

Eskom Holdings SOC Limited

**PROPOSED INSTALLATION OF A 66kV OVERHEAD
POWERLINE AND NEW SUBSTATION EAST OF THE
BITOU RIVER, WESTERN CAPE**




**Final Environmental Management Programme
(Re-submission)**

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PREFACE

Eskom Holdings SOC Ltd. is applying for Environmental Authorization to construct a 66kV overhead powerline and new substation east of the Bitou River, Western Cape. The proposed project will entail the following activities:

- Construction of a new 20MVA 66/22kV Substation on Farm 305/16 with:
 - 1 x 66kV feeder having a 66kV motorised isolator only for the Robberg feeder
 - Space for 2nd 66kV feeder bay for the Kurland feeder
 - 1 x 66kV busbar
 - 1 x 20MVA Transformer 1 bay
 - Space for 2nd 20MVA Transformer bay
 - 4 x 11kV Feeder bays using indoor switchgear
 - Protection and Metering for the above equipment.
 - New substation building.
 - Adequate Platform for the site.
 - Adequate road leading to the site.
- Construction of a new 66kV Overhead Powerline (2.5km) with a servitude width of 20m from the centerline of the Powerline (10meters on either side).
- The pylon structures to be used to construct the Powerline will galvanized steel monopole self-supporting structures.

The development requires compliance with the National Environmental Management Act (NEMA), Act No. 107 of 1998 (as amended) and Environmental Impact Assessment (EIA) Regulations 2010. This Application for Environmental Authorisation is being made to the Competent Authority, namely, the National Department of Environmental Affairs (DEA).

This Environmental Management Programme (EMP) is required to be submitted with the Final Basic Assessment Report for comment to I&APs.

The development and implementation by environmental specifications is an on-going process that is iterative in nature.

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GLOSSARY

Contaminated water:

Means any water contamination by the Contractor's activities, e.g. concrete water and run-off from plant / personnel wash areas.

Contractor:

Persons/organisations contracted by the Applicant to carry out parts of the work for the planned upgrade. The Contractor shall ensure compliance with this EMP, and shall request advice from the Environmental Control Officer where considered appropriate.

Construction Activities:

Activities associated with physical disturbance to the land, including the storage machinery, equipment and materials.

Construction Phase:

The Construction Phase is the period of commencement of physical disturbance to the land, excluding rehabilitation activities, such as re-vegetation and replacing of topsoil.

Construction Zone:

The demarcated and pegged area where construction activities shall be permitted.

Corrective (or remedial) action

Response required to address an environmental problem that is in conflict with the requirements of the EMP. The need for corrective action may be determined through monitoring, audits or management review.

Degradation:

The lowering of the quality of the environment through human activities, e.g. river degradation, soil degradation.

Developer:

The Developer is the Applicant – Eskom Holdings SOC Ltd.

Environment:

The surroundings within which humans live and that consist of :

- (i) the land, water an atmosphere of the earth;
- (ii) micro-organisms, plant and animal life
- (iii) any part or combination of (i) and (ii) and the interrelationships among and between them; and the physical, chemical, aesthetic and cultural properties and conditions of the foregoing that influence human health and well-being.

Environmental Audit:

A systematic, documented verification process of objectively obtaining and evaluating evidence to determine whether specified environmental activities, events, conditions, management systems, or information about these matters conform with audit criteria, and communicating the results of this process to the client.

Groundwater:

All subsurface water that fills voids between highly permeable ground strata comprised of sand, gravel, broken rocks, porous rocks, etc. and move under the influence of gravitation.

Hazardous waste:

Waste, even in small amounts, that can cause damage to plants, animals, their habitat and the well-being of human beings, e.g. waste from factories, detergents, pesticides, hydrocarbons, etc.

Impact:

A description of the potential effect or consequence of an aspect of the development on a specified component of the biophysical, social or economic environment within a defined time and space.

Infrastructure

The network of facilities and services that are needed for economic activities, e.g. roads, electricity, water, sewerage.

Integrated

Mixing or combining all useful information and factors into a joint or unified whole. See Integrated Environmental Management.

Integrated Environmental Management (IEM):

A way of managing the environment by including environmental factors in all stages of development. This includes thinking about physical, social, cultural and economic factors and consulting with all the people affected by the proposed developments. Also called "IEM".

Interested and Affected Parties (I&AP's):

Those individuals or organisations that have an interest in the proposed development or will be directly affected by the activities of the development, as identified in the environmental impact assessment process.

Local Authority: Bitou Local Municipality.

Method statement:

Written statements that contain details about construction procedures required for work near sensitive environments in the site, including environmentally sensitive activities such as waste management, storage of hazardous substances, dust control, erosion and sediment control, etc.

A work method statement is predominately used in construction to describe a document that gives specific instructions on how to safely perform a work related task, or operate a piece of plant or equipment.

Mitigation:

Measures designed to avoid, reduce or remedy adverse impacts

Natural environment:

Our physical surroundings, including plants and animals, when they are unspoiled by human activities.

Pollutant:

A contaminant at a concentration high enough to endanger the environment or the public health.

Pollution:

- *National Water Act, 36 of 1998:* "Water pollution means the direct or indirect alteration of the physical, chemical or biological properties of a water resource so as to make it –
 - (a) less fit for any beneficial purpose for which it may reasonably be expected to be used; or
 - (b) harmful or potentially harmful –
 - (aa) to the welfare, health or safety of human beings;
 - (bb) to any aquatic or non-aquatic organisms;
 - (cc) to the resource quality; or
 - (dd) to property".
- *National Environmental Management Act, No. 107 of 1998:-* "pollution means any change in the environment caused by –
 - (i) substances;
 - (ii) radioactive or other waves; or
 - (iii) noise, odours, dust or heatemitted from any activity, including the storage or treatment of waste or substances, construction and the provision of services, whether engaged in by any person or an organ of state, where that change has an adverse effect on human health or well-being or on the composition, resilience and productivity of natural or managed ecosystems, or on materials useful to people, or will have such an effect in the future."

Rehabilitation:

Rehabilitation is defined as the return of a disturbed area to a state which approximates the state (wherever possible) which it was before disruption.

Waste Management

Classifying, recycling, treatment and disposal of waste generated during construction and decommissioning activities.

ABBREVIATIONS

C	Contractor
DEA	Department of Environmental Affairs
ECO	Environmental Control Officer
EMP	Environmental Management Programme
EIA	Environmental Impact Assessment
HWC	Heritage Western Cape
I&AP's	Interested and Affected Parties
OHSA	Occupational Health and Safety Act, Act 85 of 1993
PC	Project Co-ordinator

1 INTRODUCTION

Eskom Holdings SOC Ltd is applying for Environmental Authorization to construct a 66kV overhead Powerline and new substation east of the Bitou River, Western Cape. SiVEST Environmental (Pty) Ltd was appointed as the Independent Environmental Assessment Practitioner to undertake the necessary Basic Assessment (BA) process to ensure environmental compliance.

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The compilation of this EMP forms part of the requirements of the EIA Regulations 2010 and compliance with the contents of this report is required during the construction and operational phases. This Environmental Management Programme (EMP) serves as an environmental management tool by providing a *generic structured plan* of mitigatory measures, which serves as a guide to assist in minimising the potential environmental impact of the activity that may arise during the construction and operational phases. In addition, site specific mitigation measures are described.

This EMP provides a set of guidelines for the environmental management of all works to be executed by the Engineer and Contractor, so as to have a minimum impact on the environment in accordance with all relevant legislation, policies and standards.

In this context it should be viewed as a dynamic or 'living' document, which may require updating, or revision during the life-cycle of the upgrade to address new circumstances as the need arises. It is essentially a written plan of how the environment is to be managed in practical and achievable terms.

The effectiveness of the EMP is limited by the level of adherence to the conditions set forth in this report by the Developer and the Contractor. It is further assumed that compliance with the EMP will be monitored on a regular basis as set out in the EMP and contractual clauses.

All new additional information is highlighted in light grey for ease of reference in this Final EMP.

All information added to this re-submitted Final EMP is highlighted in blue.

2 AIM AND OBJECTIVES OF THE EMP

The aim of the EMP is to:

- Identify those construction activities identified for the proposed upgrade that may have a negative impact on the environment;
- Outline the mitigation measures that will need to be taken and the steps necessary for their implementation; and
- Describe the reporting system to be undertaken during construction.

The objectives of the EMP are to:

- Identify a range of mitigation measures which could reduce and mitigate the potential adverse impacts to minimal or insignificant levels.
- Provide a pro-active and practical working mechanism to enable the measurement and monitoring of environmental performance on site.
- Ensure that the environmental specifications are identified, effective and contractually binding to enable compliance on site.

3 COMPLIANCE WITH APPLICABLE LAWS

The supreme law of the land is "The Constitution of the Republic of South Africa", which states: "*Every person shall have the right to an environment which is not detrimental to his or her health or well being*".

Laws applicable to protection of the environment in terms of Environmental Management (and relating to construction activities) include but are not restricted to:

- National Environmental Management Act, No. 107 of 1998
- National Environmental Management: Air Quality Act (AQA), No. 39 of 2004
- National Environmental Management: Biodiversity Act, No. 10 of 2004
- National Environmental Management: Waste Act (WA), No. 59 of 2008
- National Environmental Management: Integrated Coastal Management Act, No. 24 of 2008
- National Heritage Resources Act, No. 25 of 1999
- National Water Act, No 36 of 1998 and amendments
- National Veld and Forest Fire Act, No 101 of 1998
- National Road Traffic Act, No 93 of 1996
- Occupational Health and Safety Act, No 85 of 1993
- Soil Conservation Act, Act No 76 of 1969
- Sub-division of Agricultural Land Act Repeal Act 64 of 1998 (re: soil conservation)
- and all regulations framed there under and amendments there to.

Of particular importance is Section 28 (1) of the National Environmental Management Act (NEMA – Act 107 of 1998) which places an obligation on all individuals to take due care of the environment and to ensure remedial action is instituted to minimise and mitigate environmental impact.

The EMP forms part of the Contract Documentation and is thus a legally binding document. This EMP as well as the Environmental Authorization (EA) is to be kept on site where the construction activities will occur, at all times. In terms of this Act an individual responsible for environmental damage must pay costs both to environment and human health and the preventative measures to reduce or prevent additional pollution and/or environmental damage from occurring. This is referred to as the Polluter Pays Principle.

Should an amendment to this EMP be required, an application is to be lodged with the competent authority (DEA). Amendments may only be implemented once the amended EMP has been approved by the competent authority.

4 ADMINISTRATION AND REGULATION OF EMP

4.1 Implementation and Compliance with the EMP

The Developer is responsible for the implementation of the EMP and for compliance monitoring of the EMP. The EMP will be made binding on all Contractors operating on the site and will be included with the Contract. Non-Compliance with, or any deviation from, the conditions set out in this document constitutes a failure in compliance.

Refer to Appendix 3 for a Proforma for an Environmental Contract Agreement to be signed between the Developer and Contractor.

4.2 Conditions of Contract / Roles and Responsibilities

The Contractor shall be responsible for ensuring compliance with the provisions contained in the EMP, and shall be held accountable in terms of the EMP.

4.2.1 Authority (DEA)

The National Department of Environmental Affairs (DEA) is the designated authority responsible for authorising this EMP. DEA has overall responsibility for ensuring that the Applicant complies with the conditions of Environmental Authorisation and the EMP.

DEA shall also be responsible for approving any amendments to the EMP (if required). DEA may also perform random site inspections to check compliance with the EMP.

4.2.2 Developer (Eskom Holdings SOC Ltd.)

The Applicant is the Developer and has overall responsibility for compliance with the EMP as it is a fundamental component of the authorisation requirements for the project.

This means that the Developer must:

- Ensure that the professional team and the Contractors are appropriately briefed and that their appointment includes environmental requirements as relevant.
- Ensure that he/she is kept fully informed of the performance of the project against the requirements of the EMP.
- Ensure that appropriate action is taken where consistent incidents of non-compliance are taking place.
- Ensure that any corrective action required by the authorities is implemented.

4.2.3 Project Co-ordinator (PC)

The primary responsibility of the Project Co-ordinator (PC) is to ensure that the Contractor complies with the environmental specifications in this document. In addition the PC shall:

- Assume overall responsibility for the effective implementation and administration of the EMP;
- Ensure that the EMP is included in the Contractors' contract (Including all subcontractors);
- Ensure that the EMP and any other relevant documentation are provided to the applicable Construction Supervisor and the contractor (if utilized);
- Undertake regular inspections of the Contractor's site (in conjunction with the Clerk of Works, where relevant) as well as the Powerline servitude works in order to check for compliance with the EMP in terms of the specifications outlined in this document.
- Keep a register of major incidents (spills, injuries, complaints, legal transgressions, etc) and any other relevant issues related to the EMP;
- Report any problems (or complaints) concerning the environment arising out of the construction phase to the appointed Environmental Practitioner;
- To ensure Contractor staff are trained in accordance with the EMP;
- To implement recommendations of possible audits;
- Inform Environmental Practitioner of the date of construction at least 2 months in advance.

4.2.4 Eskom construction team or external construction contractor and all subcontractors (C)

Hence forth referred to as the 'Contractor' in this document, the Construction Team/ Contractor/ Sub-contractor shall:

- Ensure that the environmental specifications of this document are effectively implemented. This includes the on-site implementation of steps to mitigate environmental impacts;
- Monitor environmental performance and conformance with the specifications contained in this document during site inspections;
- Discuss implementation of and compliance with this document with staff at routine site meetings;
- Report non-compliances to EMP and Environmental Authorisation to PC and Environmental Practitioner immediately (on discovery), within 24 hours of the event discovered or occurred;
- Report progress towards implementation of and non-conformances with this document at site meetings with the PC;
- Ensure that suitable records are kept and appropriate documentation is available to the PC; and
- Ensure that construction employees are trained in accordance with the requirements of the EMP.

The Contractor will conduct all activities in a manner that minimises disturbances to and impacts on the environment.

The Contractor is deemed not to have complied with this EMP if:

- There is evidence of contravention of clauses within the boundaries of the property and adjacent areas during the Construction Phase;
- If environmental damage ensues due to negligence;
- The Contractor fails to comply with corrective or other instructions issued by the Local Authority, PC, ECO, or the Developer within a specified time; and
- Failure to take any reasonable measure to protect the environment if there is a perceived or identified environmental risk associated with an activity that has not been defined in the EMP.
- The Contractor fails to respond adequately to complaints from the public.

Application of a penalty clause will apply for incidents of non-compliance as per the Schedule of Fines¹ at Appendix 6. Such fines will be paid by the Contractor to the Developer and will be used in rehabilitation and/or landscaping.

4.2.5 Environmental Control Officer (ECO)

The Environmental Control Officer's (ECO) duties shall include, *inter alia*, the following:

- Ensuring the necessary environmental authorisations and permits, if any, have been obtained.
- Advising the Contractor and/or the ER on environmental issues within defined construction areas.
- Undertaking twice-per-month site visits to ensure compliance with this EMP when the construction works are located outside the Estuarine Functional Zone (EFZ). During construction works in the EFZ, site visits will increase in frequency to once-per-week.
- Completing environmental checklists during site visits and keeping a photographic record of initial site conditions prior to construction as well as progress on site from an environmental perspective.
- Reporting back on any environmental issues/incidents to the DEA as reported to by the Contractor.
- Providing the DEA is informed of work progress on site.
- Preparing an environmental audit report at the conclusion of the construction phase.

4.3 ON-SITE EMP TRAINING AND AWARENESS

The purpose of the environmental training is to communicate potential environmental impacts relating to construction activities to contractors to ensure that precautionary measures are undertaken to avoid and/or mitigate the impacts. Environmental awareness training sessions should be undertaken prior to any work commencing by any contractor or sub-contractor on site as well as throughout the construction phase. The ECO shall give initial EMP training prior to any work starting on site. The training record must be kept on the project file for each training.

