



**FINAL BASIC ASSESSMENT REPORT FOR THE PROPOSED LETABA NETWORK DEVELOPMENT PLAN 2 WITHIN  
GREATER TZANEEN, GREATER LETABA AND MARULENG LOCAL MUNICIPALITIES OF MOPANI DISTRICT  
MUNICIPALITY, LIMPOPO PROVINCE.**

**DEA REF NO:** 14/12/16/3/3/1/479

**HESSA REF NO:** 2011.PLK\_HESSA.ENV\_PRO.006

**POLOKWANE:** AUGUST 2012

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**Nzumbululo**  
heritage solutions south africa

FINAL BASIC ASSESSMENT REPORT FOR PUBLIC REVIEW FOR THE PROPOSED  
ESKOM LETABA NDP 2 PROJECT.



**environmental affairs**

Department:  
Environmental Affairs  
REPUBLIC OF SOUTH AFRICA

(For official use only)

**File Reference Number:**

**Application Number:**

**Date Received:**


Basic assessment report in terms of the Environmental Impact Assessment Regulations, 2010, promulgated in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended.

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**Kindly note that:**

1. This **basic assessment report** is a standard report that may be required by a competent authority in terms of the EIA Regulations, 2010 and is meant to streamline applications. Please make sure that it is the report used by the particular competent authority for the activity that is being applied for.
2. The report must be typed within the spaces provided in the form. The size of the spaces provided is not necessarily indicative of the amount of information to be provided. The report is in the form of a table that can extend itself as each space is filled with typing.
3. Where applicable **tick** the boxes that are applicable in the report.
4. An incomplete report may be returned to the applicant for revision.
5. The use of “not applicable” in the report must be done with circumspection because if it is used in respect of material information that is required by the competent authority for assessing the application, it may result in the rejection of the application as provided for in the regulations.
6. This report must be handed in at offices of the relevant competent authority as determined by each authority.
7. No faxed or e-mailed reports will be accepted.
8. The report must be compiled by an independent environmental assessment practitioner.
9. Unless protected by law, all information in the report will become public information on receipt by the competent authority. Any interested and affected party should be provided with the information contained in this report on request, during any stage of the application process.
10. A competent authority may require that for specified types of activities in defined situations only parts of this report need to be completed.

FINAL BASIC ASSESSMENT REPORT FOR PUBLIC REVIEW FOR THE PROPOSED  
ESKOM LETABA NDP 2 PROJECT.

**REPORT DETAILS**

**PROJECT NAME:** PROPOSED ESKOM LETABA NETWORK DEVELOPMENT PLAN 2 WITHIN GREATER TZANEEN, GREATER LETABA AND MARULENG LOCAL MUNICIPALITIES OF MOPANI DISTRICT MUNICIPALITY, LIMPOPO PROVINCE.

**REPORT TITLE:** FINAL PROPOSED ESKOM LETABA NETWORK DEVELOPMENT PLAN 2 WITHIN GREATER TZANEEN, GREATER LETABA AND MARULENG LOCAL MUNICIPALITIES OF MOPANI DISTRICT MUNICIPALITY, LIMPOPO PROVINCE.

**AUTHOR:** TEBOGO KODIBONA

**SIGNATURE:**

**CHECKED BY:**

**SIGNATURE:**

**CLIENT** N/A

**REFERENCE NO.**

**HESSA REFERENCE NO.** 2012.PLK\_HESSA.ENV\_PRO.006

**DEA REFERENCE NO.** 14/12/16/3/3/1/479

**STATUS OF THE REPORT:** FINAL REPORT

**FIRST ISSUE:**

JULY 2012

P.S.P

APPROVED FOR PSP BY HEAD OF DEPARTMENT:

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DATE: JULY 2012

REVISION	DATE	REASON FOR CHANGE

FINAL BASIC ASSESSMENT REPORT FOR PUBLIC REVIEW FOR THE PROPOSED  
ESKOM LETABA NDP 2 PROJECT.

**CAVEAT**

DRAFT PROPOSED ESKOM LETABA NETWORK DEVELOPMENT PLAN 1 WITHIN GREATER TZANEEN, GREATER LETABA AND MARULENG LOCAL MUNICIPALITIES OF MOPANI DISTRICT MUNICIPALITY, LIMPOPO PROVINCE.

**AUTHORSHIP:** THIS BASIC ASSESSMENT REPORT HAS BEEN PREPARED BY NZUMBULULO HERITAGE SOLUTIONS FOR ESKOM. THE REPORT IS FOR SUBSEQUENT PROCESSING BY THE DEA.

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**GEOGRAPHIC CO-ORDINATE INFORMATION:** GEOGRAPHIC CO-ORDINATES IN THIS REPORT WERE OBTAINED USING A HAND-HELD GARMIN GLOBAL POSITIONING SYSTEM DEVICE. THE MANUFACTURER STATES THAT THESE DEVICES ARE ACCURATE TO WITHIN +/- 5 M.

**MAPS:** MAPS INCLUDED IN THIS REPORT USE DATA EXTRACTED FROM THE NTS MAP AND GOOGLE EARTH PRO.

**DISCLAIMER:** THE AUTHOR IS NOT RESPONSIBLE FOR OMISSIONS AND INCONSISTENCIES THAT MAY RESULT FROM INFORMATION NOT AVAILABLE AT THE TIME THIS REPORT WAS PREPARED.

SIGNED BY ENVIRONMENTAL PRACTITIONER:

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T.KODIBONA  
JULY 2012

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## **SUMMARY AND PROJECT OVERVIEW**

Eskom SOC (Distribution) seeks to optimise the provision of electricity in the Greater Tzaneen Local Municipality by building a 2 x 20MVA 66/11kV and 1 x 20MVA66/22kV Sasekane Substation and the associated loop-in loop-out powerlines from the existing 8.5km 66kV Letsitele-Lenyenye line by constructing 2x4.5km,66kv chickadee line to the proposed sasekani substation. The distribution network development work would also include construction of the new 31km 132kV Kingbird powerline between Letaba Substation and Makhutswi Substation also the re-construction of a new 2.7km 66kv chickadee power line between Dan-village and Letsitele metering points, re-construction of the Nkowankowa-Risenga 5km 66kv Chickadee power line and the re-construction of 2km 66kv Chickadee power line between Dan village and Nkowankowa at the Greater Tzaneen, Greater Letaba and Maruleng Local Municipalities within Mopani District Municipality of Limpopo Province.

This Basic Assessment Report (BAR) is part of an application for an Environmental Authorisation for the proposed construction of the substation and associated loop-in and loop-out power line and distribution powerline. In terms of section 24 and 24D of the National Environmental Management Act (Act No 107 of 1998) as read with the Government Notice R543 (Regulation 20-25) and R544 of the Environmental Impact Assessment Regulations of 2010 as amended, a Basic Assessment process is required to be undertaken for the construction of the 132kv powerlines and is listed as follows:

**Activity 10:** The construction of facilities or infrastructure for the transmission and distribution of electricity:

- (i) Outside urban areas or industrial complexes with a capacity of more than 33 kV but less than 275 kilovolts or

**Activity 22:** The construction of a road outside urban areas

- (i) With a reserve wider than 13.5 meters or
- (ii) Where no reserve exists where the road is wider than 8 metres, or
- (iii) For which an environmental authorisation was obtained for the route determination

Therefore, Eskom requires authorisation from the DEA (in consultation with Limpopo Department of Economic Development, Environment and Tourism) for the undertaking of the proposed substation development and power lines. This project has been registered with the National DEA under reference number 14/12/16/3/3/1/479.

Eskom has appointed Nzumbululo Heritage Solutions, independent environmental consultants, to undertake an Environmental Assessment in the form of a Basic Assessment study to identify and assess all potential environmental impacts associated with the proposed Sasekani Substation and the

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loop-in loop-out powerlines and construction of the new 31km 132kv kingbird power line between Letaba Substation and Makhutswi Substation project,also the re-construction of a new 2.7km 66kv chickadee power line between Dan-village and Letsitele metering points,re-construction of the Nkowankowa-Risenga 5km 66kv Chickadee power line and the re-construction of 2km 66kv Chickadee power line between Dan village and Nkowankowa As part of this environmental study, Interested and Affected Parties (I&APs) are involved through a public participation and involvement process through which their input, comments, concerns and opinions on the proposed development were captured.

## **REVIEW OF THE DRAFT BASIC ASSESSMENT REPORT**

The draft BAR was made available for public review and comment and was distributed to the following locations from the 15<sup>th</sup> of June to 27<sup>th</sup> of July 2012:

This BAR was made available for public review and comment at the following locations:

- Greater Tzaneen Local Municipality Library
- Mopani District Municipality
- Greater Letaba Local Municipality
- Greater Tzaneen Local Municipality
- Maruleng Local Municipality
- Limpopo Department of Economic Development Tourism and Environmental Affairs
- Department of Water Affairs
- Department of Environmental Affairs
- Department of Agriculture & Forestry
- Department of land affairs
- Tzaneen Library
- Nkuna Tribal Offices
- Valoyi Tribal Offices
- Seboye Secondary School (Lenyenye)
- Charles Mathonsi Secondary School
- Agri-Letaba offices

Written comments were invited to be submitted to Nzumbululo Heritage Solutions no later than the 27<sup>th</sup> of July 2012. All comments received are included in the Final Basic Assessment Report, which will be submitted for consideration to DEA who will issue their decision.

## SECTION A: ACTIVITY INFORMATION

HAS A SPECIALIST BEEN CONSULTED TO ASSIST WITH THE COMPLETION OF THIS SECTION?

NO<sup>1</sup>

IF YES, PLEASE COMPLETE THE FORM ENTITLED "DETAILS OF SPECIALIST AND DECLARATION OF INTEREST"

FOR APPOINTMENT OF A SPECIALIST FOR EACH SPECIALIST THUS APPOINTED:  
ANY SPECIALIST REPORTS MUST BE CONTAINED IN APPENDIX D.

### 1. ACTIVITY DESCRIPTION

DESCRIBE THE ACTIVITY, WHICH IS BEING APPLIED FOR, IN DETAIL<sup>1</sup>:

- CONSTRUCTION A 2X20MVA 66/11KV AND 1X20MVA 66/22KV SASEKANI SUBSTATION.
- CONSTRUCTION OF THE LOOP IN LOOP OUT LINE FROM EXISTING 8.5KM, 66KV LETSITELE-LENYENYE LINE BY CONSTRUCTING 2X4.5KM 66KV CHICKADEE POWERLINE TO THE PROPOSED SASEKANI SUBSTATION.
- CONSTRUCTION OF THE NEW 31KM 132KV KINGBIRD LINE BETWEEN PROPOSED LETABA SUBSTATION AND MAKHUTSWI SUBSTATION.
- UPGRADING OF THE ACCESS ROADS
- RE-CONSTRUCTION THE 2.7KM 66KV CHICKADEE POWER LINE BETWEEN DAN-VILLAGE AND LETSITELE METERING POINTS.
- RE-CONSTRUCTION OF THE NKOWANKOWA-RISENGA 5KM 66KV CHICKADEE POWER LINE.
- RE-CONSTRUCTION OF THE 2KM 66KV CHICKADEE POWER LINE BETWEEN DAN VILLAGE AND NKOWANKOWA

### 2. FEASIBLE AND REASONABLE ALTERNATIVES

"**ALTERNATIVES**", IN RELATION TO A PROPOSED ACTIVITY, MEANS DIFFERENT MEANS OF MEETING THE GENERAL PURPOSE AND REQUIREMENTS OF THE ACTIVITY, WHICH MAY INCLUDE ALTERNATIVES TO—

<sup>1</sup> Please note that this description should not be a verbatim repetition of the listed activity as contained in the relevant Government Notice, but should be a brief description of activities to be undertaken as per the project description.

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- (A) THE PROPERTY ON WHICH OR LOCATION WHERE IT IS PROPOSED TO UNDERTAKE THE ACTIVITY;
- (B) THE TYPE OF ACTIVITY TO BE UNDERTAKEN;
- (C) THE DESIGN OR LAYOUT OF THE ACTIVITY;
- (D) THE TECHNOLOGY TO BE USED IN THE ACTIVITY;
- (E) THE OPERATIONAL ASPECTS OF THE ACTIVITY; AND
- (F) THE OPTION OF NOT IMPLEMENTING THE ACTIVITY.

DESCRIBE ALTERNATIVES THAT ARE CONSIDERED IN THIS APPLICATION. ALTERNATIVES SHOULD INCLUDE A CONSIDERATION OF ALL POSSIBLE MEANS BY WHICH THE PURPOSE AND NEED OF THE PROPOSED ACTIVITY COULD BE ACCOMPLISHED IN THE SPECIFIC INSTANCE TAKING ACCOUNT OF THE INTEREST OF THE APPLICANT IN THE ACTIVITY. THE NO-GO ALTERNATIVE MUST IN ALL CASES BE INCLUDED IN THE ASSESSMENT PHASE AS THE BASELINE AGAINST WHICH THE IMPACTS OF THE OTHER ALTERNATIVES ARE ASSESSED.

THE DETERMINATION OF WHETHER SITE OR ACTIVITY (INCLUDING DIFFERENT PROCESSES ETC.) OR BOTH IS APPROPRIATE NEEDS TO BE INFORMED BY THE SPECIFIC CIRCUMSTANCES OF THE ACTIVITY AND ITS ENVIRONMENT. AFTER RECEIPT OF THIS REPORT THE COMPETENT AUTHORITY MAY ALSO REQUEST THE APPLICANT TO ASSESS ADDITIONAL ALTERNATIVES THAT COULD POSSIBLY ACCOMPLISH THE PURPOSE AND NEED OF THE PROPOSED ACTIVITY IF IT IS CLEAR THAT REALISTIC ALTERNATIVES HAVE NOT BEEN CONSIDERED TO A REASONABLE EXTENT.

**Paragraphs 3 – 13 below should be completed for each alternative.**

**3. ACTIVITY POSITION**

INDICATE THE POSITION OF THE ACTIVITY USING THE LATITUDE AND LONGITUDE OF THE CENTRE POINT OF THE SITE FOR EACH ALTERNATIVE SITE. THE CO-ORDINATES SHOULD BE IN DEGREES AND DECIMAL MINUTES. THE MINUTES SHOULD HAVE AT LEAST THREE DECIMALS TO ENSURE ADEQUATE ACCURACY. THE PROJECTION THAT MUST BE USED IN ALL CASES IS THE WGS84 SPHEROID IN A NATIONAL OR LOCAL PROJECTION. LIST ALTERNATIVE SITES, IF APPLICABLE.

<b>ALTERNATIVE (SASEKANI SUBSTATION):</b>	<b>LATITUDE (S):</b>		<b>LONGITUDE (E):</b>	
ALTERNATIVE S1 <sup>2</sup> (PREFERRED ONLY )	S23°	54.52.1'	E030°	15.48.4'
ALTERNATIVE S2 (IF ANY)	0	'	0	'
ALTERNATIVE S3 (IF ANY)	0	'	0	'

**In the case of linear activities:**

	<b>LATITUDE (S):</b>		<b>LONGITUDE (E):</b>	
ALTERNATIVE S1 (PREFERRED OR ONLY ROUTE ALTERNATIVE) <b>LOOP IN LOOP OUT LINE</b>				

<sup>2</sup> "Alternative S.." refer to site alternatives.

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• STARTING POINT OF THE ACTIVITY	S23°	54.18.3'	E030°	14.38.6'
• MIDDLE/ADDITIONAL POINT OF THE ACTIVITY	S23°	54.22.4'	E030°	14.47.9'
• END POINT OF THE ACTIVITY	S23°	54.52.1'	E030°	15.48.4'
ALTERNATIVE S2 (IF ANY)				
• STARTING POINT OF THE ACTIVITY				
• MIDDLE/ADDITIONAL POINT OF THE ACTIVITY				
• END POINT OF THE ACTIVITY				

ALTERNATIVE S3 (IF ANY)

• STARTING POINT OF THE ACTIVITY	0	'	0	'
• MIDDLE/ADDITIONAL POINT OF THE ACTIVITY	0	'	0	'
• END POINT OF THE ACTIVITY	0	'	0	'

FOR ROUTE ALTERNATIVES THAT ARE LONGER THAN 500M, PLEASE PROVIDE AN ADDENDUM WITH CO-ORDINATES TAKEN EVERY 250 METERS ALONG THE ROUTE FOR EACH ALTERNATIVE ALIGNMENT.

ALTERNATIVE FROM LETABA TO MAKHUTSWI SUBSTATION):	LATITUDE (S):		LONGITUDE (E):	
ALTERNATIVE S1 <sup>3</sup> (PREFERRED ONLY )	S23°	57.063'	E030°	22.362'
ALTERNATIVE S2 (IF ANY)	S24°	4.898'	E030°	17.707'
ALTERNATIVE S3 (IF ANY)	S23°	56.948'	E030°	22.413'

In the case of linear activities:

MAKHUTSWI SUBSTATION	LATITUDE (S):		LONGITUDE (E):	
ALTERNATIVE S1 (PREFERRED OR ONLY ROUTE ALTERNATIVE)				
• STARTING POINT OF THE ACTIVITY	S23°	52.870'	E030°	16.988'
• MIDDLE/ADDITIONAL POINT OF THE ACTIVITY	S24°	0.445'	E030°	22.350'
• END POINT OF THE ACTIVITY	S24°	06.411'	E030°	25.496'
ALTERNATIVE S2 (IF ANY)				
• STARTING POINT OF THE ACTIVITY	S23°	52.870'	E030°	16.988'
• MIDDLE/ADDITIONAL POINT OF THE ACTIVITY	S24°	4.898'	E030°	17.707'
• END POINT OF THE ACTIVITY	S24°	06.411'	E030°	25.496'

ALTERNATIVE S3 (IF ANY)

• STARTING POINT OF THE ACTIVITY	S23°	52.870'	E030°	16.988'
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<sup>3</sup> "Alternative S.." refer to site alternatives.

