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BOSA

TRANSMISSION PROJECT

APPENDIX 10

TRAFFIC MANAGEMENT PLAN
REVISION 1.0

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List of Acronyms

BOSA	Botswana-South Africa	EO	Environmental Officer
BPC	Botswana Power Corporation	ESIA	Environmental and Social Impact Assessment
DBSA	Development Bank of Southern Africa	ESMP	Environmental and Social Management Plan
DEA	Department of Environmental Affairs	IFC	International Finance Corporation
ECO	Environmental Control Officer	SAPP	Southern African Power Pool

INTRODUCTORY NOTE

This plan has been prepared in terms of the requirements of the Department of Environmental Affairs (DEA) in their acceptance of the Final Scoping Report prepared for the proposed Botswana-South Africa (BOSA) Transmission Interconnection Project (the “Project”) to alleviate the current electricity supply constraints and contribute towards energy security of supply in the long run by enhancing the distribution of electricity in the region.

This Plan must be read in conjunction with the ESMP and should be implemented throughout the lifecycle of the project and/or where relevant. In terms of implementation, the Developer (Eskom or BPC) will be responsible for appointing a qualified Environmental Control Officer (ECO) to visit the site as stipulated in the ESMP to ensure implementation of this plan and other relevant authorisations and permits. A copy of this Plan must be maintained on site, and all the Contractor’s employees working at the site, including sub-contractors must be trained to ensure compliance with this Plan. Changes to the Plan must be approved by the ECO, and updates and reasons for the changes incorporated into the plan.

SECTION 1

1 Introduction

1.1 Background to the Project

The Southern African Power Pool (SAPP) has identified the Botswana-South Africa (BOSA) Transmission Interconnection Project as one of the energy pool initiatives to alleviate the current electricity supply constraints and contribute towards energy security of supply in the long run between South African and Botswana. Given the transborder nature of the project, both Eskom of South Africa and the Botswana Power Corporation (BPC) will subsequently be the beneficiaries of the project. The proposed transmission line stretches between the Mafikeng area in South Africa and Gaborone in Botswana for approximately 210 km.

The subject of this Plan is **Traffic Management** for the project.

1.2 Purpose and Scope

The purpose of this Plan is to identify effective traffic management measures to minimise the risk of collision and traffic on site and public roads.

1.3 Objectives

- To define the requirements that will be implemented to mitigate any potential negative risks resulting from construction traffic on site and public roads.
- Inform the EPC contractor and external suppliers of equipment and materials of access and entry points along with other key information such as tipping areas and wash-out areas.
- The TMP will specify maximum speeds on both public and site roads.
- Intended to compliment and work alongside relevant CESMP. The TM will be classed as “live” and therefore be subjected to updates as required.

1.4 Major Sources of Traffic Impacts

- Material transportation to and from site;
- New site access roads;
- Temporary speed limit;
- Lane closure or detours; and
- Property access or footpath closures.

It is important to note that the detailed traffic impacts of the Project will not be fully understood once the detailed designs have been finalised and construction planning has commenced. Once the construction tasks have been programmed, associated traffic management requirements will need to be identified for each task and appropriate site-specific traffic measures and /or requirements must be included in the plan.

SECTION 2

2 Traffic Management

Table 1: Traffic aspects and impacts with associated objectives and mitigation measures

