spillages and pollution and Eskom SHEQ policy. It was recommended that snake awareness training and protection of watercourses and heritage sites is conducted.

A first aid kit and fire extinguisher is available at the site office (**Figure 6)**. Additional fire extinguishers are stored in the storage container at site camp. Wheelie bins are available at the site offices (**Figure 7**). Proof of safe disposal is however a challenge as there is no supervision at the disposal facility. At the time of the audit there was no proof that the landfill utilised for disposal is registered. ECO advised that disposal slips is kept on file and that proof that landfill is licensed is requested from the Municipality. Chemical ablution facilities are available at the site offices and anchored as a spill prevention measure (**Figure 8**). No litter or spills were noted at the site camp and the state of housekeeping was seen to be well managed and under control (**Figure 9**). No hazardous chemicals are currently stored on site. Drip trays and absorbent material were noted in storage for spill prevention and clean up when needed.

Figures 11 - 14 show construction progress on site. Backfilling and layering works are in progress at the switching station footprint (**Figures 11 & 12**). The Contractor indicated that the Municipality requested disposal of the excavated rocks in an identified area where an old excavation needs to be backfilled. It was recommended that an agreement letter is kept on file. Topsoil and subsoil is stored at central storage/stockpiling area for re-use later in the project for rehabilitation purposes (**Figures 13 & 14**). The

Contractor compacted the subsoil to keep stockpiling area to a minimum. It was advised that topsoil stockpile should either be vegetated with indigenous grasses or covered with a suitable material to prevent erosion and invasion by weeds. It was also recommended that storm water management plan is implemented when needed as rainy season start to prevent erosion. No dust was noted at the time of the audit. A water truck for was procured and is available on site. Water is being abstracted from a nearby dam (**Figure 15**). The Contractor indicated that the municipality gave permission to abstract water from a nearby dam. No proof of authorisation was available at the time of the audit. It was advised that the Contractor obtains permission form the Municipality in writing for the use of water for dust suppression and construction purposes.

4 FINDINGS AND OBSERVATIONS

4.1 Overview

A combined environmental compliance score of **94%** was attained for this month compared to the previous month's score of **99%** (**Table 2**). Due to the project being in the initial stages of construction, there are still a significant number of conditions which are not yet auditable and were excluded from the compliance scoring, hence are not reflected in the final percentage. During the audit, **7** *Non-compliance* (NC) finding, **122** *Full compliance* (FC) and **3** *Partial compliance* (PC) findings were raised (**Figure B**). A summary of the NC and PC findings requiring interventions and actions as at September 2020 are presented (**Table 3**). There were 132 conditions applicable with 180 found to be *Not applicable* (NA) or *Not yet applicable* (NYA) due to the current stage of the project (**Figure B**) as it has progressed somewhat with construction in progress. The breakdown of the scores, per sub-component of the EA and EMPr, are highlighted in **Figure C**.

4.2 Summary of EA and EMPr compliance and findings

Table 2: Summary of environmental compliance for October 2020.

SIYATHEMBA SWITCHING STATION					
MONTHLY ECO EA & EMPr COMPLIANCE AUDIT					
AUDIT EVALUATION					
NAME OF CLIENT		**Eskom**			
DATE		**28.10.2020**			
AUDITOR (ECO)		**NCC Environmental Services (C Billing)**			
CLIENT/CONTRACTOR REPRESENTATIVES		**High voltage technology**			
LOCATION		**Dipaleseng, Gert Sibande District Municipality, Mpumalanga**			
SUMMARY OF COMPLIANCE AND ALLOCATION OF POINTS					
SUB COMPONENTS OF EA & EMPr	**TOTAL POINTS**	**POINTS AWARDED**	**POINTS APPLICABLE**	**POINTS NOT APPLICABLE**	**SCORE PERCENTAGE**
SCOPE OF THE EA	32	4	4	28	100
APPEAL OF THE EA	20	0	0	20	N/A
COMMENCEMENT OF ACTIVITIES	28	0	0	28	N/A
RECORDING AND REPORTING TO DEPARTMENT	56	24	24	32	100
SPECIFIC CONDITIONS	20	4	8	12	50
GENERAL	20	4	4	16	N/A
10 PRE-CONSTRUCTION PHASE	40	24	24	16	100
11 CONSTRUCTION PHASE	1032	431	460	568	94
TOTAL	**1248**	**491**	**524**	**720**	**94**
OVERALL PERCENTAGE COMPLIANCE (%)	**94**				

Allocation of points for the percentage calculations for the EA and EMPr sub-components is shown alongside the overall, combined score.

Table 3: Summary of the October 2020 NC and PC audit findings[1].

Status	Ref number	Condition	Findings and Recommendations
NC	11.12.1	All waste must be transported in an appropriate manner (e.g. plastic rubbish bags) and disposed of at a licensed waste disposal facility. Proof of safe disposal must be kept on site.	Agreement with Municipality in place. No proof of licensed facility. Proof of safe disposal is however a challenge as there is no supervision at the disposal facility. ECO recommended that the Contractor request that the Municipality stamp and sign a disposal register off when disposal takes place.
NC	32	Any solid waste must be disposed of at a landfill licensed in terms of section 20 (b) of the National Environment Management Waste Act, 2008 (Act 59 of 2008).	The Contractor has a permission letter from the local municipality stating that general and building waste can be disposed at the local landfill site. ECO advised that disposal slips is kept on file and that proof that landfill is licensed is requested from the Municipality.
NC	11.1.4 & 11.1.5	Water for human consumption must be available at all times.	ECO advised that site water supply should be tested for human consumption. No proof was provided at the time of the audit.
NC	11.1.5	The Contractor must ensure that all water sources are authorised and proof of such must be presented to the ECO.	The Contractor indicated that an agreement with the local municipality is in place. No proof was provided.
NC	11.12.1	All waste must be transported in an appropriate manner (e.g. plastic rubbish bags) and disposed of at a licensed waste disposal facility. Proof of safe disposal must be kept on site.	Agreement with Municipality in place. Proof of safe disposal is however a challenge as there is no one at the disposal facility. ECO recommended that the Contractor request that the Municipality stamp and sign a disposal register off when disposal takes place. No proof that landfill is registered.
NC	11.12.2	All waste must be transported in an appropriate manner and disposed of at a licensed waste disposal site.	No proof provided that landfill is registered. ECO advised that disposal slips is kept on file and that proof that landfill is licensed is requested from the Municipality.
NC	11.13	No extraction of water from any natural resources without the relevant authorisation.	The Contractor indicated that an agreement with the local municipality is in place. No proof was provided.
PC	11.10	To protect graves, an educational programme to construction workers is essential to avoid accidental damage.	ECO sent heritage resource toolbox talk to the Contractor. Proof of training was not provided. ECO advised that training is conducted during the next reporting period.

PC	11.24.4	Stockpiled soil must be protected by erosion-control berms if exposed for a period of greater than 14 days during the wet/windy season.	Method statement available on file. To be implemented during rainy season.
PC	11.24.8	If topsoil will be stockpiled for a longer period, it must be either vegetated with indigenous grasses or covered with a suitable material to prevent erosion and invasion by weeds.	Method statement available on file. To be implemented during rainy season.

[1]FC findings not included; refer to APPENDIX B for the full audit checklist.

4.3 Audit Statistics and Graphical Representation

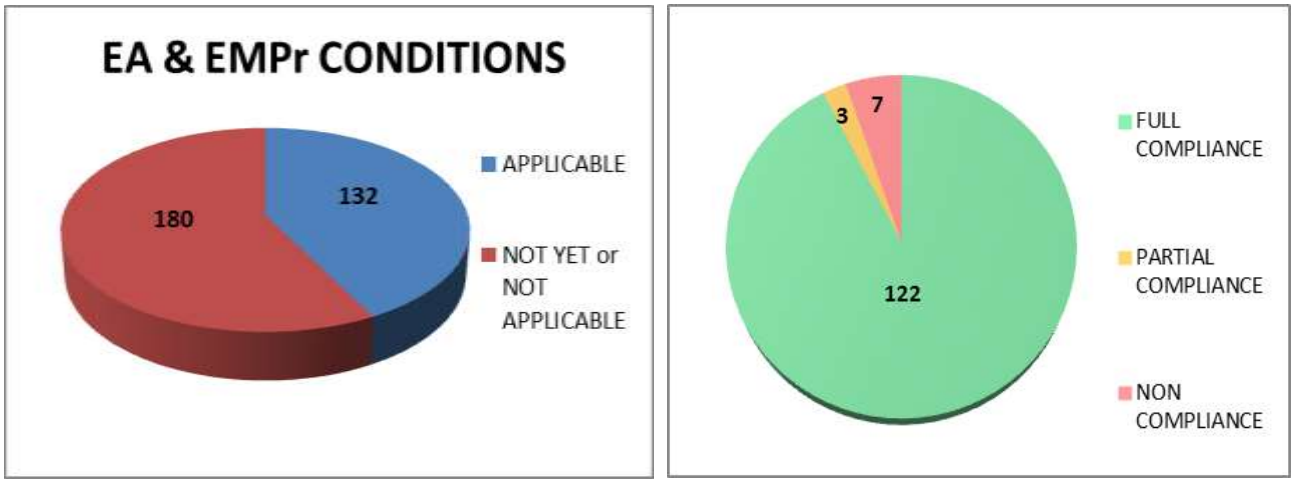

Figure B: Pie charts showing summary distribution of auditable points and status of findings.
*Summarised are the number of criteria which were not/not yet applicable and those which were fully, partially or non -compliant.