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• MIDDLE/ADDITIONAL POINT OF THE ACTIVITY	S23°	56.948'	E030°	22.413'
• END POINT OF THE ACTIVITY	S24°	06.411'	E030°	25.496'

**4. PHYSICAL SIZE OF THE ACTIVITY**

INDICATE THE PHYSICAL SIZE OF THE PREFERRED ACTIVITY/TECHNOLOGY AS WELL AS ALTERNATIVE ACTIVITIES/TECHNOLOGIES (FOOTPRINTS):

<b>PREFERRED SASEKANI SUBSTATION:</b>	<b>SIZE OF THE ACTIVITY:</b>
ALTERNATIVE A1 <sup>4</sup> (PREFERRED ACTIVITY ALTERNATIVE)	100M X (15000M <sup>2</sup> )
ALTERNATIVE A2 (IF ANY)	M <sup>2</sup>
ALTERNATIVE A3 (IF ANY)	M <sup>2</sup>

OR, FOR LINEAR ACTIVITIES:

<b>• ALTERNATIVE 2X4,5KM,66KV CHICKADEE LOOP-IN LINE AND LOOP OUT LINE</b>	<b>LENGTH OF THE ACTIVITY:</b>
ALTERNATIVE A1 (PREFERRED ACTIVITY ALTERNATIVE)	2X4,5KM
ALTERNATIVE A2 (IF ANY)	M
ALTERNATIVE A3 (IF ANY)	M

INDICATE THE SIZE OF THE ALTERNATIVE SITES OR SERVITUDES (WITHIN WHICH THE ABOVE FOOTPRINTS WILL OCCUR):

<b>ALTERNATIVE:</b>	<b>SIZE OF THE SITE/SERVITUDE:</b>
ALTERNATIVE A1 (PREFERRED ACTIVITY ALTERNATIVE) LOOP IN LOOP OUT	31M
ALTERNATIVE A2 (IF ANY)	M
ALTERNATIVE A3 (IF ANY)	M <sup>2</sup>

**31KM KINGBIRD LINES BETWEEN LETABA SUBSTATION AND MAKHUTSWI SUBSTATION**

<b>PREFERRED ROUTE FROM LETABA TO MAKHUTSWI SUBSTATION:</b>	<b>SIZE OF THE ACTIVITY:</b>
ALTERNATIVE A1 <sup>5</sup> (PREFERRED ACTIVITY ALTERNATIVE)	+/- 31 KM
ALTERNATIVE A2 (IF ANY)	+/- 31 KM
ALTERNATIVE A3 (IF ANY)	+/- 31 KM

OR, FOR LINEAR ACTIVITIES:

<b>ALTERNATIVE S1 (PREFERRED OR ONLY</b>	<b>LENGTH OF THE</b>

<sup>4</sup> "Alternative A.." refer to activity, process, technology or other alternatives.

<sup>5</sup> "Alternative A.." refer to activity, process, technology or other alternatives.

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ROUTE ALTERNATIVE)		ACTIVITY:
ALTERNATIVE A1 (PREFERRED ACTIVITY ALTERNATIVE)		+/- 31 KM
ALTERNATIVE A2 (IF ANY)		+/- 31 KM
ALTERNATIVE A3 (IF ANY)		+/- 31 KM

INDICATE THE SIZE OF THE ALTERNATIVE SITES OR SERVITUDES (WITHIN WHICH THE ABOVE FOOTPRINTS WILL OCCUR):

ALTERNATIVE:		SIZE OF THE SITE/SERVITUDE:
ALTERNATIVE A1 (PREFERRED ACTIVITY ALTERNATIVE)		31M
ALTERNATIVE A2 (IF ANY)		31M
ALTERNATIVE A3 (IF ANY)		31M

**5. SITE ACCESS**

DOES READY ACCESS TO THE SITE EXIST?	<input type="checkbox"/> <input checked="" type="checkbox"/>
IF NO, WHAT IS THE DISTANCE OVER WHICH A NEW ACCESS ROAD WILL BE BUILT	M

DESCRIBE THE TYPE OF ACCESS ROAD PLANNED:

ACCESS TO THE PROPOSED SITE UNDER CONSIDERATION WILL BE VIA THE EXISTING ACCESS ROADS WITHIN THE PROPOSED AREA. ESKOM WILL SIMPLY UPGRADE THE EXISTING ACCESS ROAD.

**6. SITE OR ROUTE PLAN**

A DETAILED SITE OR ROUTE PLAN(S) MUST BE PREPARED FOR EACH ALTERNATIVE SITE OR ALTERNATIVE ACTIVITY. IT MUST BE ATTACHED AS APPENDIX A TO THIS DOCUMENT.

THE SITE OR ROUTE PLANS MUST INDICATE THE FOLLOWING:

- 6.1 THE SCALE OF THE PLAN, WHICH MUST BE AT LEAST A SCALE OF 1:500;
- 6.2 THE PROPERTY BOUNDARIES AND NUMBERS OF ALL THE PROPERTIES WITHIN 50 METRES OF THE SITE;
- 6.3 THE CURRENT LAND USE AS WELL AS THE LAND USE ZONING OF EACH OF THE PROPERTIES ADJOINING THE SITE OR SITES;
- 6.4 THE EXACT POSITION OF EACH ELEMENT OF THE APPLICATION AS WELL AS ANY OTHER STRUCTURES ON THE SITE;
- 6.5 THE POSITION OF SERVICES, INCLUDING ELECTRICITY SUPPLY CABLES (INDICATE ABOVE OR UNDERGROUND), WATER SUPPLY PIPELINES, BOREHOLES, STREET LIGHTS, SEWAGE PIPELINES, STORM WATER INFRASTRUCTURE AND TELECOMMUNICATION INFRASTRUCTURE;

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- 6.6 ALL TREES AND SHRUBS TALLER THAN 1.8 METRES;
- 6.7 WALLS AND FENCING INCLUDING DETAILS OF THE HEIGHT AND CONSTRUCTION MATERIAL;
- 6.8 SERVITUDES INDICATING THE PURPOSE OF THE SERVITUDE;
- 6.9 SENSITIVE ENVIRONMENTAL ELEMENTS WITHIN 100 METRES OF THE SITE OR SITES INCLUDING (BUT NOT LIMITED THERETO):
- RIVERS;
  - THE 1:100 YEAR FLOOD LINE (WHERE AVAILABLE OR WHERE IT IS REQUIRED BY DWA);
  - RIDGES;
  - CULTURAL AND HISTORICAL FEATURES;
  - AREAS WITH INDIGENOUS VEGETATION (EVEN IF IT IS DEGRADED OR INVESTED WITH ALIEN SPECIES);
- 6.10 FOR GENTLE SLOPES THE 1 METRE CONTOUR INTERVALS MUST BE INDICATED ON THE PLAN AND WHENEVER THE SLOPE OF THE SITE EXCEEDS 1:10, THE 500MM CONTOURS MUST BE INDICATED ON THE PLAN; AND
- 6.11 THE POSITIONS FROM WHERE PHOTOGRAPHS OF THE SITE WERE TAKEN.

THE FOLLOWING PLANS HAVE BEEN INCLUDED AND ATTACHED AS APPENDIX A:

- **APPENDIX A1:** SITE PLAN OF PROPOSED SUBSTATION
- **APPENDIX A2:** POSSIBLE STRUCTURES TO BE USED WHEN CONSTUCTING POWER LINES

## **7. SITE PHOTOGRAPHS**

COLOUR PHOTOGRAPHS FROM THE CENTRE OF THE SITE MUST BE TAKEN IN AT LEAST THE EIGHT MAJOR COMPASS DIRECTIONS WITH A DESCRIPTION OF EACH PHOTOGRAPH. PHOTOGRAPHS MUST BE ATTACHED UNDER APPENDIX B TO THIS FORM. IT MUST BE SUPPLEMENTED WITH ADDITIONAL PHOTOGRAPHS OF RELEVANT FEATURES ON THE SITE, IF APPLICABLE.

COLOUR PHOTOGRAPHS TAKEN FROM THE SITE AND LOGICAL POINTS OF THE PROPOSED SUBSTATION PREFERRED AND LOOP IN LOOP OUT LINES ARE ATTACHED AND DESCRIBED IN **APPENDIX B.**

## **8. FACILITY ILLUSTRATION**

A DETAILED ILLUSTRATION OF THE ACTIVITY MUST BE PROVIDED AT A SCALE OF 1:200 AS APPENDIX C FOR ACTIVITIES THAT INCLUDE STRUCTURES. THE ILLUSTRATIONS MUST BE TO SCALE AND MUST REPRESENT A REALISTIC IMAGE OF THE PLANNED ACTIVITY. THE ILLUSTRATION MUST GIVE A REPRESENTATIVE VIEW OF THE ACTIVITY.

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**9. ACTIVITY MOTIVATION**

**9(A) SOCIO-ECONOMIC VALUE OF THE ACTIVITY**

WHAT IS THE EXPECTED CAPITAL VALUE OF THE ACTIVITY ON COMPLETION?	UNKNOWN
WHAT IS THE EXPECTED YEARLY INCOME THAT WILL BE GENERATED BY OR AS A RESULT OF THE ACTIVITY?	UNKNOWN
WILL THE ACTIVITY CONTRIBUTE TO SERVICE INFRASTRUCTURE?	YES✓
IS THE ACTIVITY A PUBLIC AMENITY?	YES✓
HOW MANY NEW EMPLOYMENT OPPORTUNITIES WILL BE CREATED IN THE DEVELOPMENT PHASE OF THE ACTIVITY?	NOT YET DETERMINED AT THIS STAGE.
WHAT IS THE EXPECTED VALUE OF THE EMPLOYMENT OPPORTUNITIES DURING THE DEVELOPMENT PHASE?	NOT YET DETERMINED
WHAT PERCENTAGE OF THIS WILL ACCRUE TO PREVIOUSLY DISADVANTAGED INDIVIDUALS?	UNKNOWN
HOW MANY PERMANENT NEW EMPLOYMENT OPPORTUNITIES WILL BE CREATED DURING THE OPERATIONAL PHASE OF THE ACTIVITY?	UNKNOWN
WHAT IS THE EXPECTED CURRENT VALUE OF THE EMPLOYMENT OPPORTUNITIES DURING THE FIRST 10 YEARS?	UNKNOWN
WHAT PERCENTAGE OF THIS WILL ACCRUE TO PREVIOUSLY DISADVANTAGED INDIVIDUALS?	UNKNOWN

**9(B) NEED AND DESIRABILITY OF THE ACTIVITY**

MOTIVATE AND EXPLAIN THE NEED AND DESIRABILITY OF THE ACTIVITY (INCLUDING DEMAND FOR THE ACTIVITY):

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**NEED:**

THIS SUBSTATION, THE THE LOOP IN LOOP OUT LINES AND THE 31KM KINGBIRD LINES IS A NECESSITY AND SHOULD BE ESTABLISHED IN ORDER TO IMPROVE THE PROVISION OF ELECTRICITY SINCE THE

- THREE OF ESKOM SUBSTATION ARE FED FROM THE MUNICIPAL 66KV BACKBONE LINE WHICH IS REACHED ITS THERMAL CAPACITY LIMIT.
- LETSITELE VALLEY IS REACHING ITS THERMAL CAPACITY LIMIT.
- LETSITELE VALLEY LINES ARE IN A BAD CONDITION.
- ALL THE ESKOM SUBSTATIONS ARE AT RISK SHOULD 66KV BACKBONE LINE FROM TARENDAAL FAIL.
- THE NETWORK FROM TZANEEN MUNICIPALITY SUPPLY ESKOM LOADS WITH RADIAL IN-FEED.
- THE MUNICIPALITY HAS NO MONEY TO UPGRADE THEIR NETWORKS.

BASED ON CURRENT NETWORK STATE, FUTURE LOAD GROWTH WOULD BE LIMITED BY MUNICIPALITY NETWORK. ELECTRICITY LOAD AND SUPPLY WILL BE IMPROVED, THE HIGHER THE VOLTAGE THE BETTER THE SUPPLY.

1.	WAS THE RELEVANT PROVINCIAL PLANNING DEPARTMENT INVOLVED IN THE APPLICATION?	<input type="checkbox"/>	<input type="checkbox"/>
2.	DOES THE PROPOSED LAND USE FALL WITHIN THE RELEVANT PROVINCIAL PLANNING FRAMEWORK?	<input type="checkbox"/>	NO √
3.	IF THE ANSWER TO QUESTIONS 1 AND / OR 2 WAS NO, PLEASE PROVIDE FURTHER MOTIVATION / EXPLANATION: THE PROJECT IS ESKOM'S INITIATIVE AS A RESULT OF THE INCREASING LOAD IN THE AREA.		

**DESIRABILITY:**

1.	DOES THE PROPOSED LAND USE / DEVELOPMENT FIT THE SURROUNDING AREA?	YES √	<input type="checkbox"/>
2.	DOES THE PROPOSED LAND USE / DEVELOPMENT CONFORM TO THE RELEVANT STRUCTURE PLANS, SDF AND PLANNING VISIONS FOR THE AREA?	<input type="checkbox"/>	NO √
3.	WILL THE BENEFITS OF THE PROPOSED LAND USE / DEVELOPMENT OUTWEIGH THE NEGATIVE IMPACTS OF IT?	YES √	<input type="checkbox"/>
4.	IF THE ANSWER TO ANY OF THE QUESTIONS 1-3 WAS NO, PLEASE PROVIDE FURTHER MOTIVATION / EXPLANATION: THE PROJECT IS ESKOM'S INITIATIVE AS A RESULT OF THE INCREASING LOAD IN THE AREA.		
5.	WILL THE PROPOSED LAND USE / DEVELOPMENT IMPACT ON THE SENSE OF PLACE?	YES √	<input type="checkbox"/>
6.	WILL THE PROPOSED LAND USE / DEVELOPMENT SET A PRECEDENT?	<input type="checkbox"/>	NO √

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7.	WILL ANY PERSON'S RIGHTS BE AFFECTED BY THE PROPOSED LAND USE / DEVELOPMENT?	<input type="checkbox"/>	NO √
8.	WILL THE PROPOSED LAND USE / DEVELOPMENT COMPROMISE THE "URBAN EDGE"?	<input type="checkbox"/>	NO √
9.	<p>IF THE ANSWER TO ANY OF THE QUESTION 5-8 WAS YES, PLEASE PROVIDE FURTHER MOTIVATION / EXPLANATION.</p> <p>THE NEW SUBSTATION WILL CREATE A VISUAL INTRUSION, ALSO THE PROPOSED LOOP IN LOOP OUT POWER FROM THE EXISTING 8,5 KM,66KVM FROM LETSITELE-LENYENYE LINE TO THE PROPOSED SASEKANI SUBSTATION AND THE 31KM KINGBIRD LINE BETWEEN LETABA AND MAKHUTSWI SUBSTATION, HOWEVER THE STUDY AREA DOES HAVE EXISTING DISTRIBUTION LINES TRAVERSING THROUGH THE SETTLEMENT AREA. THERE ARE EXISTING FARM AREAS AND ASSOCIATED INFRASTRUCTURE THAT WILL MAKE THE PROPOSED SUBSTATION, THE 31KM KINGBIRD LINES AND LOOP IN LOOP OUT LINES FIT IN EXISTING IN SITU DEVELOPMENTS. FURTHERMORE, THE VALUE OF THE SUBSTATION,THE 31KM KINGBIRD LINE AND THE LOOP IN LOOP OUT LINES TO THE SOCIO-ECONOMIC IMPACT FAR OUTWEIGHS THE ANTICIPATED VISUAL INTRUSION.</p>		

**BENEFITS:**

1.	WILL THE LAND USE / DEVELOPMENT HAVE ANY BENEFITS FOR SOCIETY IN GENERAL?	YES√	<input type="checkbox"/>
2.	<p>EXPLAIN:</p> <p>AS A RESULT OF INCREASED POWER DEMAND IN THE COUNTRY IN GENERAL AND IN THE PROJECT AREA IN PARTICULAR, IT IS CRITICAL THAT THE ESKOM ELECTRICITY DISTRIBUTION INFRASTRUCTURE BE UPGRADED OR DEVELOPED TO MEET THE DEVELOPMENTAL DEMANDS. THE PROPOSED SASEKANI SUBSTATION, THE 31KM KINGBIRD LINES BETWEEN LETABA AND MAKHUTSWI AND THE LOOP IN LOOP OUT LINES INCREASE RELIABILITY AND AVAILABILITY OF POWER SUPPLY IN THE AREA AND THIS COULD OPEN DOORS TO NEW LOCAL ECONOMIC, INDUSTRIES OR OTHER DEVELOPMENTS.</p>		
3.	WILL THE LAND USE / DEVELOPMENT HAVE ANY BENEFITS FOR THE LOCAL COMMUNITIES WHERE IT WILL BE LOCATED?	YES√	<input type="checkbox"/>
4.	<p>EXPLAIN:</p> <p>THE RELIABLE ELECTRICITY SUPPLY WILL OPEN DOORS TO NEW SOCIAL AND ECONOMIC OPPORTUNITY SUCH AS FORMAL HOUSING DEVELOPMENTS; MINING ACTIVITIES ETC. THE STABILITY OF POWER SUPPLY WILL INCREASE SUSTAINABILITY OF EXISTING INDUSTRIES WITHIN THE GENERAL AND THE AFFECTED AREA. THE BENEFITS TO SOCIETY ARE THROUGH THE UNINTERRUPTED AND RELIABLE SUPPLY OF POWER TO BE MANAGED AND DISTRIBUTED THROUGH THE SASEKANI SUBSTATION PROPOSED LETABA AND EXISTING MAKHUTSWI.</p>		

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**10. Applicable legislation, policies and/or guidelines**

LIST ALL LEGISLATION, POLICIES AND/OR GUIDELINES OF ANY SPHERE OF GOVERNMENT THAT ARE APPLICABLE TO THE APPLICATION AS CONTEMPLATED IN THE EIA REGULATIONS, IF APPLICABLE:

<b>TITLE OF LEGISLATION, POLICY OR GUIDELINE:</b>	<b>ADMINISTERING AUTHORITY:</b>	<b>DATE:</b>
NATIONAL ENVIRONMENTAL MANAGEMENT ACT EIA	NATIONAL AND PROVINCIAL	NATIONAL AND PROVINCIAL 18 JUNE 2010
NATIONAL VELD AND FOREST FIRE ACT	NATIONAL AND PROVINCIAL	27 NOVEMBER 1998
NATIONAL FOREST ACT	NATIONAL AND PROVINCIAL	30 OCTOBER 1998
ADVERTISING ON ROADS AND RIBBON DEVELOPMENT ACT	NATIONAL AND PROVINCIAL	43 OF 1983
CONSERVATION OF AGRICULTURAL RESOURCES ACT	NATIONAL AND PROVINCIAL	21 APRIL 1983
AGRICULTURAL PESTS ACT	NATIONAL AND PROVINCIAL	13 APRIL 1983
NATIONAL ENVIRONMENTAL MANAGEMENT ACT	NATIONAL AND PROVINCIAL	18 JUNE 2010
ENVIRONMENT CONSERVATION ACT	NATIONAL AND PROVINCIAL	9 JUNE 1989
FENCING ACT	NATIONAL AND PROVINCIAL	27 APRIL 1963
HAZARDOUS SUBSTANCES ACT	NATIONAL AND PROVINCIAL	26 MARCH 1973
HEALTH ACT	NATIONAL AND PROVINCIAL	18 JULY 2004
NATIONAL ROADS ACT	NATIONAL AND PROVINCIAL	1 OCTOBER 1971
OCCUPATIONAL HEALTH AND SAFETY ACT	NATIONAL AND PROVINCIAL	23 JUNE 1993
NATIONAL HERITAGE RESOURCES ACT	NATIONAL AND PROVINCIAL	28 APRIL 1999
NATIONAL WATER ACT	NATIONAL AND PROVINCIAL	20 AUGUST 1998
NATIONAL ENVIRONMENTAL MANAGEMENT: WASTE ACT (ACT NO. 59 OF 2008)	DEA	2008

**11. WASTE, EFFLUENT, EMISSION AND NOISE MANAGEMENT**

**11(A) SOLID WASTE MANAGEMENT**

WILL THE ACTIVITY PRODUCE SOLID CONSTRUCTION WASTE DURING THE CONSTRUCTION/INITIATION PHASE?	YES√	
IF YES, WHAT ESTIMATED QUANTITY WILL BE PRODUCED PER MONTH?	QUANTITIES OF WASTE TO BE PRODUCED ARE NOT POSSIBLE TO ESTIMATE AT THIS STAGE	
<p>HOW WILL THE CONSTRUCTION SOLID WASTE BE DISPOSED OF (DESCRIBE)?</p> <p>WASTE WILL BE EXTRACTED BY A WASTE DISPOSAL TRUCK AND TRANSPORTED TO THE CLOSEST REGISTERED LANDFILL SITE IN GREATER TZANEEN, GREATER LETABA AND MARULENG LOCAL MUNICIPALITIES. DEPENDING ON THE QUANTITY, WASTE MATERIAL WILL BE COLLECTED BY WASTE TRUCKS ON A WEEKLY BASIS OR CAN BE DETERMINED BY THE CONTRACTOR SHOULD THE FREQUENCY INCREASE. THE AMOUNT OF CONSTRUCTION WASTE IS NOT KNOWN AT THIS STAGE.</p>		

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WHERE WILL THE CONSTRUCTION SOLID WASTE BE DISPOSED OF (DESCRIBE)?