ASPECTS	POTENTIAL IMPACTS	MITIGATION MEASURES	PERFORMANCE INDICATORS/ OUTCOME TARGETS	PROJECT PHASE	APPLICABLE PLANS, POLICIES & PROCEDURES	RESPONSIBLE PERSON	REPORTING, MONITORING AND AUDITING REQUIREMENTS
Movement of construction vehicles to and from site	<p>Increased-traffic congestion and Inconvenience to road users</p> <p>Nuisance – dust, noise and vibration from traffic</p> <p>Dust generation</p> <p>Disruption of access routes and daily movement patterns</p>	<ul style="list-style-type: none"> The most appropriate route for large vehicles (such as trucks) transporting equipment, materials and employees to and from the site shall be determined in consultation with the local municipality, local road traffic authorities and the local community. The site access will be clearly sign posted and shall not be located so as to cause a traffic risk. Materials and labour shall, as far as possible, be sourced locally in order to minimise transport related impacts and transport safety risks. The Contractor is to provide and traffic install signs along public roads used by the Project, where public signs are inadequate. Deliveries should preferably be scheduled for off-peak hour traffic times to avoid causing an impact on commuters. Access roads should be planned so that only minimum linear distances are developed. Where construction will obstruct existing access, be sure to allow for alternative temporary access routes. Allow for safe pedestrian crossings where necessary. 	<ul style="list-style-type: none"> No incidents of reported vehicle, pedestrian and livestock accidents. 	CONSTRUCTION & DECOMMISSIONING	<p>International:</p> <ul style="list-style-type: none"> IFC Performance Standard 2: Labour and Working Conditions IFC EHS General Guidelines (2007), Section 2.0 – Occupational Health and Safety <p>South Africa:</p> <ul style="list-style-type: none"> Road Traffic Act of 1989 (Act No. 29 of 1989) North West Provincial Road Traffic Act (11/1997): Regulations (As amended) Occupational Health and Safety Act (Act No. 85 of 1993) <p>Botswana:</p> <ul style="list-style-type: none"> Road Traffic Act Chapter 69:01 (1975) 	<p>Implementation:</p> <p>Contractor and EO</p> <p>Verification:</p> <p>Site Manager and ECO</p>	<p>Reporting:</p> <ul style="list-style-type: none"> Traffic incidents must be reported to the appropriate safety representative on site and emergency services must be contacted if necessary. All the complaints related to traffic impacts or incidents must be documented in the complaint register kept on site. The Contractor will be expected to do the follow ups and address the complaints. <p>Monitoring frequency:</p> <ul style="list-style-type: none"> Traffic flow must be monitored on a daily basis during work hours. <p>Auditing requirements:</p> <ul style="list-style-type: none"> Implementation of this Plan shall be audited at the commencement of works and on a quarterly basis throughout construction works. An independent ECO must be appointed to undertake site verification audits/ inspections on a monthly basis. Audit reports will be submitted to the client and relevant Competent Authority as and when required. <p>Training:</p> <ul style="list-style-type: none"> The Contractor must ensure that the flag men are trained about the requirements of this Plan and they are competent to direct the traffic. <p><i>(Refer to Section 5 of the ESMP for the detailed information on the training programmes and requirements).</i></p>

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		<ul style="list-style-type: none"> Traffic calming measures must be implemented in consultation with the provincial traffic department. 					
Road safety	Lack of visibility of warning signage increased vehicle traffic resulting in increased potential vehicle accidents. or pedestrian	<ul style="list-style-type: none"> A designated site access to the site must be created to ensure safe entry and exit. Allow for safe pedestrian crossings where necessary. All the road signs and driving speed must be adhered to at all times. Actions to limit and check the speed of all vehicles on site must be implemented. The Contractor is to provide and traffic install signs along public roads used by the Project, where public signs are inadequate. Allow for safe pedestrian crossings where necessary. All road incidents should be reported to the Safety Officer and project Manager, investigated, documented and kept in the safety file. Emergency response plan (for accidents) must always be readily available on site. The location and construction of access roads shall be informed by road-use safety requirements and shall seek to limit the impact of traffic on neighbouring landowners. Clear visibility of warning signage. Warning signs must be placed on and around the site as per the Occupational, Health and Safety Act requirements. 	<ul style="list-style-type: none"> No complaints from surrounding landowners or road users. No incidents of reported vehicle, pedestrian and livestock accidents. 	CONSTRUCTION & DECOMMISSIONING	<p>International:</p> <ul style="list-style-type: none"> IFC Performance Standard 2: Labour and Working Conditions IFC EHS General Guidelines (2007), Section 3.4, – Traffic Safety IFC EHS General Guidelines (2007), Section 2.0 – Occupational Health and Safety <p>South Africa:</p> <ul style="list-style-type: none"> Road Traffic Act of 1989 (Act No. 29 of 1989) North West Provincial Road Traffic Act (11/1997): Regulations (As amended) Occupational Health and Safety Act (Act No. 85 of 1993) <p>Botswana:</p> <ul style="list-style-type: none"> Road Traffic Act Chapter 69:01 (1975) 	<p>Implementation:</p> <p>Contractor and EO</p> <p>Verification:</p> <p>Site Manager and ECO</p>	<p>Reporting:</p> <ul style="list-style-type: none"> Traffic incidents must be reported to the appropriate safety representative on site and emergency services must be contacted if necessary. All the complaints related to traffic impacts or incidents must be documented in the complaint register kept on site. The Contractor will be expected to do the follow ups and address the complaints. <p>Monitoring frequency:</p> <ul style="list-style-type: none"> Traffic flow must be monitored on a daily basis during work hours. <p>Auditing requirements:</p> <ul style="list-style-type: none"> Implementation of this Plan shall be audited at the commencement of works and on a quarterly basis throughout construction works. An independent ECO must be appointed to undertake site verification audits/ inspections on a monthly basis. Audit reports will be submitted to the client and relevant Competent Authority as and when required. <p>Training:</p> <ul style="list-style-type: none"> The Contractor must ensure that the flag men are trained about the requirements of this Plan and they are competent to direct the traffic. <p><i>(Refer to Section 5 of the ESMP for the detailed information on the training programmes and requirements).</i></p>