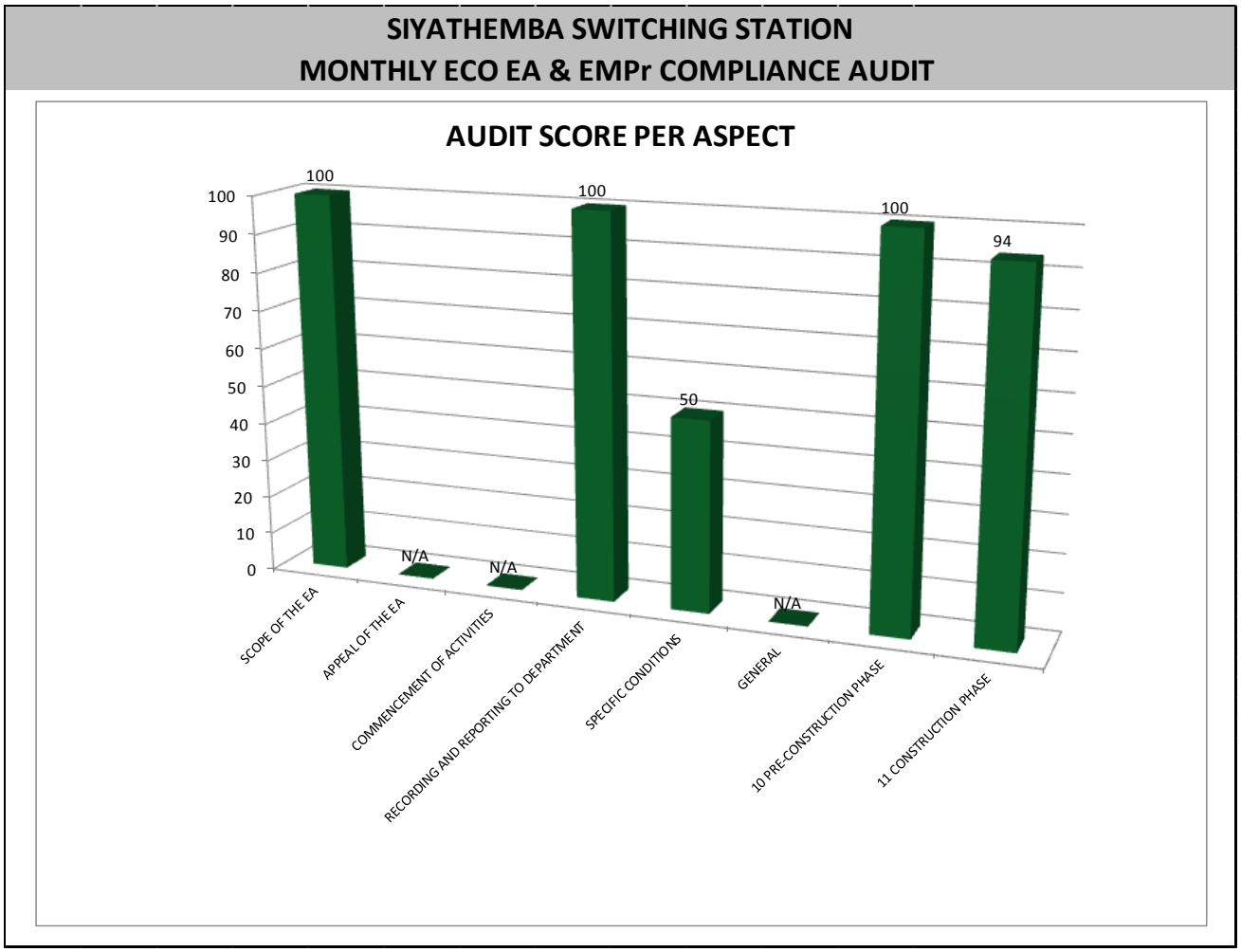

Figure C: EA & EMPr audit compliance scores per sub-component/aspect.

5 DISCUSSION AND CONCLUSION

An overall percentage compliance score of **94**% was attained for this month of the construction phase compared to the previous month's score of **99%.** Due to the project being in the initial stages of construction, there are still a significant number of conditions which are not yet auditable and were excluded from the compliance scoring, hence are not reflected in the final percentage. Much of the requisite environmental documentation was submitted by the Contractor in July 2020. This included internal EMP and method statements. It was advised that the Contractor focus on waste, water management and storm water management practices.

All findings will continue to be re-evaluated by the ECO in follow-up audits and inspections. Wherever legally relevant and important, recommendations will be provided to address and avoid significantly negative and detrimental ecological issues and impacts from occurring. Any interventions or actions taken to close out findings and remedy legal compliance issues will require co-operative commitment and open communication between all parties *i.e.* the Contractor, holder of the EA, ECO and the respective authorities.

APPENDIX A – PHOTOGRAPHIC RECORDS

Figure 1: Attendance register for Eskom SHEQ policy training available on file.

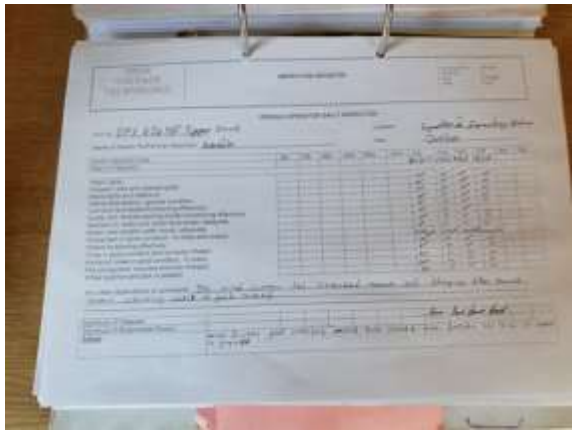

Figure 2: Vehicle inspection records available on file.

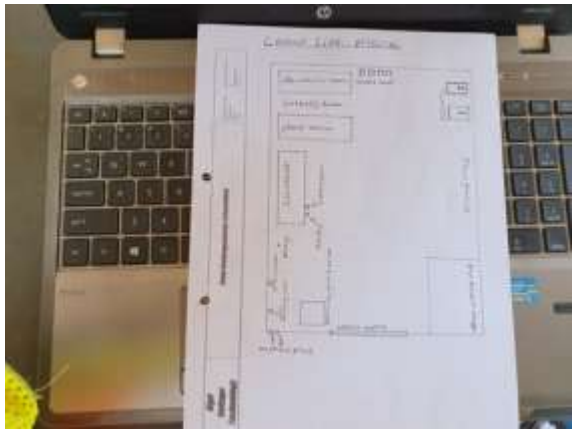

Figure 3: Site camp layout drawing.

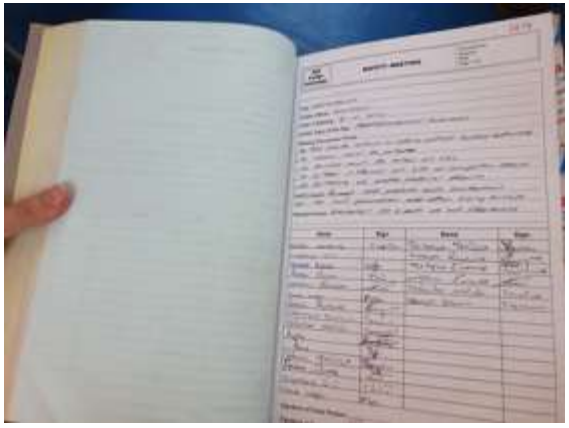

Figure 4: Environmental awareness training available on file.

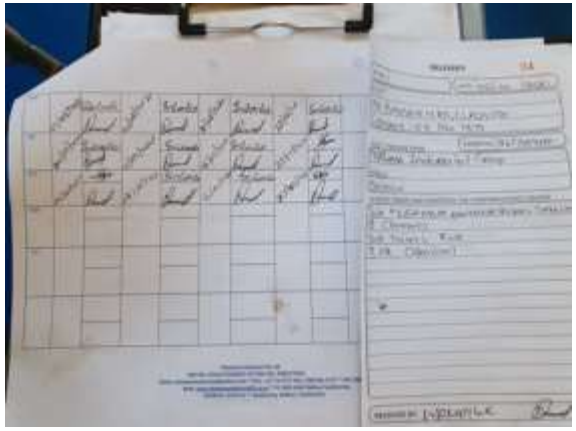

Figure 5: Portable toilet inspection and service register & service records available on file.

Figure 6: Office container with first aid kit and fire extinguisher available at site camp.

Figure 7: Spill kit and waste bins for waste segregation available at site camp.

Figure 8: 2x chemical ablution facilities available at site camp.

Figure 9: Good housekeeping and storage noted at site camp.

Figure 10: Water available at site camp.

Figure 11: Backfilling and layering works for switching station footprint ongoing.

Figure 12: Backfilling and layering works for switching station footprint ongoing.

Figure 13: Topsoil stockpile stored onsite for rehabilitation purposes.

Figure 14: Subsoil temporarily stored on site for backfilling purposes.

Figure 15: Water abstracted form dam located close to site.