WASTE WILL BE DISPOSED OF AT A REGISTERED LANDFILL SITE.

IN ORDER TO COMPLY WITH LEGAL REQUIREMENTS, ALL WASTE MATERIALS FROM PROPOSED SASEKANI SUBSTATION AND THE LOOP IN LOOP OUT LINES CONSTRUCTIONS MUST BE DISPOSED OF AT AN APPROPRIATELY LICENSED WASTE DISPOSAL SITE IN GREATER TZANEEN, GREATER LETABA AND MARULENG LOCAL MUNICIPALITIES. SPOIL MATERIAL EXCAVATED DURING THE CONSTRUCTION ACTIVITIES OF THE PROPOSED POWERLINE WILL BE USED AS FILL MATERIAL WHERE REQUIRED OR TAKEN UP AND DISPOSED OF ACCORDING TO THE ACCEPTED PROCEDURES. WHERE TOP SOIL MATERIALS IS COLLECTED, SUCH SPOIL MAY BE USED TO REHABILITATE SECTION OF THE SITE WHEN CONSTRUCTION IS COMPLETE.

WILL THE ACTIVITY PRODUCE SOLID WASTE DURING ITS OPERATIONAL PHASE?  NO  YES

IF YES, WHAT ESTIMATED QUANTITY WILL BE PRODUCED PER MONTH? M<sup>3</sup>

HOW WILL THE SOLID WASTE BE DISPOSED OF (DESCRIBE)?

N/A

WHERE WILL THE SOLID WASTE BE DISPOSED IF IT DOES NOT FEED INTO A MUNICIPAL WASTE STREAM (DESCRIBE)?

N/A

IF THE SOLID WASTE (CONSTRUCTION OR OPERATIONAL PHASES) WILL NOT BE DISPOSED OF IN A REGISTERED LANDFILL SITE OR BE TAKEN UP IN A MUNICIPAL WASTE STREAM, THEN THE APPLICANT SHOULD CONSULT WITH THE COMPETENT AUTHORITY TO DETERMINE WHETHER IT IS NECESSARY TO CHANGE TO AN APPLICATION FOR SCOPING AND EIA.

CAN ANY PART OF THE SOLID WASTE BE CLASSIFIED AS HAZARDOUS IN TERMS OF THE RELEVANT LEGISLATION?  NO  YES

IF YES, INFORM THE COMPETENT AUTHORITY AND REQUEST A CHANGE TO AN APPLICATION FOR SCOPING AND EIA.

IS THE ACTIVITY THAT IS BEING APPLIED FOR A SOLID WASTE HANDLING OR TREATMENT FACILITY?  NO  YES

IF YES, THEN THE APPLICANT SHOULD CONSULT WITH THE COMPETENT AUTHORITY TO DETERMINE WHETHER IT IS NECESSARY TO CHANGE TO AN APPLICATION FOR SCOPING AND EIA.

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**11(B) LIQUID EFFLUENT**

WILL THE ACTIVITY PRODUCE EFFLUENT, OTHER THAN NORMAL SEWAGE,  
THAT WILL BE DISPOSED OF IN A MUNICIPAL SEWAGE SYSTEM?  NO✓

IF YES, WHAT ESTIMATED QUANTITY WILL BE PRODUCED PER MONTH?

M<sup>3</sup>

WILL THE ACTIVITY PRODUCE ANY EFFLUENT THAT WILL BE TREATED AND/OR  
DISPOSED OF ON SITE?  NO✓

IF YES, THE APPLICANT SHOULD CONSULT WITH THE COMPETENT AUTHORITY TO  
DETERMINE WHETHER IT IS NECESSARY TO CHANGE TO AN APPLICATION FOR SCOPING  
AND EIA.

WILL THE ACTIVITY PRODUCE EFFLUENT THAT WILL BE TREATED AND/OR  
DISPOSED OF AT ANOTHER FACILITY?  NO✓

IF YES, PROVIDE THE PARTICULARS OF THE FACILITY:

FACILITY

NAME:

CONTACT

PERSON:

POSTAL

ADDRESS:

POSTAL

CODE:

TELEPHONE:

CELL:

E-MAIL:

FAX:

DESCRIBE THE MEASURES THAT WILL BE TAKEN TO ENSURE THE OPTIMAL REUSE OR  
RECYCLING OF WASTE WATER, IF ANY:

ON SITE WASTEWATER MANAGEMENT SHALL INCLUDE THE FOLLOWING (DURING  
CONSTRUCTION)

- ② SEPARATION OF DIRTY AND CLEAN WATER AT SOURCE
- ② RECYCLING OF CLEAN WATER FOR RE-USE
- ② PROVISION OF RECOMMENDATIONS REGARDING WATER USE MINIMISATION ON  
SITE.

**11(C) EMISSIONS INTO THE ATMOSPHERE**

WILL THE ACTIVITY RELEASE EMISSIONS INTO THE ATMOSPHERE?	YES√	<input checked="" type="checkbox"/>
IF YES, IS IT CONTROLLED BY ANY LEGISLATION OF ANY SPHERE OF GOVERNMENT?		NO√
IF YES, THE APPLICANT SHOULD CONSULT WITH THE COMPETENT AUTHORITY TO DETERMINE WHETHER IT IS NECESSARY TO CHANGE TO AN APPLICATION FOR SCOPING AND EIA.		
IF NO, DESCRIBE THE EMISSIONS IN TERMS OF TYPE AND CONCENTRATION:		
<p>DURING THE CONSTRUCTION PHASE, DUST AND VEHICULAR EMISSIONS WILL BE RELEASED AS A RESULT OF EARTHMOVING ACTIVITIES. HOWEVER THESE EMISSIONS WILL HAVE A SHORT TERM IMPACT ON THE IMMEDIATE SURROUNDING AREA AND THUS NO AUTHORISATION WILL BE REQUIRED FOR SUCH EMISSIONS.</p> <p>APPROPRIATE DUST SUPPRESSION MEASURES SHALL BE IMPLEMENTED (E.G. REMOVAL OF VEGETATION IN A PHASED MANNER AND USING RECYCLED WATER FOR SPRAYING DUST TO REDUCE THE IMPACTS. THERE WILL BE NO EMISSIONS GENERATED AS A RESULT OF THE OPERATION OF THE PROPOSED ACTIVITY.</p>		

**11(D) GENERATION OF NOISE**

WILL THE ACTIVITY GENERATE NOISE?	YES√	<input checked="" type="checkbox"/>
IF YES, IS IT CONTROLLED BY ANY LEGISLATION OF ANY SPHERE OF GOVERNMENT?		NO√
IF YES, THE APPLICANT SHOULD CONSULT WITH THE COMPETENT AUTHORITY TO DETERMINE WHETHER IT IS NECESSARY TO CHANGE TO AN APPLICATION FOR SCOPING AND EIA.		
IF NO, DESCRIBE THE NOISE IN TERMS OF TYPE AND LEVEL:		
<p>MINIMAL NOISE WILL EMANATE FROM CONSTRUCTION MACHINERY AND VEHICLES DURING THE LIMITED PERIOD OF CONSTRUCTION PHASE. THE CONSTRUCTION PHASE WILL BE LIMITED THERE WILL BE NO NOISE GENERATED AS A RESULT OF THE OPERATION OF THE PROPOSED ACTIVITY.</p>		

**12. WATER USE**

PLEASE INDICATE THE SOURCE (S) OF WATER THAT WILL BE USED FOR THE ACTIVITY BY TICKING THE APPROPRIATE BOX (ES)

MUNICIPAL WATER BOARD	GROUNDWATER	RIVER, STREAM, DAM OR LAKE	OTHER√	THE ACTIVITY WILL NOT USE WATER
IF WATER IS TO BE EXTRACTED FROM GROUNDWATER, RIVER, STREAM, DAM, LAKE OR ANY OTHER NATURAL FEATURE, PLEASE INDICATE				

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THE VOLUME THAT WILL BE EXTRACTED PER MONTH:

LITRES

DOES THE ACTIVITY REQUIRE A WATER USE PERMIT FROM THE DEPARTMENT  
OF WATER AFFAIRS?



NO✓

IF YES, PLEASE SUBMIT THE NECESSARY APPLICATION TO THE DEPARTMENT OF WATER  
AFFAIRS AND ATTACH PROOF THEREOF TO THIS APPLICATION IF IT HAS BEEN SUBMITTED.

**13. ENERGY EFFICIENCY**

DESCRIBE THE DESIGN MEASURES, IF ANY, THAT HAVE BEEN TAKEN TO ENSURE THAT THE  
ACTIVITY IS ENERGY EFFICIENT:

THE PROPOSED DEVELOPED BY ITS NATURE WILL ALLOW ESKOM TO INSTALL THE LATEST  
AVAILABLE SUBSTATION, KINGBIRD LINES AND LOOP IN LOOP OUT LINES TECHNOLOGY  
WHICH WILL ALLOW FOR EFFICIENT AND EFFECTIVE ELECTRICITY DISTRIBUTION ONCE THE  
PROJECT IS IN OPERATION PHASE.

DESCRIBE HOW ALTERNATIVE ENERGY SOURCES HAVE BEEN TAKEN INTO ACCOUNT OR  
BEEN BUILT INTO THE DESIGN OF THE ACTIVITY, IF ANY:

**NONE**

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**SECTION B: SITE/AREA/PROPERTY DESCRIPTION**

**IMPORTANT NOTES:**

- FOR LINEAR ACTIVITIES (PIPELINES, ETC.) AS WELL AS ACTIVITIES THAT COVER VERY LARGE SITES, IT MAY BE NECESSARY TO COMPLETE THIS SECTION FOR EACH PART OF THE SITE THAT HAS A SIGNIFICANTLY DIFFERENT ENVIRONMENT. IN SUCH CASES PLEASE COMPLETE COPIES OF SECTION C AND INDICATE THE AREA, WHICH IS COVERED BY EACH COPY NO. ON THE SITE PLAN.

SECTION C COPY NO.  
(E.G. A):

- PARAGRAPHS 1 - 6 BELOW MUST BE COMPLETED FOR EACH ALTERNATIVE.

- HAS A SPECIALIST BEEN CONSULTED TO ASSIST WITH THE COMPLETION OF THIS SECTION?

IF YES, PLEASE COMPLETE THE FORM ENTITLED "DETAILS OF SPECIALIST AND DECLARATION OF INTEREST"

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FOR EACH SPECIALIST THUS APPOINTED:  
ALL SPECIALIST REPORTS MUST BE CONTAINED IN APPENDIX D.

PROPERTY DESCRIPTION/PHYSICAL ADDRESS:	<b>SEE LIST ATTACHED</b>
	(FARM NAME, PORTION ETC.) WHERE A LARGE NUMBER OF PROPERTIES ARE INVOLVED (E.G. LINEAR ACTIVITIES), PLEASE ATTACH A FULL LIST TO THIS APPLICATION.
	IN INSTANCES WHERE THERE IS MORE THAN ONE TOWN OR DISTRICT INVOLVED, PLEASE ATTACH A LIST OF TOWNS OR DISTRICTS TO THIS APPLICATION.
CURRENT LAND-USE ZONING:	AGRICULTURAL, RESIDENTIAL, CULTIVATED, MINING, INFORMAL SETTLEMENTS, PLANTATIONS
	IN INSTANCES WHERE THERE IS MORE THAN ONE CURRENT LAND-USE ZONING, PLEASE ATTACH A LIST OF CURRENT LAND USE ZONINGS THAT ALSO INDICATE WHICH PORTIONS EACH USE PERTAINS TO , TO THIS APPLICATION.
IS A CHANGE OF LAND-USE OR A CONSENT USE APPLICATION REQUIRED?	<input style="width: 50px; height: 20px; border: 1px solid black; background-color: black; color: white; text-align: right;" type="text" value="NO✓"/>
MUST A BUILDING PLAN BE SUBMITTED TO THE LOCAL AUTHORITY?	<input style="width: 50px; height: 20px; border: 1px solid black; background-color: black; color: white; text-align: right;" type="text" value="NO✓"/>

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**LOCALITY MAP:** AN A3 LOCALITY MAP MUST BE ATTACHED TO THE BACK OF THIS DOCUMENT, AS APPENDIX A. THE SCALE OF THE LOCALITY MAP MUST BE RELEVANT TO THE SIZE OF THE DEVELOPMENT (AT LEAST 1:50 000. FOR LINEAR ACTIVITIES OF MORE THAN 25 KILOMETRES, A SMALLER SCALE E.G. 1:250 000 CAN BE USED. THE SCALE MUST BE INDICATED ON THE MAP.) THE MAP MUST INDICATE THE FOLLOWING:

- AN INDICATION OF THE PROJECT SITE POSITION AS WELL AS THE POSITIONS OF THE ALTERNATIVE SITES, IF ANY;
- ROAD ACCESS FROM ALL MAJOR ROADS IN THE AREA;
- ROAD NAMES OR NUMBERS OF ALL MAJOR ROADS AS WELL AS THE ROADS THAT PROVIDE ACCESS TO THE SITE (S);
- ALL ROADS WITHIN A 1KM RADIUS OF THE SITE OR ALTERNATIVE SITES; AND
- A NORTH ARROW;
- A LEGEND; AND
- LOCALITY GPS CO-ORDINATES (INDICATE THE POSITION OF THE ACTIVITY USING THE LATITUDE AND LONGITUDE OF THE CENTRE POINT OF THE SITE FOR EACH ALTERNATIVE SITE. THE CO-ORDINATES SHOULD BE IN DEGREES AND DECIMAL MINUTES. THE MINUTES SHOULD HAVE AT LEAST THREE DECIMALS TO ENSURE ADEQUATE ACCURACY. THE PROJECTION THAT MUST BE USED IN ALL CASES IS THE WGS84 SPHEROID IN A NATIONAL OR LOCAL PROJECTION)

**1. GRADIENT OF THE SITE**

INDICATE THE GENERAL GRADIENT OF THE SITE.

**ALTERNATIVE S1: SASEKANI SUBSTATION AND ASSOCIATED LOOP IN LOOP OUT LINES**

FLAT						
------	--	--	--	--	--	--

**ALTERNATIVE S2 (IF ANY):**

FLAT						
------	--	--	--	--	--	--

**ALTERNATIVE S3 (IF ANY):**

FLAT	1:50 – 1:20	1:20 – 1:15	1:15 – 1:10	1:10 – 1:7,5	1:7,5 – 1:5	STEEPER THAN 1:5
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**Alternative S1: 31KM KINGBIRD LINE BETWEEN LETABA AND MAKHUTSWI SUBSTATION**

Flat						
------	--	--	--	--	--	--

**Alternative S2 (if any):**

Flat						
------	--	--	--	--	--	--

**Alternative S3 (if any):**

Flat						
------	--	--	--	--	--	--

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**2. LOCATION IN LANDSCAPE**

INDICATE THE LANDFORM (S) THAT BEST DESCRIBES THE SITE:

- 2.1 RIDGELINE
- 2.2 PLATEAU
- 2.3 SIDE SLOPE OF HILL/MOUNTAIN
- 2.4 CLOSED VALLEY
- 2.5 OPEN VALLEY
- 2.6 PLAIN** ✓
- 2.7 UNDULATING PLAIN / LOW HILLS
- 2.8 DUNE
- 2.9 SEAFRONT

**3. Groundwater, Soil and Geological stability of the site**

IS THE SITE(S) LOCATED ON ANY OF THE FOLLOWING (TICK THE APPROPRIATE BOXES)?  
**SASEKANE SUBSTATION**

	ALTERNATIVE S1:		ALTERNATIVE S2 (IF ANY):		ALTERNATIVE S3 (IF ANY):	
	<input type="checkbox"/>	NO✓	YES	NO	YES	NO
SHALLOW WATER TABLE (LESS THAN 1.5M DEEP)	<input type="checkbox"/>	NO✓	YES	NO	YES	NO
DOLOMITE, SINKHOLE OR DOLINE AREAS	<input type="checkbox"/>	NO✓	YES	NO	YES	NO
SEASONALLY WET SOILS (OFTEN CLOSE TO WATER BODIES)	<input type="checkbox"/>	NO✓	YES	NO	YES	NO
UNSTABLE ROCKY SLOPES OR STEEP SLOPES WITH LOOSE SOIL	<input type="checkbox"/>	NO✓	YES	NO	YES	NO
DISPERSIVE SOILS (SOILS THAT DISSOLVE IN WATER)	<input type="checkbox"/>	NO✓	YES	NO	YES	NO
SOILS WITH HIGH CLAY CONTENT (CLAY FRACTION MORE THAN 40%)	<input type="checkbox"/>	NO✓	YES	NO	YES	NO
ANY OTHER UNSTABLE SOIL OR GEOLOGICAL FEATURE	<input type="checkbox"/>	NO✓	YES	NO	YES	NO
AN AREA SENSITIVE TO EROSION	<input type="checkbox"/>	NO✓	YES	NO	YES	NO

IF YOU ARE UNSURE ABOUT ANY OF THE ABOVE OR IF YOU ARE CONCERNED THAT ANY OF THE ABOVE ASPECTS MAY BE AN ISSUE OF CONCERN IN THE APPLICATION, AN APPROPRIATE SPECIALIST SHOULD BE APPOINTED TO ASSIST IN THE COMPLETION OF THIS

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SECTION. (INFORMATION IN RESPECT OF THE ABOVE WILL OFTEN BE AVAILABLE AS PART OF THE PROJECT INFORMATION OR AT THE PLANNING SECTIONS OF LOCAL AUTHORITIES. WHERE IT EXISTS, THE 1:50 000 SCALE REGIONAL GEOTECHNICAL MAPS PREPARED BY THE COUNCIL FOR GEO SCIENCE MAY ALSO BE CONSULTED).