4.3.1 EMP training and awareness before commencement of construction

- Eskom Holdings SOC Ltd. will provide a General Environmental Awareness Workshop for all employees of the Contractor, sub-contractor, and suppliers. The initial training workshop will be held prior to any work commencing on route. The Contractors shall ensure that all construction personnel, including senior route staff, sub-contractors and suppliers etc., attend the environmental awareness-training workshop prior to commencing any work i.e. camp establishment, clearing and installations. The Contractor shall allow one hour for this initial workshop. Additional staff, sub-contractors and suppliers coming on to the route must attend an environmental awareness workshop prior to the commencing their duties. Subsequent workshops will be arranged at a mutually agreed time and venue.
- The main contractor must provide the ECO with (a) a list of all sub-contractors and their scope of work for the contract and (b) a time schedule of works before the initial environmental training awareness session is scheduled. This will assist the ECO to schedule subsequent EMP awareness training sessions as and when required.
- No construction work may take place on route unless under the supervision of a person who has attended an Environmental Awareness Workshop.

¹ Based on City of Cape Town: Standard Environmental Specifications – Version 5 (03/2002)

- The PC shall inform the environmental practitioner two months prior to starting construction, so that training can be given.

4.3.2 EMP awareness training throughout the construction phase

- EMP awareness training must be given to new contractors and sub-contractors that start to work on site throughout the construction phase at various stages.
- All contractor and sub-contractor teams involved in work on site must be briefed on their obligations towards environmental controls and methodologies in terms of this EMP prior to commencement of any construction and construction related activities on an on-going basis throughout the construction phase.
- In the case of new workers coming on site throughout the construction programme, the site contractor is responsible to ensure all new labour arriving on site is made aware of the contents of the CEMP and is briefed on the Environmental Awareness Training session.
- A register must be kept of all training given to contractors and sub-contractors, indicating the date, time, venue, attendees, name of trainer, name of contractor, signatures and unique numbers / identity numbers of attendees.
- If the construction is phased, a training session must be conducted before the commencement of each phase. The environmental issues, construction impacts and mitigation measures for each phase must be discussed in detail at this training session.

4.4 ON-SITE COMMUNICATION PROCEDURE

4.4.1 On site start-up/ kick-off meeting

- The mandatory on-site start-up meeting that is conducted preferably 14 days but not less than 5 working days prior to commencement of any site/camp establishment, earthworks and/or construction activities and will relate to additional discussed information that must be complied with during the entire construction phase.
- All site-specific issues and arrangements as discussed and agreed on at site start-up meeting.
- Information pertaining to specific site construction agreements that was discussed at the kick-off meeting on site by all the relevant parties and agreed on and must be recorded and included as part of the EMP.
- Any changes made to the EMP as per the agreements between all parties on site must still fall within the conditions of the Environmental Authorisation.
- At the site start-up meeting, the following issues must be discussed:
 - Eskom SHEQS Policy and Policy Statement
 - The Construction EMP & other relevant site documents
 - Project to be discussed and all uncertainties are cleared
 - Method statement/s to be discussed
 - Access routes
 - Road and construction area to be demarcated
 - Materials stockpile and lay down areas to be demarcated
 - Method of stockpiling to be discussed
 - Firefighting procedures
 - Mandatory firefighting equipment & fire preventative measures
 - Mandatory site equipment and facilities
 - Solid waste facilities and removal intentions
 - Placement, type and service of toilets to be agreed on
 - Placement and type of rubbish bins and removal of rubbish to be agreed on
 - Environmental Education and awareness training session to all contractors & onsite staff/labour.
 - Location & establishment of concrete batching plant facility, if applicable.
 - Frequency of site audits (at least one (1) site visit per month)

4.4.2 Monthly construction progress meetings

- Environmental matters pertaining to the construction of the project must be included as an agenda item on the monthly project construction progress meeting.

- The ECO must be invited to monthly construction progress meetings to discuss findings of site audits, mitigation measures and other issues arising pertaining to the implementation of the EMP conditions.

4.4.3 Minutes of meetings

- Environmental issues, action items, complaints, incidents and mitigation measures must be recorded in minutes of monthly construction project meetings.
- The ECO must be included in the circulation of minutes of meetings in order to stay informed of construction progress and construction issues as they relate to the receiving environment.

4.5 Method Statements

The Contractor shall submit written Method Statements to the PC and ECO for all environmentally sensitive activities, as per the Method Statement (Proforma attached at Appendix 1). A Method Statement Control Sheet must be attached to each Method Statement, and shall be signed by the Contractor (Proforma attached at Appendix 2).

Method statements are required for the following aspects of works:

- MS 1: Location of Construction camp
- MS 2: Storage of construction material and hazardous substances
- MS 3: Wastewater management
- MS 4: Fauna & Flora Management and Vegetation Clearance
- MS 5: Solid Waste management
- MS 6: Removal and stockpiling of topsoil and other excavated material
- MS 7: Watercourses and Estuarine Management
- MS 8: Dust control
- MS 9: Cement and concrete batching/on site mixing and water supply
- MS 10: Demarcation of Sensitive Areas
- MS 11: Erosion and Sediment Control
- MS 12: Fire control
- MS 13: Re-vegetation and land rehabilitation in areas disturbed by construction activities.
- MS 14: Construction of a temporary access road to pylon B16
- MS 15: Rehabilitation of temporary access road
- MS 16: Stringing of conductor over the estuary and "wet areas"

5 PRE-CONSTRUCTION (SITE ESTABLISHMENT) PHASE

Pre-Construction EMP activities are those relating to the preparation of the site prior to the start of the Construction Phase.

The contractor is responsible for the implementation of the activities within this phase.

- a. Prior to any commencement of construction, an ECO must be appointed.
- b. The ECO with PC and all construction contractors must inspect all pylon positions along the route and substation site and conduct final permit & license checks (with Eskom environmental practitioner). This must take place at least two months prior to construction commencement to leave enough time for consultation with Departments if needed.
- c. Removal of any vegetation which is considered an endangered species or protected species listed in Schedules 3 and 4 in terms of the Western Cape Conservation Laws Amendment Act (No. 3 of 2000) may not be removed without a relevant permit obtained from Cape Nature.
- d. From the outset of construction, the working area must be well defined with an appropriate method. Final site demarcation must be carried out with all relevant parties who will be responsible for the day-to-day activities on the site.
- e. All rivers and wetland areas must be considered no-go areas; no vehicles shall be allowed to drive through rivers, streams and wetlands (refer to Section 6.14).
- f. Areas of paleontological and archaeological significance shall be considered as no-go areas (refer to Section 6.13).
- g. Areas of botanical significance shall be considered as no-go areas (refer to Section 6.7)
- h. A route walk with the Contractor, ECO, PC and a qualified Botanical specialist shall be undertaken to identify any botanically sensitive areas and identify any plant species which require trans-location.
- i. The site will be demarcated with appropriate strong steel dropper poles. A single strand of orange baler twine is to be attached to the dropper poles to indicate boundaries and no-go areas for site personnel and vehicular movement. (Alternative fencing may be decided upon dependent on site requirements)
- j. The construction area i.e. road, stockpile areas and development footprint etc. must be demarcated and fenced off with steel dropper poles and orange baler twine approximately 1m high is considered adequate. The demarcation will be agreed on during the start-up meeting.
- k. Work areas and access routes must be clearly demarcated to minimize environmental impact.
- l. In the event that sensitive features are threatened by construction activities, temporary fencing off of these areas (for individual areas such as trees or rocks) or the construction area (when working in a mainly natural environment) is recommended.
- m. Areas of special importance will be decided upon between the Engineer, Contractor and the ECO and demarcated as "NO GO" areas on a site plan and fenced off. Such areas are out of bounds to the Contractor and his staff, sub-contractors and their staff or suppliers and their staff and to any other person involved in the construction, without the written permission specified by the ECO.

MS 1: Location of construction camp

6 CONSTRUCTION PHASE

6.1 Construction Site

- a. The location for the establishment of a construction site for the storage of materials, site office, containers, ablution facilities etc., shall be identified by the Contractor.
- b. The construction camp shall not be located in an area of environmental sensitivity as detailed in Section 5 above.
- c. No camp shall be established within 32 metres of any watercourse (wetland, river, drainage channels or flood plains) or in an area with sensitive archaeological resources.
- d. The construction camp shall be demarcated by a fence and the suitable signage shall be placed on the entrance and perimeter fence.
- e. The construction camp shall be kept neat and tidy at all times. Materials and equipment must be kept in designated areas and storing/stockpiling shall be kept orderly.
- f. The Contractor shall submit a Method Statement indicating the location, preparation and layout of the construction camp.

MS 1: Location of construction camp

6.2 Access to the Site

- a. As far as possible any access routes/haul roads must utilise existing roads or tracks. Any new access roads/haul roads must be designed so as to minimise erosion and must run across slopes and not directly up-hill;
- b. Access to the footprint should be via a strip track where vegetation is simply cut and no road should be graded to the footprint. i.e. No disturbance to the top soil;
- c. The access track must be as short as practicably possible, and use the road verge as far as possible to achieve an appropriate gradient to the track and thereby minimise habitat destruction of adjacent vegetation outside of the road verge;
- d. Existing gates and entrance walls should not be removed or damaged unless negotiated with the landowner;
- e. Should damage to access gates and access routes exist before Eskom commence construction on a particular property photographic evidence should be taken of the disturbed area;
- f. Should the entrance gates be too small for access, they can only be removed with the permission of the property owner;
- g. Permission must be sought from all property owners before private property is accessed or site preparation commences;
- h. Property owners access to their property must remain clear at all times;
- i. Ensure that access to the Powerline route are along negotiated routes as required by landowners;
- j. Access roads damaged by Eskom vehicles must be rehabilitated to the landowners' satisfaction within an agreed period from date of identification.
- k. Unused materials must be removed from site at the end of construction.
- l. On gravel or earth roads on site, the vehicles of the Contractor and his suppliers must not exceed a speed of 25 km/h. On public roads adjacent to the Site vehicles will adhere to municipal and provincial traffic regulations.
- m. Should an additional access route be required, the access must be agreed upon with the relevant property owner in conjunction with the contractor. A written agreement must be in place, prior to any construction of the said access route.
- n. Should the entrance gates be too small for access, they can only be removed with the permission of the property owner.
- o. Once the construction is completed all gates that were removed must be replaced unless requested to stay by the landowner.
- p. All temporary access routes must be rehabilitated at the end of the contract to the satisfaction of the ECO.
- q. Refer to Method Statement for the construction of a temporary road to access pylon B16 within the Estuarine Functional Zone.
- r. Method Statements for any new access/ haul roads must be submitted.

MS 14: Construction of a temporary access road to pylon B16

6.3 Storage of General Materials & Hazardous Substances

- a. Storage of any general or hazardous or building materials shall not take place within 32m of any no-go areas, High Water Mark, watercourses or sensitive environments.
- b. Fuel, oil and any other hazardous substances and harmful materials shall be stored in suitable containers within adequately bunded areas (with 110% of the capacity of the volume of the container) in a dry, secure environment, with concrete or sealed flooring.
- c. The stored materials shall have a respective hazard sign displayed on the containers, identifying its contents.
- d. Material Safety Data Sheets shall be kept for all hazardous materials and substances and a copy of the Material Safety Data sheets shall be made available to all workers to ensure that the required safe handling and necessary precautions are taken when using the materials.
- e. The PC will ensure that materials storage facilities are cleaned/maintained on a regular basis, and that leaking containers are disposed of in a manner that allows no spillage onto the bare soil or surface water.

- f. The management of such storage facilities and means of securing them shall be agreed to by the Contractor with the PC.

MS 2: Storage of construction materials and hazardous substances

6.4 Leaks and Spills

- a. All accidental leaks or spills are to be reported to the PC or ECO immediately for any substance, including hydrocarbons and hazardous substances.
- b. The Contractor shall ensure that an adequate amount of absorbent material is present on-site to absorb any hydrocarbon products, with the material able to absorb the entire volume of hydrocarbons on site.
- c. Re-fuelling of vehicles shall be done in a designated area within the construction camp.
- d. Drip trays shall be used at all times when re-fuelling vehicles on-site or for any motor-driven equipment (e.g. generators, pumps etc.).
- e. Refuelling or maintenance involving the use of hydrocarbons shall not occur within 32m of a watercourse, no-go area or sensitive environments.
- f. If accidental spillage of hydrocarbons occurs, the area shall demarcated and isolated before clean-up commences.
- g. Any contaminated soil shall be excavated and disposed of at a licensed landfill site.
- h. The Contractor shall ensure that any run-off from re-fuelling area(s), stockpiles or hazardous materials site is contained. No run-off shall enter the ground, culverts or watercourses.
- i. No soil or other foreign material (paint, cement powder, chemicals and any other materials associated with construction) should be put either deliberately or accidentally in the culvert bordering Substation Site C so that it can wash into the estuary. Close supervision required to ensure this does not happen and or culvert should be covered until construction is finished.

MS 2: Storage of construction materials and hazardous substances

6.5 Concrete and cement preparation

- a. Concrete and cement preparation activities shall not be permitted in any sensitive environments and no mixing shall be allowed on bare soil / permeable ground surfaces.
- b. Concrete and cement shall preferably be ordered from the supplier, otherwise only sufficient quantities shall be mixed at any one time.
- c. Mixing activities must take place on an impermeable surface and the mixing area should be bunded to contain any liquids to prevent contamination of soil and stormwater.
- d. All washing of concrete-contaminated equipment shall take place within the construction camp on impermeable surface(s) with appropriate wastewater containment measures.
- e. The Contractor shall be responsible to control cement-contaminated water and shall implement collection facilities for cement, contaminated water and matter.
- f. Full cement bags shall be stored in a dry, contained area to prevent run-off.
- g. Used cement bags shall be collected and stored in waterproof containers to prevent wind-blown cement dust and water contamination.
- h. Excess concrete shall be disposed of in a safe manner at a licensed landfill site.
- i. Sources of water for concrete and cement preparation shall be confirmed prior to construction commencing, including water quality and suitability thereof.
- j. The Contractor shall be responsible to implement collection facilities for cement/ concrete water and matter.
- k. Cement & concrete mixing not to be done within 32 m of the High Water Mark or near the culvert and not to be done on permeable surfaces. Only to be undertaken at authorised sites determined suitable by botanist/terrestrial ecologist to ensure that this does not get into storm water

MS 9: Cement and concrete batching/on site mixing and water supply

MS 3: Wastewater management

6.6 Demarcation of Development Footprint (Construction Zone) and Sensitive Areas

- a. The construction zone is the section of the proposed substation and Powerline corridor that will be under construction to complete the activities of the outstanding work.
- b. The activities required to complete outstanding work shall occur in work spaces agreed to by the PC and ECO before start of construction and shall be limited to the immediate development footprint.
- c. Environmentally sensitive areas or other significant features shall be marked, and if feasible fenced off, and demarcated as “no-go” areas. The ECO may identify “no-go” areas at any time during the duration of construction activities.
- d. Construction vehicles turning requirements shall be restricted to the existing road footprint.
- e. Areas of construction shall be fenced where possible.
- f. Areas that require vegetation clearing shall be cleared in a phased approach as construction commences.
- g. No workers allowed between the Main Road 390 (R340) and water level of the estuary or between the N2 and water level of the estuary. i.e. No access to or below the High Water Mark of the estuary.
- h. No workers allowed between the footprint of pylon B16 (only pylon within the Estuarine Functional Zone) and the Bitou Estuary. i.e. No access to or below the High Water Mark of the estuary.
- i. No-go areas should be appropriately demarcated/fenced off for the duration of the construction period and all demarcation removed entirely after completion of the project.
- j. All staff, vehicles, equipment and construction material are to be restricted to the working areas.
- k. Vehicles, if parked on site, must have a clearly demarcated area. Accommodation must be made for oil leaks that may occur from the vehicle sumps. This can be achieved by providing a sump tray for each vehicle or sand that is later removed. The contaminated sand will have to be disposed of at a licensed hazardous disposal site.
- l. The Contractor must maintain in good order all demarcation, fencing and barriers for the duration of construction activities, or as otherwise instructed.
- m. Any temporary fencing removed for the execution of any portion of the works is to be reinstated by the Contractor as soon as practicable.
- n. The Contractor at the end of the contract must remove all demarcation, fencing or barriers not forming part of the final works on Site.
- o. The contractor must ensure that no person, machinery, equipment enter the “NO-GO” areas at any time during the contract period.