APPENDIX B – AUDIT CHECKLIST

SIYATHEMBA SWITCHING STATION MONTHLY ECO EA & EMPr COMPLIANCE AUDIT			
			CLIENT: Eskom
DATE:	28 October 2020		CONTRACTOR: High voltage technology
LOCATION:	Dipalaseng District Municipality, Mpumalanga		AUDITOR/ECO: C BILLING (NCC)

SCORING CRITERIA:	
0	NOT TO STANDARD/ NON-COMPLIANT
2	50% OR MORE OF THE AUDIT CRITERION IS TO STANDARD
4	100% COMPLIANCE OF AUDIT CRITERION/FULL COMPLIANCE
✓	NOT YET APPLICABLE (NYA), NO LONGER APPLICABLE (NLA) or INFORMATIVE

AUDITORS NOTES:

ENVIRONMENTAL AUTHORISATION SCOPE OF THE EA	EA Ref	CONDITION / REQUIREMENT	EVALUATION SCORE	EVALUATION N/A or NLA	COMMENTS
	1	The preferred alternative 1 for the construction of 88kV Eskom power line and associated infrastructure form Burnstone to the proposed Siyathemba switching station within ward 03 of the Dipaleseng local municipality, Mpumalanga province, is approved as per the geographic coordinates cited at the table reflected in p3.		✓	Informative - noted.
	2	Authorisation of the activity is subject to the conditions contained in this EA, which form part of the EA and are binding on the holder of the authorisation.		✓	Informative - noted.
	3	The holder of the authorisation is responsible for ensuring compliance with the conditions contained in this EA. This includes any person acting on the holder's behalf, including but not limited to, an agent, servant, contractor, sub-contractor, employee, consultant or person rendering a service to the holder of the authorisation.		✓	Informative - noted.
	4	The activities authorised may only be carried out at the property as described above.		✓	Informative - noted.
	5	Any changes to, or deviation from, the project description set out in this EA must be approved, in writing, by the Department before such changes or deviations may be effected. In assessing whether to grant such approval or not, the Department may request such information as it deems necessary to evaluate the significance and impacts of such changes or deviations and it may be necessary for the holder of the authorisation to apply for further EA in terms of the regulations.		✓	Informative - noted. Not applicable at this stage

	6	The holder of an EA must apply for an amendment of the EA with the competent authority for any alienation, transfer or change of ownership right in the property on which the activity is to take place.		✓	Informative - noted.
	7	This activity must commence within a period of five years from the date of issue of this EA. If commencement of the activity does not occur within the period, the authorisation places and a new application for EA must be made in order for the activity to be undertaken.	4		Noted, < two years have lapsed since the EA was issued. Construction and site establishment underway.
	8	Commencement with one activity listed in terms of this EA constitutes commencement of all authorised activities.		✓	Informative - noted.
APPEAL OF THE EA					
	9	The holder of the authorisation must notify every registered interested and affected party, in writing and within 14 calendar days of the date of this EA, of the decision to authorise the activity.		✓	Noted. No longer applicable at this stage.
	10.1	The notification must – Specify the date on which the authorisation was issued;		✓	Noted.
	10.2	Inform the interested and affected party of the appeal procedure provided for in the National Appeal Regulations, 2014;		✓	No objections received from any registered I&Aps.
	10.3	Advise the interested and affected party that a copy of the authorisation will be furnished on request; and		✓	Noted.
	10.4	Give the reasons of the competent authority for the decision.		✓	Noted.
COMMENCEMENT OF ACTIVITIES					
	11	The authorised activity shall not commence until the period for the submission of appeals has lapsed as per the National Appeal Regulations, 2014 and no appeal has been lodged against the decision. In terms of section 43(7), an appeal under section 43 of the NEMA, 1998 will suspend the EA or any provision or condition attached thereto. In the instance where an appeal is lodged you may not commence with the activity until such time that the appeal has been finalised.		✓	Noted. No longer applicable at this stage
	12	The EMPr submitted as part of the application for EA is hereby approved. This EMPr must be implemented and strictly adhered to.		✓	Informative - noted.
	13	The EMPr must be updated where the findings of the environmental audit reports, contemplated in Condition 23 below, indicate insufficient mitigation of environmental impacts associated with the undertaking of the activity, or insufficient levels of compliance with the EA or EMPr.		✓	
	14	The updated EMPr must contain recommendations to rectify the shortcomings identified in the environmental audit reports.		✓	Informative - noted.
	15	The updated EMpr must be submitted to the Department for approval together with the environmental audit report, as per Regulation 34 of GN R.982. The updated EMPr must have been subjected to a public participation process, which process has been agreed to by the Department, prior to submission of the updated EMPr to the Department for approval.		✓	Informative - noted.

	16	In assessing whether to grant approval of an EMPr which has been updated as a result of an audit, the Department will consider the processes prescribed in Regulation 35 of GN R.982. Prior to approving an amended EMPr, the Department may request such amendments to the EMPr as it deems appropriate to ensure that the EMPr sufficiently proceeds for avoidance, management and mitigation of environmental impacts associated with undertaking of the activity.		✓	Informative - noted.
	17	The holder of the authorisation may apply for an amendment of an EMPr, if such amendment is required before an audit is required. The holder must notify the Department of its intention to amend the EMPr at least 60 days prior to submission such amendments to the EMpr to the Department for approval. In assessing t=whether to grant such approval or not, the Department will consider the processes and requirements prescribed in Regulation 37 of GN R.982.		✓	Informative - noted.
RECORDING AND REPORTING TO DEPARTMENT					
	18	The holder of the authorisation must appoint an experienced independent ECO for the construction phase of the development that will have the responsibility to ensure that the mitigation/rehabilitation measure and recommendations referred to in this EA are implemented and to ensure compliance with the provisions of the approved EMPr.	4		First kick off audit for the project conducted in July 2020. This audit checklist is included as an Appendix in each subsequent audit report submitted officially via electronic mail.
	18.1	The ECO must be appointed before commencement of any authorised activities.	4		Notification letter dated 29 January 2020 on file.
	18.2	Once appointed, the name and contact details of the ECO must be submitted to the Director: Compliance Monitoring of the Department at Directorcompliance@environment.gov.za	4		Notification letter dated 29 January 2020 on file.
	18.3	The ECO must keep record of all activities on site, problems identified, transgressions noted and task schedule of tasks undertaken by the ECO.	4		Compliant at this stage of the project. Continual monitoring/verification by the ECO will occur each month.
	18.4	The ECO must remain employed until all rehabilitation measure, as required for implementation due to construction damage, are completed and the site is ready for operation.		✓	Informative - noted.
	19	All documentation e.g. audit/monitoring/compliance reports and notifications, required to be submitted to the Department in terms of this EA, must be submitted to the Director: Compliance Monitoring of the Department at Directorcompliance@environment.gov.za.		✓	Informative - noted.
	20	The holder of the EA must, for the period during which the EA and EMPr remain valid, ensure that project compliance with the conditions of the EA and the EMPr are audited, and that the audit reports are submitted to the Director: Compliance Monitoring of the Department at Directorcompliance@environment.gov.za.		✓	Informative - noted.
	21	The frequency of auditing and of submission of the environmental audit		✓	Informative - noted.

		report must be as per the frequency indicated in the EMPr, taking into account the processes for such auditing as prescribed in Regulation 34 of GN R.982.			
	22	The holder of the authorisation must, in addition, submit an environmental audit report to the Department within 30 days of completion of the construction phase (i.e. within 30 days of site handover) and a final environmental audit report within 30 day of completion of rehabilitation activities.		✓	Informative - noted. Not applicable at this stage.
	23	The environmental audit report must be complied in accordance with appendix 7 of the EIA Regulations, 2014 and must indicated the date of the audit, the name of the auditor and the outcome of the audit in terms of compliance with the EA conditions as well as the requirements of the approved EMPr.		✓	Informative - noted.
	24	Records relating to monitoring and auditing must be kept on site and made available for inspection to any relevant and competent authority in respect to this development.	4		Contractor safety file available on site.
NOTIFICATION TO AUTHORITIES					
	25	A written notification of commencement must be given to the Department no later than 14 days prior to the commencement of the activity. Commencement for the purposes of this condition includes site preparation. The notice must include a date on which it is anticipated that the activity will commence, as well as a reference number.	4		Notification letter dated 29 January 2020 on file.
OPERATION OF THE ACTIVITIES					
	26	A written notification of operation must be given to the Department no later than 14 days prior to the commencement of the activity operational phase.		✓	Informative - noted. Not applicable at this stage.
SITE CLOSURE AND DECOMMISSIONING					
	27	Should the activity ever cease or become redundant, the holder of the authorisation must undertake the required actions as prescribed by legislation at the time and comply with all relevant legal requirement administered by any relevant and competent authority at the time.		✓	Informative - noted. Not applicable at this stage.
SPECIFIC CONDITIONS					
	28	A permit must be obtained from the relevant nature conservation agency for the removal or destruction of indigenous protected and endangered plant and animal species.		✓	Informative - noted. No protected and endangered plant and animal species removed from site.
	29	No exotic plants must be used for rehabilitation purposes. Only indigenous plant of the area must be utilised.		✓	Informative - noted. Not applicable at this stage.
	30	Construction areas must be clearly demarcated and only approved areas must be used for storage and cement mixing. Any cement or concrete mixing must be done on an impervious surface to prevent soil contamination.		✓	Informative - noted. Not applicable at this stage.