**LOOP IN AND LOOP OUT POWER LINE FROM THE EXISTING 8,5KM, 66KV LETSITELE-LENYENYE LINE TO THE PROPOSED SASEKANI SUBSTATION**

	<b>ALTERNATIVE S1:</b>		<b>ALTERNATIVE S2 (IF ANY):</b>		<b>ALTERNATIVE S3 (IF ANY):</b>	
SHALLOW WATER TABLE (LESS THAN 1.5M DEEP)	<input checked="" type="checkbox"/>	NO✓	YES	NO	YES	NO
DOLOMITE, SINKHOLE OR DOLINE AREAS	<input checked="" type="checkbox"/>	NO✓	YES	NO	YES	NO
SEASONALLY WET SOILS (OFTEN CLOSE TO WATER BODIES)	<input checked="" type="checkbox"/>	NO✓	YES	NO	YES	NO
UNSTABLE ROCKY SLOPES OR STEEP SLOPES WITH LOOSE SOIL	<input checked="" type="checkbox"/>	NO✓	YES	NO	YES	NO
DISPERSIVE SOILS (SOILS THAT DISSOLVE IN WATER)	<input checked="" type="checkbox"/>	NO✓	YES	NO	YES	NO
SOILS WITH HIGH CLAY CONTENT (CLAY FRACTION MORE THAN 40%)	<input checked="" type="checkbox"/>	NO✓	YES	NO	YES	NO
ANY OTHER UNSTABLE SOIL OR GEOLOGICAL FEATURE	<input checked="" type="checkbox"/>	NO✓	YES	NO	YES	NO
AN AREA SENSITIVE TO EROSION	<input checked="" type="checkbox"/>	NO✓	YES	NO	YES	NO

IF YOU ARE UNSURE ABOUT ANY OF THE ABOVE OR IF YOU ARE CONCERNED THAT ANY OF THE ABOVE ASPECTS MAY BE AN ISSUE OF CONCERN IN THE APPLICATION, AN APPROPRIATE SPECIALIST SHOULD BE APPOINTED TO ASSIST IN THE COMPLETION OF THIS SECTION. (INFORMATION IN RESPECT OF THE ABOVE WILL OFTEN BE AVAILABLE AS PART OF THE PROJECT INFORMATION OR AT THE PLANNING SECTIONS OF LOCAL AUTHORITIES. WHERE IT EXISTS, THE 1:50 000 SCALE REGIONAL GEOTECHNICAL MAPS PREPARED BY THE COUNCIL FOR GEO SCIENCE MAY ALSO BE CONSULTED).

THE GEOLOGICAL MAP SHOWS THAT THE STUDY AREA IS WOODLAND (OR SAVANNA) IS THE DOMINANT BIOME IN THE STUDY AREA AND IT IS DEFINED AS HAVING A GRASSY UNDER-STOREY AND A DISTINCT WOODY UPPER-STOREY OF TREES AND TALL SHRUBS (HARRISON ET AL 1997). SOIL TYPES ARE VARIED BUT ARE GENERALLY NUTRIENT POOR.IT IS ALSO RELATIVELY WELL CONSERVED COMPARED TO THE GRASSLAND BIOME. THE SAVANNA BIOME IS PARTICULARLY RICH IN LARGE POWERLINE SENSITIVE RAPTORS, APART FROM RED DATA SPECIES,

**4. GROUNDCOVER**

INDICATE THE TYPES OF GROUNDCOVER PRESENT ON THE SITE:

THE GEOLOGICAL FORMATIONS IN THE GRANITE LOWVELD ARE FOUND FROM NORTH TO SOUTH AND CONSIST OF SWAZIAN GOUDPLAATS GNEISS, MUKHUTSWI GNEISS, NELSPRUIT SUITE AND MPULUZI GRANITES. THE GRANITES AND GNEISS WEATHERED INTO SANDY SOILS IN THE HIGHER AREAS WITH CLAY SOILS HIGH IN SODIUM IN THE LOWER AREAS (MUCINA AND RUTHERFORD, 2006)

THE VEGETATION TYPE FALLS IN THE SUMMER RAINFALL AREA WITH DRY WINTERS AND AN ANNUAL MAP OF 450 MM ON THE EASTERN FLATS TO 900 MM NEAR THE ESCARP. FROST IS INFREQUENT BUT MAY OCCUR OCCASIONALLY AT THE HIGHER ALTITUDES NEAR THE ESCARP. THE MEAN MAXIMUM AND MINIMUM TEMPERATURES VARY BETWEEN 39.5°C AND - 0.1°C ACROSS THE VEGETATION TYPE (MUCINA AND RUTHERFORD, 2006AL)

THOUGH THE VEGETATION FAIRLY DISTURBED DUE TO VERY OLD FIELDS AND LONG PERIODS OF HUMAN OCCUPATION IN THE REGION, THE VEGETATION HAS RECOVERED BUT SHOULD STILL BE REGARDED AS BEING SECONDARY. HOWEVER, SEVERAL INDIVIDUALS OF THE PROTECTED TREE *SCLEROCARYA BIRREA* (MARULA) ARE FOUND IN THE GENERAL AREA. THESE TREES WERE NORMALLY NOT REMOVED WHEN THE AREA WAS PLOUGHED FOR AGRICULTURE.

**31 KM KINGBIRDLINE BETWEEN LETABA AND MAKHUTSWI SUBSTATION**

	Alternative S1:		Alternative S2 (if any):		Alternative S3 (if any):	
SHALLOW WATER TABLE (LESS THAN 1.5M DEEP)	<input checked="" type="checkbox"/>	NO√	<input checked="" type="checkbox"/>	NO√	<input checked="" type="checkbox"/>	NO√
DOLOMITE, SINKHOLE OR DOLINE AREAS	<input checked="" type="checkbox"/>	NO√	<input checked="" type="checkbox"/>	NO√	<input checked="" type="checkbox"/>	NO√
SEASONALLY WET SOILS (OFTEN CLOSE TO WATER BODIES)	<input checked="" type="checkbox"/>	NO√	<input checked="" type="checkbox"/>	NO√	<input checked="" type="checkbox"/>	NO√
UNSTABLE ROCKY SLOPES OR STEEP SLOPES WITH LOOSE SOIL	<input checked="" type="checkbox"/>	NO√	<input checked="" type="checkbox"/>	NO√	<input checked="" type="checkbox"/>	NO√
DISPERSIVE SOILS (SOILS THAT DISSOLVE IN WATER)	<input checked="" type="checkbox"/>	NO√	<input checked="" type="checkbox"/>	NO√	YES√	<input checked="" type="checkbox"/>

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SOILS WITH HIGH CLAY CONTENT (CLAY FRACTION MORE THAN 40%)	<input type="checkbox"/>	NO✓	<input type="checkbox"/>	NO✓	<input type="checkbox"/>	NO✓
ANY OTHER UNSTABLE SOIL OR GEOLOGICAL FEATURE	<input type="checkbox"/>	NO✓	<input type="checkbox"/>	NO✓	<input type="checkbox"/>	NO✓
AN AREA SENSITIVE TO EROSION	YES✓	<input type="checkbox"/>	YES✓	<input type="checkbox"/>	YES✓	<input type="checkbox"/>

IF YOU ARE UNSURE ABOUT ANY OF THE ABOVE OR IF YOU ARE CONCERNED THAT ANY OF THE ABOVE ASPECTS MAY BE AN ISSUE OF CONCERN IN THE APPLICATION, AN APPROPRIATE SPECIALIST SHOULD BE APPOINTED TO ASSIST IN THE COMPLETION OF THIS SECTION. (INFORMATION IN RESPECT OF THE ABOVE WILL OFTEN BE AVAILABLE AS PART OF THE PROJECT INFORMATION OR AT THE PLANNING SECTIONS OF LOCAL AUTHORITIES. WHERE IT EXISTS, THE 1:50 000 SCALE REGIONAL GEOTECHNICAL MAPS PREPARED BY THE COUNCIL FOR GEO SCIENCE MAY ALSO BE CONSULTED).

THE AREA SURROUNDING THE PROPOSED POWER LINE PROBABLY COMPRISED ENTIRELY OF PRISTINE WOODLAND. AS A RESULT IT WOULD MOST LIKELY HAVE SUPPORTED HEALTHY POPULATIONS OF POWER LINE SENSITIVE LARGE SPECIES, HOWEVER PARTS OF THIS AREA HAS SINCE BEEN TRANSFORMED TO ACCOMMODATE A CHANGE IN LAND USE (I.E. AGRICULTURE AND URBANIZATION) WHICH REDUCED THE NUMBER AND VARIETY OF LARGE SPECIES ORIGINALLY INHABITING THE AREA,.IT IS INEVITABLE THAT WOODLAND WILL HAVE TO BE CLEARED UNDER THE NEW LINE, THE IMPACT ON SMALLER SPECIES THAT ARE POTENTIALLY BREEDING IN THE AREA THAT WILL BE CLEARED FOR THE NEW POWER LINE WILL BE LOCAL IN EXTENT, IN THAT IT SHOULD NOT AFFECT REGIONAL OR NATIONAL POPULATIONS IN ANY SIGNIFICANT WAY.

**4.2 GROUNDCOVER**

INDICATE THE TYPES OF GROUNDCOVER PRESENT ON THE SITE:

IN THE GRANITE LOWVELD GEOLOGICAL FORMATIONS ARE FOUND FROM NORTH TO SOUTH AND INCLUDE THE SWAZIAN GUDPLAATS GNEISS, MUKHUTSWI GNEISS, NELSPRUIT SUITE AND MPULUZI GRANITES. THE GRANITES AND GNEISS WEATHERED INTO SANDY SOILS IN THE HIGHER AREAS WITH CLAY SOILS HIGH IN SODIUM IN THE LOWER AREAS (MUCINA AND RUTHERFORD, 2006)IN THE CASE OF THE TZANEEN SOUR BUSHVELD, THE POTASSIUM-POOR GNEISS OF THE GOUDPLAATS GNEISS AND ARCHAEOAN GRANITE DYKES UNDERLIE MOST OF THE AREA. SOILS ARE DOMINATED BY HUTTON, MISPAH AND GLENROSA AND VARY FROM SHALLOW TO DEEP, SANDY TO GRAVEL AND ARE MOSTLY WELL DRAINED (MUCINA AND RUTHERFORD, 2006).

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THE LOCATION OF ALL IDENTIFIED RARE OR ENDANGERED SPECIES OR OTHER ELEMENTS SHOULD BE ACCURATELY INDICATED ON THE SITE PLAN (S).

NATURAL VELD - GOOD CONDITION <sup>E</sup>	NATURAL VELD WITH SCATTERED ALIENS <sup>E</sup>	NATURAL VELD WITH HEAVY ALIEN INFESTATION <sup>E</sup>	VELD DOMINATED BY ALIEN SPECIES <sup>E</sup>	GARDENS
OPEN VELD <sup>✓</sup>	ABANDONED CULTIVATED LAND <sup>✓</sup>	PAVED SURFACE	BUILDING OR OTHER STRUCTURE	BARE SOIL

IF ANY OF THE BOXES MARKED WITH AN "E" IS TICKED, PLEASE CONSULT AN APPROPRIATE SPECIALIST TO ASSIST IN THE COMPLETION OF THIS SECTION IF THE ENVIRONMENTAL ASSESSMENT PRACTITIONER DOESN'T HAVE THE NECESSARY EXPERTISE.

**5. LAND USE CHARACTER OF SURROUNDING AREA**

INDICATE LAND USES AND/OR PROMINENT FEATURES THAT DOES CURRENTLY OCCUR WITHIN A 500M RADIUS OF THE SITE AND GIVE DESCRIPTION OF HOW THIS INFLUENCES THE APPLICATION OR MAY BE IMPACTED UPON BY THE APPLICATION:

**5.1 NATURAL AREA:** THIS AREA WILL BE IMPACTED ON DURING THE CONSTRUCTION PHASE AS THERE WILL BE A NEED TO CLEAR VEGETATION FOR THE CONSTRUCTION CAMP, SUBSTATION SITE AND SERVITUDE AND ACCESS ROAD. HOWEVER, GIVEN THE PREVIOUS DISTURBANCE ON THE AFFECTED SITES, THE IMPACT WILL BE MAINLY ON SECONDARY VEGETATION.

5.2 LOW DENSITY RESIDENTIAL

5.3 MEDIUM DENSITY RESIDENTIAL

**5.4 HIGH DENSITY RESIDENTIAL: IMPACT** ON SENSE OF PLACE, VISUAL IMPACT OF THE SUBSTATION, THE LOOP IN LOOP OUT LINES AND NOISE DURING CONSTRUCTION.

5.5 INFORMAL RESIDENTIAL<sup>A</sup>

5.6 RETAIL COMMERCIAL & WAREHOUSING

5.7 LIGHT INDUSTRIAL

5.8 MEDIUM INDUSTRIAL <sup>AN</sup>

5.9 HEAVY INDUSTRIAL <sup>AN</sup>

**5.10 POWER LINE:** IF SUBSTATION ALTERNATIVE S1 IS CHOSEN, THERE WILL BE A NEED FOR A 2X4, 5KM, 66KV LOOP IN AND LOOP OUT POWER LINE FROM THE EXISTING 8,5KM, 66KV LETSITELE-LENYENYE LINE TO THE PROPOSED SUBSTATION, ALSO CONSTRUCTION OF 31KM KINGBIRD LINE BETWEEN LETABA AND MAKHUTSWI

5.11 OFFICE/CONSULTING ROOM

5.12 MILITARY OR POLICE BASE/STATION/COMPOUND

5.13 SPOIL HEAP OR SLIMES DAM<sup>A</sup>

5.14 QUARRY, SAND OR BORROW PIT

5.15 DAM OR RESERVOIR

5.16 HOSPITAL/MEDICAL CENTRE

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- 5.17 SCHOOL
- 5.18 TERTIARY EDUCATION FACILITY
- 5.19 CHURCH
- 5.20 OLD AGE HOME
- 5.21 SEWAGE TREATMENT PLANT<sup>A</sup>
- 5.22 TRAIN STATION OR SHUNTING YARD<sup>N</sup>
- 5.23 RAILWAY LINE<sup>N</sup>
- 5.24 MAJOR ROAD (4 LANES OR MORE)<sup>N</sup>
- 5.25 AIRPORT<sup>N</sup>
- 5.26 HARBOUR
- 5.27 SPORT FACILITIES
- 5.28 GOLF COURSE
- 5.29 POLO FIELDS
- 5.30 FILLING STATION<sup>H</sup>
- 5.31 LANDFILL OR WASTE TREATMENT SITE
- 5.32 PLANTATION THE PROPOSED POWER LINE WILL TRAVERSE THROUGH PLANTATIONS
- 5.33 AGRICULTURE
- 5.34 RIVER, STREAM OR WETLAND
- 5.35 NATURE CONSERVATION AREA
- 5.36 MOUNTAIN, KOPPIE OR RIDGE THERE ARE SEVERAL LOW HILLS WITHIN THE ROUTE OF THE PROPOSED POWER LINE.
- 5.37 MUSEUM
- 5.38 HISTORICAL BUILDING
- 5.39 PROTECTED AREA
- 5.40 GRAVEYARD THERE IS A FORMAL GRAVEYARD ABOUT 100M FROM THE PROPOSED (PREFERRED) SITE FOR THE LETABA SUBSTATION; THIS WILL NOT BE IMPACTED ON.
- 5.41 ARCHAEOLOGICAL SITE
- 5.42 OTHER LAND USES (DESCRIBE)

IF ANY OF THE BOXES MARKED WITH AN "N" ARE TICKED, HOW WILL THIS IMPACT / BE IMPACTED UPON BY THE PROPOSED ACTIVITY?

THERE WILL BE NOISE GENERATED AS A RESULT OF THE CONSTRUCTION ACTIVITIES ASSOCIATED WITH THE PROPOSED ACTIVITY

IF ANY OF THE BOXES MARKED WITH AN "AN" ARE TICKED, HOW WILL THIS IMPACT / BE IMPACTED UPON BY THE PROPOSED ACTIVITY?

IF YES, SPECIFY AND EXPLAIN:

IF YES, SPECIFY:

|

IF ANY OF THE BOXES MARKED WITH AN "H" ARE TICKED, HOW WILL THIS IMPACT / BE IMPACTED UPON BY THE PROPOSED ACTIVITY.