MS 10: Demarcation of Sensitive Areas

6.7 Fauna and Flora Management

The Contractor is referred to the conditions of the botanical specialist study undertaken by Paul Emms of Bergwind (2013) as attached in the BAR:

- a. Disturbance to vegetation should be kept to a minimum. This should include only single track access (i.e. no turn-around points) and these should be constructed as a once off, so that the vegetation can regenerate after cutting to prevent the spread of invasive alien vegetation. In the event that single-track access is not feasible and the footprint requires widening, the Contractor shall consult the ECO before commencement of the activity.
- b. Important plant species (e.g. *Podocarpus falcatus* and *Sideroxylon inerme*) within the servitude must be tagged so that construction and maintenance staff do not destroy them.
- c. Pylons should, as far as possible, be placed in disturbed areas only. The ECO must ensure that no sensitive habitats are negatively impacted on as highlighted in the site-specific vegetation descriptions.
- d. The total allowable development footprint of the Substation must be fenced off prior to any development, and thereafter all disturbances and dumping of materials and temporary storage of materials must take place within the designated development area.
- e. Construction of a Substation is only permissible on the flat portion of Site C.
- f. The cliffs located at the back of Substation Site C are a designated “no-go” area, and access to the cliffs should be fenced off wherever possible.
- g. All alien vegetation should be cleared in the undeveloped portions on and surrounding Site C.
- h. All indigenous plants on and surrounding the site (Substation and Powerline Route) must be left undisturbed.
- i. Indigenous plants located on the cliff must be left undisturbed to ensure slope-stability.

- j. Where occurring, alien vegetation (mainly *Acacia mearnsii* and *Acacia cyclops*) should be cleared from the N2 Roadside Reserve and adjacent private property.
- k. Trimming of one *Sideroxylon inerme* (Milkwood tree) at Substation Site C shall be undertaken in accordance with requirements stipulated by the Forestry Official.
- l. Bush / alien clearing must be done under the supervision of the ECO and Contractor;
- m. Bush clearing in the servitude must be in accordance with Eskom's Standard (Reference: ESKASABG3).
- n. All cleared alien vegetation from the footprint of the Substation Site C to be removed offsite and placed at a suitable landfill area. Any alien species seeds should not be allowed to enter the culvert near Substation Site C.
- o. No use of any herbicides within 32 m of the High Water Mark or near culverts or storm water drains.
- p. All bush cuttings must be removed from the servitude and disposed of at a licensed landfill site.
- q. All incidents of harm to any animal or natural vegetation (apart from the agreed upon areas) must be reported to the ECO.
- r. The areas of vegetation that are to be protected during construction must be demarcated and indicated on a site plan. A Method Statement is to be submitted to the ECO by the Contractor, detailing the method of fencing for protection of the conservation areas.
- s. The following coordinates harbour vegetation in good condition, protected or endangered plant species and shall be avoided:

Route Alternative	Coordinates	Mitigation Measure
1	34°0.991'S 23°21.670'E	Garden Route Shale Fynbos thicket to be avoided
1 & 2	34°1.224S 23°21.196E 34°0.730S 23°21.668E 34°0.729S 23°21.709E	Southern Afrotemperate Forest, including old milkwood tree not to be disturbed. Salt marsh and riparian zone at Keurbooms Estuary (including milkwood trees). Highly sensitive area to be avoided/minimal disturbance.
3	34°1.365S 23°21.974E 34°1.089S 23°22.572E 34°0.872S 23°22.871E	Garden Route Shale Fynbos thicket to be avoided. Cape Lowland Freshwater Wetland riverine thicket not to be disturbed. Old milkwood tree on farmland to be avoided.
4	34°02.183S 23°21.822E 34°0.866S 23°23.208E 34°0.608S 23°23.445E 34°0.427S 23°23.572E	Large, old milkwood tree to be avoided Large, old milkwood tree to be avoided Large, old milkwood tree to be avoided Large, old milkwood tree at Substation Site C not to be disturbed except for authorised trimming by DAFF

MS 4: Fauna & Flora Management and Vegetation Clearance

6.8 Ornithological

The Contractor is referred to the conditions of the specialist study as below undertaken by Dr A. Jenkins of Avisense (dated 2014 and attached in Appendix D of BAR) conducted during the Basic Assessment phase of the project.

- a. Both the temporal and spatial disturbance footprints of the construction process should be as compressed as possible – i.e. the process should be completed as quickly as possible, and the area of ground directly affected by the process should be as small as possible.
- b. An expert observer should work along the proposed route immediately before construction activities start to ensure that no nests, particularly those of 'priority' species, are situated on or very close to the line.
- c. Minimize disturbance impacts by abbreviating construction time around breeding times, especially near the estuary.
- d. Minimize associated noise.
- e. The pylon structures used to support the conductors must be of a bird-friendly configuration, with sufficient gaps between the conducting elements and the metalwork, and with perching surfaces spaced adequately away from the conductors to prevent even the largest birds (African Crowned Eagle) from spanning these gaps.
- f. Bird-guards should be fitted wherever birds might perch above the conductors to reduce bird-streamer related faulting.
- g. Suitable marking devices (Bird Flight Diverters or Bird-flappers) should be fitted to the entire length of the route using industry standard markers and marker fitting protocols.
- h. Bird flappers to be erected with expert ornithological guidance to identify the exact locations of the marked areas.
- i. Once erected, the line should be surveyed for signs of avian collisions at least twice in the first year of operation during line maintenance walks. Any further problem areas identified in this way should be retrofitted with bird-flappers to alleviate such problems.

MS 4: Fauna & Flora Management and Vegetation Clearance

6.9 Maintenance of the Construction Site and Waste Management

- a. All hydrocarbons, including fuel, oil, tar or bitumen and its associated contaminated soil or wastewater, shall be disposed of at a licensed hazardous waste site and disposal certificates obtained.
- b. No hydrocarbons shall be disposed of by burning or burial and unused material to be returned to the supplier or disposed of in the manner described above.
- c. Disposal certificates are to be kept at the construction camp by the contractor and the PC.
- d. Hydrocarbons from vehicle and machinery maintenance may be stored in appropriate containers in a bunded area with impermeable surfacing for up to 30 days before disposal at a licensed hazardous waste disposal site.
- e. Any accidental spills shall be cleaned up and the area re-instated to the approval of the ECO and PC.
- f. Storage of large quantities of solid construction waste should be avoided. All solid construction waste shall be stored on-site at the construction camp in a suitably marked area until disposal is possible.
- g. Any stockpiling of solid waste shall only be done after approval from the PC.
- h. All waste material shall be stored in a way to avoid stormwater run-off or ground contamination due to rain.
- i. The Contractor shall ensure that all litter is collected daily from the work area. Similarly, all bins shall be emptied daily and the waste disposed of at a permitted landfill site.
- j. The Contractor shall ensure that the construction site, working and eating areas are maintained in a clean, hygienic and orderly state.
- k. Separate bins should be provided for various materials to facilitate recycling. The bins should have liner bags for easy control and safe disposal of waste.
- l. The excavation and use of rubbish pits on site is forbidden.
- m. The burning of waste is forbidden.
- n. All vehicles and equipment must be maintained in a good condition in order to minimise the risk of leakage and possible contamination of the soil or stormwater by fuels, oils and hydraulic fluids. Sufficient quantities of suitable hydrocarbon absorption or remediation materials must be present on site at all times.

MS 5: Solid waste management

6.10 Staff management, Ablution & Eating Facilities

- a. Workers are to make use of the chemical toilet to be provided. Under no circumstances may neighbouring open areas or the surrounding bush be used as a toilet facility.
- b. Chemical toilets shall not be located within 32m of a watercourse or the High Water Mark and emptied on a regular basis. Care shall be taken that spillage of toilet contents does not occur during content removals.
- c. Adequate refuse bins shall be provided by the contractor and emptied regularly. Refuse bins shall have lids in order to prevent materials from being blown out of the bins. Bins shall be located at least 32m away from the High Water Mark of the estuary.
- d. No food may be left outside unattended and no foodstuff is to be left at the camp overnight. No food may be disposed of in the surrounding areas.
- e. Cooking shall only be done on gas stoves. Under no circumstances shall open fires be used for cooking.
- f. Washing facilities for construction teams shall be provided with flow reduction devices and adequate catchment to contain wash water. Only biodegradable soap shall be allowed (as provided by the Contractor).
- g. Water from wash basins shall be re-used wherever possible.
- h. No toilet shall be located in sensitive environments at or near watercourses and no-go areas.
- i. The Contractor in association with the PC shall monitor the performance of workers to ensure compliance with good environmental practices and general conduct as per their environmental awareness induction training.
- j. Site staff shall not be permitted to access any watercourses, including the estuary, along the construction route or use watercourses for the purposes of bathing, washing of clothing or for any other construction or related activities.

6.11 Worker facilities

- a. No temporary overnight facilities shall be provided for construction workers on site.
- b. The Contractor shall be responsible for ensuring access to clean drinking water for all construction workers.

6.12 Vegetation Clearance, Excavations and Earthworks

- a. Clearance of any vegetation which is considered an endangered species or protected species listed in Schedules 3 and 4 in terms of the Western Cape Conservation Laws Amendment Act (No. 3 of 2000) may not be removed without a relevant permit obtained from Cape Nature.
- b. Vegetation clearance shall be restricted to construction activities where the proposed substation and Powerline corridor is to be established.
- c. Vegetation may be removed with heavy machinery where excavations and cuttings are proposed, as a last resort. Brush-cutting and mowing should be used whenever possible. Impacts to identified plant species by the botanical specialist shall be mitigated accordingly.
- d. Vegetation clearance should be kept to a minimum.
- e. All vegetation material removed from the construction site shall be stored in stockpiles at locations identified by the PC and ECO. Vegetation shall be removed and disposed of at an approved disposal site. No vegetation shall be burned on site.
- f. Identification of alien species by the botanical specialist and subsequent removal by the construction crew forms part of the vegetation clearance protocol of this EMP.
- g. Temporary stockpiles should be limited as far as possible.
- h. No depositing of soil within 32 m of the High Water Mark and only at authorised areas at least 32 m from the High Water Mark as guided by a terrestrial botanist/ecologist.
- i. Care shall be taken to preserve all vegetation in the immediate area of these temporary stockpiles.
- j. Stockpiles should ideally be located to create the least visual impact and must be maintained to avoid erosion of the material and contamination of surrounding environment.
- k. Stockpile areas shall be re-instated to its original state after the removal of material.
- l. Top soil shall be removed separately and stockpiled separately from other soil base layers.
- m. All top soil (from the top 40 cm) excavated from within the pylon footprint should be stored carefully offsite for later use in rehabilitation and not be mixed with any other materials.

- n. Topsoil storage areas must be convex and should not exceed 2m in height.
- o. The Contractor must ensure that the material does not blow or wash away.
- p. Topsoil must be treated with care, must not be buried or in any other way be rendered unsuitable for further use (e.g. by mixing with spoil) and precautions must be taken to prevent unnecessary handling and compaction.
- q. In particular, topsoil must not be subject to compaction greater than 1 500 kg/m² and must not be pushed by a bulldozer for more than 50 m. Trucks may not be driven over the stockpiles.
- r. Topsoil from different soil types must be stockpiled separately and replaced in the same areas from which they were taken if this proves to be the case.
- s. Specific attention should be given to the areas that may house rare and threatened species.
- t. Topsoil areas must be demarcated in order to ensure the safekeeping of topsoil and to separate different stockpile types.

MS 4: Fauna & Flora Management and Vegetation Clearance

MS 6: Removal and stockpiling of top soil and other excavated material

6.13 Watercourse and Estuarine Ecosystem Management

- a. Vehicular movement should be restricted to a single access roadway only and no movement within the estuary floodplain.
- b. All alien vegetation should be cleared on the estuary banks, and no disturbance on estuary banks, within the floodplain, or within the tidal zone should be affected.
- c. The construction teams should be prohibited from unnecessary destruction of estuarine vegetation or fishing.
- d. Earthmoving equipment and vehicles should be serviced and inspected regularly to allow for the timeous identification of any fluid leaks. Hydrocarbon contamination of the watercourse and estuarine habitat is rated as a high impact.
- e. Water shall not be abstracted from the estuary.
- f. No washing of vehicles and machinery within 32 m of the High Water Mark or close to storm water drains and only at designated areas defined by botanist/terrestrial ecologist.
- g. The construction area footprint associated with the span across the Keurbooms Estuary should be maintained at a bare minimum to minimise the potential ecological impacts.
- h. No construction or structures to be placed within the estuary, the floodplain or any other water course.
- i. Site work must ideally be undertaken during the dry season (November – April) to minimise damage to sensitive estuarine habitats.
- j. Excessive stormwater runoff should be managed to abate siltation of the adjacent estuarine habitat;
- k. The surrounding areas of Substation Site C and the proposed pylon near the estuary should not be used for construction or storage of materials and disturbance must be limited to the construction track and pylon footprint.
- l. Proposed method for stringing the cables between pylons must be strictly adhered to (refer to method statement 16).
- m. The Contractor in association with the Project Coordinator to ensure compliance of workers with good environmental practices and general conduct as per their environmental awareness induction training.
- n. Any bare ground areas of the Substation Site C that do not have hard infrastructure should be covered by suitable groundcover such as gravel or indigenous turf forming grass such as *Cynodon dactylon* to minimise soil erosion.

MS 7: Watercourses and Estuarine Management

MS 15: Stringing of conductor over the estuary and “wet areas”

6.14 Stormwater Management

- a. Stormwater inflow shall be diverted from operations to reduce the risk of contamination.
- b. Any “wet” activities during construction shall be contained to limit stormwater contamination.
- c. Sand bags or other suitable containment structures shall be provided at the point of stormwater exit from the construction zone to reduce the flow and to trap sediment.

- d. Contaminated water by silt, cement, bitumen or any other construction materials shall be diverted into a temporary settlement pond or suitable containers to settle out materials before the water can be decanted into the ground and/or watercourse. The settled material shall be disposed of in an environmentally acceptable manner.
- e. Under no circumstances shall any contaminated stormwater, chemical, sediment or otherwise be allowed to drain into the Keurbooms Estuary.

MS 11: Erosion and Sediment Control

6.15 Erosion Control

- a. All vehicles to remain within the designated vehicle tracks;
- b. Should it be necessary to plant a pole on a slope ensure that the necessary erosion prevention measures are put in place;
- c. Erosion control should form part of the on-going construction site management.
- d. During excavations the substation or pylons, care should be taken that areas susceptible to erosion are protected by temporary drainage channels.
- e. Erosion channels on any slopes should not form and proper mitigation techniques, such as stabilization, should be implemented. If erosion channels do form, they shall be filled up and compacted to return the slope/gradient to its original condition. Re-vegetation, with indigenous species, shall be done upon completion of works in the affected area(s).
- f. During excavations, sedimentation from excavated material or from erosion shall be kept to a minimum by installing suitable barriers, such as sediment traps, at water exit points (e.g. stormwater drains). Sedimentation shall not be permitted to flow into the Keurbooms Estuary.
- g. After excavation, the affected area shall be stabilized accordingly to prevent any erosion or sediment runoff. Stabilized areas shall be demarcated accordingly.
- h. Stabilized areas where through-fare is necessary for vehicles and excavation equipment, shall be monitored carefully and traffic kept to a minimum. Any de-stabilization shall be restored.
- i. Where necessary, stream and river banks shall be restored with a low gradient and re-vegetated to prevent erosion.
- j. Areas no longer under excavation shall be rehabilitated, including vegetation, as quickly as possible to mitigate erosion and sediment runoff, especially at steep gradients and slopes. For land rehabilitation and vegetative conservation see Sections 7.3 and 7.5 respectively.