	31	An integrated waste management approach must be implemented that is based on waste minimisation and must incorporate reduction, recycling, re-use and disposal.	4		Waste method statement implemented and available on the site file.
	32	Any solid waste must be disposed of at a landfill licensed in terms of section 20 (b) of the National Environment Management Waste Act, 2008 (Act 59 of 2008).	0		The Contractor has a permission letter from the local municipality stating that general and building waste can be disposed at the local landfill site. ECO advised that disposal slips is kept on file and that proof that landfill is licensed is requested from the Municipality.
GENERAL					
	33	A copy of this EA, the audit and compliance monitoring reports and the approved EMPr must be made available for inspection and copying-	4		Contractor safety file available on site.
	33.1	At the site of the authorised activity;		✓	Informative - noted.
	33.2	To anyone on request; and		✓	Informative - noted.
	33.3	Where the holder of the EA has a website, on such publicly accessible website.		✓	Informative - noted.
	34	National government, provincial government, local authorities or committees appointed in terms of the conditions of this authorisation or any other public authority or any other public authority shall not be held responsible for any damages or losses suffered by the holder of the authorisation or his/her successor in title in any instance where construction or operation subsequent to construction be temporarily or permanently stopped for reasons of non-compliance by the holder of the authorisation with the conditions of authorisation as set out in this document or any other subsequent document emanating from these conditions of authorisations.		✓	Informative - noted.

EMPr 10 PRE-CONSTRUCTION PHASE	EMPr Ref	CONDITION / REQUIREMENT	EVALUATION SCORE	 N/A or NLA	COMMENTS
10.1 NEGOTIATIONS WITH AFFECTED LANDOWNERS	10.1.1	Ensure that all affected landowners are negotiated with prior to construction.	4		The Client indicated that they are awaiting the LO agreements from the negotiator. No complaints noted to date. ECO to verify in the next audit.
	10.1.2	Ensure that landowner special conditions are recorded and implemented.	4		The Client indicated that there were no special conditions recorded. ECO requested the LO agreement for verification.
10.2 COMMISIONING OF TENDER	10.2.1	The successful bidding Contractors will be made aware of the contents of this EMPr and any penalties arising from noncompliance prior to the commencement of work.	4		ECO discussed the EMPr with the Contractor SHE Officer during the first audit. EMPr was made available to the Contractor. EMPr induction was conducted with the employees
	10.2.2	All Contractors will be made aware of the audit and monitoring	4		First kick off audit for the project conducted

		requirements as stipulated in this EMPr.			in July 2020. This audit checklist is included as an Appendix in each subsequent audit report submitted officially via electronic mail.
	10.2.3	Appoint an Environmental Control Officer (ECO) who will be responsible to monitor compliance to the EMPr and EA as well as other permits and licence requirements	4		ECO appointed in terms of EA.
	10.2.4	Inform the Competent Authority of the appointment of the ECO and provide the candidate's contact details.	4		Notification letter dated 29 January 2020 on file.
10.3 SEARCH AND RESCUE OF SPECIES OF CONCERN	10.3.1	Application for all the necessary plant removal /relocation permits form the responsible authorities must be undertaken accordingly.		✓	Informative - noted.
	10.3.2	Suitable safe receiving areas should be identified prior to search and rescue commencing.		✓	Informative - noted.
	10.3.3	Search and rescue of all identified species of conservation concern that will be disturbed should be undertaken.		✓	The ECO and Contractor SHE officer did a walk through of the switching station area on the day of the audit. No bush clearing or tree (woody) clearing has been required and on a positive, no protected species were identified within the footprint.
	10.3.4	Search and rescue should take place in late winter (i.e. no earlier than mid-July and no later than mid-September).		✓	Informative - noted.
11 CONSTRUCTION PHASE					
11.1 SITE ESTABLISHMENT		Construction camps on the site must be established on least sensitive locations preferably within already disturbed areas. After completion of the construction activities, these areas must be rehabilitated.	4		The Contractor has set up a camp/site office on an area next to the road and tied into existing municipal services (lights and water).
11.1.1 Site Plan:		Documentation for the proposed camp site must be prepared by the Contractor prior to the commencement of construction activities and must be submitted to Eskom for approval. This documentation must include, but not limited to the following: Site access (including entry and exit points). All material and equipment storage areas including storage areas for hazardous substances. Construction offices and other structures. Security requirements including temporary and permanent fencing, and lighting. Solid waste management facilities. Storm water control measures. Provision of potable water and mobile chemical ablution facilities.	4		Site establishment method statement approved by the Client. Site camp fenced and permanent security present on site. Office and storage container available on site. Chemical ablution facilities and wheelie bins are available at site camp/office.
		Throughout the period of construction, the Contractor shall restrict all activities to within the designated areas as per the construction layout plan. Any relaxation or modification of the construction layout plan shall be approved by the ECO.	4		Compliant at this stage of the project.
11.1.2 Site Camps:		The following restrictions must be placed on the site camp for the construction staff in general: The use of water courses for washing of clothes. The use of welding equipment, oxy-acetylene torches and other bare flames where veld fires can be a hazard. Collection of firewood.	4		The environmental induction dated 16 July 2020 on site file conducted by the Eskom environmental representative. Environmental awareness training is

		Poaching of any form. Use of surrounding veld as toilets.			conducted through toolbox talks. Continual monitoring will be done on a monthly basis.
11.1.3 Vegetation clearing:		The natural vegetation encountered on site must be conserved and left intact as much as possible.	4		Compliant at this stage of the project.
		Only flora within the construction footprint must be cleared. Clearance must be as per the approved Method statement in line with Eskom policies.	4		Compliant at this stage of the project.
		Search and rescue must be done by a suitable Specialist in accordance with the permit requirements from the responsible authorities and in consultation with the ECO.		✓	The ECO and Contractor SHE officer did a walk through of the switching station area on the day of the audit. No bush clearing or tree (woody) clearing has been required and on a positive, no protected species were identified within the footprint.
11.1.4 Water for human consumption:		Water for human consumption must be available at all times.	0		ECO advised that site water supply should be tested for human consumption. No proof was provided at the time of the audit.
11.1.5 Sewage Treatment:		Chemical toilets must be supplied at a ratio of 1 toilet per 15 persons and must be regularly cleaned and maintained by the Contractor.	4		Compliant at this stage of the project.
		The Contractor must arrange for regular emptying of toilets and shall be entirely responsible for enforcing their use and for maintenance.	4		Compliant at this stage of the project. Service registers available on file.
		The ablution facilities must be at least 100m away from the identified watercourses and associated buffers.	4		Compliant at this stage of the project.
		All ablution facilities must be anchored to prevent them from being toppled by the wind. Only rigid material such as steel wires and droppers will be used for anchoring of toilets. No conductors or rope may be used for this purpose.	4		Ablution facilities were anchored at the time of the audit. No incident to date.
11.2 SENSITIVE ECOLOGY		It is recommended that search and rescue be done on the affected towers and biodiversity permit applications made to the relevant authority for removal and relocation.		✓	Informative - noted. Not applicable at this stage
		Where possible construction in high sensitive areas must take place during the dry season (November to May) to minimise impacts on bulbs and annuals.		✓	Informative - noted. Not applicable at this stage
		No laydown areas may be located within identified areas of high ecological sensitivity.	4		Compliant at this stage of the project.
		Creation of new access tracks should be minimised in all areas of natural vegetation.		✓	Informative - noted. Not applicable at this stage
		Point out and/or demarcate all ecologically "sensitive" areas to the contractors (e.g. red data habitats & species water courses, sensitive soils, steep slopes and areas susceptible to erosion).	4		Compliant at this stage of the project.
		Demarcate and create a DWS approved buffer for the area near the wetlands and consider it a no-go area.		✓	Informative - noted. No work taking place in the area.
		Ensure that 'No-Go' areas are clearly demarcated and/or fenced before		✓	Informative - noted. No work taking place in