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		<ul style="list-style-type: none"> Clearly indicate which activities are to take place within which areas of the site using demarcation and/or signage. Warning barricading should be placed around open trenches and should be suitable for varying weather conditions. Traffic warning signage must be erected where applicable, along transport routes and access roads. The Contractor shall properly mark all access roads. Markers shall show the direction of travel. Roads not being used shall be marked with a "No Entry" sign. Vehicle and pedestrian safety shall be emphasised in the Induction Training 					
Existing road infrastructure	Impacts on existing road conditions (i.e. development of potholes or decrease in the surface quality of roads)	<ul style="list-style-type: none"> Existing road surfaces must be utilised and maintained within the baseline levels Maintain storm water control mechanisms. All equipment and/or materials transported to or from site shall be appropriately secured to, or contained in, vehicles. All vehicles used during the project shall have the appropriate load-bearing capacity for the materials and/or equipment intended to be transported. Repair any damages to public or private roads caused during construction. 	<ul style="list-style-type: none"> No incidents of reported vehicle, pedestrian and livestock accidents. Condition of road surface maintained. No complaints from surrounding landowners or road users. 	CONSTRUCTION & DECOMMISSIONING	<p>South Africa:</p> <ul style="list-style-type: none"> Road Traffic Act of 1989 (Act No. 29 of 1989) North West Provincial Road Traffic Act (11/1997): Regulations (As amended) <p>Botswana:</p> <ul style="list-style-type: none"> Road Traffic Act Chapter 69:01 (1975) 	<p>Implementation:</p> <p>Contractor and EO</p> <p>Verification:</p> <p>Site Manager and ECO</p>	<p>Reporting:</p> <ul style="list-style-type: none"> Photographic evidence of road conditions (before, during and after construction) must be kept in the records. <p>Monitoring frequency:</p> <ul style="list-style-type: none"> Road conditions of the public roads used for construction must be inspected at least every second week. <p>Auditing requirements:</p> <ul style="list-style-type: none"> Implementation of this Plan shall be audited at the commencement of works and on a quarterly basis throughout construction works. An independent ECO must be appointed to undertake site verification audits/ inspections on a monthly basis. Audit reports will be submitted to the client and relevant Competent Authority as and when required. <p>Training:</p> <ul style="list-style-type: none"> The Contractor must ensure that the flag men are trained about the requirements of this Plan and they

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							<p>are competent to identify and respond to impacts on the existing road infrastructure.</p> <p><i>(Refer to Section 5 of the ESMP for the detailed information on the training programmes and requirements).</i></p>