MS 11: Erosion and Sediment Control

6.16 Dust Control

- a. Generation of dust shall be minimised and dust nuisance for the surrounding agricultural and residential areas shall be kept to a minimum wherever possible.
- b. Dust from exposed soil surfaces shall be minimised at all times, only using water spray during very windy conditions and if water is available at areas adjacent to residents' dwellings.
- c. Reasonable measures must be undertaken by the Contractor to ensure that any exposed areas and material stockpiles are adequately protected against the wind. Dust screens of a suitable height should be erected wherever required and possible.
- d. All exposed surfaces should be minimised in terms of duration of exposure to wind and stormwater.

MS 8: Dust control

6.17 Noise

- a. The Contractor shall adhere to the local by-laws and regulations regarding the noise and associated hours of operations.
- b. The Contractor shall limit noise levels (e.g. install and maintain silencers on machinery). The provisions of SANS 1200A Subclause 4.1 regarding "built-up" area shall apply to all areas within audible distance of residents whether in urban, peri-urban or rural areas.
- c. Construction and demolition activities generating output of 85dB or more, shall be limited to normal working hours and not allowed during weekends to limit the impact of noise of neighbours. Should the Contractor need to work outside normal working hours, the surrounding neighbours shall be informed prior to the work taking place.

- d. No amplified music shall be allowed on site.

6.18 Cultural Heritage

- a. Should any human remains or archaeological remains (e.g. fossils, bones, artefacts etc.) be disturbed, exposed or uncovered during excavations for the proposed Substation and overhead Powerlines, the Contractor shall stop work immediately and inform the ECO who must Contact the South African Heritage Resources Agency (SAHRA) or Heritage Western Cape (HWC) for information on the appropriate course of action to be taken.
- b. The ECO shall inform the South African Heritage Resource Agency (SAHRA) and arrange for a palaeontologist/ archaeologist to inspect, and if necessary excavate, the material, subject to acquiring the requisite approval from the SAHRA; and
- c. Should any findings be made, the Contractor shall not recommence working in that area until he has received written permission from the ECO.
- d. In the event that previously unknown archaeological features are exposed during the construction phase, the Contractor should inform the Engineer and the ECO who will advise Applicant on the necessary course of action.
- e. Note that the Contractor may not, without a permit issued by the responsible heritage resource authority; destroy, damage, excavate, alter, deface or otherwise disturb any archaeological site or archaeological material. The latter is a criminal offence under the Heritage Resources Act.

6.19 Conservation of Natural Resources

- a. Unnecessary access to the road reserve i.e. off the existing road shall be prohibited.
- b. Access to adjacent watercourses (for any purposes i.e. swimming, water collection, bathing or washing) is strictly prohibited.
- c. No watercourse or stream shall be diverted or modified in any way without approval from Department of Water Affairs (GA or WULA required) and the PC and ECO. Construction activities shall not permanently alter the surface or sub-surface flow of water through any aquatic ecosystem.
- d. Natural features shall not be defaced, painted, marked or damaged in any way, unless it is for construction activity purposes and cleared with the PC and ECO beforehand.
- e. Vegetation associated with wetlands, pans and dunes shall not be disturbed or removed.
- f. No hunting, fishing, trapping, shooting, or poisoning of wildlife shall occur. Feeding or disturbance of wildlife is strictly prohibited.
- g. No construction materials shall be deposited in any wetland/pan or sensitive environment.
- h. No flora, fauna or avifauna shall be removed or damaged.
Removal of any vegetation which is considered an endangered species or protected species listed in Schedules 3 and 4 in terms of the Western Cape Conservation Laws Amendment Act (No. 3 of 2000) may not be removed without a relevant permit obtained from Cape Nature.
- i. Natural vegetation clearing shall be kept to a minimum. Removal or damage of flora without prior consent of the PC or ECO is strictly prohibited.
- j. Care must be taken to avoid the introduction of alien plant species to the site and surrounding areas. Particular attention must be paid to imported material.
- k. Re-vegetation and rehabilitation of the cleared areas shall be undertaken as the works are completed at that section as per Method Statement 13 (Section 7).

6.20 Water Conservation Management

- a. The minimisation of loss or waste of water, and the efficient and effective use of water shall be maintained on site at all times.
- b. All hoses shall be fitted with trigger-gun spray nozzles to limit water wastage.
- c. Dry sweeping shall be undertaken in preference to washing of areas and equipment wherever possible.
- d. Vehicles may not be washed on site.
- e. The Contractor shall be responsible for ensuring that there is access to clean drinking water for all employees on site. If water is stored on site, drinking water and multi-purpose water storage facilities shall be clearly distinguished and demarcated.

6.21 Fire Control

- a. All fire requirements shall be carried out as contained in the National Building Regulations SABS 0400 and the safety code of the N.F.P.A.

- b. The contractor shall appoint a Fire Officer who shall be aware of the location of fire fighting equipment and take control in the event of a fire. The Fire Officer shall also be responsible that all staff on-site are aware of the protocols to be followed should a fire occur.
- c. The Contractor shall ensure that the risk of fires is minimised as much as possible.
- d. The Contractor shall take all reasonable and active steps to avoid increasing the risk of fire through their activities on site. The Contractor shall ensure that the basic fire-fighting equipment is to the satisfaction of the Local Fire Services. The Contractor shall designate a Fire Control Officer. The Contractor shall ensure that all the correct fire-fighting equipment is available on site and within easy access.
- e. No open fires for cooking or heating purposes shall be allowed.
- f. Fires for the purpose of on-site work may be allowed, however a designated area shall be approved by the PC prior to starting the fire. Fire fighting equipment shall be present at the location for the duration of the fire.
- g. The disposal of any matter by burning is prohibited.
- h. No smoking will be allowed on site, except in designated smoking points.

MS 12: Fire control

6.22 Traffic Control

- a. The Contractor must control the movement of all vehicles (construction and private) including that of his suppliers so that they remain on designated routes.
- b. Temporary road signs must be erected during the construction phase.
- c. Single directional traffic shall be controlled through a stop-go system or any other appropriate traffic control method.
- d. During all stages of the construction, the Contractor shall be responsible to for ensuring that suitable access is maintained for public traffic to all relevant businesses and properties.
- e. The final position of the temporary signs and the proposed traffic accommodation plan must be approved by the Engineer.
- f. All traffic accommodation measures are to conform to the latest edition of the South African Road Signs Manual.

MS 10: Traffic accommodation

6.23 Visual Impact Management

- a. The Contractor is referred to the mitigation measures of the Visual Impact Assessment (dated May 2012 and attached in Appendix D of the BAR) which notes the following:
- b. All structures on the substation site are to be kept as low as possible in the landscape.
- c. The use of concrete is to be kept to a minimum as this will facilitate better decommissioning.
- d. The gate along the R340, and any signage, is to be in line with local usages and not draw attention.
- e. All colours and finishes of the building on the substation site are to be chosen for their ability to blend in to the local environment. The face brick finish is to be of a dark earth tone and the roof to be charcoal grey.
- f. All galvanized elements are to be left to weather rather than being painted. This includes the transmission line pylons and the palisade fence. If, at some stage in the future the fence needs to be painted, the colour should be dark grey or black. The use of green is to be avoided.
- g. Excavation on the site is to be kept to the absolute minimum required for the successful implementation of the project.
- h. The design and construction methods must be planned in such a way that the maximum amount of natural vegetation is left undisturbed. This is especially true for the cliff face, the disturbance of which could greatly increase the visual impact.
- i. Sufficient lighting may be used that staff can access and operate the site safely at night. Any lighting which may be needed for operations or maintenance at night must be shielded in such a way that no direct light is allowed to escape into the surrounding terrain or up into the sky. Only the areas that are necessary to be lit must be lit, the surrounding terrain being protected from any light pollution. No direct light sources must be visible from the N2 or the R340 although reflected light is permissible (See Addendum 2 of VIA for the general principles involved).
- j. The design phase must take into consideration the need for partial vegetative screening of the substation site between the fence and the water channel using shrub and tree species that are endemic

and will not require regular maintenance. It will be impossible to screen the whole of the substation site but the aim must be to provide a vegetative foreground which partially screens the site, with the visible parts of the substation seen as the middle ground, and the cliff face providing the background.

- k. A photographic record of the site and its immediate surrounding area must be kept as part of the EMP to serve as a baseline for measurement of all future visual impacts and as an aid to the full rehabilitation of the site should the facility be decommissioned in future.
- l. The disturbance of the existing environment around the substation and along the route of the transmission line is to be kept to a minimum.
- m. All areas where disturbance of the existing environment is not necessary are to be marked or fenced off and access to these areas by the construction crews is to be prohibited.
- n. All stockpiles necessary for the construction of the substation and the transmission line, such as cement and other building materials, diesel etc., must be prevented from entering the natural environment by any means whatsoever including dispersion by wind or water.
- o. All littering is to be strictly controlled.
- p. All areas that need to be disturbed in the construction process but are not required during the operation of the facility must be rehabilitated as soon as possible after their use is no longer needed. This includes specifically any areas that need to be disturbed by the installation of the pylons.
- q. The use of fire by the construction workers is to be strictly controlled so that bush fires, especially on the substation site, are prevented. These could have a significant short-term visual impact if allowed to occur

6.24 Access Track Management

- a. The Contractor is referred to the mitigation measures of the Botanical Impact Assessment (dated July 2013 and attached in Appendix D of the BAR) which notes the following:
- b. All structures on the substation site are to be kept as low as possible in the landscape.
- c. Vegetation removal and disturbance to be limited to the track only.
- d. No storing of equipment or parking of vehicles outside of the proposed route of the track within Erf 448/5.
- e. There are several sensitive areas with plants of particular conservation value that should not be disturbed in any manner. These locations must be clearly demarcated with hazard tape and cordoned off:

Table 1. GPS Coordinates for sensitive areas to be avoided near the proposed access track.

Site	Species	Geographic coordinates	
		Latitude	Longitude
1	<i>Pterocelastrus rostratus</i>	-34.01107	23.38972
2	<i>Pterocelastrus rostratus</i>	-34.01080	23.39001
3	<i>Pterocelastrus rostratus</i>	-34.01044	23.39036
5	<i>Pterocelastrus rostratus</i>	-34.01017	23.39060
4	<i>Chasmanthe aethiopica</i>	-34.01021	23.39059
6	<i>Sideroxylon inerme</i>	-34.01007	23.39068

- f. The mechanism to remove vegetation must not include any poisons due to the proximity of the route to the Bitou Estuary.
- g. Vegetation must be removed in a manner that allows the roots of bushes and shrubs to remain in the ground as far as possible so that there is a chance of re-growth. Appropriate methods of vegetation removal would be the use of mowers, pangas and chainsaws. No bulldozing, grading or disturbance of the soil should be permitted.
- h. No workers allowed between the end of the proposed track and the estuary.
- i. No access to or below the High Water Mark of the estuary.
- j. No access to any areas off of the proposed access route.
- k. All cleared alien vegetation must be removed from the site and taken to a suitable landfill area.
- l. All cleared indigenous vegetation should be used to make mulch and applied in subsequent rehabilitation efforts during decommissioning. Mitigation measures regarding the rehabilitation of the site are outlined further in Section **Error! Reference source not found.**
- m. There are several invasive alien species growing in the way of proposed access route, directly adjacent to it and within the precinct of Erf 448/5 that are listed in Category 1 of the Conservation of Agricultural

Resources Act. According to the Act the responsible landowner is under legal obligation to destroy these species immediately: *Tecoma stans* and *Acacia longifolia*

- n. Furthermore, there are several alien invader species listed under Category 2 of the Act that should be destroyed as they are not being *grown under controlled conditions*: *Acacia mearnsii*, *Ricinus communis*, *Melia azedarach*, *Pinus* spp.
- o. All foreign material brought on to site to be removed during and once clearing is finished.
- p. Vehicles must keep to the access track at all times and reverse out. No turning at the end of the access track as per the plans for the access track
- q. Although unlikely, if the site becomes muddy vehicles should not be driven on the access track until it has dried out.
- r. Vehicles should be driven up and down the access track as little as is practically possible.
- s. All alien vegetation must be removed periodically, at least once a year from the area cleared for the access track.
- t. Alien plants to be removed mechanically and herbicides only to be used at distances of greater than 32 m from the estuary High Water Mark.
- u. Any other alien vegetation on Erf 448/5 should also be destroyed as many of these species are listed under Category 1 & 2 of the Conservation of Agricultural resources Act, and therefore, according to the Act, the landowner is under legal obligation to do so immediately.

6.25 Safety and emergency procedures, risk management and training

- a. The application of all Occupational Health and Safety Regulations must be ensured. This includes the distribution and use of protective clothing and equipment to at least include safety shoes, overalls, gloves, dust masks, and where appropriate ear muffs and eye/face protection shields.
- b. Handout and use of safety and protective equipment must be recorded. Staff who fails to use the protective equipment provided by site staff must not be allowed to work at the facility.
- c. Emergency procedures for fire, adverse conditions due to inclement weather, spillages, stoppage of operations due to refusal to work by employees, etc. must be included in the emergency procedures.
- d. All relevant fire fighting equipment should be kept on site.
- e. All staff working on site shall be trained in all relevant aspects of the Occupational Health and Safety Act No. 86 of 1993 and relevant regulations promulgated under this act.
- f. The Site Manager shall be assigned as the Safety Coordinator for the facility and the Site Manager shall assign a person as deputy to act when appropriate.

The following requirements would be the minimum for the safety program:

- i. Orientation of new employees including safety training and emergency contingency planning.
- ii. Accident reporting procedures for notification to the Employer and after appropriate agencies.
- iii. Thorough investigation and documentation of all accidents to ascertain the cause and future methods of preventing recurrence.
- iv. Mandatory first aid instruction for all staff members.
- v. Regularly scheduled safety meetings.
- vi. Fire prevention and fire fighting instruction.
- vii. Routine inspection and testing procedure for all safety and emergency equipment and protective devices, and routine walk through inspections conducted by the Operator through all areas to identify and correct potential unsafe conditions.
- viii. Posting of safety bulletins and posters required by regulatory agencies and other materials concerning accident prevention and hazardous conditions.
- ix. The Contractor shall abide by all local, provincial and national safety requirements.
- x. The Contractor shall provide for a first aid station and emergency medical response for injured staff.

6.26 Failure of equipment

- a. All plant/equipment failure must be repaired or replaced by the Contractor without any undue delay or adverse effect to the operation of the site.
- b. This includes all mechanical equipment and tools, safety and warning systems.
- c. The Operator will ensure that all equipment is maintained in a safe operating condition.
- d. All vehicles & machinery should be checked daily for oil and chemical leaks. Leaking machines not to be used.

6.27 Accident and incident control and reporting

- a. All accidents must be recorded irrespective of the severity or seriousness of injuries and damage. Data about the accident must be provided within 24 hours after occurrence or by end of shift to construction supervisor, Eskom safety officer or via a flash report to the Eskom Safety & Risk Department.
- b. Appropriate recording documents must be available on site and a person must be designated as the Health and Safety Officer.
- c. Appropriate authorities and law enforcement officers must be included in investigations into accidents.
- d. Steps to avoid recurrence of similar accidents must be identified and implemented. The steps must be recorded and monitored.
- e. Incidents must be recorded in an incident register noting the time, date and place where the incident occurred, who and what was involved, and a detailed description of the incident must be included in the report. Refer to the Proforma attached at Appendix 5.
- f. Actions taken to address the occurrence of the incident, as well as the avoidance of recurrence of the incident must be recorded.