		construction starts. Barriers must be maintained in good order throughout the course of the construction.			the area.
		Avoid construction in sensitive vegetation types and wetland areas. The recommendations of the ecological and botanical specialist studies must be strictly implemented, especially as far as limitation of the construction footprint and rehabilitation of disturbed areas is concerned.		✓	Informative - noted. No work taking place in the area.
		Construction activities must be restricted to the immediate footprint of the infrastructure to avoid any additional disturbance impacts on bird species residing in the broader area.	4		
		Access to the remainder of the site should be strictly controlled to prevent unnecessary disturbance of Red Data species.		✓	Informative - noted. Not applicable at this stage
		Maximum use should be made of existing access roads and the construction of new roads should be kept to a minimum.	4		Compliant at this stage of the project.
		Measures to control noise should be applied according to current best practice in the industry.	4		Compliant at this stage of the project.
11.2.1 WETLAND AND STREAM		No streams or wetlands will be crossed by the power lines; however, there is a non-perennial river and an artificial wetland approximately 175m and 240m to the south-east of the proposed site respectively.		✓	Informative - noted. Not applicable at this stage
		Undue disturbance of both the river and artificial wetland must be prohibited.		✓	Informative - noted. Not applicable at this stage
		Water Use Licence (WUL) must be obtained from the Department of Water and Sanitation prior to commencement of work WUL must be obtained from the Department of Water and Sanitation prior to commencement of work.		✓	Informative - noted. No work occurring or planned to occur in or near wetland or stream at this stage of the project.
		Rehabilitate disturbances close to stream; and wetland as a matter of urgency.		✓	Informative - noted. Not applicable at this stage
		Rehabilitated areas must be monitored to ensure the establishment of re-vegetated areas.		✓	Informative - noted. Not applicable at this stage
		Remove and control all alien plant species that may appear during construction phase.		✓	Informative - noted. Not applicable at this stage
11.3 MATERIALS HANDLING, USE AND STORAGE		All the necessary handling and safety equipment required for the safe use of hydrocarbons shall be provided by the Contractor to be used and/or worn by the staff.		✓	Informative - noted. Not applicable at this stage. No hydrocarbons on site.
		The Contractor must comply with the Occupational Health AND Safety Act, 1993 (Act 85 of 1993) and Construction Regulations, 2003 as this governs what the Contractor must do and provide for his staff.		✓	Informative - noted. Not applicable at this stage
11.3.1 Safety		Hydrocarbons and hazardous substances must only be stored under controlled conditions.		✓	Informative - noted. Not applicable at this stage
		All hazardous materials must be stored in a secured, designated area with restricted entry.		✓	Informative - noted. Not applicable at this stage
11.3.2 Hazardous Material		Storage of hazardous products must only be in suitable containers. The		✓	Informative - noted. Not applicable at this

Storage		containers must indicate the nature of the stored materials and Material Safety Data Sheets (MSDS) must be available on site.			stage
		Should fuel be stored on site, it must be stored in a steel tank supplied and maintained by the Contractor according to safety procedures.		✓	Informative - noted. Not applicable at this stage
11.3.3 Fuels and Gas Storage		The tanks/ bowsers shall be situated on a smooth impermeable surface (concrete) with a permanent bund. The impermeable lining shall extend to the crest of the bund and the volume inside the bund shall be 110% of the total capacity of all the storage tanks/ bowsers.		✓	Informative - noted. Not applicable at this stage
		Gas welding cylinders and LPG cylinders must be stored in a secure, well-ventilated area. The Contractor must supply sufficient firefighting equipment in the event of an accident and strictly no smoking will be allowed where fuel is stored and used.		✓	Informative - noted. Not applicable at this stage
11.4 CONSTRUCTION AND OPERATION EMPR TRAINING		The CEO shall arrange for Environmental Awareness Training programs for all personnel on site.	4		Compliant at this stage of the project.
		The training must include the content of the EMPr and the CEO must sensitise the team on the importance of compliance.	4		Compliant at this stage of the project.
		Weekly toolbox talks must be undertaken by the CEO.	4		Compliant at this stage of the project.
11.5 WATER SUPPLY		The Contractor must ensure that all water sources are authorised and proof of such must be presented to the ECO.	0		The Contractor indicated that an agreement with the local municipality is in place. No proof was provided.
		Contractor must ensure absolute conservation of water throughout construction.	4		Compliant at this stage of the project.
		Contractor must supply potable water for human consumption at all times.	0		No proof provided that site water supply has been tested for human consumption.
11.6 VEHICULAR ACCESS AND MOVEMENT OF CONSTRUCTION VEHICLES		A physical access Method Statement along the servitude shall be compiled by the Contractor and accepted by the ECO and Eskom Representative.		✓	Informative - noted. Not applicable at this stage
		Access roads must be maintained by the Contractor. The Contractor shall erect and maintain marker pegs along the boundaries of the working areas, access roads, haul roads or paths before commencing any other work. If proved insufficient for control, these will be replaced. Ensure that access roads to the site are of a suitable quality to eliminate soil erosion and channel storm water.		✓	Informative - noted. Not applicable at this stage
		No illegal use of private roads during construction.		✓	Informative - noted. Not applicable at this stage
		The Contractor shall sign post the access roads to the tower positions, immediately after the access has been negotiated.		✓	Informative - noted. Not applicable at this stage
		Where it is necessary for access roads to traverse drainage lines, rocky drift crossings should be used as these have little impact on flow pattern, but limit erosion and other impacts.		✓	Informative - noted. Not applicable at this stage
		Upon completion of the project all roads required for operational phase		✓	Informative - noted. Not applicable at this

		shall be maintained and repaired as required.			stage
		All existing farm roads (private roads) damaged during the construction phase, should at the end of construction be repaired to the satisfaction of the landowner, as per the conditions of the written contractual agreement between the landowner and the Contractor.		✓	Informative - noted. Not applicable at this stage
		Roads not required for maintenance activities during the operational phase must be fully rehabilitated.		✓	Informative - noted. Not applicable at this stage
		The Contractor must ensure that all construction personnel, labourers and equipment remain within the demarcated construction sites at all times.	4		Compliant at this stage of the project.
11.7 MOVEMENT OF CONSTRUCTION PERSONNEL AND EQUIPMENT		Where construction personnel move outside the boundaries of the site, the Contractor/ labourers must obtain permission from the CEO.		✓	Informative - noted. Not applicable at this stage
		All equipment moved onto site or off site is subject to the legal requirements as well as Eskom specifications for the transport of such equipment. The Contractor shall meet these safety requirements under all circumstances.	4		Compliant at this stage of the project.
		All equipment transported shall be clearly labelled as to their potential hazards according to specifications.	4		Compliant at this stage of the project.
		All the required safety labelling on the containers and trucks used shall be in place.	4		Compliant at this stage of the project.
		The Contractor shall ensure that all the necessary precautions against damage to the environment and injury to persons are taken in the event of an accident and shall provide a Method Statement to that effect.	4		Compliant at this stage of the project.
		The Contractor is to ensure that no machinery, personnel, material, or equipment enters 'No-Go' areas during the course of the project.		✓	Informative - noted. Not applicable at this stage
		There should be a preconstruction walk-through of the substation footprint area and power line alignments to identify species of conservation concern that should be avoided or translocated.	4		The ECO and Contractor SHE officer did a walk through of the switching station area. No bush clearing or tree (woody) clearing has been required and on a positive, no protected species were identified within the footprint.
11.8 VEGETATION	11.8.1	Existing roads and access routes should be used wherever possible.	4		Compliant at this stage of the project.
	11.8.2	Ensure that lay-down and other temporary infrastructure is within low sensitivity areas, preferably previously transformed areas if possible.	4		Compliant at this stage of the project.
	11.8.3	Minimise the development footprint as far as possible and rehabilitate disturbed areas that are no longer required by the operational phase of the development.	4		Compliant at this stage of the project.
	11.8.4	Demarcate all areas to be cleared with construction tape or other appropriate and effective means. However, caution should be exercised to avoid using material that might entangle fauna.	4		Construction layout plan and pegs set out by surveyor is utilised.
	11.8.5	Demarcate the construction footprint.	4		Demarcation of construction area was

					recommended during the first audit. Construction layout plan and pegs set out by surveyor is utilised.
	11.8.6	The natural vegetation encountered on the site is to be conserved and left intact as much as possible.	4		Compliant at this stage of the project.
	11.8.7	Only vegetation directly affected by the works may be felled or cleared.	4		Compliant at this stage of the project.
	11.8.8	The clearing of vegetation must be kept to a minimum and remain within the footprint of the pylon;	4		Compliant at this stage of the project.
	11.8.9	Disturbed areas must be rehabilitated immediately after construction has been completed in that area by using appropriate measures such as sowing appropriate indigenous grass species;		✓	Informative - noted. Not applicable at this stage
	11.8.10	During the construction phase workers must be limited to areas under construction and access to the undeveloped areas must be strictly controlled;	4		Compliant at this stage of the project.
	11.8.11	Rehabilitated areas must be monitored to ensure the establishment of re-vegetated areas.		✓	Informative - noted. Not applicable at this stage
	11.8.12	Woody plants should only be cut shorter if absolutely necessary;		✓	Informative - noted. Not applicable at this stage
	11.8.13	No open fires are permitted within naturally vegetated areas.	4		No signs of open fire noted during the audit
	11.8.14	Formalise access roads and make use of existing roads and tracks where feasible, rather than creating new routes through naturally vegetated areas.	4		Compliant at this stage of the project.
	11.8.15	Retain vegetation and soil in position for as long as possible in that area (DWAF, 2005).	4		Compliant at this stage of the project.
	11.8.16	Bush clearing in the servitude or around the transmission power line must be in accordance to Eskom's latest Vegetation Management Guideline (Reference – TGL41- 334).		✓	Informative - noted. Not applicable at this stage
	11.8.17	No bush clearing is to be undertaken without the knowledge of the property owner. It is recommended that the owner is informed of the basic construction process during initial interaction so that they are aware of the vegetation clearing that will occur.		✓	Informative - noted. Not applicable at this stage
	11.8.18	Only manual removal of weeds will be permitted on site. Chemical and mechanical (e.g. TLB, bulldozer) control is not allowed on site.		✓	Informative - noted. Not applicable at this stage
	11.8.19	Implement an alien invasive plant monitoring and management plan whereby the spread of alien and invasive plant species into the areas disturbed by the construction of the power line are regularly removed and re-infestation monitored.		✓	Informative - noted. Not applicable at this stage
11.9 PROTECTION OF FAUNA AND FLORA		Avoid unnecessary disturbance of faunal habitats.	4		Compliant at this stage of the project.
		Any bird nests that are found must be left intact/undisturbed.		✓	Informative - noted. Not applicable at this stage

