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1 INTRODUCTION

The Plan of study for Environmental Impact Assessment document outlines how Naledzi Environmental Consultants (NEC) will undertake the Impact Assessment phase of the Environmental Impact Assessment Process and provides information as required for such a document in terms of Regulations 27 to 36 of the Regulations compiled in terms of Chapter 5 of the National Environmental Management Act, 1998 (Act 107 of 1998) as amended.

Eskom Transmission appointed Naledzi Environmental Consultants to carry out an Environmental Impact Assessment study/process for the proposed new 2x400kV power lines from Glockner substation to Etna substation in the Gauteng Province. An application was made to the Department of Environmental Affairs and Tourism (Ref: 12/12/20/867).

The Plan of Study indicates the proposed approach to the environmental impact assessment of the application, which must include (as per the regulations) –

- A description of the tasks that will be undertaken as part of the environmental impact assessment process, including any specialist reports or specialised processes, and the manner in which such tasks will be undertaken;
- An indication of the stages at which the competent authority will be consulted;
- A description of the proposed method of assessing the environmental issues and alternatives, including the option of not proceeding with the activity; and
- Particulars of the public participation process that will be conducted during the environmental impact assessment process; and
- Any specific information required by the competent authority.

The tasks to be undertaken are listed below.

2 DESCRIPTION OF TASKS TO BE PERFORMED

2.1 PRE-CONSULTATION WITH THE COMPETENT AUTHORITIES

A pre-consultation meeting will be held with the Department of Environmental Affairs and Tourism to address and highlight issues that the competent authorities might be particularly interested in or the process and/or procedures that the competent authority might want the environmental assessment team to follow in the EIA process.

2.2 I&AP IDENTIFICATION AND REGISTRATION

Although the list of potential I&APs has already been compiled, identification of interested and affected parties is an on-going process. The established electronic database will be updated on a regular basis, and the existing information will be customised to suit the needs of this project. This will assist in conducting the Public Participation Programme (PPP). Some time and energy will need to be expended, in close consultation and co-operation with Eskom personnel, in capturing stakeholders.

The key stakeholders for this EIA were identified. These include authorities, I&APs who act as sectoral representatives, I&APs with whom Eskom may have ongoing contact, and individuals who have previously expressed interest about the development of power lines (positive or negative). This database would be updated on a regular basis as well.

2.3 PROJECT ADVERTISEMENT

The commencement of the impact assessment phase will be widely announced, with an invitation to the general public to be involved and to actively participate in the PPP. This will be achieved via the following:

- ❖ A letter of reminding and invitation all I&APs captured on the database
- ❖ Print media advertisements in the Local and/or regional newspaper
- ❖ On-site advertisements will be pasted in public areas, these will be written in SeSotho and English as the dominant languages in the area
- ❖ The dissemination of a briefing paper and/or background information document covering: a simplified rationale for and description of the development proposal, a description of the impact assessment process, including public involvement and, importantly, milestones where stakeholder input is critical and lastly an invitation to I&APs to participate, especially to attend public meetings

2.4 CONSULTATION WITH I&APS (INCLUDING AUTHORITIES)

Meetings will be arranged by Naledzi Environmental Consultants (as the Independent Environmental Consultants) with the authorities throughout the environmental assessment process, particularly when milestones are reached. It should be noted that all public involvement documents will also reach the authorities in their capacity as I&APs.

Consultation with DEAT will be ongoing. However, it is anticipated that DEAT will provide relevant comment with respect to adequacy of this Plan of Study for the EIA, as it informs the content of the EIA report and sufficiency thereof. Other government departments have already been consulted, but may require further consultation during the EIA phase; hence the environmental assessment team will keep these departments informed and solicit their inputs into the project.