6.28 Public information management and community relations

- a. The right of the public to information shall be respected in accordance with relevant legislation.
- b. No person requesting reasonable information will be sent away without supply of the information. This will be limited to site operating conditions and procedures.
- c. General disturbance should be kept to a minimum. The Contractor shall be responsible for responding to third party or public queries and/or complaints relating to operations.
- d. The Contractor shall be responsible for maintaining a Complaints Register to record complaints received and action taken. This register shall be made available to the DEA if requested.

7 POST CONSTRUCTION PHASE (OPERATIONAL PHASE)

This relates to the activities that occur once construction is completed and the construction camp is dismantled and the site rehabilitated. It is important that a meeting be held on site between the Applicant, ER and the Contractor to approve all the remediation measures and to ensure that the site has been restored to a condition that is approved by the ER.

7.1 *Maintenance of access roads and Powerlines*

- a. Use existing access roads/tracks during maintenance periods;
- b. Existing gates and entrance walls should not be removed or damaged unless negotiated with the landowner;
- c. Should the entrance gates be too small for access, they can only be removed with the permission of the property owner;
- d. Permission must be sought from all property owners before private property is accessed;
- e. Property owners access to their property must remain clear at all times;
- f. Ensure that access to the Powerline route are along negotiated routes as required by landowners;
- g. Access roads damaged by Eskom vehicles must be rehabilitated to the landowners' satisfaction within an agreed period from date of identification.
- h. On gravel or earth roads on Site, the vehicles of the Contractor and his suppliers must not exceed a speed of 25 km/h. On public roads adjacent to the Site vehicles will adhere to municipal and provincial traffic regulations.
- i. As far as possible any access routes/haul roads must utilise existing roads or tracks. Any new access roads/haul roads must be designed so as to minimise erosion and must run across slopes and not directly up-hill.
- j. Should an additional access route be required, the access must be agreed upon with the relevant property owner in conjunction with the contractor. A written agreement must be in place, prior to any construction of the said access route.
- k. Woody Alien invasive vegetation within the servitude area of the Powerline should be removed on a recommended annual basis or based on the Eskom vegetation management schedule or once safety clearance encroachment is observed.

7.2 *Construction Site*

- a. All structures comprising the construction site are to be removed from the site and the area restored to its original condition, to the approval of the relevant landowner.
- b. Any fencing which was erected at the site prior to the/during the operational phase shall be removed.
- c. All building rubble, construction material and litter shall be removed during and once construction is finished.
- d. The area should be inspected for spills such as from vehicles, if any are found need to be disposed of accordingly and rehabilitated as necessary.

7.3 *Land Rehabilitation*

- a. The PC/Contractor shall make sure that a budget equivalent to 10% of the total project value is set aside for rehabilitation. This requirement shall be included in the contractor tender contract.
- b. All unwanted soil from the construction phase is to be removed from the site.
- c. The site is to be free of litter and surfaces are to be checked for waste products.
- d. Any excess material with exception of the topsoil shall be levelled and formed to blend into the landscape.
- e. Topsoil that has been stored during the construction activity phase shall be re-distributed over the entire area where disturbance occurred.
- f. Care should be taken to avoid soil erosion during the rehabilitation phase as much as possible. This is especially important at steep gradients and near cliffs. These areas include substation and/or pylon footprint where disturbance occurred, as well as access roads and the stockpile areas (if applicable).
- g. A survey of the rehabilitated land shall be conducted by the contractor upon phase completion for the final closure report.

7.4 Access Track Operation and Decommissioning/Rehabilitation

The Contractor is referred to the mitigation measures of the Botanical Impact Assessment (dated July 2013 and attached in Appendix D of the BAR) for the proposed access track between Pylon B15 and B16 which notes the following:

- a. Vehicles must keep to the access track at all times and reverse out. No turning at the end of the access track as per the plans for the access track
- b. Although unlikely, if the site becomes muddy vehicles should not be driven on the access track until it has dried out.
- c. Vehicles should be driven up and down the access track as little as is practically possible.
- d. All chemicals such as petrol and oil should be responsibly contained and used
- e. Contractor in association with the Project Coordinator to ensure compliance of workers with good environmental practices and general conduct as per their environmental awareness induction training.
- f. The track must be decommissioned within 2 years of the vegetation being cleared so that appropriate rehabilitation can commence within a reasonable time.
- g. Rehabilitation of the site must include mitigation of any signs of early erosion and re-vegetation with appropriate vegetation indigenous to that habitat.
- h. Rehabilitation must be undertaken under the guidance of a qualified rehabilitation ecologist.
- i. The rehabilitation plan must undertake to re-vegetate the area with suitable indigenous vegetation from the area back to a natural or near-natural state in order to minimize the chance of alien plant infestations (as per the Garden Route Initiative Fine-Scale Biodiversity Planning Projects management objectives (SANParks and Garden Route Initiative 2010)).
- j. All alien vegetation must be removed periodically, at least once a year from the area cleared for the access track.
- k. Alien plants to be removed mechanically and herbicides only to be used at distances of greater than 32 m from the estuary High Water Mark.
- l. Any other alien vegetation on Erf 448/5 should also be destroyed as many of these species are listed under Category 1 & 2 of the Conservation of Agricultural resources Act, and therefore, according to the Act, the landowner is under legal obligation to do so immediately.

MS 15: Rehabilitation of temporary access road

7.5 Materials and Infrastructure

- a. All remaining building materials and equipment shall be removed from the site by the Contractor once construction is complete.
- b. The pylon must be bird-friendly, with sufficiently large gaps between the conducting elements and the metalwork, and with perching surfaces spaced adequately away from the conductors to prevent even large birds such as the African Fish- Eagle from bridging these gaps.
- c. Bird-guards should be fitted where birds might perch above the conductors to reduce bird-streamer related shorting.
- d. Bird-guards to be replaced as and when required for the duration of the project.
- e. Power lines over Estuarine Functional Zone should be fitted with FireFlies or After Glows and not bird flappers or other bird diversion devices which work during daylight only. The precise placement of the After Glows/Fireflies on the power line to be done under the guidance of an ornithologist.
- f. Impaired/old After Glows & FireFlies to be replaced periodically (3-5 years) as and when required for the lifetime of the project.

7.6 Vegetation and Conservation Management

- a. Re-vegetation and rehabilitation of the site would have been in progress throughout the construction phase and shall be completed at this stage.
- b. Fire is needed to maintain re-seeding of indigenous species, thus fire should be seen as a maintenance tool. Fynbos should burn every 12 to 14 years.
- c. Indigenous vegetation on site shall not be brush cut for two consecutive years. Time should be allowed for seed set and seed bank accumulation.
- d. Pruning of old stems shall be avoided wherever possible.
- e. Ancient trees such as milkwoods shall not be pruned unless a license has been obtained through DAFF.

- f. Care should be taken that invasive or alien plant species do not establish at the site during or after the rehabilitation phase. On-going monitoring and clearing (at least once per year) shall be undertaken if necessary.
- g. Alien vegetation must be removed from the disturbed areas for a period of at least ten years post construction until the area has been suitably rehabilitated.
- h. The use of herbicides, pesticides or any other chemicals, within 32m of the High Water Mark or adjacent to any culverts or storm water drains, which may have a detrimental effect on any watercourses shall not be used unless cleared with the ER and the ECO.
- i. Herbicide shall only be used on invasive alien plant species.
- j. No alien and/or invasive flora may be used in rehabilitation. Only indigenous vegetation may be planted where required as it will not require watering.

MS 13: Re-vegetation and land rehabilitation in areas disturbed by construction activities.

8 AMENDMENTS TO THE EMP

Any major issues not covered in the EMP as submitted shall be addressed as an addendum to the EMP, submitted for approval by DEA prior to implementation.

METHOD STATEMENT FOR THE:

This method statement is to be completed by the Contractor (in consultation with the PC and ECO) at least 5 working days prior to the proposed commencement date of the said work and represents a binding agreement to the method statement by all site contractors and sub-contractors involved in the work for which the method statement is submitted.

DATE OF SUBMISSION: _____

LEAD CONTRACTOR: _____

OTHER CONTRACTORS AND/OR SUB-CONTRACTORS: _____

Describe in detail what work is to be undertaken?

Describe in detail where on the site the works are to be undertaken and the extent? Provide a sketch plan and grid block reference.

Lead supervisor/foreman name and contact details: _____

Number of personnel: _____

Construction activities: _____

Plant and machinery to be used: _____

Other: _____

What environmental impacts are anticipated and what precautions are proposed to prevent these impacts? (Refer to the relevant sections of the EMP for guidance and provide general site camp layout).

Toilet facilities: _____

Litter: _____

Security: _____

Plant/machinery (operation, servicing, management, storage, refueling, etc).

Emergencies and fire: _____

Hazardous materials (handling, management, storage):

Have all personnel involved been through an environmental induction course:

Petrochemical spill remediation and containment measures:

Other:

DECLARATION BY PARTIES

Contractor:

I understand the contents of the method statement and the scope of the works required of me. I further understand that the method statement may be amended on application to the above signatories and that the Environmental Control Officer will audit my compliance with the contents of this method statement.

Print Name

Date

Signed

Environmental Control Officer (ECO):

The work described in this method statement, if carried out according to the methodology described, is satisfactory mitigation to prevent avoidable environmental harm.

Print Name

Date

Signed

Project Co-ordinator (PC):

The work described in this method statement, if carried out according to the methodology described, is satisfactory mitigation to prevent avoidable environmental harm.

Print Name

Date

Signed

**APPENDIX 2
METHOD STATEMENT CONTROL SHEET**

PROPOSED INSTALLATION OF A 66kV OVERHEAD POWERLINE (2.5km) AND NEW SUBSTATION ON FARM 305/16 EAST OF THE BITOU RIVER, WESTERN CAPE

CONTRACT NO: _____

METHOD STATEMENT CONTROL SHEET

(This control sheet is to be attached to all methods statements)

MS Number:

THIS SECTION TO BE COMPLETED BY THE CONTRACTOR/METHOD STATEMENT AUTHOR ONLY

TITLE:
DESCRIPTION:
SUBMITTED BY:

Date requested by: _____ Date submitted: _____

Date response required by: _____ Date work start: _____

REVIEW SCHEDULE		
Date	Authority	Comments

DISTRIBUTION AND AUTHORISATION			
	ER	ECO	CONTRACTOR
Name			
Signature			
Date			

PROPOSED INSTALLATION OF A 66kV OVERHEAD POWERLINE (2.5km) AND NEW SUBSTATION ON FARM 305/16 EAST OF THE BITOU RIVER, WESTERN CAPE

CONTRACT NO: _____

CONSTRUCTION ENVIRONMENTAL MANAGEMENT PROGRAMME (EMP)

MADE AND ENTERED BETWEEN

ESKOM HOLDINGS SOC LTD.

Herein represented by: _____

In his/her capacity as: _____

Duly authorised hereto

Hereafter referred to as: **ESKOM**

AND

Herein represented by: _____

In his/her capacity as: _____

Duly authorised hereto

Hereafter referred to as the Contractor:

.....

The parties record that the Contractor shall be responsible for the following in terms of this EMP Contract:

1. Comply with all the provisions of the EMP, in particular to prepare the listed Method Statements.
2. Comply with the requirements of the Occupational Health and Safety Act (no. 85 of 1993).
3. Ensure sub-contractors comply with the EMP.
4. Enforce compliance with the EMP by:
 - o Appointing an Environmental Control Officer and
 - o Ensuring that staff is familiar with the EMP.
5. Protect the environment of the site against environmental damage and rehabilitate any damage caused.
6. Failure to comply with the provisions of the attached EMP will result in the implementation of the fines as listed.
7. Reported non-compliance may result in the suspension of work or termination of the contract.

**APPENDIX 4
INCIDENT AND ENVIRONMENTAL LOG**

ENVIRONMENTAL INCIDENT LOG				
Date	Env. Condition	Comments <i>(Include any possible explanations for current condition and possible responsible parties. Include photographs, records etc. if available)</i>	Corrective Action Taken <i>(Give details and attach documentation as far as possible)</i>	Signature

SCHEDULE OF FINES FOR ENVIRONMENTAL DAMAGE OR EMP TRANSGRESSIONS

A system of penalties will be introduced to reinforce environmentally sensitive behaviour. The Eskom penalties are listed below. The figures shown are the maximum penalty per incident. The penalty will be influenced by the severity of the offence.

Note: The maximum fine for any environmental damage will never be less than the cost of applicable environmental rehabilitation.

PHASE	Penalty for Non-compliance	
PRE-CONSTRUCTION PHASE	Bottom range	Top Range*
Failure to demarcate Construction area/working areas off before construction starts.	500	5000
Failure to maintain demarcated area(s) throughout the construction phase	500	1000
Failure to demarcate stock piling area of building materials	500	5000
Fencing off the construction site with mesh fencing of 1.8m, where necessary or other suitable material as agreed on by ECO and contract specifications	500	1000
Sitting of access road/s to be approved by ECO & demarcated with stakes before any construction starts (if applicable)	500	5000
Temporary route used for construction must be determined on site with ECO (if applicable)	1000	5000
Telecommunications & AC power routes must be determined with the ECO (if applicable)	1000	5000
Sensitive features that may be harmed/removed/harvested must be clearly marked or demarcated and all construction team must be made aware of this.	2000	2000
failure to give environmental awareness to Construction team and all sub-contractors of all environmental aspects that could lead to imposition of environmental penalties/fines	1000	5000
Contractor, Project Coordinator and clerk of works must sign Declaration of understanding (DOU) for the approved Environmental Management Plan and Environmental Authorisation before construction starts	1000	5000
All appointed contractor must attend Environmental Training Contractor to assure that all subcontractors be informed and signed DOU	1000	5000
Method statements must be provided on request by the ECO. No work may commence until the Method Statement is accepted by the ECO/Project Coordinator and Clerk of Works and contractor representative.	1000	5000
CONSTRUCTION PHASE		
Information		
Failure to keep a copy of the EMP & Environmental Authorisation/Record of Decision (ROD) with all the conditions of approval and the relevant Method Statements must be kept on at site at all times.	200	5000
Construction team behaviour	200	2000
Construction team may not overnight on site.	200	5000
All noise and sound generated during all phases of the projects must comply with the relevant SANS codes and standards.	100	200
Construction crew must stay within the demarcated construction area. (Applicable in sensitive sites)	500	5000
Eating of meals only allowed in demarcated area	50	500
No pets permitted on site		100
Failure to park all construction vehicle on the demarcated area and provision of any oil leaks must be made for example Drip trays	1000	5000
Driving, parking and storing of machinery vehicles are only allowed inside demarcated areas and existing roads.	500	5000
Machinery may only be used on the road and may not disturb the vegetation on the sides of the road except if cleared by ECO. Machinery used must be carefully considered to limit environmental damage	500	5000
Failure to conduct bush clearing according to Eskom procedure for vegetation clearance and maintenance within the Overhead Powerline Servidute and on Eskom owned land (refer to EPC 32-247)	500	5000
Failure to undertake herbicide spraying under the supervision of registered	500	2000