	The movement of vehicles and heavy machinery around sensitive fauna habitats (river crossings and thickets) must be limited.		✓	Informative - noted. Not applicable at this stage
	An Eskom approved bird friendly pylon design must be used.		✓	Informative - noted. Not applicable at this stage
	Bird flapper/deterrents must be installed. Under no circumstances shall any animals (livestock or game) be hunted, handled, killed or be interfered with by the construction team.		✓	Informative - noted. Not applicable at this stage
	No construction personnel are allowed to bring any animals on site.	4		Compliant at this stage of the project.
	The Contractor shall keep the site clean and tidy from waste material that can attract animals.	4		Bins with lids are used on site and waste disposed regularly.
	Fauna rescue and relocation programme must be implemented.	4		ECO will be contacted should rescue and relocation be necessary.
	Any open excavations must be barricaded and regularly inspected to prevent fauna from falling in.		✓	Informative - noted. Not applicable at this stage
	Records of any injury or deaths of fauna within the construction servitude must be kept by the CEO and ECO.		✓	Informative - noted. Not applicable at this stage
	Construction must be restricted to daylight hours to prevent any disturbance such as floodlights.	4		Compliant at this stage of the project.
	To mitigate for collision, it is recommended that the earth wires be fitted with Eskom approved anti bird collision line marking device.		✓	Informative - noted. Not applicable at this stage
	Avoid construction in sensitive vegetation types and wetland areas.		✓	Informative - noted. Not applicable at this stage
	Construction activities should be restricted to the immediate footprint of the infrastructure to avoid any additional disturbance impacts on bird species residing in the broader area.	4		Compliant at this stage of the project.
	Access to the remainder of the site should be strictly controlled to prevent unnecessary disturbance of Red Data species.		✓	Informative - noted. No red data species identified on site.
	Maximum use should be made of existing access roads and the construction of new roads should be kept to a minimum.	4		Compliant at this stage of the project.
	Measures to control noise should be applied according to current best practice in the industry.	4		Compliant at this stage of the project.
	Eskom line and servitude managers are requested to report all bird collisions encountered during routine line patrols of the power lines to the Eskom-Endangered Wildlife Trust Strategic Partnership.		✓	Informative - noted. Not applicable at this stage
	It is highly recommended that the steel monopole design be used and that this incorporates the standard bird perch.		✓	Informative - noted. Not applicable at this stage
	Eskom line and servitude managers are requested to report all bird electrocutions encountered during inspections of the switching station to the Eskom-Endangered Wildlife Trust Strategic Partnership. Switching station mitigation to be applied reactively, if required.		✓	Informative - noted. Not applicable at this stage
	If on-going quality of supply impacts are recorded once the switching station and the associated 88kV LILO power lines are operational, it is recommended that these impacts be assessed by Eskom-Endangered		✓	Informative - noted. Not applicable at this stage

		Wildlife Trust Strategic Partnership and site-specific mitigation be applied reactively.			
		While it is not illegal to remove an unoccupied nest that is posing a quality of supply risk, the removal of nests that contain eggs or chicks will require a permit to do so. Nest management strategies to be identified and implemented reactively, if required.		✓	Informative - noted. Not applicable at this stage
11.10 HERITAGE AND/OR ARCHAEOLOGICAL SITES		No obvious sites of heritage significance were noted on site, however in the event of chance finds, the following mitigations must be implemented:		✓	Informative - noted. Not applicable at this stage
		To protect graves, an educational programme to construction workers is essential to avoid accidental damage.	2		ECO sent heritage resource toolbox talk to the Contractor. Proof of training was not provided. ECO advised that training is conducted during the next reporting period.
		Should isolated stone tools be encountered, no stone robbing or removal of any material is allowed.		✓	Informative - noted. Not applicable at this stage
		There are no burial sites or graves identified on site, however, should graves and burial sites be discovered during construction activities, all activities should cease and the site must be barricaded. Further, SAHRA / MPHRA or a professional archaeologist must be informed.		✓	Informative - noted. Not applicable at this stage
		Should any unmarked burials exposed during construction, affected families must be consulted, relevant rescue / relocation permits must be obtained from SAHRA/MPHRA before any grave relocation can take place. Furthermore, a professional archaeologist must be retained to oversee the relocation process in accordance with the National Heritage Resources Act, (25) of 1999.		✓	Informative - noted. Not applicable at this stage
		Should archaeological materials (e.g. fossils, bones, artefacts etc.) or human burials remains be exposed during construction, work should cease on the affected area and the discovery must be reported to the heritage authorities immediately. The Contractor shall not recommence working in that area until written permission has been received from the SAHRA.		✓	Informative - noted. Not applicable at this stage
		Where burial sites are accidentally disturbed during construction, the affected area should be demarcated as no go area.		✓	Informative - noted. Not applicable at this stage
11.11 SERVECING AND RE-FUELLING OF CONSTRUCTION EQUIPMENT		All maintenance and repair work will be carried out within an area designated for this purpose, equipped with necessary pollution containment measures.	4		Maintenance and repair works conducted off site.
		Refuelling, greasing or oiling of vehicle and construction machinery must be done on a drip tray or bunded surface.	4		Refuelling is conducted off site.
		Drip trays must be placed under stationary construction vehicles and machinery at all times.	4		Drip trays present on site.
		Construction vehides are to be maintained in an acceptable state of repair. No vehicles or equipment with leaks or causing spills will be	4		No spills noted on site.

		permitted on site.			
		If equipment and construction vehicles are to be refuelled on site, fuel must be stored at a central depot that must be located on a slab and be contained within a bund capable of containing at least 110% of the total volume in the containers.		✓	Informative - noted. Not applicable at this stage
		Temporary fuel storage tanks and transfer areas also need to be located on an adequately bunded surface to contain accidental spillages.		✓	Informative - noted. Not applicable at this stage
11.12 WASTE MANAGEMENT		Waste must be separated at source (e.g. containers for glass, paper, metals, plastic, organic waste and hazardous waste).	4		Compliant at this stage of the project.
11.12.1 SOILD WASTE MANAGEMENT		An adequate number of scavenger proof refuse bins must be provided at the construction site and must be clearly labelled according to waste streams.	4		Compliant at this stage of the project.
		All waste must be transported in an appropriate manner (e.g. plastic rubbish bags) and disposed of at a licensed waste disposal facility. Proof of safe disposal must be kept on site.	0		Agreement with Municipality in place. Proof of safe disposal is however a challenge as there is no one at the disposal facility. ECO recommended that the Contractor request that the Municipality stamp and sign a disposal register off when disposal takes place. No proof that landfill is registered.
		No waste including construction rubble may be disposed of by burning or burying.	4		Compliant at this stage of the project.
		Waste bins must be emptied regularly (minimum weekly) such that they do not overfill.	4		Compliant at this stage of the project.
		The Contractor shall maintain 'good housekeeping' practices and ensure that all work sites and the construction camp is kept tidy and litter free.	4		Compliant at this stage of the project.
		An adequate number of suitable containers with lids must be provided at the construction site.	4		Compliant at this stage of the project.
11.12.2 LIQUID WASTE MANAGEMENT		The Contractor will ensure that waste water is discharged in the drums provided.		✓	Informative - noted. Not applicable at this stage
		All waste must be transported in an appropriate manner and disposed of at a licensed waste disposal site.	0		No proof provided that landfill is registered.
		The Contractor must comply with all national, regional and local legislation with regard to the storage, transport, use and disposal of petroleum, chemical, harmful and hazardous substances and materials.		✓	Informative - noted. Not applicable at this stage
11.12.3 HAZARDOUS WASTE		The Contractor will furthermore be responsible for the training and education of all personnel on site who will be handling the material about its proper use, handling and disposing.		✓	Informative - noted. Not applicable at this stage
		The Contractor will be responsible for establishing an emergency procedure for dealing with spills or toxic substances.	4		Compliant at this stage of the project.
		Storage of all hazardous material is to be safe, tamper proof and under strict control.		✓	Informative - noted. Not applicable at this stage