IF YES, SPECIFY AND EXPLAIN:

IF YES, SPECIFY:

|

|

**6. CULTURAL/HISTORICAL FEATURES**

ARE THERE ANY SIGNS OF CULTURALLY OR HISTORICALLY SIGNIFICANT ELEMENTS, AS DEFINED IN SECTION 2 OF THE NATIONAL HERITAGE RESOURCES ACT, 1999, (ACT NO. 25 OF 1999), INCLUDING ARCHAEOLOGICAL OR PALAEOLOGICAL SITES, ON OR CLOSE (WITHIN 20M) TO THE SITE?	NO✓
IF YES, EXPLAIN:	UNCERTAIN
IF UNCERTAIN, CONDUCT A SPECIALIST INVESTIGATION BY A RECOGNISED SPECIALIST IN THE FIELD TO ESTABLISH WHETHER THERE IS SUCH A FEATURE (S) PRESENT ON OR CLOSE TO THE SITE.	
<b>BRIEFLY EXPLAIN THE FINDINGS OF THE SPECIALIST:</b>	NO FORMAL CEMETERY RECORDED SURROUNDING THE PROPOSED (PREFERRED) SUBSTATION SITE AND THE POWER LINE ROUTE. THE PROPOSED SUBSTATION DEVELOPMENT AND LOOP INLOOP OUT POWERLINE ROUTE IS NOT GOING TO AFFECT THE BURIAL SITE, FOR THE 31KM KINGBIRD LINES BETWEEN LETABA AND MAKHUTSWI LARGE FORMAL GRAVEYARD IS LOCATED IN CLOSE PROXIMITY OF THE PROPOSED NEW LETABA SUBSTATION SITE RECORDED, POWERLINE ROUTE IS NOT GOING TO AFFECT THE BURIAL SITE AND ALSO ON OPTION 3 OF THE POWER LINE ROUTE THERES A GRAVEYARD (GY04) WITH TWO GRAVES WHICH OCCURS ON THE WESTERN OUTSKIRTS OF BOKAKA IN THE VILLAGE OF THLABINE, HOWEVER CONSTRUCTION TEAMS SHOULD EXERCISE CAUTION DURING THE CONSTRUCTION PHASE. WHETHER THEY ARE KNOWN OR NOT ON RECORD, FROM A HERITAGE PERSPECTIVE, BURIAL GROUNDS AND GRAVESITES ARE ACCORDED THE HIGHEST SOCIAL SIGNIFICANCE THRESHOLD THEY HAVE BOTH HISTORICAL AND SOCIAL SIGNIFICANCE AND ARE CONSIDERED SACRED. WHEREVER THEY EXIST THEY MAY NOT BE TEMPERED WITH OR INTERFERED WITH DURING ANY PROPOSED DEVELOPMENT.
WILL ANY BUILDING OR STRUCTURE OLDER THAN 60 YEARS BE AFFECTED IN ANY WAY?	NO✓
IS IT NECESSARY TO APPLY FOR A PERMIT IN TERMS OF THE NATIONAL HERITAGE RESOURCES ACT, 1999 (ACT 25 OF 1999)?	NO✓
IF YES, PLEASE SUBMIT OR, MAKE SURE THAT THE APPLICANT OR A SPECIALIST SUBMITS THE NECESSARY APPLICATION TO SAHRA OR THE RELEVANT PROVINCIAL HERITAGE AGENCY AND ATTACH PROOF THEREOF TO THIS APPLICATION IF SUCH APPLICATION HAS BEEN MADE.	

## **SECTION C: PUBLIC PARTICIPATION**

### **1. ADVERTISEMENT**

THE PERSON CONDUCTING A PUBLIC PARTICIPATION PROCESS MUST TAKE INTO ACCOUNT ANY GUIDELINES APPLICABLE TO PUBLIC PARTICIPATION AS CONTEMPLATED IN SECTION 24J OF THE ACT AND MUST GIVE NOTICE TO ALL POTENTIAL INTERESTED AND AFFECTED PARTIES OF THE APPLICATION WHICH IS SUBJECTED TO PUBLIC PARTICIPATION BY—

- (A) FIXING A NOTICE BOARD (OF A SIZE AT LEAST 60CM BY 42CM; AND MUST DISPLAY THE REQUIRED INFORMATION IN LETTERING AND IN A FORMAT AS MAY BE DETERMINED BY THE COMPETENT AUTHORITY) AT A PLACE CONSPICUOUS TO THE PUBLIC AT THE BOUNDARY OR ON THE FENCE OF—
  - (I) THE SITE WHERE THE ACTIVITY TO WHICH THE APPLICATION RELATES IS OR IS TO BE UNDERTAKEN; AND
  - (II) ANY ALTERNATIVE SITE MENTIONED IN THE APPLICATION;
- (B) GIVING WRITTEN NOTICE TO—
  - (I) THE OWNER OR PERSON IN CONTROL OF THAT LAND IF THE APPLICANT IS NOT THE OWNER OR PERSON IN CONTROL OF THE LAND;
  - (II) THE OCCUPIERS OF THE SITE WHERE THE ACTIVITY IS OR IS TO BE UNDERTAKEN OR TO ANY ALTERNATIVE SITE WHERE THE ACTIVITY IS TO BE UNDERTAKEN;
  - (III) OWNERS AND OCCUPIERS OF LAND ADJACENT TO THE SITE WHERE THE ACTIVITY IS OR IS TO BE UNDERTAKEN OR TO ANY ALTERNATIVE SITE WHERE THE ACTIVITY IS TO BE UNDERTAKEN;
  - (IV) THE MUNICIPAL COUNCILLOR OF THE WARD IN WHICH THE SITE OR ALTERNATIVE SITE IS SITUATED AND ANY ORGANISATION OF RATEPAYERS THAT REPRESENT THE COMMUNITY IN THE AREA;
  - (V) THE MUNICIPALITY WHICH HAS JURISDICTION IN THE AREA;
  - (VI) ANY ORGAN OF STATE HAVING JURISDICTION IN RESPECT OF ANY ASPECT OF THE ACTIVITY; AND
  - (VII) ANY OTHER PARTY AS REQUIRED BY THE COMPETENT AUTHORITY;
- (C) PLACING AN ADVERTISEMENT IN—
  - (I) ONE LOCAL NEWSPAPER; OR
  - (II) ANY OFFICIAL *GAZETTE* THAT IS PUBLISHED SPECIFICALLY FOR THE PURPOSE OF PROVIDING PUBLIC NOTICE OF APPLICATIONS OR OTHER SUBMISSIONS MADE IN TERMS OF THESE REGULATIONS;
- (D) PLACING AN ADVERTISEMENT IN AT LEAST ONE PROVINCIAL NEWSPAPER OR NATIONAL NEWSPAPER, IF THE ACTIVITY HAS OR MAY HAVE AN IMPACT THAT EXTENDS BEYOND THE BOUNDARIES OF THE METROPOLITAN OR LOCAL MUNICIPALITY IN WHICH IT IS OR WILL BE UNDERTAKEN: PROVIDED THAT THIS PARAGRAPH NEED NOT BE COMPLIED WITH IF AN ADVERTISEMENT HAS BEEN PLACED IN AN OFFICIAL *GAZETTE* REFERRED TO IN SUBREGULATION 54(C)(II); AND
- (E) USING REASONABLE ALTERNATIVE METHODS, AS AGREED TO BY THE COMPETENT AUTHORITY, IN THOSE INSTANCES WHERE A PERSON IS DESIRING OF BUT UNABLE TO PARTICIPATE IN THE PROCESS DUE TO—
  - (I) ILLITERACY;

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- (II) DISABILITY; OR
- (III) ANY OTHER DISADVANTAGE.

NOTICES ADVERTISING THE PROJECT WERE PLACED/DISTRIBUTED AS FOLLOWS:

- SITE NOTICES WERE ERECTED ON THE PROPERTY WHERE IT IS INTENDED TO UNDERTAKE THE ACTIVITY.
- A NOTICE DISTRIBUTED TO THE DATABASE OF REGISTERED PARTIES FROM THE PROCESS UNDERTAKEN FOR THE SUBSTATION AND POWERLINES DEVELOPING, INFORMING LOCAL COMMUNITIES, LANDOWNERS AND KEY STAKEHOLDERS AS WELL AS ORGANS OF STATE OF THE PROPOSED PROJECT AND INVITING COMMENTS ON THE DRAFT BAR.
- A NOTICE IN LOCAL NEWSPAPERS TO ADVERTISE THE BA PROCESS WAS PLACED IN THE DAILY SUN (22<sup>nd</sup> MARCH 2012), MOPANI HERALD (23<sup>rd</sup> MARCH 2012) AND LETABA HERALD ON THE ( 23<sup>rd</sup> AND 30<sup>th</sup> MARCH 2012).
- AVAILABILITY OF DRAFT BAR FOR REVIEW AND COMMENTS WAS ADVERTISED ON MOPANI AND LETABA HERALD ON THE 14<sup>th</sup> OF JUNE 2012 AND ON DAILY SUN ON THE 15<sup>th</sup> OF JUNE 2012

## **2. CONTENT OF ADVERTISEMENTS AND NOTICES**

A NOTICE BOARD, ADVERTISEMENT OR NOTICES MUST:

- (A) INDICATE THE DETAILS OF THE APPLICATION WHICH IS SUBJECTED TO PUBLIC PARTICIPATION; AND
- (B) STATE—
  - (I) THAT THE APPLICATION HAS BEEN SUBMITTED TO THE COMPETENT AUTHORITY IN TERMS OF THESE REGULATIONS, AS THE CASE MAY BE;
  - (II) WHETHER BASIC ASSESSMENT OR SCOPING PROCEDURES ARE BEING APPLIED TO THE APPLICATION, IN THE CASE OF AN APPLICATION FOR ENVIRONMENTAL AUTHORISATION;
  - (III) THE NATURE AND LOCATION OF THE ACTIVITY TO WHICH THE APPLICATION RELATES;
  - (IV) WHERE FURTHER INFORMATION ON THE APPLICATION OR ACTIVITY CAN BE OBTAINED; AND
  - (IV) THE MANNER IN WHICH AND THE PERSON TO WHOM REPRESENTATIONS IN RESPECT OF THE APPLICATION MAY BE MADE.

## **3. PLACEMENT OF ADVERTISEMENTS AND NOTICES**

WHERE THE PROPOSED ACTIVITY MAY HAVE IMPACTS THAT EXTEND BEYOND THE MUNICIPAL AREA WHERE IT IS LOCATED, A NOTICE MUST BE PLACED IN AT LEAST ONE PROVINCIAL NEWSPAPER OR NATIONAL NEWSPAPER, INDICATING THAT AN APPLICATION WILL BE SUBMITTED TO THE COMPETENT AUTHORITY IN TERMS OF THESE REGULATIONS, THE NATURE AND LOCATION OF THE ACTIVITY, WHERE FURTHER INFORMATION ON THE PROPOSED ACTIVITY CAN BE OBTAINED AND THE MANNER IN WHICH REPRESENTATIONS IN RESPECT OF THE APPLICATION CAN BE MADE, UNLESS A NOTICE HAS BEEN PLACED IN ANY GAZETTE THAT IS PUBLISHED SPECIFICALLY FOR THE PURPOSE OF PROVIDING NOTICE TO THE PUBLIC OF APPLICATIONS MADE IN TERMS OF THE EIA REGULATIONS.

ADVERTISEMENTS AND NOTICES MUST MAKE PROVISION FOR ALL ALTERNATIVES.

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ADVERTISEMENT AND NOTICES DETAILING THE BASIC ASSESSMENT PROCESS, THE NATURE OF THE LOCATION OF THE PROPOSED PROJECT, WHERE FURTHER INFORMATION ON THE PROPOSED ACTIVITY COULD BE OBTAINED AND MANNER IN WHICH REPRESENTATION ON THE APPLICATION COULD BE MADE..

COPIES OF THE ADVERTISEMENT AND NOTICES ARE INCLUDED IN **APPENDIX E**

#### **4. DETERMINATION OF APPROPRIATE MEASURES**

THE PRACTITIONER MUST ENSURE THAT THE PUBLIC PARTICIPATION IS ADEQUATE AND MUST DETERMINE WHETHER A PUBLIC MEETING OR ANY OTHER ADDITIONAL MEASURE IS APPROPRIATE OR NOT BASED ON THE PARTICULAR NATURE OF EACH CASE. SPECIAL ATTENTION SHOULD BE GIVEN TO THE INVOLVEMENT OF LOCAL COMMUNITY STRUCTURES SUCH AS WARD COMMITTEES, RATEPAYERS ASSOCIATIONS AND TRADITIONAL AUTHORITIES WHERE APPROPRIATE. PLEASE NOTE THAT PUBLIC CONCERNS THAT EMERGE AT A LATER STAGE THAT SHOULD HAVE BEEN ADDRESSED MAY CAUSE THE COMPETENT AUTHORITY TO WITHDRAW ANY AUTHORISATION IT MAY HAVE ISSUED IF IT BECOMES APPARENT THAT THE PUBLIC PARTICIPATION PROCESS WAS INADEQUATE.

#### **5. COMMENTS AND RESPONSE REPORT**

THE PRACTITIONER MUST RECORD ALL COMMENTS AND RESPOND TO EACH COMMENT OF THE PUBLIC BEFORE THE APPLICATION IS SUBMITTED. THE COMMENTS AND RESPONSES MUST BE CAPTURED IN A COMMENTS AND RESPONSE REPORT AS PRESCRIBED IN THE EIA REGULATIONS AND BE ATTACHED TO THIS APPLICATION. THE COMMENTS AND RESPONSE REPORT MUST BE ATTACHED UNDER APPENDIX E.

**NO COMMENTS OR ISSUES WERE RECEIVED PERTAINING TO THE DRAFT BAR.**

#### **6. AUTHORITY PARTICIPATION**

PLEASE NOTE THAT A COMPLETE LIST OF ALL ORGANS OF STATE AND OR ANY OTHER APPLICABLE AUTHORITY WITH THEIR CONTACT DETAILS MUST BE APPENDED TO THE BASIC ASSESSMENT REPORT OR SCOPING REPORT, WHICHEVER IS APPLICABLE.

AUTHORITIES ARE KEY INTERESTED AND AFFECTED PARTIES IN EACH APPLICATION AND NO DECISION ON ANY APPLICATION WILL BE MADE BEFORE THE RELEVANT LOCAL AUTHORITY IS PROVIDED WITH THE OPPORTUNITY TO GIVE INPUT.

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LIST OF AUTHORITIES INFORMED:

- GREATER TZANEEN LOCAL MUNICIPALITY
- GREATER LETABA LOCAL MUNICIPALITY
- MARULENG LOCAL MUNICIPALITY
- MOPANI DISTRICT MUNICIPALITY
- DEPARTMENT OF WATER AFFAIRS
- DEPARTMENT OF LAND AFFAIRS
- DEPARTMENT OF AGRICULTURE & FORESTRY
- LIMPOPO DEPARTMENT OF ECONOMIC DEVELOPMENT, ENVIRONMENT AND TOURISM
- NKUNA TRIBAL AUTHORITY
- VALOYI TRIBAL AUTHORITY
- MODJADJI TRIBAL AUTHORITY
- AGRI-LETABA

LIST OF AUTHORITIES FROM WHOM COMMENTS HAVE BEEN RECEIVED:

ATTACHED AS **APPENDIX E**

**7. CONSULTATION WITH OTHER STAKEHOLDERS**

NOTE THAT, FOR LINEAR ACTIVITIES, OR WHERE DEVIATION FROM THE PUBLIC PARTICIPATION REQUIREMENTS MAY BE APPROPRIATE, THE PERSON CONDUCTING THE PUBLIC PARTICIPATION PROCESS MAY DEVIATE FROM THE REQUIREMENTS OF THAT SUBREGULATION TO THE EXTENT AND IN THE MANNER AS MAY BE AGREED TO BY THE COMPETENT AUTHORITY.

PROOF OF ANY SUCH AGREEMENT MUST BE PROVIDED, WHERE APPLICABLE.

HAS ANY COMMENT BEEN RECEIVED FROM STAKEHOLDERS? YES  [REDACTED]  
IF "YES", BRIEFLY DESCRIBE THE FEEDBACK BELOW (ALSO ATTACH COPIES OF ANY CORRESPONDENCE TO AND FROM THE STAKEHOLDERS TO THIS APPLICATION):

## **SECTION D: IMPACT ASSESSMENT**

THE ASSESSMENT OF IMPACTS MUST ADHERE TO THE MINIMUM REQUIREMENTS IN THE EIA REGULATIONS, 2010, AND SHOULD TAKE APPLICABLE OFFICIAL GUIDELINES INTO ACCOUNT. THE ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES SHOULD ALSO BE ADDRESSED IN THE ASSESSMENT OF IMPACTS.

### **1. ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES**

LIST THE MAIN ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES.

ATTACHED AS **APPENDIX E**

RESPONSE FROM THE PRACTITIONER TO THE ISSUES RAISED BY THE INTERESTED AND AFFECTED PARTIES (A FULL RESPONSE MUST BE GIVEN IN THE COMMENTS AND RESPONSE REPORT THAT MUST BE ATTACHED TO THIS REPORT AS ANNEXURE E):

RESPONSES WERE GIVEN DURING THE MEETINGS HELD. PLEASE REFER TO ATTACHED MINUTES OF THE MEETINGS (**APPENDIX E**).

### **2. IMPACTS THAT MAY RESULT FROM THE PLANNING AND DESIGN, CONSTRUCTION, OPERATIONAL, DECOMMISSIONING AND CLOSURE PHASES AS WELL AS PROPOSED MANAGEMENT OF IDENTIFIED IMPACTS AND PROPOSED MITIGATION MEASURES**

LIST THE POTENTIAL DIRECT, INDIRECT AND CUMULATIVE PROPERTY/ACTIVITY/DESIGN/TECHNOLOGY/OPERATIONAL ALTERNATIVE RELATED IMPACTS (AS APPROPRIATE) THAT ARE LIKELY TO OCCUR AS A RESULT OF THE PLANNING AND DESIGN PHASE, CONSTRUCTION PHASE, OPERATIONAL PHASE, DECOMMISSIONING AND CLOSURE PHASE, INCLUDING IMPACTS RELATING TO THE CHOICE OF SITE/ACTIVITY/TECHNOLOGY ALTERNATIVES AS WELL AS THE MITIGATION MEASURES THAT MAY ELIMINATE OR REDUCE THE POTENTIAL IMPACTS LISTED.