Pest Control Officer.		
Excavations		
No topsoil may be removed or altered outside the demarcated area and/or which was not specified.	500	2000
Commercial sources of sand, rock and gravel to be cleared with ECO	200	5000
All surplus material to be taken off-site and be disposed of at approved site	500	5000
Toilets		
Failure to put ablution facilities on site for the construction worker during the construction phase. These facilities must be used by the construction workers and be removed when the project is completed.	100	1000
Failure serviced the toilets regularly, (according to the manufacturer's instructions) and kept clean.	100	1000
Fire Prevention		
Failure to keep fire equipment on site all	500	4000
Failure to keep Fire fighting equipment to be in good working order and serviced.	500	2000
Keeping of open fire on site, this pose a risk of fire.	1000	5000
Dust pollution control		
Failure to suppress dust through regular water spraying the emitted during the construction phase (Site specific/weather Dependent)	500	2000
Water run-off		
No Contamination of water bodies, rivers, dams or wetlands is permitted	500	5000
Failure to special care where the power line will cross river, streams or wetlands.	500	5000
Waste Management		
Failure to provide dust bins/skip on site in order to handle all waste litter generated during construction phase of the project.	500	2000
General litter / building refuse must be cleaned up on a regular basis from the site	500	3000
Cement-contaminated water; paint; oil; cement slurries etc must be stored in watertight containers or as agreed with ECO	500	5000
Failure to report oil spillage to Environmental Practitioner via flash report within 24 hours of the spill occurring	500	2000
	500	2000
Concrete may only be mixed within the boundaries of the demarcated area and/or where was agreed on by the ECO.	500	5000
Any cement / concrete spillage to be cleaned up immediately.	500	5000
Ready-mix delivery trucks must not carry out the wash down of their trucks on or around the site unless arranged with ECO.	1000	3000
Waste must be disposed of at an official waste deposit site on a regular basis.	500	5000
The absence of or inadequate drip trays or binding facilities for on site oil leakage	500	5000
Failure to clean up oil/fuel leaks from on-site machinery	200	5000
Failure to keep oil spill remediation chemicals on site.	500	2000
Herbicides		
Failure to used herbicide spraying under the supervision of registered Pest Control Officer.	200	2000
Soil erosion		
Failure to prevent degradation and soil erosion on the construction site.	500	5000
Failure to notify properties owners of the construction before commencement	200	5000
Rehabilitation		
Failure to remove rocks and stones/stock pile in area recommended by ECO	500	5000
Failure to remove all plants that can be used for rehabilitation and store on- or off-site in appropriate manner as agreed with ECO	200	5000
Failure to removal all old concrete and alien materials from site	500	5000
Failure to cleared all waste and building material on site before commissioning of the project	500	5000
General		
Failure to comply with the Environmental Conditions of the approved Environmental Authorisation as per Record of Decision (ROD)	5000	10 000

*(Large scale / repeated offence)

ECO = Environmental Control Officer
ESO= Environmental Site Officer
EO= Environmental Officer

APPENDIX 6

**METHOD STATEMENT: STRINGING OF THE POWERLINE/CONDUCTOR CABLES
OVER THE BITOU RIVER/KEURBOOMS ESTUARY**

Method Statement for:

Construction of Structure Foundations, Erection of Structures and Stringing of Conductors for Robberg-Bitou Project

1. Purpose:

- 1.1. To determine the minimum work area required for each structure.
- 1.2. To limit the area to be affected by the construction activities for each structure.
- 1.3. To implement the access plan per structure
- 1.4. To determine if any protected plants exist on the site that needs to be rescued or trees removed.
- 1.5. To allow affected parties time to influence the excavation/Site
- 1.6. To ensure compliance with all Acts and legal requirements
- 1.7. To rehabilitate the affected area upon completion of construction activities

2. Method:

- 2.1. Peg structure centre line; x-and y axis; footing positions and sizes of each pad (4) foundation in order to indicate size of foundation. (Total Footprint)
- 2.2. Determine where topsoil and subgrade material will be stockpiled during construction.
- 2.3. Plan area for fitting/layout of structure, position for crane and access for concrete truck and the related turning circles.
- 2.4. Demarcate the total area needed for the construction activities using candy stripe tape.
- 2.5. Demarcate the access road to the site as indicated in 2.4
- 2.6. Commission botanist to complete sensitivity assessment of the access route and demarcated site (only on recommendation of ECO if needed)
- 2.7. Mark species that needs to be rescued or removed.
- 2.8. Determine if any permits are required and list them.
- 2.9. Draw up method statement per structure.
- 2.10. Contact affected Departments/parties for a Site investigation as well as the necessary applications for the required permits.
- 2.11. Include preliminary rehabilitation plan for area affected
- 2.12. Review Method statement and change if required, with input from ECO.

3. Execution:

- 3.1. Upon acceptance by all and obtaining necessary permits, access site.
- 3.2. Ensure that all construction activities are contained within the area demarcated and agreed upon. Communicate this with all workers and contractors!!
- 3.3. Keep method statement and permits for specific site on site at all times.
- 3.4. Rescue/ remove plants and complete bush clearing (ECO to make sure all applicable permits are in place first).
- 3.5. Proceed with excavation by machine ensuring that topsoil is separated and stockpiled separately from subgrade material in area as stated in method statement.
- 3.6. Complete excavations and install reinforcing and shuttering to foundation.
- 3.7. Cast concrete ensuring that no spilling of concrete takes place.
- 3.8. Apply curing agent , cure concrete and strip formwork as per SANS 1200
- 3.9. Backfill excavated subgrade material in layers not exceeding 300mm thickness and compact to 93% mod AASHTO density up until the existing ground level is reached.
- 3.10. Layout and assemble structure on area as planned.
- 3.11. On completion of assembly of structure, bring crane to site and erect structure.
- 3.12. Complete stringing activity and do binding in of conductors.
- 3.13. Upon completion of the construction activities, start the rehabilitation of the affected area.
- 3.14. Place the excavated topsoil over the excavated area ensuring that at least a layer of 150mm is placed.
- 3.15. Install storm water berms as per the EMP should they be required.

4. Method for stringing over the Bitou Estuary between the Terminal Tower (at Bitou substation) and Bend16

- 4.1. A rope (normal construction/ builders rope) is attached to the terminal tower.
- 4.2. The rope is then taken over the estuary by either (i) walking it over (if shallow enough and low risk to construction staff) or (ii) by taking it over boat.

- 4.3. The rope is then fed through the running-out wheels attached to pylon B16.
- 4.4. A pilot cable is attached to the rope at the terminal tower. The rope can then be pulled over the estuary from pylon B16 without being dragged through the estuary and damaging the cable.
- 4.5. The process in 4.4 is repeated a few times until the proper size cable to carry the weight of the conductor can be used to pull the conductor through over the estuary.

5. Finalisation:

- 5.1. Upon completion of construction activities and rehabilitation, take affected parties for a final site inspection and sign off the site.

6. Project deliverables before commencement of construction

- 6.1. Demarcate minimum work area required for each structure.
- 6.2. Demarcate no-go areas (sensitive areas, wetlands, heritage resources, etc.)
- 6.2. Access plan per structure which:
 - (i) Identifies and document which access routes will be used to gain access to each structure
 - (ii) Identifies where new access tracks are required and evaluate the risks associated with each
 - (iii) Identify the need for any permits for the removal/ trimming/ cutting/ damage of protected trees
 - (iv) Has been agreed to by affected land owners

Note:

- All activities will be supervised by the Environmental Officer and monitored by the Environmental Control Officer and assistance will be given to Site staff in the compilation of method statements, should it be required.
- Status before construction photographic record to be submitted with each structure.
- Status after construction photographic record to be submitted with each structure prior to sign off inspection.



Safety, Health, Environment & Quality (SHEQ) Policy

To demonstrate our firm commitment to Safety, Health, Environment and Quality, we shall:

- establish appropriate management systems that are ISO 9001, ISO 14001 and OHSAS 18001 compliant to minimise risk and ensure duty of care
 - ~ by prevention of pollution and environmental degradation
 - ~ by conducting performance monitoring and measurement
- comply with applicable legislative and other requirements Eskom subscribes to
- address the needs and expectations of our customers and stakeholders
- ensure that SHEQ is an integral part of our operations and that no operating condition, or urgency of service, justifies exposing anyone to negative risks arising out of Eskom's business, causing an incident or damage to the environment
- appraise our SHEQ performance with the objective of continuous improvement
- ensure that SHEQ objectives are established and periodically reviewed
- promote on- and off-the-job SHEQ practices for all our employees,
- engage stakeholders, by promoting open communication, educating, training, motivating and developing them on requirements of SHEQ
- ensure that our suppliers and service providers integrate SHEQ issues into their operations
- conduct Eskom business with respect and care for people and the environment
- ensure that adequate resources are available for SHEQ management
- ensure that the planning process takes into account a low carbon future and prioritises energy efficiency within and outside Eskom
- ensure that SHEQ objectives and criteria are entrenched in Eskom's procurement and investment strategies, governance and decision-making processes

Compliance with the SHEQ Policy will facilitate the achievement of Eskom's strategic objectives and shall be the responsibility of every employee and contractor.

This statement is an extract from the Eskom Safety, Health, Environment and Quality (SHEQ) Policy No: 32-727 rev 0 – August 2013

Brian Dames
Eskom Chief Executive



Pholisi ya Polokeho, Bophelo bo Botle, Tikoloho le Boleng (SHEQ)

Ho bontsha boikemisetso ba rona bo tiileng bakeng sa Polokeho, Bophelo bo Botle, Tikoloho le Boleng, re tla:

- theha disistimi tsa tsamaiso tse loketseng tse latelang ISO 9001, ISO 14001 le OHSAS 18001 ho fokotsa kotsi le ho netefatsa mosebetsi wa tlhokomelo
 - ~ ka ho thibela tshilafalo le ho senyeha ha tikoloho
 - ~ ka ho etsa tekolo le tekanyo ya tshebetso
- ho latela melao e sebetsang le ditlhokahalo tse ding tseo Eskom e di tshhehetsang
- ho sebetsana le ditlhoko le ditebello tsa bareki ba rona le bankakarolo
- ho netefatsa hore SHEQ ke karolo ya bohlokwa ya mosebetsi wa rona mme ha ho na maemo a mosebetsi, kapa ho potlaka ha tshebeletso, ho tla lokafatsa ho pepesa leha e le efe ya dikotsi tse mpe tse ka bang teng ka lebaka la kgwebo ya Eskom, mme ha baka kotsi le tshenyeho ya tikoloho
- ho lekanya tshebetso ya rona ya SHEQ ka maikemisetso a ntlafatso e tswelang pele
- ho netefatsa hore maikemisetso a SHEQ a thehilwe hape a hlahlojwa nako le nako
- ho buella mekgwa ya SHEQ ya boitshwara ka nako ya mosebetsi le ka mora nako ya mosebetsi bakeng sa bahiruwa ba rona kaofela
- ho akarelletsa bankakarolo, ka ho kgothaletsa puisano e bulehileng le ho ruta, ho kwetlisa, ho susumetsa le ho ba ntlafatsa ka ditlhokahalo tsa SHEQ
- ho netefatsa hore bafepedi le bafani ba ditshebeletso ba rona ba kenyeletsa ditaba tsa SHEQ ka hare ho ditshebetso tsa bona
- ho tsamaisa kgwebo ya Eskom ka tlhompheo le tlhokomelo bakeng sa batho le tikoloho
- ho netefatsa hore matlotlo a lekaneng aa fumaneha bakeng sa tsamaiso ya SHEQ
- ho netefatsa hore tshebetso ya merero e nahanela bokamoso ba carbon e haellang le ho etelletsa pele tshebediso e ntle ya eneji ka hare le ka ntle ho Eskom
- ho netefatsa hore maikemisetso a SHEQ a metse bakeng sa maano a phumano le matsete, bolaodi, le tshebetso ya ho etsa diqeto

Ho latela Pholisi ya SHEQ ho tla nolofatsa katleho ya maikemisetso a kgwebo a Eskom mme e tla ba boikarabello ba mohiruwa e mong le e mong le rakonteraka.

Polelo ena e ntshitswe ho tswa go Pholisi ya Eskom ya Polokeho, Bophelo bo Botle, Tikoloho le Boleng



Brian Dames
Mookamedi wa Eskom



Tsireledzo, Mutakalo, Mupo na Pholisi dza Vhonzani (SHEQ)

U itela u sumbedza u n̄inekedza hashu ho khwanhaho kha Tsireledzo, Mutakalo, Mupo na Pholisi dza Vhonzani, ri n̄o:

- thoma sisteme dza vhulanguli ho teaho dzine dza n̄o tevhela ISO 9001, ISO 14001 na OHSAS 18001 u itela u fhungudza khombo na u vha na vhungoho ha uri hu na vhulondi mushumoni
~ nga u thivhela u tshikafhadzwa na u hojefhadzwa ha mupo
~ nga u vha na maitela a u vhona na u kala n̄dila ine vhatu vha shuma ngayo
- tevhedza mulayo na dziñwe t̄hoḁea dzine Eskom ya dzi tevhela
- tandulula t̄hoḁea na ndavhelelo dza vhashumisi / khasitama na vhaledzani vhashu
- vhona uri SHEQ i ndi tshipiḁa tsho tshikatelwaho kha mashumele ashu na uri a hu na nyimele ya mashumele na nthihi, kana vhushishi ha tshumelo, zwine zwa ḁo itisa uri muñwe na muñwe a ḁi wane a tshi nga kha ḁi vha e kha nyimele l si ya vhuḁi zwi tshi bva kha mushumo wa Eskom, zwi itaho mutshinyalo kha mupo
- khoḁa mashumele a SHEQ yashu nga ndivho ya u bvela phanda na u khwinisa
- u vhona uri ndivho dza SHEQ dzi a bveledzwa nahone dzia tolwa misi yothev
- alusa maitele a SHEQ mushumoni na hune ha si vhe mushumoni u itela vhashumi vhashu vhotheambadzana na vhaledzani, nga u alusa vhudavhidzani ho tanḁavhuwaho na u gudisa u pfumbunza, u t̄uḁuwedza na u vha bveledzisa kha t̄hoḁea dza SHEQ
- vhona uri vhanetshedzi na vha n̄ḁisedzo dza tshumelo vha katela maitele a SHEQ mishumoni yavho
- tshimbidza mushumo wa Eskom nga t̄honifho na u u t̄hogomela ri tshi itela vhatu na mupo
- vhona uri zwishumiswa zwi t̄oḁeaho zwi hone u itela ndangulo ya SHEQ
- vhona uri maitele a u puḁana a dzhiela n̄ḁa u shumiswa ha khaboni t̄hukhu ha tshifhingani tshi ḁaho na u ita tshivhangalelwa tsha maanda kwayo nga ngomu na nga n̄ḁa ha Eskom
- vhona uri zwipikwa zwa SHEQ na maitele vhona uri zwipikwa zwa SHEQ na maitele zwi a katelwa kha puḁane dza Eskom dza vhubindudzi, kulangele, na maitele a u dzhiwa ha tsheo

U shumiswa ha Maitele a SHEQ zwi ḁo thusa kha uri Eskom i swikelele zwipikwa zwayo nahone zwi ḁo vha vhuḁifhinduleli ha mutholiwa muñwe na muñwe na mutholi.