		Petroleum, chemical, harmful and hazardous waste throughout the site must be stored in appropriate, well maintained containers.		✓	Informative - noted. Not applicable at this stage
		Exercise extreme care with the handling of diesel and other toxic solvents to ensure that spillage is minimised.		✓	Informative - noted. Not applicable at this stage
		Any accidental chemical / fuel spills have to be corrected immediately.		✓	Informative - noted. Not applicable at this stage
11.13 SURFACE AND GROUND WATER MANAGEMENT		The contractor must take reasonable precaution to prevent pollution of ground and surface water resources as a result of construction activities.	4		Compliant at this stage of the project.
		No natural watercourse is to be used for the cleaning of tools. This includes for purposes of bathing, or washing of clothes etc.	4		Compliant at this stage of the project.
		No spills may be hosed into the surrounding natural environment.	4		Compliant at this stage of the project.
		All soil contaminated must be excavated to the depth of contaminant penetration, placed suitable drums/containers and removed to a hazardous waste facility.	4		No incidents to date. WMP and spill prevention plan in place.
		No extraction of water from any natural resources without the relevant authorisation.	0		The Contractor indicated that an agreement with the local municipality is in place. No proof was provided.
		Erosion control measure must be put in place to control storm water runoff.	4		Compliant at this stage of the project.
		Storm water management measures must be as per the Method Statement prepared by the Contractor for ECO approval.	4		Storm water management plan on file.
		Erosion control on all access roads must be undertaken.		✓	Informative - noted. Not applicable at this stage
		Minimise the extent of damage to flood plains that is necessary to complete the works, and will not pollute any water course as a result of construction.		✓	Informative - noted. Not applicable at this stage
11.14 SENSITIVE AREAS **(WATER COURSES AND BUFFERS)**		Vehicular access through watercourses must be prohibited (unless a GA/WUL is in place). If inevitable access must be managed and limited to only one access.		✓	Informative - noted. Not applicable at this stage
		Cordon-off areas that are under rehabilitation as no-go areas. If necessary, these areas should be cordoned off to prevent vehicular, pedestrian and livestock access.		✓	Informative - noted. Not applicable at this stage
		Runoff from roads must be managed to avoid erosion and pollution problems.		✓	Informative - noted. Not applicable at this stage
		Demarcate the watercourses and buffer zones to limit disturbance and clearly mark these areas as no-go areas.		✓	Informative - noted. Not applicable at this stage
		No vehicles must be allowed to drive through and within watercourses.	4		Compliant at this stage of the project.
		Erosion control measures must be implemented in areas sensitive to erosion, particularly in areas prone to wind erosion and where erosion has already occurred such as edges of slopes, exposed soil etc.		✓	Informative - noted. Not applicable at this stage
		Recommendation from Department of Water and Sanitation as part of the licencing process must be taken into consideration throughout the		✓	Informative - noted.

		construction phase.			
11.15 HAZARDOUS MATERIALS		The Contractor must comply with all National, Regional and Local legislation with regard to the storage, transport, use and disposal of petroleum, chemical, harmful and hazardous substances and materials.		✓	Informative - noted. Not applicable at this stage
		The CEO will furthermore be responsible for the training and education of all personnel on site who will be handling the material about its proper use, handling and disposal.		✓	Informative - noted. Not applicable at this stage
		Exercise extreme care with the handling of diesel and other toxic solvents to ensure that spillage is avoided.		✓	Informative - noted. Not applicable at this stage
		Any accidental chemical / fuel spills must be remediated immediately.		✓	Informative - noted. Not applicable at this stage
11.16 OIL SPILL MANAGEMENT		The Contractor must prevent potential hydrocarbon spills during construction.	4		Compliant at this stage of the project.
		Hydrocarbon must be stored in properly contained areas so as to minimise accidental spillage.		✓	Informative - noted. Not applicable at this stage
		All spills must be reported to the ECO within 24 hours of occurrence and Eskom PDP procedures must be followed thereafter.	4		No incidents to date.
		The Contractor must be in possession of a mobile oil spill kit at all times.	4		Spill kit present at site camp.
		The oil spill clean-up and rehabilitation standards must be implemented.	4		Compliant at this stage of the project.
11.17 STORM WATER MANAGEMENT		The Contractor must ensure that rainwater pollutants from construction activities does not run-off into natural areas and thus result in a pollution threat.	4		Compliant at this stage of the project.
		Storm water shall be diverted from the construction works.		✓	Informative - noted.
		Storm water management measures must be as per the Storm Water Management Method Statement prepared by the Contractor for ECO approval.	4		Method statement on file.
		Increased runoff due to vegetation clearance and/or soil compaction must be managed and steps must be taken to ensure that storm water does not lead to excessive levels of silt entering the watercourses.		✓	Informative - noted.
		Necessary storm water control mechanisms shall be employed to ensure the sustainability of all the structures.		✓	Informative - noted.
		Effort shall be made to ensure that storm water leaving the construction site is not contaminated by any substance, whether solid, liquid or gas.	4		Compliant at this stage of the project.
11.18 FIRE		A fire Management Method Statement must be put in place by the Contractor Landowners must be consulted in order to incorporate their specific firefighting measures. The Method Statement must be approved by the ECO and Eskom Representatives.	4		Method statement on file.
		All the necessary precautions must be implemented to ensure that fires are not started as a result of activities on site.	4		No incidents to date.
		Fuels or chemicals must be stored at the designated storage area.		✓	Informative - noted. Not applicable at this stage
		Gas and liquid fuels must not be stored in the same storage area.		✓	Informative - noted. Not applicable at this stage

		All fire control mechanisms (firefighting equipment) will be made available and accessible at all times and routinely inspected.	4		Fire extinguisher present at site camp. Checklist to be verified during the next audit.
		No open fires for heating or cooking will be permitted on site, unless agreed and then only on designated areas.	4		Compliant at this stage of the project.
		Designated smoking areas must be provided, with special bins for discarding of cigarette stump.	4		Smoking area available at site camp.
		Fire must be reported immediately.		✓	Informative - noted. Not applicable at this stage
11.19 AIR POLLUTION		The potential air pollutants would be dust emanating from excavation activities and access roads; emissions or exhaust fumes from faulty plant or equipment. The following measures must be put in place:		✓	Informative - noted. Not applicable at this stage
		Appropriate dust suppression measures or temporary stabilising mechanisms (e.g. adherence to speed limit, chemical soil binders, straw, brush packs chipping) must be put in place throughout construction, particularly during prolonged periods of dry weather.	4		No dust was noted on site at the time of the audit. Water truck present for dust suppression. Site vehicles are adhering to speed limits to minimise dust.
		Removal of vegetation must be avoided until such time as soil stripping is required.	4		Compliant at this stage of the project.
		A maximum speed of 40km/hr on the access road must be adhered to in order to minimise or avoid dust pollution.	4		Compliant at this stage of the project.
		Construction vehicles and equipment must be in good working order and serviced regularly.	4		Compliant at this stage of the project. Vehide checklist available on site file.
11.20 NOISE		Machinery and vehicles are to be maintained in good working order.	4		Compliant at this stage of the project.
		Offending machinery and vehicles will be banned from use on site until they have been repaired.		✓	Informative - noted. Not applicable at this stage
		The project team must endeavour to keep noise generating activities associated with construction to a minimum and within working hours.	4		Compliant at this stage of the project.
		Any complaints pertaining to noise must be recorded and reported to the ECO and addressed accordingly.	4		No complaints to date
		Labourers to be provided with hearing protection as and when required.	4		Compliant at this stage of the project.
11.21 VISUAL		Various towers will be used depending on the terrain as well as other factors.		✓	Informative - noted. Not applicable at this stage
11.21.1 TRANSMISSION POWER LINE		Rehabilitate disturbed areas around pylons as soon as practically possible after construction. This should be done to restrict extended periods of exposed soil.		✓	Informative - noted. Not applicable at this stage
11.21.2 ACCESS ROUTES		Make use of existing access roads where possible;		✓	Informative - noted. Not applicable at this stage
		Where new access roads are required, the disturbance area should be kept to a minimum. A two-track dirt road will be the most preferred option;		✓	Informative - noted. Not applicable at this stage
		· Locate access routes so as to limit modification to the topography and to avoid the removal of established vegetation;		✓	Informative - noted. Not applicable at this stage

		Maintain no or minimum cleared road verges;		✓	Informative - noted. Not applicable at this stage
		Access routes should be located on the perimeter of disturbed areas such as cultivated/fallow lands as not to fragment intact vegetated areas; and		✓	Informative - noted. Not applicable at this stage
		If it is necessary to clear vegetation for a road, avoid doing so in a continuous straight line. Alternatively, curve the road in order to reduce the visible extent of the cleared corridor.		✓	Informative - noted. Not applicable at this stage
11.21.3 CLEARED SERVITUDES		Locate the alignment and the associated cleared servitude so as to avoid the removal of established vegetation; and		✓	Informative - noted. Not applicable at this stage
		· Avoid a continuous linear path of cleared vegetation that would strongly contrast with the surrounding landscape character. Feather the edges of the cleared corridor to avoid a clearly defined line through the landscape.		✓	Informative - noted. Not applicable at this stage
11.21.4 CONSTRUCTION CAMPS AND LAYDOWN YARDS		If practically possible locate construction camps in areas that are already disturbed or where it isn't necessary to remove established vegetation like for example naturally bare areas;	4		Compliant at this stage of the project.
		Utilise existing screening features such as dense vegetation stands or topographical features to place the construction camps and lay-down yards out of the view of sensitivity visual receptors;		✓	Informative - noted. Not applicable at this stage
		Keep the construction sites and camps neat, clean and organised in order to portray a tidy appearance; and	4		Compliant at this stage of the project.
		Screen the construction camp and lay- down yards by enclosing the entire area with a dark green or black shade cloth of no less than 2m height.		✓	Informative - noted. Not applicable at this stage
		Where possible, keep the construction camps away from existing residents and especially lodges and tourist venues.		✓	Informative - noted. Not applicable at this stage
11.21.5 GENERAL		Demarcate sensitive areas and no-go areas with danger tape to prevent disturbance during construction.		✓	Informative - noted. Not applicable at this stage
		Plan construction times in such a manner to have the least impact on surrounding properties.	4		Compliant at this stage of the project.
		Keep disturbed areas to a minimum.	4		Compliant at this stage of the project.
		No clearing of land to take place outside the demarcated footprints.	4		Compliant at this stage of the project.
		The steel components should not be painted but be galvanised and allowed to oxidise naturally over time. The grey colour produced in this process will help to reduce the visual impact.		✓	Informative - noted. Not applicable at this stage
		New road construction must be kept to a minimum. Utilise existing roads and tracks to the extent possible.		✓	Informative - noted. Not applicable at this stage
		Reduce and control dust through the use of approved dust suspension techniques as and when required.	4		No dust was noted on site at the time of the audit. Water truck present for dust suppression. Site vehicles are adhering to speed limits to minimise dust.
		Construction to occur only during daytime. Should the Eskom and ECO authorize night work, low flux and frequency lighting shall be used.	4		Compliant at this stage of the project.
		Rehabilitate all disturbed areas in accordance with the Method		✓	Informative - noted. Not applicable at this