**2.1.1. PLANNING AND DESIGN PHASE IMPACTS**

**ALTERNATIVE S1 (PREFERRED ALTERNATIVE)**

**SASEKANE SUBSTATION AND THE LOOP IN LOOP OUT LINES PLANNING AND DESIGN PHASE**

SITE ALTERNATIVE 1 IS SITUATED ON A PORTION OF LAND NOT FAR FROM THE ROAD. THIS SITE WILL NOT RESULT IN ANY SIGNIFICANT IMPACTS. THUS FROM AN ENVIRONMENTAL IMPACT PERSPECTIVE THIS SITE IS CONSIDERED THE PREFERRED. THE LOOP IN AND LOOP OUT FROM LITSITELE LENYENYE LINE IT ALSO HAS LESS IMPACT TO THE ENVIRONMENT

<b>POTENTIAL IMPACTS (DIRECT)</b>	<b>PROPOSED MITIGATION MEASURES</b>
LACK OF ADEQUATE PLANNING AND NEGOTIATION OF SERVITUDES MAY LEAD TO SITE CHANGES, HIGHER THAN EXPECTED COST OPPORTUNITIES AND INCREASED VISUAL IMPACTS.	<ul style="list-style-type: none"> <li>• CONSTRUCTION AND OPERATION PHASES MUST BE ADEQUATELY PLANNED FOR IN ADVANCE.</li> <li>• UNDERTAKE ADEQUATE CONSULTATION WITH STAKEHOLDERS FOR THE NEGOTIATION OF SERVITUDES.</li> </ul>
FLORA, PLACEMENT OF SUBSTATION AND LOOP IN AND LOOP OUT POWERLINES IN FOOTPRINTS OF SENSITIVE AREAS WILL HAVE A NEGATIVE IMPACT ON THE FLORA.	IDENTIFICATION AND UNDERTAKING OF ALL NECESSARY RISK ASSESSMENTS.

**INDIRECT IMPACTS:**  
**NONE**

**CUMULATIVE IMPACTS:**  
**NONE**

ALTERNATIVE S2: PLANNING AND DESIGN PHASE

**INDIRECT IMPACTS:**  
**NONE**

**CUMULATIVE IMPACTS:**  
**NONE**

**NO-GO ALTERNATIVE**

SHOULD THE STATUS QUO PREVAIL, THE GREATER TZANEEN, GREATER LETABA AND MARULENG LOCAL MUNICIPALITIES WILL NOT MEET THE GROWING DEMAND FOR ELECTRICITY IN THE GENERAL AREA DUE TO RATE OF DEVELOPMENT (MOSTLY RESIDENTIAL). FURTHERMORE, ELECTRICITY SUPPLY IS URGENTLY REQUIRED FOR VARIOUS LOW COST HOUSING DEVELOPMENT INITIATIVES (CURRENT AND FUTURE) IMPLEMENTED AND PLANNED BY THE GREATER TZANEEN LOCAL MUNICIPALITY.

<b>POTENTIAL IMPACTS (DIRECT IMPACTS)</b>	<b>PROPOSED MITIGATION MEASURES</b>
OVERLOAD AND POWER FAILURE WITHIN AREA.	CONSTRUCTION OF THE PROPOSED NEW SASEKANE SUBSTATION, THE 2X4,5KM, 66KV LOOP IN LOOP OUT LINE TO THE PROPOSED SASEKANI SUBSTATION. AND THE 31KM KINGBIRD LINE BETWEEN LETABA AND MAKHUTSWI SUBSTATION
THE NETWORK WILL NOT HAVE SUFFICIENT CAPACITY TO SUPPLY THE PRESENT AND FUTURE DEMAND DURING PEAK PERIODS IN THE SURROUNDING AREA OF SASEKANE LETSITELE AND LENYENYE.	CONSTRUCTION OF THE PROPOSED NEW SASEKANE SUBSTATION, THE 2X4,5KM, 66KV LOOP IN LOOP OUT LINE TO THE PROPOSED SASEKANI SUBSTATION. AND THE 31KM KINGBIRD LINE BETWEEN LETABA AND MAKHUTSWI SUBSTATION
LARGE AREAS OF SASEKANE AND THE SURROUNDING AREA WILL BE WITHOUT ELECTRICITY DURING FAILURE ON ANY SECTION OF THE EXISTING LINE.	CONSTRUCTION OF THE PROPOSED NEW SASEKANE SUBSTATION, THE 2X4,5KM, 66KV LOOP IN LOOP OUT LINE TO THE PROPOSED SASEKANI SUBSTATION. AND THE 31KM KINGBIRD LINE BETWEEN LETABA AND MAKHUTSWI SUBSTATION
OVERLOAD AND POWER FAILURE WITHIN THE AREA.	CONSTRUCTION OF THE PROPOSED NEW SASEKANE SUBSTATION, THE 2X4,5KM, 66KV LOOP IN LOOP OUT LINE TO THE PROPOSED SASEKANI SUBSTATION. AND THE 31KM KINGBIRD LINE BETWEEN LETABA AND MAKHUTSWI SUBSTATION
<b>INDIRECT IMPACTS</b>	
THE EXISTING ELECTRICITY NETWORK WILL NOT BE ABLE TO ACCOMMODATE FUTURE GROWTH AND DEVELOPMENT IN THE SURROUNDING AREA. THE QUALITY OF ELECTRICITY SUPPLY TO CUSTOMERS IN THE AREA WILL REMAIN POOR. THIS WILL HAVE INDIRECT SOCIO-ECONOMIC IMPACTS.	CONSTRUCTION OF THE PROPOSED NEW SASEKANE SUBSTATION, THE 2X4,5KM, 66KV LOOP IN LOOP OUT LINE TO THE PROPOSED SASEKANI SUBSTATION. AND THE 31KM KINGBIRD LINE BETWEEN LETABA AND MAKHUTSWI SUBSTATION

<b>CUMULATIVE IMPACTS:</b> LONG-TERM FINANCIAL CONSTRAINTS BASED ON POOR SERVICE DELIVERY.	CONSTRUCTION OF THE PROPOSED NEW SASEKANE SUBSTATION THE 2X4,5KM, 66KV LOOP IN LOOP OUT LINE TO THE PROPOSED SASEKANI SUBSTATION. AND THE 31KM KINGBIRD LINE BETWEEN LETABA AND MAKHUTSWI SUBSTATION
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**2.1.2 PLANNING AND DESIGN PHASE IMPACTS**

**ALTERNATIVE S1 (PREFERRED ALTERNATIVE)  
31KM KINGBIRD LINE BETWEEN LETABA AND MAKHUSTWI SUBSTATION PLANNING AND DESIGN PHASE**

POWER LINE FOLLOWS THE FOLLOWING ROUTE:  
RUNS EASTWARDS FROM THE LETABA SUBSTATION ALONG THE NORTHERN PERIMETER OF KA MAYOMELA TO THE TURN-OFF TO THE R529. RUNS SOUTHWARDS ALONG THE WESTERN AND THEN THE EASTERN SHOULDER OF THE R529 AND CROSSES THE FARMS BERLYN 670LT, KEULEN 669LT, COBLENTZ 666LT AND BONN 671LT BEFORE CROSSING A DIRT ROAD RUNNING EASTWARDS INTO THE HARMONY BLOCK, THEN RUNS FROM THE DIRT ROAD FURTHER TO THE SOUTH AND FOLLOWS THE EASTERN SHOULDER OF THE R529 WHILST CROSSING THE FARM DUSSELDORF 22KT, PASSING THE VILLAGE OF OFCALACO AND CROSSING THE FARM LUXEMBURG 24KT BEFORE ENDING AT THE MAKUTSWI SUBSTATION THIS ROUTE WILL NOT RESULT IN LESS SIGNIFICANT IMPACTS.

POTENTIAL IMPACTS (DIRECT)	PROPOSED MITIGATION MEASURES
LACK OF ADEQUATE PLANNING AND NEGOTIATION OF SERVITUDES MAY LEAD TO SITE CHANGES, HIGHER THAN EXPECTED COST OPPORTUNITIES AND INCREASED VISUAL IMPACTS.	CONSTRUCTION AND OPERATION PHASES MUST BE ADEQUATELY PLANNED FOR IN ADVANCE. UNDERTAKE ADEQUATE CONSULTATION WITH STAKEHOLDERS FOR THE NEGOTIATION OF SERVITUDES.
FLORA, PLACEMENT OF 31KM KINGBIRD LINE BETWEEN LETABA AND MAKHUSTWI SUBSTATION IN FOOTPRINTS OF SENSITIVE AREAS WILL HAVE A NEGATIVE IMPACT ON THE FLORA.	IDENTIFICATION AND UNDERTAKING OF ALL NECESSARY RISK ASSESSMENTS.

INDIRECT IMPACTS:  
NONE  
CUMULATIVE IMPACTS:  
NONE

**2.1.3 PLANNING AND DESIGN PHASE IMPACTS**

**ALTERNATIVE S2: 31KM KINGBIRD LINE BETWEEN LETABA AND MAKHUSTWI SUBSTATION PLANNING AND DESIGN PHASE**

POWER LINE RUNS FROM THE LETABA SUBSTATION NORTHWARDS AND CROSSES THE LETABA RIVER AFTER WHICH IT BENDS TO THE EAST RUNNING ACROSS THE FARM LETABA ESTATES 528LT. BENDS TO THE SOUTH-EAST ON THE FARM RUST 522LT AND RUNS ACROSS THE

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LETABA RIVER AS WELL AS ACROSS THE R529 THEN RUNS IN A STRAIGHT LINE SOUTH-EASTWARDS FOLLOWING THE BORDERS OF THEN IT AGAIN TURNS WITH A NINETY DEGREE TURN TO THE SOUTH-WEST AND FOLLOWS ESKOM'S EXISTING POWER LINE ACROSS THE FOLLOWING FARMS: HARMONY 140KT AND ACROSS THE NWGABITSI AND GA SELATI RIVERS TO THE MAKUTSWI SUBSTATION

<b>POTENTIAL IMPACTS (DIRECT)</b>	<b>PROPOSED MITIGATION MEASURES</b>
LACK OF ADEQUATE PLANNING AND NEGOTIATION OF SERVITUDES MAY LEAD TO SITE CHANGES, HIGHER THAN EXPECTED COST OPPORTUNITIES AND INCREASED VISUAL IMPACTS.	<ul style="list-style-type: none"> <li>• CONSTRUCTION AND OPERATION PHASES MUST BE ADEQUATELY PLANNED FOR IN ADVANCE.</li> <li>• UNDERTAKE ADEQUATE CONSULTATION WITH STAKEHOLDERS FOR THE NEGOTIATION OF SERVITUDES.</li> </ul>
FLORA, PLACEMENT OF 31KM KINGBIRD LINE BETWEEN LETABA AND MAKHUSTWI SUBSTATION IN FOOTPRINTS OF SENSITIVE AREAS WILL HAVE A NEGATIVE IMPACT ON THE FLORA.	<ul style="list-style-type: none"> <li>• IDENTIFICATION AND UNDERTAKING OF ALL NECESSARY RISK ASSESSMENTS.</li> </ul>

**INDIRECT IMPACTS:**

**NONE**

**CUMULATIVE IMPACTS:**

**NONE**

**ALTERNATIVE S3:**

**31KM KINGBIRD LINE BETWEEN LETABA AND MAKHUSTWI SUBSTATION PLANNING AND DESIGN PHASE**

POWERLINE RUNS FROM THE LETABA SUBSTATION WESTWARDS ACROSS THE LETABA ESTATES AND TURNS SOUTHWARDS IN ORDER TO RUN ALONG THE WESTERN BORDER OF THE VILLAGE OF MOKGOLOBOTHO AND THROUGH THE VILLAGE OF MOHLABA (ON MOHLABAS WHERE IT TURNS TO THE SOUTH-WEST TO END ON LETSITELE ,THEN RUNS FROM LETSITELE SOUTHWARDS AND THEN EASTWARDS ALONG THE BORDERS OF LONG VALLEY 644LT/UPLANDS 653LT AND THABINA VALLEY 13KT.CORVER OF THABANIA VALLEY 13KT SOUTH-EASTWARDS AND WESTWARDS ACROSS AN EXTENSIVE MOUNTAIN RANGE ON MAMATZERI 15KT BEFORE BENDING TO THE SOUTH-EASTWARDS ALONG THE BORDERS OFTHE FARMS TOURS 17KT/SEDAN 18KT; FINALE 200LT/SCHKLUM 41KT WHERE IT TURNS EASTWARDS TO RUN ACROSS PRETORIA 25KT TO THE MAKHUTSWI SUBSTATION.

POTENTIAL IMPACTS (DIRECT)	PROPOSED MITIGATION MEASURES
LACK OF ADEQUATE PLANNING AND NEGOTIATION OF SERVITUDES MAY LEAD TO SITE CHANGES, HIGHER THAN EXPECTED COST OPPORTUNITIES AND INCREASED VISUAL IMPACTS.	<ul style="list-style-type: none"> <li>CONSTRUCTION AND OPERATION PHASES MUST BE ADEQUATELY PLANNED FOR IN ADVANCE.</li> <li>UNDERTAKE ADEQUATE CONSULTATION WITH STAKEHOLDERS FOR THE NEGOTIATION OF SERVITUDES.</li> </ul>
FLORA, PLACEMENT OF 31KM KINGBIRD LINE BETWEEN LETABA AND MAKHUSTWI SUBSTATION IN FOOTPRINTS OF SENSITIVE AREAS WILL HAVE A NEGATIVE IMPACT ON THE FLORA.	IDENTIFICATION AND UNDERTAKING OF ALL NECESSARY RISK ASSESSMENTS.

**INDIRECT IMPACTS:**

**NONE**

**CUMULATIVE IMPACTS:**

**NONE**

**2.1.3 PLANNING AND DESIGN PHASE IMPACTS**

**ALTERNATIVE S1 (PREFERRED ALTERNATIVE)**

**RE-CONSTRUCTION OF A NEW 2.7KM 66KV CHICKADEE POWER LINE BETWEEN DAN-VILLAGE AND LETSITELE METERING POINTS, RE-CONSTRUCTION OF THE NKOWANKOWA-RISENGA 5KM 66KV CHICKADEE POWER LINE AND THE RECONSTRUCTION OF 2KM 66KV CHICKADEE POWER LINE BETWEEN DAN VILLAGE AND NKOWANKOWA PLANNING AND DESIGN PHASE**

POWER LINE FOLLOWS THE FOLLOWING ROUTE:

THE RE-CONSTRUCTION OF THESE POWER LINE WILL INVOLVE THE REPLACEMENT OF THE EXISTING POWERLINES ESKOM WILL REMOVETHE EXISTING NOT IN GOOD CONDITIONS BY CONSTRUCTING NEW ONCE WHICH WILL RESULT IN LESS SIGNIFICANT IMPACTS.

POTENTIAL IMPACTS (DIRECT)	PROPOSED MITIGATION MEASURES
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LACK OF ADEQUATE PLANNING AND INCREASED VISUAL IMPACTS.	CONSTRUCTION AND OPERATION PHASES MUST BE ADEQUATELY PLANNED FOR IN ADVANCE. UNDERTAKE ADEQUATE CONSULTATION WITH STAKEHOLDERS FOR THE NEGOTIATION OF SERVITUDES.
NO FLORA, PLACEMENT OF THE RE-CONSTRUCTED LINES IN FOOTPRINTS OF SENSITIVE AREAS WILL HAVE A NO IMPACT ON THE FLORA.	IDENTIFICATION AND UNDERTAKING OF ALL NECESSARY RISK ASSESSMENTS.

INDIRECT IMPACTS:  
NONE  
CUMULATIVE IMPACTS:  
NONE

**CONSTRUCTION PHASE IMPACTS (PREFERRED SUBSTATION AND POWERLINE ROUTE).**

POTENTIAL IMPACTS (DIRECT)	PROPOSED MITIGATION MEASURES
WATER RESOURCES: POTENTIAL POLLUTION OF GROUNDWATER AND SURFACE WATER POLLUTION	<ul style="list-style-type: none"> <li>FUEL STORAGE AREAS NEED TO BE PROPERLY SEALED WITH CONCRETE APRON WITH BUNDS THAT CAN CONTAIN SPILLAGE FOR REUSE OR RECYCLING TO PREVENT GROUND WATER POLLUTION.</li> <li>ALL RUN OFF WASHING WATER MUST NOT BE DISPOSED OF INTO THE DRAINAGE LINES.</li> <li>STORM WATER DRAINAGE SYSTEMS MUST BE DESIGNED AND STORM WATER MUST BE WELL MANAGED BEFORE ENTERING INTO THE RIVER.</li> </ul>
<p><b>1. LOSS OF BIODIVERSITY:</b> THE IMPACTS ON BIODIVERSITY MIGHT RANGE FROM LOSS OF PROTECTED OR RED DATA PLANTS AND ANIMAL SPECIES AS A RESULT OF CLEARANCE OF VEGETATION, LEADING TO LOSS OF SOIL, HABITAT, LOSS OF FOOD AND RAW MATERIALS, LOSS OF MEDICINAL PLANTS AND ALL THIS CAN DRIVE SPECIES TOWARDS BEING ENDANGERED.</p>	<ul style="list-style-type: none"> <li>UNNECESSARY REMOVAL OF VEGETATION COVER SHOULD BE AVOIDED AT ALL TIMES.</li> <li>CONFINE IMPACTS ONLY TO THE DEVELOPMENT AREA.</li> <li>LIMIT MOVEMENT OF VEHICLES AND PERSONNEL THROUGH AREAS OF SENSITIVITY.</li> <li>GRASSLAND OCCURRING ON AND NEAR CONSTRUCTION SITE SHOULD BE RETAINED WHERE POSSIBLE IN ORDER TO ASSIST IN RETARDING EROSION</li> </ul>
<p><b>2. SOIL:</b> CONTINUOUS MOVEMENT OF HEAVY MACHINERY TO AND FROM THE CONSTRUCTION SITES WILL RESULT IN SOIL COMPACTION THEREBY REDUCING ITS CAPACITY TO HOLD WATER WHICH WILL IN</p>	<ul style="list-style-type: none"> <li>WHEN THE VEGETATION COVER IS REMOVED, MANAGEMENT TECHNIQUES TO PREVENT WATER AND WIND EROSION SHOULD BE EMPLOYED E.G. SEEDING OF</li> </ul>

TURN RESULT IN INCREASED RUNOFF DURING THE RAINY SEASON. FUEL LEAKAGES AND ACCIDENTAL OIL SPILLS FROM CONSTRUCTION VEHICLES AND MACHINERY HAVE THE CAPABILITY OF CONTAMINATING SOIL ONCE THEY INFILTRATE INTO THE SOIL, THIS INDIRECTLY ALSO AFFECTS PLANT GROWTH IN THE NEAR FUTURE. MIXING OF CEMENT ON UNPAVED SURFACES DURING CONSTRUCTION WILL RESULT IN CHANGE OF SOIL CHEMICAL ALKALINITY/ ACIDITY LEVELS THERE CREATING DISEQUILIBRIUM IN THE SOIL FERTILITY

TOPSOIL AND SUBSOIL.