Hetshi tshitatamennde tsho dzhiwa kha Maitele a Tsireledzo, Mutakalo, Mupo na Pholisi dza Vhonzani (SHEQ) a Eskom: No 32-727 rev 0-August 2013



Brian Dames
Mulanguli Muhulwane wa Eskom



Pholisi ya Pabalesego, Boitekanelo, Tikologo & Boleng (SHEQ)

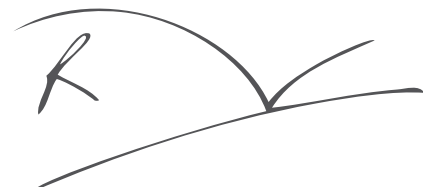
Go bontsha boikemisetso jwa rona jo bogolo malebana le Pabalesego, Boitekanelo, Tikologo le Boleng, re tla:

- tlhoma dithulaganyo tse di maleba tsa botsamaisi tse di tsamaisanang le ISO 9001, ISO 14001 le OHSAS 18001, go fokotsa dikotsi le go tlhomamisa gore re dira dilo ka kelotlhoko
 - ~ ka go thibela kgotlelo le tshenygo ya tikologo
 - ~ ka go baya leitlho le go lekanyetsa tsela e dilo di dirwang ka yone
- go ikobela ditlhokego tsa semolao le tse dingwe tse di maleba tse Eskom e inakantseng natso
- lepalepana le dilo tse di tlhokwang le tse di solofelwang ke badirisi le bannaleseabe
- tlhomamisa gore SHEQ ke karolo ya konokono ya ditirelo tsa rona le gore ga go na seemo sepe sa tiro, kgotsa tiro epe ya tshoganyetso, e e tshwanetseng go baya ope mo kotsing mo kgwebong ya rona ya Eskom, go baka tiragalo nngwe ya kotsi kgotsa go senya tikologo
- sekaseka tiro ya rona ya SHEQ ka maikaelelo a go tseweletsa ntlafatso
- tlhomamisa gore maikaelelo a SHEQ a a tlhomiwa le go sekasekwa nako le nako
- rotloetsa mekgwa ya SHEQ mo badiring botlhe ba rona ka nako ya fa ba le kwa tirong le fa ba se kwa tirong
- dirisana le bannaleseabe, ka go bula mokgwa o montle wa puisano le ka go ba ruta, go ba katisa, go ba rotloetsa, le go ba godisa go itse ditlhokwa tsa SHEQ
- tlhomamisa gore batlamedi ba rona ba dithoto le ba ditirelo ba dirisa melao ya SHEQ mo ditirelong tsa bone
- dira kgwebo ya Eskom ka tlotlo le go tlhokomela batho le tikologo
- tlhomamisa gore go na le didiriswa tse di lekaneng gore melao ya SHEQ e laolwe sentle
- tlhomamisa gore tiro ya go rulaganya e dirwa go akantswe ka gore go se dirisiwe khabone e ntsi mo isagong le gore se se tlang pele e nne tiriso e e maleba ya eneji mo mafelong a Eskom le ka kwa ntle
- tlhomamisa gore maikaelelo le dintlha tsa SHEQ di dirisiwa ka botlalo mo mekgweng ya Eskom ya go reka dithoto le peeletso, mo taolong le mo dithulaganyong tsa go dira ditshwetso

Go ikobela Pholisi ya SHEQ go tla thusa Eskom go fitlhelela maitlhomomagolo a yona e bile seno e tla nna maikarabelo a modiri le modiredi mongwe le mongwe wa konteraka.

Polelwana eno e tswa mo Pholising ya Eskom ya Pabalesego, Boitekanelo, Tikologo le Boleng (SHEQ):

No 32-727 rev 0 – Phatwe 2013



Brian Dames
Motlhankedikhuduthamaga wa Eskom



Beleid oor Veiligheid, Gesondheid, die Omgewing en Kwaliteit (SHEQ)

As bewys van ons vaste verbintenis tot Veiligheid, Gesondheid, die Omgewing en Kwaliteit sal ons:

- gepaste bestuurstelsels vestig wat voldoen aan ISO 9001, ISO 14001 en OHSAS 18001 ten einde risikos te verminder en die nakoming van die sorgplig te verseker
 - ~ deur besoedeling en die agteruitgang van die omgewing te voorkom
 - ~ deur middel van prestasiemonitering en - meting
- voldoen aan die vereistes van toepaslike wetgewing en ander vereistes wat deur Eskom onderskryf word
- voldoen aan die behoeftes en verwagtinge van ons kliënte en belanghebbendes
- verseker dat SHEQ 'n integreerende deel van ons werksaamhede is en dat geen bedryfsomstandighede, of dringendheid van dienslewering dit regverdig dat enigiemand aan negatiewe risikos blootgestel word wat voortspruit uit Eskom se bedrywighede, dat 'n insident veroorsaak word of dat die omgewing geskaad word nie
- ons prestasie ten opsigte van SHEQ evalueer met die oog op voortgesette verbetering
- verseker dat V SHEQ -doelwitte gestel word en van tyd tot hersien word
- SHEQ - gebruike binne en buite die bedryf bevorder vir al ons werknemers
- met belanghebbers skakel deur openhartige kommunikasie te bevorder en deur hulle te onderrig, op te lei, te motiveer en te ontwikkel rakende die vereistes van SHEQ
- verseker dat SHEQ - aangeleenthede 'n integreerende deel van ons verskaffers en diensverskaffers se werksaamhede is
- die sake van Eskom bedryf met respek vir en besorgdheid oor mense en die omgewing
- toesien dat genoegsame hulpbronne beskikbaar is vir die uitvoering van SHEQ
- sorg dat die beplanningsproses rekening hou met 'n laekoolstof-toekoms en die prioritisering van energiebesparing binne en buite die bestek van Eskom
- verseker dat SHEQ -doelwitte en – kriteria stewig gevestig is in Eskom se verkrygings- en beleggingstrategieë, asook in sy besluitnemings- en bestuursprosesse

Die nakoming van die SHEQ-beleid sal die bereiking van Eskom se strategiese doelwitte voorhelp en sal die verantwoordelikheid van elke werknemer en kontrakteur wees

Hierdie verklaring is 'n uittreksel uit Eskom se Beleid oor Veiligheid, Gesondheid, die Omgewing en Kwaliteit (SHEQ) Beleid nr. 32-727 rev 0 – Augustus 2013

Brian Dames
Eskom- uitvoerende hoof



Umgaqo-nkqubo woKhuseleko, wezeMpilo, ezokusiNgqongileyo noMgangatho (SHEQ)

Ukubonakalisa ukuzimisela kwethu ngoKhuseleko, ezeMpilo, ezokusingqongileyo nezokubasemgangathweni, siza:

- kumisela iinkqubo ezifanelekileyo zolawulo ezihambisana ne-ISO 9001, ISO 14001 ne-OHSAS 18001 ukuze sinciphise imingcipheko kwaye siqinisekise ukuba inkathalo siyenza uxanduva lwethu
 - ~ ngokuthintela ungcoliseko nokonakaliswa kokusingqongileyo
 - ~ ngokusoloko sibeke iliso kwindlela esiqhuba ngayo, siyivavanye ngokunjalo
- kuyithobela imithetho enxulumene noku ndawonye neminye imiqathango uEskom azoyamanisa nayo
- kuhlangabezana neemfuno zabaxumi bethu nezabo babandakanyekayo ngokunjalo, kambe sihlangabezane noko bakulindeleyo kuthi
- kuqinisekisa ukuba i-SHEQ imiliselwe kumsebenzi wethu kambe siqinisekise neyokuba kungabikho meko yakusebenza, okanye kungxamiseka kwenkonzo, okuya kwenza ukuba nawuphi na umntu azibeke emngciphekweni wokuchatshazelwa kokungancumisiyo ngenxa yomsebenzi kaEskom, nto leyo inokubangunobangela wesehlo esithile okanye wokonakaliswa kokusingqongileyo
- kuthlekisa indlela esiqhuba ngayo i-SHEQ nenjongo yokuyiphucula ngalo lonke ixesha
- kuqiniseka ukuba imimiselo yethu ye-SHEQ iyamiliselwa kwaye ibekwa iliso ngamaxesho athile
- kukhuthaza bonke abasebenzi bethu ukuba baziqhelise ukuqhuba ngokwe-SHEQ emsebenzini naxa bengekho msebenzini,
- kuthethana nababandakanyekayo, ngokukhuthaza unxibelelwano olungafihlisiyo nangokubafundisa, ukubaqeqesha, ukubakhuthaza nangokubaphuhlisa ngokuphathelele kwiimiqathango ye-SHEQ
- kuqinisekisa ukuba abo sithenga kubo nababoneleli ngeenkonzo imiba emalunga ne-SHEQ bayayimilisele kumsebenzi wabo
- kuqhuba umsebenzi kaEskom ngentlonipho nangokukhathalela abantu nokusingqongileyo
- kuqinisekisa ubukho bezinto ezoneleyo ezinokuba luncedo ekulawulweni kwe-SHEQ
- kuqinisekisa ukuba izicwangciso zethu zijoliswe kwikamva elinekhoboni engephi nasekubekeni phambili ukusetyenziswa kwamandla ngcathu ngaphakathi nangaphandle kukaEskom
- kuqinisekisa ukuba imimiselo nemiqathango ye-SHEQ imiliselwe kwinkqubo zikaEskom zokuthenga nokutyala imali, kwizicwangciso, kulawulo, nakwiinkqubo zokwenziwa kwezigqibo

Ukuthotyelwa komgaqo-nkqubo we-SHEQ kuya kulungiselela ukuphunyezwa kweenjongo eziphambili zikaEskom kambe kuya kuba luxanduva labo bonke abasebenzi ndawonye neekontraki ngokunjalo.

Oku kucatshulwe kwiEskom Safety, Health, Environment and Quality (SHEQ) Policy: No 32-727 Rev 0 – August 2013



Brian Dames
INTloko yoLawulo



Vumbiwa bya Vuhlayiseki, Rihanyo, Mbango & Nkoka (SHEQ)

Ku kombisa leswaku hi tiyimiserile emhakeni ya Vuhlayiseki, Rihanyo, Mbango ni Nkoka, hi ta:

- simeka maendlelo yo lawula lama kongomisiwaka hi nawu wa ISO 9001, ISO14001 na OHSAS 18001 ku hunguta makhombo ni ku tiyisisa ku tirha hi vuxiyaxiya
 - ~ hi ku sivela nthyakiso ni ku onha mbango
 - ~ hi ku xiyisisa ndlela ya matirhelo ni ku yi kambela
- ku fambisana ni swilaveko swa nawu ni sin'wana leswi khumbaka Eskom
- ku enerisa swilaveko ni ku navela ka tikhasitama ta hina ni vavekisi eka bindzu ra hina
- ku tiyisisa leswaku SHEQ yi va xiyenge-nkulu xa matirhelo ya hina, ni ku sivela yini na yini lexi vangaka khombo eka xiyimo xa matirhelo kumbe ntirho lowu faneleke wu endliwa hi xihatla eka bindzu ra Eskom, lexi nga tshukaka xi vanga mhangu kumbe xi onha mbango
- ku kambela matirhelo ya SHEQ hi xikongomelo xo endla nhluvukiso lowu yaka emahlweni
- ku tiyisisa leswaku makungu ya SHEQ ma simekiwa ma tiya ni ku antswisiwa nkarhi ni nkarhi
- ku khutaza vatirhi leswaku va hanya hi maendlelo ya SHEQ kwihi ni kwihi
- ku avelana mavonelo ni vavekisi ni ku dyondzisa, ku va letela, ku va hlohlotela ni ku hlomisa hi swilaveko swa SHEQ
- ku tiyisisa leswaku lava hi phamelaka switirhisiwa ni vakorhokeri va katsa maendlelo ya SHEQ eka matirhelo ya vona
- ku fambisa bindzu ra Eskom hi xichavo ni nkathalelo wa vanhu ni mbango
- ku tiyisisa leswaku ku ni switirho leswi eneleke swa vufambisi bya SHEQ
- ku tiyisisa leswaku hi endla makungu hi ku anakanyela vumundzuku byo pfumala nthyakiso wa moya ni ku rhangisa matirhiselo lamanene ya gezi endzeni ni le handle ka Eskom
- ku tiyisisa leswaku swikongomelo swa SHEQ swi dzima timitsu eka makungu hinkwawo ya Eskom yo endla bindzu, vavekisi, vukongomisi ni le ku endliweni ka swiboho

Ku fambisana ni Vumbiwa bya SHEQ swi ta hi pfuna ku fikelela makungu ya Eskom naswona swi ta va vutihlamuleri bya mutirhi ni n'wakontiraka un'wana ni un'wana

Rito leri ri tsavuriwe eka Vumbiwa bya Vuhlayiseki, Rihanyo, Mbango & Nkoka (SHEQ):

No 32-727 rev) – August 2013



Brian Dames
Mufambisi-nkulu Wa Eskom



Pholisi ya Tšhireletšego, tša Maphelo, Tikologo le Boleng (SHEQ)

Go bontšha boikgafo bja rena go tša Tšhireletšego, tša Maphelo,
Tikologo le Boleng, re tla:

- thea ditshepedišo tša maleba tša taolo ka go dumelelana le ya ISO 9001, ISO 14001 le OHSAS 18001 go fokotša kotsi le go kgonthiša tlhokomelo
 - ~ ka go thibela tšhilafalo le tshenyho ya tikologo
 - ~ ka go lekola le go lekanya tšhomo
- go sepedišana le melao yeo e nyakegago le dinyakwa tše dingwe tšeo Eskom e di holofetšago
- go swaragana le dinyakwa le ditebelelo tša bareki ba rena le bakgathatema
- go kgonthiša gore SHEQ ke karolo ya ka gare ya tšhomišo ya rena le gore ga go na boemo bja tšhomišo, goba go akgofo ga tirelo, mo go lokafatšago go bea mang goba mang dikotsing tšeo di bakwago ke mešomo ya Eskom, mo go bakago tiragalo e itšego goba go senyega ga tikologo
- go lekola go šoma ga SHEQ ya rena ka maikemišetšo a kaonefatšo yeo e tšwelago pele
- go kgonthiša gore go thewa maikemišetšo a SHEQ le gore a dula a lekolwa
- go kgothaletša bašomi ba rena ka moka gore ba tlwaele mekgwa ya SHEQ ge ba le mošomong le ge ba se mošomong
- go akaretša bakgathatema, ka go kgothaletša poledišano ya bolokologi le go ba ruta, go ba hlahla, go ba hlohleletša le go ba hlama go ya ka dinyakwa tša SHEQ
- go netefatša gore batšweletši ba rena le banei ba ditirelo ba akaretša ditaba tša SHEQ ditšhomišong tša bona
- go dira mešomo ya Eskom ka go hlompha le go hlokomela batho le tikologo
- go kgonthiša gore go na le ditlabakelo tše di lekanego bakeng sa taolo ya SHEQ
- go kgonthiša gore mogato wa go rulaganya dilo o gopola bokamoso bja moya o se nago tšhilafalo le go etiša pele tekanyo ya mohlagase ka gare le ka ntle ga Eskom
- go kgonthiša gore maikemišetšo le mekgwa ya SHEQ e šomišwa gabotse mo maanong a theko ya diphahlo le dipeeletšo, taolo le ge go dirwa diphetho

Go dira dilo ka go dumelelana le Molao wa SHEQ go tla bontšha gore maano ao Eskom e a logilego a a atlega gomme e tla ba boikarabelo bja mothwalwa yo mongwe le yo mongwe le rakonteraka.