		Statement.			stage
		Maintain access roads to prevent scouring and erosion, especially after rains.	4		Compliant at this stage of the project.
		Storage facilities and other temporary structures on site must be located such that they have as little visual impact on local residents as possible.	4		Compliant at this stage of the project.
		All temporary structures erected on site for the purposes of the project's construction phase will be removed from site upon completion of the project.		✓	Informative - noted. Not applicable at this stage
		Lighting will be sufficient to ensure security but will not constitute 'light pollution' to the surrounding areas.		✓	Informative - noted. Not applicable at this stage
		The site must be clean and tidy at all times.	4		Compliant at this stage of the project.
11.22 EXCAVATION, BACKFILLING AND TRENCHING		While working at areas prone to erosion the following must be adhered to: • Excavations must not be left open for longer than 30days. • Excavations must be adequately barricaded/fenced off at all times.		✓	Informative - noted. Not applicable at this stage
11.23 AGRICULTURAL ACTIVITIES		The rehabilitation of any bare soil areas caused by the construction process (including any access roads or tracks) and wherever possible, the siting of pylons away from any cultivated lands, but rather to use servitudes and boundary lines.		✓	Informative - noted. Not applicable at this stage
		vegetation cover is disturbed or removed (such as during the construction phase of a transmission line) and especially on steeper slopes, then erosion can occur. Therefore, clear mitigation measures should be implemented, namely.		✓	Informative - noted. Not applicable at this stage
		o Roads should avoid steep slopes		✓	Informative - noted. Not applicable at this stage
		o Where steep slopes are used, road stabilization measures (culverts, run-off trenches, banking of bends etc.) should be implemented; and		✓	Informative - noted. Not applicable at this stage
		o Restrict areas cleared of vegetation to road surfaces only.		✓	Informative - noted. Not applicable at this stage
		Special care should be given to areas with steeper topography.		✓	Informative - noted. Not applicable at this stage
		Maintain good relations with landowners		✓	Informative - noted. Not applicable at this stage
		Consult farmers/landowners prior to any clearing activities.		✓	Informative - noted. Not applicable at this stage
11.24 EROSION AND CONTROL	11.24.1	During construction, the Contractor will protect areas susceptible to erosion by installing necessary temporary and / or permanent drainage system and by taking suitable measures to prevent surface water concentration into nearby roadways.	4		Method statement available on file. To be implemented during rainy season
	11.24.2	Prior to construction, all topsoil must be stripped and stockpiled separately from subsoil and rocky material. Soil must be stripped in a phased manner so as to retain vegetation cover for as long as possible.	4		Compliant at this stage of the project.
	11.24.	Stockpiled topsoil must not be compacted and must be replaced as the	4		Compliant at this stage of the project.

	3	final soil layer.			
	11.24.4	Stockpiled soil must be protected by erosion-control berms if exposed for a period of greater than 14 days during the wet/windy season.	2		Method statement available on file. To be implemented during rainy season
	11.24.5	Topsoil stockpiles must not be contaminated with oil, diesel, petrol, waste or any other foreign matter, which may inhibit the later growth of vegetation and micro-organisms in the soil.	4		Compliant at this stage of the project.
	11.24.6	Soil must not be stockpiled on drainage lines or near watercourses.	4		Compliant at this stage of the project.
	11.24.7	The timing of clearing and grubbing must be co-ordinated as much as possible to avoid prolonged exposure of soils to wind and water erosion.		✓	Informative - noted.
	11.24.8	If topsoil will be stockpiled for a longer period, it must be either vegetated with indigenous grasses or covered with a suitable material to prevent erosion and invasion by weeds.	2		Method statement available on file. To be implemented during rainy season
	11.24.9	To limit the introduction of alien species into the area, no soil may be imported onto site.	4		No imported soil utilised.
	11.24.10	Where required, cut-off trenches can be installed to divert substantial run-off and prevent erosion as and when necessary.		✓	Informative - noted. Not applicable at this stage
		Where new roads are constructed, water diversion berms should be constructed to prevent erosion.		✓	Informative - noted. Not applicable at this stage
		Sensitive areas such as watercourses (wetlands, pans, and riparian areas) must be cordoned off to control vehicles and construction personnel access.		✓	Informative - noted. Not applicable at this stage
11.25 USE OF CEMENT AND CONCRETE		Cement and concrete are regarded as highly hazardous to the natural environment due to their high pH and the chemicals contained therein. To avoid ground pollution the following must be implemented:		✓	Informative - noted. Not applicable at this stage
		Pre-mix concrete shall be the preferred option where possible		✓	Informative - noted. Not applicable at this stage
		If concrete mixing is undertaken on site, the following measures must be put in place:		✓	Informative - noted. Not applicable at this stage
		The batching / mixing area must be properly designated, indicated on the site plan and kept neat and tidy at all times.		✓	Informative - noted. Not applicable at this stage
		No batching / mixing activities will occur on a permeable surface.		✓	Informative - noted. Not applicable at this stage
		Used and empty cement bags shall be dipped and soaked in water for 24 hours where after it can be removed and disposed of as general waste.		✓	Informative - noted. Not applicable at this stage
		The visible remains of the batch plant and concrete, either solid, or from washing shall be physically removed and disposed of appropriately at a licensed landfill site if not reused.		✓	Informative - noted. Not applicable at this stage
11.26 SITE CLEAN-UP AND REHABILITATION		The Contractor must ensure that all temporary structures, materials, waste and facilities used for construction activities are removed upon completion of the project.		✓	Informative - noted. Not applicable at this stage
		Fully rehabilitate (e.g. Clear and clean area, rake, pack branches etc.) All disturbed areas and protect them from erosion.		✓	Informative - noted. Not applicable at this stage

		All replaced equipment and excess gravel, stone, concrete, bricks, temporary fencing and the like shall be removed from the site upon completion of the work.		✓	Informative - noted. Not applicable at this stage
		No discarded materials of any nature shall be buried on the site or on any other land within the site.		✓	Informative - noted. Not applicable at this stage
		Re-seeding shall be done on disturbed areas as per the rehabilitation Method Statement and as directed by the CEO and ECO.		✓	Informative - noted. Not applicable at this stage
		Slopes in excess of 2% must be contoured and slopes in excess of 12% must be terraced.		✓	Informative - noted. Not applicable at this stage
		The Contractor shall dispose of all excess material from site at a registered disposal facility.		✓	Informative - noted. Not applicable at this stage
		Reusable material will be taken off site and reused elsewhere.		✓	Informative - noted. Not applicable at this stage
11.27 GEOLOGY AND TOPOGRAPHY		Blasting Method Statement must be prepared, signed by the engineer and approved by the ECO.		✓	Informative - noted. Not applicable at this stage
		Blasting permit must be obtained from the relevant authority prior to blasting		✓	Informative - noted. Not applicable at this stage
		Land owners must be notified prior		✓	Informative - noted. Not applicable at this stage
		Construction team must be made aware of the planned blasting activities.		✓	Informative - noted. Not applicable at this stage
		Proper PPE must be worn at all times.		✓	Informative - noted. Not applicable at this stage
		Blasting activities must be supervised by qualified personnel.		✓	Informative - noted. Not applicable at this stage
11.28 MONITORING OF CONSTRUCTION AND OPERATION EMPR COMPLIANCE		Monitoring of the general implementation of/adherence to the EMPr shall be the responsibility of the ECO.	4		Monitoring is conducted though site visits and monthly audits.
		Reporting on adherence/compliance to stipulations as communicated to Contractors, shall take place during scheduled site meetings.	4		Monthly progress meetings hasn't been scheduled to date due to the project being in the initial stages of construction, once ongoing, environmental matters will be raised and discussed between the respective project role-players.
		Regular site Meetings by the project team.	4		Contractor representatives and ECO has meetings twice a month to discuss environmental matters.
		Continuous induction of staff and visitors on the EMPr conditions and requirements.	4		Compliant at this stage of the project.
		Put in place non-conformance, prevention and corrective procedures.	4		Compliant at this stage of the project.
		Copies of the EMPr and the EA will be made available on site at all times.	4		EA and EMPr available on file.
11.29 DOCUMENT CONTROL		The EMPr as well as the EA will be used for referral as the project progresses. The EA will also be presented on request to I&APs and	4		EA and EMPr available on file.

		stakeholders who may visit the site.			
		Monitoring and Audit Reports must be submitted to DEA as and when required.	4		Monthly audit reports submitted.