- TOP SOIL SHOULD BE SOURCED FROM AREAS, WHICH ARE CLEARED FOR CONSTRUCTION.
- THE CONTRACTOR SHOULD STRIP TOPSOIL TOGETHER WITH GRASS FROM ALL AREAS WHERE PERMANENT OR TEMPORARY STRUCTURES ARE LOCATED, CONSTRUCTION RELATED ACTIVITIES OCCUR AND ACCESS ROADS TO BE CONSTRUCTED.
- TOP SOIL MUST NOT BE COMPACTED IN ANY WAY NOR SHOULD ANY HEAVY OBJECTS BE PLACED ON IT.
- TOP SOIL STRIPPED FROM DIFFERENT SITES MUST BE STORED SEPARATELY
- TOPSOIL PILES SHOULD NOT BE MORE THAN 2M IN HEIGHT
- IN ALL CONSTRUCTION AREAS (E.G. MATERIAL LAY DOWN AREAS), TOPSOIL AND SUB-SOIL SHOULD BE PROTECTED FROM BEING CONTAMINATED BY WASTE OR FUEL SPILLS.
- INSPECT EQUIPMENT FOR FUEL LEAKS PRIOR TO USE ON CONSTRUCTION SITES AND IMPLEMENT INSPECTION SCHEDULES TO PREVENT CONTAMINATION OF SOIL AND GROUND BY FUEL SPILLS.
- CEMENT MIXING SHOULD BE DONE ON IMPERVIOUS SURFACES AND NOT DIRECTLY ON THE SOIL.
- MEASURES TO PREVENT SOIL EROSION SHOULD BE IMPLEMENTED SUCH AS DESIGN OF STORM WATER DRAINAGE SYSTEM IN ORDER TO CONTROL THE VOLUME, SPEED AND LOCATION OF RUNOFF.

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	<ul style="list-style-type: none"> <li>• VEHICLE MAINTENANCE YARD AND OTHER AREAS WHERE HYDRAULIC FLUIDS ARE TO BE STORED MUST HAVE BUND WALLS AND LINED WITH IMPERMEABLE MATERIAL TO PREVENT SOIL EROSION.</li> <li>• POLES SHOULD BE PRE-TREATED AT AN APPROPRIATE FACILITY TO ENSURE CHEMICAL FIXATION AND PREVENT LEACHING.</li> </ul>
<p><b>3. AIR POLLUTION:</b> THE QUALITY OF THE AIR WILL BE IMPACTED ON DURING THIS PHASE AND THE SOURCES WILL EMANATE FROM: EXCESSIVE EMISSION OF EXHAUST GASES, DUST DURING EXCAVATION WORKS, DIGGING OF FOUNDATIONS, STOCK PILED SOILS. CONSTRUCTION MACHINES AND CONSTRUCTION VEHICLES WILL CAUSE AIR POLLUTION THROUGH EMISSION OF GASES SUCH AS CARBON DIOXIDE OR MONOXIDE.</p>	<ul style="list-style-type: none"> <li>• ALL ACTIVITIES ON SITE MUST COMPLY WITH THE REQUIREMENTS OF THE ATMOSPHERIC POLLUTION PREVENTION ACT (ACT NO. 45 OF 1965).</li> <li>• NO OPEN FIRES SHOULD BE PERMITTED ON SITE AS THE AREA IS ALSO PRONE TO VELD FIRES.</li> <li>• BURNING OF MATERIALS, GRASS AND REFUSE SHOULD NOT BE PERMITTED ON SITE.</li> <li>• CONSTRUCTION MACHINERY AND VEHICLES SHOULD BE MAINTAINED AND SERVICED REGULARLY.</li> <li>• MEASURES TO PREVENT DUST SUCH AS INTER ALIA SPRAYING OF UNTARRED ACCESS ROADS USING WATER SHOULD BE IMPLEMENTED.</li> <li>• SPEED LIMITS OF ABOUT 40KM/HR MUST BE ENFORCED AND MAINTAINED ON THE CONSTRUCTION SITE.</li> <li>• STOCK PILED TOP SOILS MUST BE POSITIONED IN SUCH A WAY THAT THEY ARE NOT VULNERABLE TO WIND.</li> <li>• SPOIL AND OTHER DUST GENERATING DUMPS WHICH ARE NOT USED FOR MORE THAN 28DAYS SHOULD BE SPRAYED WITH WATER TO CONTROL DUST.</li> <li>• ACCESS ROADS SHOULD BE UPGRADED.</li> </ul>

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<p>1. <b>NOISE POLLUTION:</b> NOISE POLLUTION IS LIKELY TO BE GENERATED BY CONSTRUCTION MACHINES AND CONSTRUCTION VEHICLES DURING CONSTRUCTION PHASE OF THE PROPOSED DEVELOPMENT AND THIS CAN BE A NUISANCE IN THE SURROUNDING ENVIRONMENT.</p>	<ul style="list-style-type: none"> <li>• WORKING HOURS SHOULD BE LIMITED TO 6:00AM -17:00PM STRICTLY FROM MONDAY-FRIDAY.</li> <li>• AFFECTED RESIDENTS SHOULD BE NOTIFIED OF EXCESSIVE NOISY ACTIVITIES (IF ANY ARE GOING TO TAKE PLACE).</li> <li>• OPEN LIAISON CHANNELS WITH AFFECTED COMMUNITY MUST BE DEVELOPED IN ORDER TO FACILITATE THEIR CONCERNS AND COMPLAINTS ABOUT THE CONSTRUCTION ACTIVITIES.</li> </ul>
<p>2. <b>WASTE:</b> WASTE GENERATED DURING THE CONSTRUCTION PHASE WILL HAVE A NEGATIVE IMPACT ON THE ENVIRONMENT IF NOT MANAGED PROPERLY.</p>	<ul style="list-style-type: none"> <li>• IF POSSIBLE CONSTRUCTION WASTES ON SITE MUST BE RE-USED OR RECYCLED.</li> <li>• WASTE MUST BE DISPOSED OF IN ACCORDANCE TO THE NATIONAL WASTE MANAGEMENT ACT.</li> <li>• BURNING OF WASTE ON SITE SHOULD NOT BE PERMITTED.</li> </ul>
<p>3. <b>SOCIAL:</b> THERE COULD BE NEGATIVE SOCIAL IMPACTS AS A RESULT OF LOSS OF GRAZING LAND AND IMPACT OF LANDOWNERS SENSE OF PLACE</p>	<ul style="list-style-type: none"> <li>• NEGOTIATIONS WITH LANDOWNERS SHOULD INCLUDE COMPENSATION OF LAND LOST.</li> </ul>
<p>4. <b>HERITAGE:</b> ANY DEVELOPMENT THAT ALTERS THE STATUS QUO HAS THE POTENTIAL TO IMPACT UPON ANY OF THE LISTED HERITAGE RESOURCES PARTICULARLY DURING CONSTRUCTION PHASE</p>	<ul style="list-style-type: none"> <li>• IF DURING CONSTRUCTION, THE CONTRACTOR UNEARTHS ARCHAEOLOGICAL RESOURCES OR UNMARKED GRAVES, ALL WORK SHOULD STOP IMMEDIATELY AND ESKOM SHOULD BE NOTIFIED WHO WILL IN TURN INFORM AN ARCHAEOLOGIST FOR FURTHER ACTION ON WHAT SHOULD BE DONE.</li> <li>• THE ARCHAEOLOGIST SHOULD DESIGN A HERITAGE MONITORING PROGRAM. THE MONITORING PLAN WILL DEAL WITH POTENTIAL CHANCE ARCHAEOLOGICAL OR HISTORICAL FINDS, INCLUDING UNMARKED HUMAN BURIALS THAT MAY ACCIDENTALLY BE FOUND DURING DEVELOPMENT.</li> </ul>
<p><b>INDIRECT IMPACTS:</b> <b>FLORA:</b> POSSIBILITY OF ALIEN INVASIVE</p>	<ul style="list-style-type: none"> <li>• THE POTENTIAL SPREAD OF ALIEN INVASIVE SPECIES SHOULD BE MONITORED ON A CONTINUAL BASIS.</li> </ul>

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SPECIES	
<p><b>CUMULATIVE IMPACTS:</b></p> <p><b>1. AIR QUALITY</b></p> <p>THE GENERATION OF DUST AND EMISSION OF GASES BY MACHINES WILL INCREASE THE CURRENT LEVELS OF AIR POLLUTION, WHICH WILL IMPACT ON NEARBY PLANTS BY COATING ON TO THEM. FOR VEGETATION SERIOUS DUST POLLUTION CAN CAUSE PLANT IMMORTALITY.</p>	<ul style="list-style-type: none"> <li>• ALL ACTIVITIES ON SITE MUST COMPLY WITH THE REQUIREMENTS OF THE ATMOSPHERIC POLLUTION PREVENTION ACT (ACT NO. 45 OF 1965).</li> <li>• MEASURES TO PREVENT DUST SUCH AS INTER ALIA SPRAYING OF UNTARRED ACCESS ROADS USING WATER SHOULD BE IMPLEMENTED.</li> </ul>
<p><b>2. WASTE</b></p> <p>INCREASED WASTE DURING THE CONSTRUCTION PHASE WILL OR MAY RESULT IN GREATER PRESSURE ON THE LOCAL AUTHORITY TO DEAL WITH INCREASED WASTE.</p>	<ul style="list-style-type: none"> <li>• IF POSSIBLE CONSTRUCTION WASTES ON SITE MUST BE RE-USED OR RECYCLED.</li> <li>• WASTE MUST BE DISPOSED OF IN ACCORDANCE TO THE NATIONAL WASTE MANAGEMENT ACT.</li> </ul>
<p><b>3. WATER</b></p> <p>IF STORM WATER MANAGEMENT TECHNIQUES ARE NOT PUT IN PLACE THIS WILL RESULT IN EROSION WHICH MEANS DOWNSTREAM WATER QUALITY BECOMES DETERIORATED AND WILL IN TURN INCREASE THE COST OF TREATING WATER WHICH WILL INDIRECTLY AFFECT THE RESIDENTS</p>	<ul style="list-style-type: none"> <li>• MEASURES TO CONTROL STORM WATER MUST BE IMPLEMENTED.</li> </ul>

**NO GO ALTERNATIVE**

POTENTIAL IMPACTS	PROPOSED MITIGATION MEASURES
<p>THE NO GO ALTERNATIVE IN THIS CASE WOULD MEAN NOT CONSIDERING THE CONSTRUCTION OF THE SUBSTATION, THE AND THE 2X4,5KM, LOOP IN LOOP OUT LINES AND THE 31KM KINGBIRD LINES HENCE ONLY NEGATIVE IMPACTS ARE ANTICIPATED AS THE STATUS QUO WILL REMAIN THE SAME, MEANING THAT THERE WILL OVERLOAD ON THE EXISTING INFRASTRUCTURE, RESULTING IN POWER FAILURE.</p>	<p>CONSTRUCTION OF THE PROPOSED NEW SASEKANE SUBSTATION THE 2X4,5KM, 66KV LOOP IN LOOP OUT LINE TO THE PROPOSED SASEKANI SUBSTATION THE 31KM KINGBIRD LINE BETWEEN LETABA AND MAKHUTSWI</p>

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**OPERATIONAL PHASE IMPACTS (SUBSTATION AND POWERLINE ROUTE).**

<b>POTENTIAL IMPACTS (DIRECT IMPACTS)</b>	<b>PROPOSED MITIGATION MEASURES</b>
<p><b>1. OIL SPILLS</b> THE ACCIDENTAL SPILLAGE OF THE PURIFIED MINERAL OIL USED FOR INSULATION AND COOLANT MAY RESULT IN GROUND AND SOIL POLLUTION THROUGH INFILTRATION.</p>	BUND WALLS TO COLLECT ACCIDENTAL SPILLAGES.
<p><b>2. VISUAL IMPACTS</b> DISTRIBUTION POWER LINES ARE NECESSARY TO TRANSPORT ENERGY FROM POWER FACILITIES TO RESIDENTIAL COMMUNITIES AND BUSINESSES BUT MAY BE VISUALLY INTRUSIVE AND UNDESIRABLE TO THE LOCAL RESIDENTS.</p>	NO MITIGATION MEASURES PROPOSED.
<p><b>3. IMPACTS ON AVIFAUNA</b> THE SUBSTATION, THE 2X4, 5KM, 66KV LOOP IN LOOP OUT LINE AND THE 31KM KINGBIRD LINES COULD HAVE A NEGATIVE IMPACT ON AVIFAUNA DUE TO ELECTROCUTION.</p>	MARKING OF THE POWER LINE WITH BIRD FLAPPERS AND OTHER NECESSARY DEVICES. <b>(FOR DETAILED MITIGATION MEASURES PLEASE REFER TO THE AVIFAUNA REPORT).</b>
<p><b>INDIRECT IMPACTS</b></p> <p><b>1. SOCIO-ECONOMIC</b> THE NEW SUBSTATION, THE 2X4, 5KM, 66KV LOOP IN LOOP OUT LINE AND THE 31KM KINGBIRD LINES WILL DECREASE THE EXISTING POWER SHORTAGES; THERE WILL BE AN INCREASE IN POWER SUPPLY RESULTING IN POTENTIAL INVESTORS OR INDUSTRIES IN THE AREA HENCE INCREASING THE GDP OF THE AREA.</p>	NO MITIGATION PROPOSED, AS THIS IS A POSITIVE IMPACT.
<p><b>2. SAFETY</b> THERE IS A RISK OF ELECTROCUTION TO ANIMALS GRAZING AND PEOPLE IF ACCESS TO THE AREA IS NOT CONTROLLED.</p>	<ul style="list-style-type: none"> <li>• SHOULD BE CONTROLLED ACCESS TO THE AREA.</li> <li>• LOCAL COMMUNITY SHOULD BE INFORMED AND EDUCATED ABOUT THE DANGERS OF HIGH VOLTAGE ELECTRICITY.</li> </ul>
<b>CUMULATIVE IMPACTS: NONE</b>	

**NO GO ALTERNATIVE**

<b>POTENTIAL IMPACTS (DIRECT)</b>	<b>PROPOSED MITIGATION MEASURES</b>
IF THE SUBSTATION, 2X4. 5KM, 66KV LOOP IN	CONSTRUCTIONS OF THE PROPOSED NEW

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<p>LOOP OUT LINE AND THE 31KM KING BIRD LINES ARE NOT BUILT, THE STATUS QUO OF THE AREA WILL REMAIN AS IS, SHORTAGE OF POWER SUPPLY, POWER FAILURE DUE TO AN OVERLOADED EXISTING ELECTRICITY NETWORK. THE EXISTING ELECTRICITY NETWORK WILL NOT BE ABLE TO ACCOMMODATE FUTURE GROWTH IN THE AREA.</p>	<p>SASEKANE SUBSTATION, THE 2X4.5KM, 66KV LOOP IN LOOP OUT LINE TO THE PROPOSED SASEKANI SUBSTATION AND THE 31KM KINGBIRD LINE BETWEEN LETABA AND MAKHUTSWI SUBSTATION.</p>
<p><b>INDIRECT IMPACTS:</b> NONE</p>	
<p><b>CUMULATIVE IMPACTS:</b> NONE</p>	

**DECOMMISSIONING AND CLOSURE PHASE IMPACTS (SASEKANI SUBSTATION AND POWERLINE ROUTE, PREFERRED AND ALTERNATIVE).**

<p><b>POTENTIAL IMPACTS: DIRECT IMPACTS</b></p>	<p><b>PROPOSED MITIGATION MEASURES</b></p>
<p><b>1. SOIL AND GROUNDWATER CONTAMINATION</b> ACCIDENTAL OIL SPILLS MAY RESULT IN SOIL OR GROUNDWATER CONTAMINATION IF NOT WELL MANAGED</p>	<ul style="list-style-type: none"> <li>OIL SPILLS SHOULD BE CLEANED UP IMMEDIATELY TO THE SATISFACTION OF THE COMPETENT AUTHORITY BY REMOVING THE SPILLAGE TOGETHER WITH THE POLLUTED SOIL AND BY DISPOSING OF THEM AT A REGISTERED WASTE DISPOSAL FACILITY AND THE ENVIRONMENTAL SECTION AT ESKOM MUST BE INFORMED.</li> </ul>
<p><b>2. HEALTH AND SAFETY</b> WORKERS MAY BE EXPOSED TO OCCUPATIONAL HAZARDS FROM POSSIBLE CONTACT WITH LIVE TRANSFORMER AT SUBSTATION AND ELECTROCUTION FROM DIRECT CONTACT DURING DECOMMISSIONING.</p>	<p>ONLY TRAINED AND CERTIFIED PERSONNEL SHOULD REMOVE ELECTRICAL EQUIPMENT. PERSONNEL SHOULD ISOLATE AND ENSURE THAT THE SUBSTATION IS DISCONNECTED WORKERS NOT DIRECTLY ASSOCIATED WITH POWER TRANSMISSION AND DISTRIBUTION ACTIVITIES THAT ARE OPERATING AROUND OR SUBSTATION SHOULD ADHERE TO RELEVANT LEGISLATION OR GUIDELINES RELATING TO MINIMUM APPROACH DISTANCE</p>
<p><b>INDIRECT IMPACTS:</b> NONE</p>	
<p><b>CUMULATIVE IMPACTS:</b> 1. INCREASE IN PURIFICATION COSTS OF WATER DUE TO POLLUTION OF WATER RESOURCES FROM OIL SPILLS.</p>	<ul style="list-style-type: none"> <li>BUND WALLS SHOULD BE BUILT TO COLLECT ACCIDENTAL OIL SPILLAGES.</li> </ul>
<p>2. INCREASE IN POLLUTION OF WATER</p>	

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WOULD HAVE A NEGATIVE IMPACT ON AQUATIC LIFE.	
3. REDUCED STANDARDS OF LIVING FOR THOSE HOUSEHOLDS WHO MAY LOSE THEIR BREADWINNERS FROM THE OCCUPATIONAL HAZARD MENTIONED ABOVE.	<ul style="list-style-type: none"> <li>• ONLY TRAINED AND CERTIFIED PERSONNEL SHOULD REMOVE ELECTRICAL EQUIPMENT.</li> </ul>

**NO GO ALTERNATIVE**

POTENTIAL IMPACTS	PROPOSED MITIGATION MEASURES
NONE	

**3. ENVIRONMENTAL IMPACT STATEMENT**

TAKING THE ASSESSMENT OF POTENTIAL IMPACTS INTO ACCOUNT, PLEASE PROVIDE AN ENVIRONMENTAL IMPACT STATEMENT THAT SUMMARISES THE IMPACT THAT THE PROPOSED ACTIVITY AND ITS ALTERNATIVES MAY HAVE ON THE ENVIRONMENT AFTER THE MANAGEMENT AND MITIGATION OF IMPACTS HAVE BEEN TAKEN INTO ACCOUNT, WITH SPECIFIC REFERENCE TO TYPES OF IMPACT, DURATION OF IMPACTS, LIKELIHOOD OF POTENTIAL IMPACTS ACTUALLY OCCURRING AND THE SIGNIFICANCE OF IMPACTS.