Mantšu a a tšerwe go Pholisi ya Eskom ya Tšhireletšego, tša Maphelo, Tikologo le Boleng (SHEQ):
No 32-727 rev 0 – Agostose 2013



Brian Dames
Molaodi o Mogolo wa Eskom



Ipholisi Yezokuphepha, Ezempilo, Ezendawo Ezungezile Kanye Nekhwalithi (SHEQ)

Ukuze sibonakalise ukuzinikezela kwethu kwezokuphepha, ezempilo, ezendawo ezungezile kanye nekhwalithi, nakhu esizokwenza:

- sizosungula izindlela ezifanele ezihambisana ne-ISO 9001, ISO 14001 kanye ne-OHSAS 18001 ukuze sinciphise amathuba ezingozi kanti siqinisekise ukuzimisela
 - ~ ngokuvimbela ukungcola kanye nokuwohloka kwendawo ezungezile
 - ~ nokubeka iso endleleni esenza ngayo izinto
- sizohambisana nemithetho efanelekile kanye nezimfuneko u-Eskom akholelwa kuzo
- sizohlangabezana nezidingo zamakhasimende ethu kanye nabantu abanesithakazelo emsebenzini wethu
- sizoqinisekisa ukuthi i-SHEQ iyingxenye eyinhloko yomsebenzi wethu futhi akukho msebenzi, noma isimo esiphuthumayo esiyobangela ukuba kube nanoba ubani ochayeka engozini ngenxa yomsebenzi wakwa-Eskom, okungabangela umonakalo endaweni ezungezile
- sizoyihlaziya indlela esiqhuba ngayo i-SHEQ ngenjongo yokuthuthukisa indlela esenza ngayo izinto
- sizoqinisekisa ukuthi imigomo ye-SHEQ iyasungulwa futhi iyabuyekizwa ngezikhathi ezithile
- sizokhuthaza zonke izisebenzi zethu ukuthi ziphile ngendlela ye-SHEQ lapho zisemsebenzini ngisho nalapho zingekho emsebenzini
- sizokhulumisana nabo bonke abantu abanesithakazelo emsebenzini wethu ngokukhuthaza ukuxhumana okukhululekile futhi sibafundise, sibaqeqeshe, sibakhuthaze futhi sibathuthukise ngezimfuneko ze-SHEQ
- sizoqinisekisa ukuthi zonke izinkampani esisebenzelana nazo zinamathela ku-SHEQ
- sizokwenza umsebenzi wakwa-Eskom ngenhlonipho kanye nokukhathalela abantu nendawo ezungezile
- sizoqinisekisa ukuthi kunezisebenzi ezanele ezinakekela i-SHEQ
- sizoqinisekisa ukuthi lapho sihlela izinto esikhathini esizayo sisebenzisa umoya-sikhutha osezingeni eliphansi futhi sibeke phambili ukusetshenziswa kahle kwamandla ngaphakathi nangaphandle kwakwa-Eskom
- sizoqinisekisa ukuthi imigomo ye-SHEQ iyagxiliswa enqubweni yakwa-Eskom yokuthenga neyokutshala izimali, eyokubambelela emapholisini kanye nasekwenzeni izinqumo

Ukuhambisana nePholisi Ye-SHEQ kuyokwenza ukuba abakwa-Eskom bafinyelele imigomo yabo futhi kuwumthwalo wemfanelo wesisebenzi ngasinye kanye nezinkontileka ngasinye.

Lena ingcaphuno ethathwe kuPholisi yakwa-Eskom yezokuphepha, ezempilo, ezendawo ezungezile kanye nekhwalithi (SHEQ): No 32-727 rev 0 – August 2013

Brian Dames
UMphathi Wakwa-Eskom



Policy

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1. INTRODUCTION

Eskom, as a state-owned enterprise, has a greater role to play in addition to supply of electricity. Eskom generates, transmits and distributes electricity to industrial, mining, commercial, agricultural and residential customers and redistributors. Eskom supports South Africa's growth and development aspirations. To do this effectively, Eskom must consistently provide stakeholders with confidence that its activities are managed sustainably, effectively, and efficiently for the benefit of the South African economy. This can be achieved by adopting safety, health, environment, and quality (SHEQ) management as a business imperative for sustainable business performance and improvement.

The implementation of this policy will be measured progressively to ensure sustainable excellence in safety, health, environmental, and quality management. Accountability for safety, occupational health, environmental, and quality management will be held by the Board of Directors, including the Chief Executive and 16 (2) appointees. Compliance with the Safety, Health, Environment, and Quality Policy and applicable regulations shall be the responsibility of every employee and contractor.

Safety, health, environment, and quality management will ensure business optimisation and improvement through:

- protection of human lives and environmental duty of care;
- proper analysis of customer and stakeholder needs and expectations;
- effective business objective and priority setting to meet or exceed those needs and expectations;
- establishment of measures for the achievement of business objectives;
- systematic approach to defining, controlling, and continually improving the business processes; and
- advancing our business practices in line with international best practices, legislative requirements, and corporate best practice innovations.

Compliance with the SHEQ Policy will facilitate the achievement of Eskom's strategic objectives in support of the Eskom values of integrity, customer satisfaction, excellence, and innovation.

2. POLICY STATEMENT

Eskom Holdings Limited shall develop, implement, and maintain the entire electricity supply value chain so as to supply reliable and affordable electricity within a challenging business, social, natural, and political environment, without compromising future sustainability. This is in line with the corporate vision of "together building the power base for sustainable growth and development".

Eskom will integrate safety, health, environment, and quality requirements into activities, products, and services throughout the organisation for a sustainable electricity supply. This shall ensure the integration and consideration of economical development and environmental, quality, and social equity into business practices to continually improve performance and underpin development, ensuring that stakeholder requirements are met.

To demonstrate our firm commitment to safety, health, environment, and quality, we shall:

- establish appropriate management systems that are ISO 9001, ISO 14001, and OHSAS 18001 compliant to address related issues with a view to minimising risk, ensuring duty of care by prevention of pollution and environmental degradation and by conducting performance monitoring and measurement;
- comply with applicable legislative and other requirements Eskom subscribes to and, in the absence of these, set standards to meet the objectives of this policy;

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- address the needs and expectations of our customers and stakeholders;
- ensure that SHEQ is an integral part of our operations and that no operating condition, or urgency of service, justifies exposing anyone to negative risks arising out of Eskom's business, causing an incident or damage to the environment;
- appraise our SHEQ performance with the objective of continuous improvement, in light of sustainable development, cost-effective resource use, efficient production, distribution, and use of electricity;
- ensure that SHEQ objectives are established and periodically reviewed to achieve sustainable performance levels;
- promote on- and off-the-job SHEQ for all our employees, as we believe that all occupational injuries and illnesses, fatalities, environmental incidents, and poor quality performance are preventable, and our goal for all is zero occurrence;
- engage stakeholders, by promoting open communication and educating, training, motivating, and developing them on requirements of SHEQ;
- ensure that our suppliers and service providers integrate SHEQ issues into their operations to achieve SHEQ objectives throughout our value chain;
- conduct Eskom business with respect and care for people and the environment and, in so doing, ensure that adequate resources are available for SHEQ management;
- ensure that the planning process takes into account a low carbon future and prioritising energy efficiency within and outside Eskom; and
- ensure that SHEQ objectives and criteria are entrenched in Eskom's procurement and investment strategies, governance, and decision-making processes for informed decision-making.

3. SUPPORTING CLAUSES

3.1 SCOPE

3.1.1 Purpose

This policy provides a framework for safety, health, environment, and quality management in Eskom to ensure uniformity across the business. It aims to ensure that:

- a consistent set of international SHEQ standards and practices are adopted and implemented across Eskom;
- customer and stakeholder requirements are understood and consistently met or exceeded;
- measures are established to ensure the effectiveness of internal processes to achieve and maintain acceptable quality of products and services; and
- Objectives are set to promote continual improvement in organisational performance in support of the overall Eskom business plan.

3.1.2 Applicability

This policy shall apply throughout Eskom Holdings Limited divisions, subsidiaries, and entities in which Eskom has a controlling interest, including identified contractors, suppliers, and service providers.

This policy will also apply during the evaluation of all contracts, projects, and proposals.

3.2 NORMATIVE/INFORMATIVE REFERENCES

Parties using this policy shall apply the most recent edition of the documents listed in the following paragraphs.

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3.2.1 Normative

- [1] ISO 9000 Quality Management Systems – Fundamentals and Vocabulary
- [2] ISO 9001 Quality Management Systems – Requirements
- [3] OHSAS 18001 Occupational Health and Safety Management Systems – Requirements
- [4] ISO 14050 Environmental Management – Vocabulary
- [5] ISO 14001: 2004 Environmental Management Systems – Specification with Guidance for Use
- [6] The United Nations Global Compact
- [7] Constitution of the Republic of South Africa Act, No. 108 of 1996
- [8] National legislation, including, but not limited to, NEMA, NWA OHSA, and COID

3.2.2 Informative

- [9] ISO 9004: 2009 Managing for the Sustained Success of an Organisation – A Quality Management Approach
- [10] 32- 586 Eskom Holdings Business Plan
- [11] International Labour Office Occupational Health and Safety Conventions and Recommendations

3.3 DEFINITIONS

3.3.1 Continual improvement: recurring activity to increase the ability to fulfil requirements.

3.3.2 Eskom: applies to Eskom Holdings Limited and its divisions and subsidiaries.

3.3.3 Environment: the surroundings within which humans exist and which are made up of:

- i) the land, water, and atmosphere of the earth;
- ii) micro-organisms and plant and animal life;
- iii) any part or combination of (i) and (ii) and the interrelationships among and between them; and
- iv) the physical, chemical, aesthetic, and cultural properties and conditions of the foregoing that influence human health and well-being.

3.3.4 Event: Occurrence or change of a particular set of circumstances.

3.3.5 Framework: a basic conceptual structure used to solve or address complex issues. It is a well-defined tactic to, with simplicity, master the complex environment of an organisation. It allows uniform handling of different business units and increases management discipline.

3.3.6 Hazard: means a source, situation, or act with a potential for harm in terms of human injury or ill health, or a combination of these.

3.3.7 Ill health: identifiable, adverse physical or mental condition arising from, and/or made worse by, a work activity and/or work-related situation.

3.3.8 Incident (occupational health and safety related): work-related event(s) in which an injury or ill health (regardless of severity) or fatality occurred, or could have occurred.

NOTE 1: an accident is an incident that has given rise to injury, ill health, or fatality.

NOTE 2: an incident where no injury, ill health, or fatality occurs may also be referred to as a “near miss”, “near hit”, “close call”, or “dangerous occurrence”.

NOTE 3: an emergency situation is a particular type of incident.

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3.3.9 Management: coordinated activities to direct and control an organisation.

3.3.10 Management representative: a member of the organisation's management, appointed by top management, who, irrespective of other responsibilities, shall have responsibility and authority for implementing the respective safety, health, environmental, and quality management systems.

3.3.11 Management system: system to establish policy and objectives and to achieve those objectives.

3.3.12 Quality: degree to which a set of inherent characteristics fulfils requirements.

3.3.13 Occupational health: promotion and maintenance of the highest degree of complete physical, mental, and social well-being of all employees and other workers (including temporary workers and contractors) through prevention and not merely the absence of medical impairments.

3.3.14 Occupational health and safety: deals with the prevention of occupational injuries and diseases as well as the protection, promotion, and maintenance of the health of all employees and other workers (including temporary workers and contractors). It includes occupational hygiene, occupational safety, occupational medicine, occupational nursing, fire safety, public safety, and emergency preparedness.

3.3.15 Pollution: means any change in the environment caused by:

- i) substances;
- ii) radioactive or other waves; or
- iii) noise, odours, dust, or heat;

emitted from any activity, including the storage or treatment of waste or substances, construction, and the provision of services, whether engaged in by any person or an organ of state, where that change has an adverse effect on human health or well-being or on the composition, resilience, and productivity of natural or managed ecosystems or on materials useful to people, or will have such an effect in the future.

Prevention of pollution: means the use of processes, practices, techniques, materials, products, services, or energy to avoid, reduce, or control (separately or in combination) the creation, emission, or discharge of any type of pollutant or waste, in order to reduce adverse environmental impacts.

[**Note:** prevention of pollution can include source reduction or elimination, process, product, or service changes, efficient use of resources, material and energy substitution, reuse, recovery, recycling, reclamation, and treatment.]

3.3.16 Risk: Effect of uncertainty on objectives.

NOTE 1: An effect is a deviation from the expected - positive and/or negative

NOTE 2: Objectives can have different aspects, such as financial, health and safety, and environmental goals and can apply at different levels such as strategic, organization-wide, project, product and process

NOTE 3: Risk is often characterized by reference to potential events, a consequence, or a combination of these and how they can affect the achievement of objectives.

NOTE 4: Risk is often expressed in terms of a combination of the consequences of an event or a change in circumstances, and their associated likelihood of occurrence.

3.3.17 Safety: the management and control of associated risks to provide an environment that is safe for people to work in, and including members of the public.

3.3.18 SHEQ objective: something sought, or aimed for, related to SHEQ and consistent with the SHEQ Policy. In addition, SHEQ objectives for Eskom mean the organisational business objectives that are *SMART and are aimed at supporting continual business improvement.

***SMART** – **S**pecific, **M**easurable, **A**ttainable, **R**ealistic, and **T**ime-based.

3.3.19 SHEQ Policy: overall intentions and direction of an organisation related to SHEQ as formally expressed by top management.

3.3.20 Significant influence: the power to participate in the financial and operating policy decisions of the entity, but not control over those policies.

3.3.21 Stakeholder: person, group, or organisation that has a direct or indirect stake in an organisation because it can affect or be affected by the organisation's actions, objectives, and policies. Key stakeholders in a business organisation include creditors, customers, directors, employees, government, shareholders, suppliers, unions, and the community from which the business draws its resources.

3.3.22 Subsidiary: Eskom Enterprises and the line divisions, should they become incorporated or any other company in which Eskom Holdings Limited is a holding company controlling a majority of the votes (that is, more than 50%).

3.3.23 Sustainability: the integration of sustainable development into business strategy, practices, and operations.

3.3.24 Sustainable development: meeting the needs of the present without compromising the ability of future generations to meet their own needs. Sustainable development is also defined as the integration and consideration of three pillars, namely, economic, social, and environmental issues.

3.4 ABBREVIATIONS

Abbreviation	Description
A&F	Assurance and Forensic Department
BU	Business Unit
CQ	Corporate Quality
ELC	Environmental Liaison Committee
EXCO Ops	Operations Subcommittee of the Eskom Executive Committee
GM	General Manager
ISO	International Organisation for Standardisation
OHSLC	Occupational Health and Safety Liaison Committee
SHEQ	Safety, health, environment, and quality
SMART	Specific, measurable, attainable, realistic, and time-based

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3.5 ROLES AND RESPONSIBILITIES

- The Chief Executive has the overall accountability for ensuring that this policy is implemented.
- Divisional Executives and Chief Officers shall be accountable for ensuring the effective development and implementation of management systems that comply with ISO 9001, ISO 14001, and OHSAS 18001, integration of SHEQ management into business operations, and provision of the required resources to achieve this.
- Each business unit (BU) manager shall provide his/her Divisional Executive with the assurance that all SHEQ issues appropriate to his/her business are being addressed.
- Line managers and/or supervisors shall be responsible for SHEQ issues at work. This primarily means the prevention of non-conformities in work execution. It shall be the line manager and/or supervisor's responsibility to ensure that work is carried out in accordance with established procedures and instructions.
- Every employee is responsible for the safety, health, environmental and quality aspects of his/her work by adhering to established procedures and work instructions.
- Every employee, at every level, has a responsibility for preventing occupational injuries, diseases, incidents, environmental degradation, and poor quality performance from occurring. **Working safely is a condition of employment.**
- Each line manager shall ensure that all employees are trained in SHEQ management tools and methodologies. Managers shall satisfy themselves that this training is adequate and relevant to their respective functions.
- Each divisional management representative is to ensure that self-assessments and audits are conducted in his/her respective area to ensure the effectiveness of the business management system and systematic management of corrective and preventive actions.
- BU managers shall ensure that this policy is communicated to persons working for, or on behalf of Eskom.

3.6 PROCESS FOR MONITORING

All managers will develop measuring, monitoring, and maintenance processes in accordance with ISO 9001, ISO 14001, and OHSAS 18001.

The Assurance and Forensic Department will conduct internal audits and monitor and report on performance in accordance with an agreed audit programme and established business performance reporting procedures.

Additional monitoring and reporting will be done as required at the Eskom Quality Forum, Quality Leadership Forum, Environmental Liaison Committee, and Occupational Health and Safety Liaison Committee.

4. AUTHORISATION

This document has been seen and accepted by:

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E Johnson	Chief Officer (Customer Network Business)
DL Marokane	Acting Chief Officer (Generation Business)

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Name	Designation
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5. REVISIONS

Date	Rev.	Remarks
August 2010	0	This policy supersedes 32-94 and 32-7 SHE and Quality Policies. The contents of both policies were revised and incorporated into one policy, which was reallocated the reference number 32-727 in accordance with the Eskom Documentation Centre (EDC) requirements.

6. DEVELOPMENT TEAM

This policy was developed by the Corporate Quality Management, Corporate OHS Management, and Environmental Management Departments, with inputs from the Quality Forum, Quality Leadership Forum, Environmental Liaison Committee, and Occupational Health and Safety Liaison Committee.

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