Public participation plays a key role in the EIA process. Advertising in will continue to occur in the newspapers used to advertise the commencement of the Scoping Phase and the availability of Draft Documents (Sowetan, Daily Sun, Beeld, Vaal Vision, Meyerton Star). NEC will inform all I&APs that registered during the scoping phase on an ongoing basis with respect to the EIA process. Signage erected during the scoping phase will remain at the site (Etna-Glockner Substations and throughout the study area) to allow ongoing notification of the EIA process.

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The newspaper advertisements will therefore serve the following purposes;

- Inform Interested and Affected Parties of the availability of the draft Environmental Impact Report (EIR),
- Offer the Interested and Affected Parties an opportunity to comment on the draft EIR,
- Call for comments, issues, objections and, queries that Interested and Affected Parties may have concerning the report,
- Request Interested and Affected Parties to forward names and or contact details of other parties that they wish should be notified of this proposed development, and to
- Inform Interested and Affected Parties of the Consultants & Specialists conducting the environmental assessment and provide them with the contact details of the consultant for them to forward issues, concerns and comments that they may have.
- There will be a one month public review period for the Draft Report. This will involve the distribution of the draft report to authorities and key IAPs.

The Draft Environmental Impact Report that will be released for public review and will contain the following information, namely (as per the regulations):

- A detailed description of the proposed activity, the property and its location
- A description of the environment that may be affected by the activity and the manner in which the it may be affected;
- Details of the public participation process conducted;
- A description of the need and desirability of the proposed activity;
- Potential alternatives to the proposed activity, including the advantages and disadvantages on the environment and a comparative analysis;
- An indication of the methodology used in determining the significance of potential environmental impacts;
- A description and comparative assessment of all alternatives identified during the environmental impact assessment process;
- A summary of the findings and recommendations of any specialist report;
- A description of all environmental issues identified, an assessment of the significance of each issue and mitigation measures to reduce the impacts
- An opinion as to whether the activity should or should not be authorised;
- An environmental impact statement; and
- A draft environmental management plan.

The draft report will be reviewed by Eskom Transmission and the public (IAPs) and the comments will be included in the Final Environmental Impact Report, which will be submitted to DEAT for their Record of Decision (ROD).

2.5 COMPILATION OF AN ISSUES TRAIL REPORT

An Issues Trail Report will be compiled. This will include all comments provided at meetings or submitted via fax, e-mail or telephone. The issues trail will be updated regularly during the impact assessment process and will allow all registered I&APs to gain an appreciation of the issues and concerns raised by other stakeholders.

2.6 PREPARATION AND DISTRIBUTION OF DRAFT EIR

The Draft Impact Report (EIR) will be prepared based on issues identified during the scoping process and the findings of the specialists involved in the project. Naledzi Environmental Consultants will obtain inputs from the EIA specialist team when evaluating and responding to issues raised. These technical inputs are important to understanding the nature and scope of issues to be addressed.

2.7 UPDATING OF ISSUES TRAIL

The issues trail will be updated based on the feedback received during the comments period.

2.8 FINAL ENVIRONMENTAL IMPACT REPORT

A comments report will be prepared as an appendix to the final environmental impact report. This will be cross-referenced with the response report produced at the completion of the scoping phase, in order to enable I&APs to check how their issues have been addressed in the EIA. The final report will be placed in public libraries and submitted to key stakeholders and authorities.

2.9 AUTHORITY REVIEW OF THE ENVIRONMENTAL IMPACT REPORT

The Final environmental Impact Report will be submitted to the competent authority (Department of environmental Affairs and Tourism) for decision making.

3 ENVIRONMENTAL ASSESSMENT METHODOLOGY

Work shopping the significant impacts amongst the environmental consulting team will be conducted on a regular basis. Liaising with DEET and other authorities in a co-operative spirit and consultation of the relevant environmental legislation will also enable assessing the issues identified.

The identified impacts would be assessed by considering seven rating scales as listed below. All specialist studies proposed or listed for the proposed power line would consider these ratings when assessing potential impacts. These ratings include:

- Extent;
- Duration;
- Intensity;
- Significance;
- Status of impact;
- Probability; and
- Degree of confidence.