**SASEKANI SUBSTATION AND THE LOOP IN LOOP OUT POWERLINE ROUTE**

BASED ON THE FINDINGS OF THE STUDIES UNDERTAKEN, IN TERMS OF POTENTIAL ENVIRONMENTAL CONSTRAINTS IDENTIFIED THROUGH THE BASIC ASSESSMENT PROCESS, NO ENVIRONMENTAL FATAL FLAWS HAVE BEEN IDENTIFIED AS A RESULT OF THE PROPOSED CONSTRUCTION OF THE SUBSTATION AND 2X4 5KM, 66KV LOOP IN LOOP OUT LINE TO THE PROPOSED SASEKANI SUBSTATION EXCEPT THAT THERE ARE SOME MARULA TREES WITHIN THE SUBSTATION SITE. THE PROPOSED SUBSTATION WILL TAKE PLACE IN AN AREA WHICH WAS PREVIOUSLY DISTURBED BY OTHER DEVELOPMENTS ACTIVITIES SUCH AS AGRICULTURAL ACTIVITIES (ABANDONED CORNFIELD), SECONDARY VEGETATION HAS BEEN CLEARED DURING PREPARATION FOR CULTIVATION.

NO MAJOR OR RADICAL NATURAL OR HUMAN ENVIRONMENTAL IMPACTS ARE ANTICIPATED DURING THE CONSTRUCTION AND OPERATIONAL PHASES OF THE PROJECT GIVEN THE FACT THAT SIMILAR AND OTHER DEVELOPMENT ALREADY EXISTS IN THE GENERAL PROJECT AREA. ALL IMPACTS ARE CONSIDERED TO BE OF LOW SIGNIFICANCE AND ARE NOT EXPECTED TO CONTRIBUTE TO UNACCEPTABLE TRANSFORMATION AND DEGRADATION OF THE ENVIRONMENT. THE HIGHEST LEVEL OF IMPACT IS EXPECTED TO OCCUR DURING THE CONSTRUCTION PHASE. WHILE SOME IMPACTS ARE EXPECTED TO OCCUR, THEY CAN BE EFFECTIVELY MITIGATED WITH GENERIC AND SITE SPECIFIC MITIGATION MEASURES INDICATED IN THE ENVIRONMENTAL MANAGEMENT PROGRAMME.

**ALTERNATIVE S1 (PREFERRED ALTERNATIVE)**

SITE ALTERNATIVE 1 FOR THE SUBSTATION IS PREFERRED FOR THE FOLLOWING REASONS:

- IT IS SITUATED IN A VACANT SPACE NOT FAR FROM THE LITSETELE-LENYENYE LINE , WHICH IS THE PROPOSED LOOP IN AND LOOP OUT LINES WHICH WILL FEED THE PROPOSED SUBSTATION.
- THERE IS ALREADY EXTENSIVE ENVIRONMENTAL DEGRADATION FROM PREVIOUS LAND USE SUCH AS AGRICULTURAL ACTIVITIES.
- IT ALSO POSES INSIGNIFICANT IMPACTS.

**ALTERNATIVE S2**

N/A

**NO-GO ALTERNATIVE (COMPULSORY)**

THE NO GO OPTION WOULD BE TO NOT CONSTRUCT THE SUBSTATION AND THE 2X4,5KM, 66KV LOOP IN LOOP OUT LINE TO THE PROPOSED SASEKANI SUBSTATION. AT PRESENT LOW VOLTAGES ARE EXPERIENCED DURING PEAK HOURS. IN ADDITION, NEW CUSTOMERS CANNOT BE CONNECTED TO THE EXISTING NETWORKS. SHOULD NO ACTION BE TAKEN THE CURRENT STATE WILL WORSEN CONSIDERABLY, THERE WOULD BE CONTINUED POWER CUTS AND NO FUTURE CUSTOMERS WILL BE ABLE TO BE CONNECTED TO THE EXISTING NETWORK. THIS WILL HAVE A NEGATIVE EFFECT ON THE BUSINESS SECTOR AND IN TURN IMPACT ON THE GDP AS THERE WILL BE NO FUTURE GROWTH IN THE AREA.

**31KM KINGBIRD LINE BETWEEN LETABA AND MAKHUTSWI**

BASED ON THE FINDINGS OF THE STUDIES UNDERTAKEN, IN TERMS OF POTENTIAL ENVIRONMENTAL CONSTRAINTS IDENTIFIED THROUGH THE BASIC ASSESSMENT PROCESS, NO ENVIRONMENTAL FATAL FLAWS HAVE BEEN IDENTIFIED AS A RESULT OF THE PROPOSED CONSTRUCTION OF THE PROPOSED NEW 31KM KINGBIRD LINE BETWEEN LETABA AND MAKHUTSWI SUBSTATION EXCEPT THAT THERE ARE SOME MARULA TREES WITHIN THE SUBSTATION SITE. THE PROPOSED KINGBIRD KLINE WILL TAKE PLACE IN AN AREA WHICH WAS PREVIOUSLY DISTURBED BY OTHER DEVELOPMENTS ACTIVITIES SUCH AS AGRICULTURAL ACTIVITIES (ABANDONED CORNFIELD), SECONDARY VEGETATION HAS BEEN CLEARED DURING PREPARATION FOR CULTIVATION.

NO MAJOR OR RADICAL NATURAL OR HUMAN ENVIRONMENTAL IMPACTS ARE ANTICIPATED DURING THE CONSTRUCTION AND OPERATIONAL PHASES OF THE PROJECT GIVEN THE FACT THAT SIMILAR AND OTHER DEVELOPMENT ALREADY EXISTS IN THE GENERAL PROJECT AREA. ALL IMPACTS ARE CONSIDERED TO BE OF LOW SIGNIFICANCE AND ARE NOT EXPECTED TO CONTRIBUTE TO UNACCEPTABLE TRANSFORMATION AND DEGRADATION OF THE ENVIRONMENT. THE HIGHEST LEVEL OF IMPACT IS EXPECTED TO OCCUR DURING THE CONSTRUCTION PHASE. WHILE SOME IMPACTS ARE EXPECTED TO OCCUR, THEY CAN BE EFFECTIVELY MITIGATED WITH GENERIC AND SITE SPECIFIC MITIGATION MEASURES INDICATED IN THE ENVIRONMENTAL MANAGEMENT PROGRAMME.

**ALTERNATIVE S1 (PREFERRED ALTERNATIVE)**

SITE ALTERNATIVE 1 FOR THE KINGBIRD LINE IS PREFERRED FOR THE FOLLOWING REASONS:

- THERE IS ALREADY EXTENSIVE ENVIRONMENTAL DEGRADATION FROM PREVIOUS LAND USE SUCH AS AGRICULTURAL ACTIVITIES.
- IT ALSO POSES INSIGNIFICANT IMPACTS.

### **ALTERNATIVE S2 AND S3**

#### **NO-GO ALTERNATIVE (COMPULSORY)**

THE NO GO OPTION WOULD BE TO NOT CONSTRUCT THE PROPOSED NEW 31KM KINGBIRD LINE BETWEEN LETABA AND MAKHUTSWI SUBSTATION. AT PRESENT LOW VOLTAGES ARE EXPERIENCED DURING PEAK HOURS. IN ADDITION, NEW CUSTOMERS CANNOT BE CONNECTED TO THE EXISTING NETWORKS. SHOULD NO ACTION BE TAKEN THE CURRENT STATE WILL WORSEN CONSIDERABLY, THERE WOULD BE CONTINUED POWER CUTS AND NO FUTURE CUSTOMERS WILL BE ABLE TO BE CONNECTED TO THE EXISTING NETWORK. THIS WILL HAVE A NEGATIVE EFFECT ON THE BUSINESS SECTOR AND IN TURN IMPACT ON THE GDP AS THERE WILL BE NO FUTURE GROWTH IN THE AREA.

#### **RE-CONSTRUCTIONS OF POWER LINES**

IN TERMS OF POTENTIAL ENVIRONMENTAL CONSTRAINTS IDENTIFIED THROUGH THE BASIC ASSESSMENT PROCESS, NO ENVIRONMENTAL FATAL FLAWS HAVE BEEN IDENTIFIED AS A RESULT OF THE PROPOSED RE-CONSTRUCTIONS OF THE <sup>new</sup> 2.7KM 66KV CHICKADEE POWER LINE BETWEEN DAN-VILLAGE AND LETSITELE METERING POINTS, THE NKOWANKOWA-RISENGA 5KM 66KV CHICKADEE POWER LINE, THE 2KM 66KV CHICKADEE POWER LINE BETWEEN DAN VILLAGE AND NKOWANKOWA THE PROPOSED RE-CONSTRUCTIONS WILL TAKE PLACE IN AN AREA WHICH WAS PREVIOUSLY DISTURBED BY SIMILAR DEVELOPMENTS SUCH AS POWERLINES, A VEGETATION HAS BEEN CLEARED DURING CONNSTRUCTIONS OF POWERLINES.

NO MAJOR OR RADICAL NATURAL OR HUMAN ENVIRONMENTAL IMPACTS ARE ANTICIPATED DURING THE RE-CONSTRUCTIONS AND OPERATIONAL PHASES OF THE PROJECT GIVEN THE FACT THAT SIMILAR AND OTHER DEVELOPMENT ALREADY EXISTS IN THE GENERAL PROJECT AREA. ALL IMPACTS ARE CONSIDERED TO BE OF LOW SIGNIFICANCE AND ARE NOT EXPECTED TO CONTRIBUTE TO UNACCEPTABLE TRANSFORMATION AND DEGRADATION OF THE ENVIRONMENT. THE HIGHEST LEVEL OF IMPACT IS EXPECTED TO OCCUR DURING THE CONSTRUCTION PHASE. WHILE SOME IMPACTS ARE EXPECTED TO OCCUR, THEY CAN BE EFFECTIVELY MITIGATED WITH GENERIC AND SITE SPECIFIC MITIGATION MEASURES INDICATED IN THE ENVIRONMENTAL MANAGEMENT PROGRAMME.

**SECTION E. RECOMMENDATION OF PRACTITIONER**

IS THE INFORMATION CONTAINED IN THIS REPORT AND THE DOCUMENTATION ATTACHED HERETO SUFFICIENT TO MAKE A DECISION IN RESPECT OF THE ACTIVITY APPLIED FOR (IN THE VIEW OF THE ENVIRONMENTAL ASSESSMENT PRACTITIONER)?

YES✓

IF "NO", INDICATE THE ASPECTS THAT SHOULD BE ASSESSED FURTHER AS PART OF A SCOPING AND EIA PROCESS BEFORE A DECISION CAN BE MADE (LIST THE ASPECTS THAT REQUIRE FURTHER ASSESSMENT):

IF "YES", PLEASE LIST ANY RECOMMENDED CONDITIONS, INCLUDING MITIGATION MEASURES THAT SHOULD BE CONSIDERED FOR INCLUSION IN ANY AUTHORISATION THAT MAY BE GRANTED BY THE COMPETENT AUTHORITY IN RESPECT OF THE APPLICATION:

THERE IS NO FATAL FLAW ASSOCIATED WITH THE PROPOSED SUBSTATION, THE 2X4. 5KM, 66KV LOOP IN LOOP OUT LINE TO THE PROPOSED SASEKANI SUBSTATION AND THE 31KM KINGBIRD LINE BETWEEN LETABA AND MAKHUTSWI SUBSTATION. THE IMPACTS ASSOCIATED WITH THE PROPOSED DEVELOPMENT ARE CONSIDERED LOW AND THEREFORE ACCEPTABLE FROM AN ENVIRONMENTAL PERSPECTIVE, AND POTENTIAL IMPACTS TO THE ENVIRONMENT CAN BE MITIGATED TO ACCEPTABLE LEVELS.

THE FINDINGS OF THE STUDIES UNDERTAKEN WITHIN THE BASIC ASSESSMENT PROVIDE AN ASSESSMENT OF BOTH BENEFITS AND POTENTIAL NEGATIVE IMPACTS ANTICIPATED AS A RESULT OF THE PROPOSED PROJECT. THE FINDINGS CONCLUDE THAT THERE ARE NO ENVIRONMENTAL FATAL FLAWS THAT SHOULD PREVENT THE PROPOSED PROJECT FROM PROCEEDING, PROVIDED THAT THE RECOMMENDED MITIGATION AND MANAGEMENT MEASURES ARE IMPLEMENTED THROUGHOUT THE PROJECT'S LIFE CYCLE. ACCORDINGLY, **SUBSTATION ALTERNATIVE 1 AND POWER LINE ROUTE ALTERNATIVE 1**) HAS EMERGED AS THE PREFERRED OPTION FROM AN ENVIRONMENTAL PERSPECTIVE AND IT IS RECOMMENDED THAT ALTERNATIVE 1 BE AUTHORIZED, THE 2X4,5KM, 66KV LOOP IN LOOP OUT LINE TO THE PROPOSED SASEKANI SUBSTATION AND THE 31KM BETWEEN LETABA AND MAKHUTSWI SUBSTATION SHOULD THE PROJECT BE GRANTED A POSITIVE DECISION.

NZUMBULULO HERITAGE SOLUTIONS EAP SPECIALISTS ARE OF THE OPINION THAT THE IMPACTS IDENTIFIED FOR THE PROJECT CAN BE SUCCESSFULLY MITIGATED. THE ENVIRONMENTAL MANAGEMENT PROGRAMME MUST BE A LEGAL BINDING DOCUMENT TO GUIDE THE CONTRACTOR AND THE REST OF THE PROJECT TEAM DURING CONSTRUCTION IN ORDER TO MITIGATE IMPACTS.

- STOCK PILED SOILS SHOULD BE POSITIONED IN SUCH A WAY THAT THEY ARE NOT VULNERABLE TO WIND
- THE EXISTING TELECOMMUNICATION NETWORK, AND ANY PLANNED DEVELOPMENTS TO THIS NETWORK, MUST BE TAKEN INTO CONSIDERATION IN THE PLANNING PHASE, BEFORE FINALISING ANY POWER LINE ROUTE.

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- ANY SOLID WASTE PRODUCED ON SITE MUST BE COLLECTED IN SUITABLE CONTAINERS AND BE DISPOSED OF AT THE LOCAL MUNICIPAL WASTE DISPOSAL SITE.
- ALL DAMAGED AREAS SHOULD BE REHABILITATED UPON COMPLETION OF THE PROJECT
- IF ANY EVIDENCE OF ARCHAEOLOGICAL SITES OR ARTEFACTS. PALAEOANTHROPOLOGICAL OR HERITAGE RESOURCES ARE FOUND SAHRA MUST BE NOTIFIED IMMEDIATELY.
- AN ENVIRONMENTAL CONTROL OFFICER TO CONDUCT MONITORING DURING THE CONSTRUCTION PHASE SHOULD BE PRESENT.
- CONSTRUCTION CAMP TO BE ERECTED WHERE IT WILL HAVE THE LEAST ENVIRONMENTAL IMPACT.

RECOMMENDED MITIGATION MEASURE FOR THE PROPOSED ACTIVITY THROUGHOUT THE PROJECT LIFE-CYCLE ARE INCLUDED IN THE ENVIRONMENTAL MANAGEMENT PROGRAMME (EMPR) ATTACHED TO THIS DOCUMENT.

RELEVANT CONDITION TO BE ADHERED TO INCLUDE:

**DESIGN AND CONSTRUCTION PHASE:**

THE FOLLOWING MITIGATION AND MANAGEMENT MEASURES SHOULD BE IMPLEMENTED DURING THE CONSTRUCTION PHASE TO MINIMISE POTENTIAL ENVIRONMENTAL IMPACTS:

- CONSTRUCTION BUFFER ZONE SHOULD BE IDENTIFIED AND BE CLEARLY DEMARCATED PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION ON SITE AND BEFORE THE ARRIVAL OF CONSTRUCTION MACHINERY. THE DEMARCATION SHOULD STAY IN PLACE THROUGH OUT CONSTRUCTION PERIOD AND NO PERSONNEL; CONSTRUCTION MATERIAL SHOULD BE MOVED OR BE PLACED OUTSIDE THE DEMARCATED CONSTRUCTION SERVITUDE.
- CARE SHOULD BE TAKEN NOT TO DAMAGE OR REMOVE ANY TREES WITHIN OR ADJACENT TO THE CONSTRUCTION SITE UNLESS DIRECTLY ON PATH OF CONSTRUCTION WORK.
- FOLLOWING COMPLETION OF CONSTRUCTION ACTIVITIES, A CLEAN UP OPERATION OF THE CONSTRUCTION SITE AND 100 M RADIUS SHOULD BE UNDERTAKEN TO REMOVE ALL LITTER AND CONSTRUCTION RELATED WASTE.
- RE-VEGETATION OF ALL BARE SOIL AREAS WITH INDIGENOUS IMPACTS.

**OPERATION PHASE**

- TO PREVENT SPILLAGE NO DIESEL OR OIL SHOULD BE STORED ON SITE OTHER THAN WHAT IS REQUIRED FOR IMMEDIATE USE.
- SHOULD ANY ACCIDENTAL OIL COOLANT SPILLAGES OCCUR, ABSORBENT MATERIALS AND CONTAMINANT SOIL SHOULD BE DISPOSED OFF AT A DESIGNATED REGISTERED HAZARDOUS WASTE MATERIAL SITE.
- CAREFUL CONTROL OF ALL AREAS THAT INVOLVE USE OF CEMENT AND CONCRETE
- LIMIT CEMENT AND CONCRETE MIXING TO SINGLE SITE, WHICH MUST BE CLEANED UP ONCE THE ACTIVITY, IS COMPLETE.

IS AN EMPR ATTACHED?

YES ✓

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