In assigning significance ratings to potential impacts before and after mitigation specialists would be instructed to follow the approach presented below:

The core criteria for determining significance ratings are “extent”, “duration” and “intensity”.

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The status of an impact is used to describe whether the impact will have a negative, positive or zero effect on the affected / receiving environment. An impact may therefore be negative, positive (or referred to as a benefit) or neutral.

Describe the impact in terms of the probability of the impact occurring and the degree of confidence in the impact predictions, based on the availability of information and specialist knowledge.

Additional criteria to be considered, which could “increase” the significance rating if deemed justified by the specialist, with motivation, are the following:

- Permanent / irreversible impacts (as distinct from long-term, reversible impacts);
- Potentially substantial cumulative effects; and
- High level of risk or uncertainty, with potentially substantial negative consequences.

Additional criteria to be considered, which could “decrease” the significance rating if deemed justified by the specialist, with motivation, are the following:

- Improbable impact, where confidence level in prediction is high.

When assigning significance ratings to impacts *after mitigation*, the specialist needs to:

- First, consider probable changes in intensity, extent and duration of the impact after mitigation, assuming effective implementation of mitigation measures, leading to a revised significance rating; and
- Then moderate the significance rating after taking into account the likelihood of proposed mitigation measures being effectively implemented. Consider:
 - Any potentially significant risks or uncertainties associated with the effectiveness of mitigation measures;
 - The technical and financial ability of the proponent to implement the measure; and
 - The commitment of the proponent to implementing the measure, or guarantee over time that the measures would be implemented.

The significance ratings would be based largely on objective criteria and inform decision-making at a project level as opposed to a local community level. In some instances, therefore, whilst the significance rating of potential impacts might be “low” or “very low”, the importance of these impacts to local communities or individuals might be extremely high. The importance which I&APs attach to impacts will be taken into consideration, and recommendations will be made as to ways of avoiding or minimizing these negative impacts through project design, selection of appropriate alternatives and / or management.

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The relationship between the significance ratings after mitigation and decision-making can be broadly defined as follows:

Significance rating	Effect on decision-making
Very Low; Low	Will not have an influence on the decision to proceed with the proposed project, provided that recommended measures to mitigate negative impacts are implemented.
Medium	Should influence the decision to proceed with the proposed project, provided that recommended measures to mitigate negative impacts are implemented.
High; Very High	Would strongly influence the decision to proceed with the proposed project.

EXTENT

“Extent” defines the physical extent or spatial scale of the impact.

Rating	Description
Local	Extending only as far as the activity, limited to the site and its immediate surroundings. Specialist studies will specify extent.
Regional	Gauteng Province
National	South Africa
International	

DURATION

Rating	Description
Short term	0-5 years
Medium term	5-15 years
Long term	Where the impact will cease after the operational life of the activity, either because of natural processes or by human intervention.
Permanent	Where mitigation either by natural processes or by human intervention will not occur in such a way or in such time span that the impact can be considered transient.

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INTENSITY

“Intensity” establishes whether the impact would be destructive or benign.

Rating	Description
Low	Where the impact affects the environment in such a way that natural, cultural and social functions and processes are not affected.
Medium	Where the affected environment is altered, but natural, cultural and social functions and processes continue, albeit in a modified way.
High	Where natural, cultural and social functions or processes are altered to the extent that it will temporarily or permanently cease.

SIGNIFICANCE

“Significance” attempts to evaluate the importance of a particular impact, and in doing so incorporates the above three scales (i.e. extent, duration and intensity).

Rating	Description
Very High	Impacts could be EITHER: of <i>high intensity</i> at a <i>regional level</i> and endure in the <i>long term</i> ; OR of <i>high intensity</i> at a <i>national level</i> in the <i>medium term</i> ; OR of <i>medium intensity</i> at a <i>national level</i> in the <i>long term</i> .
High	Impacts could be EITHER: of <i>high intensity</i> at a <i>regional level</i> and endure in the <i>medium term</i> ; OR of <i>high intensity</i> at a <i>national level</i> in the <i>short term</i> ; OR of <i>medium intensity</i> at a <i>national level</i> in the <i>medium term</i> ; OR of <i>low intensity</i> at a <i>national level</i> in the <i>long term</i> ; OR of <i>high intensity</i> at a <i>local level</i> in the <i>long term</i> ; OR of <i>medium intensity</i> at a <i>regional level</i> in the <i>long term</i> .
Medium	Impacts could be EITHER: of <i>high intensity</i> at a <i>local level</i> and endure

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	<p>in the <i>medium term</i>;</p> <p>OR of <i>medium intensity</i> at a <i>regional level</i> in the <i>medium term</i>;</p> <p>OR of <i>high intensity</i> at a <i>regional level</i> in the <i>short term</i>;</p> <p>OR of <i>medium intensity</i> at a <i>national level</i> in the <i>short term</i>;</p> <p>OR of <i>medium intensity</i> at a <i>local level</i> in the <i>long term</i>;</p> <p>OR of <i>low intensity</i> at a <i>national level</i> in the <i>medium term</i>;</p> <p>OR of <i>low intensity</i> at a <i>regional level</i> in the <i>long term</i>.</p>
Low	<p>Impacts could be EITHER</p> <p>of <i>low intensity</i> at a <i>regional level</i> and endure in the <i>medium term</i>;</p> <p>OR of <i>low intensity</i> at a <i>national level</i> in the <i>short term</i>;</p> <p>OR of <i>high intensity</i> at a <i>local level</i> and endure in the <i>short term</i>;</p> <p>OR of <i>medium intensity</i> at a <i>regional level</i> in the <i>short term</i>;</p> <p>OR of <i>low intensity</i> at a <i>local level</i> in the <i>long term</i>;</p> <p>OR of medium intensity at a local level and endure in the medium term.</p>
Very low	<p>Impacts could be EITHER</p> <p>of <i>low intensity</i> at a <i>local level</i> and endure in the <i>medium term</i>;</p> <p>OR of <i>low intensity</i> at a <i>regional level</i> and endure in the <i>short term</i>;</p> <p>OR of low to medium intensity at a local level and endure in the short term.</p>
Not applicable	<p>Impacts with:</p> <p>Zero intensity with any combination of extent and duration.</p>
Unknown	<p>In certain cases it may not be possible to determine the significance of an impact.</p>

STATUS OF IMPACT

The status of an impact is used to describe whether the impact would have a negative, positive or zero effect on the affected environment. An impact may therefore be negative, positive (or referred to as a benefit) or neutral.

PROBABILITY

“Probability” describes the likelihood of the impact occurring.

Rating	Description
Improbable	Where the possibility of the impact to materialise is very low either because of design or historic experience.
Probable	Where there is a distinct possibility that the impact will occur.
Highly probable	Where it is most likely that the impact will occur.
Definite	Where the impact will occur regardless of any prevention measures.

DEGREE OF CONFIDENCE

This indicates the degree of confidence in the impact predictions, based on the availability of information and specialist knowledge.

Rating	Description
High	Greater than 70% sure of impact prediction.
Medium	Between 35% and 70% sure of impact prediction.
Low	Less than 35% sure of impact prediction.

4 SPECIALIST STUDIES TO BE CARRIED OUT

- ❖ Geology, soils and agricultural potential (Africa Geo-Environmental Services)
- ❖ Visual impacts assessment (Strategic Environmental Focus-SA)
- ❖ Avi-fauna (Endangered Wildlife Trust)
- ❖ Ecological processes (including flora and fauna); University of Venda
- ❖ Heritage and archaeological impacts (Archaeo-Info Northern Province)
- ❖ Social impact (including tourism and infrastructure); Naledzi Environmental Consultants

5 COMPOSITION OF THE PROJECT TEAM

5.1 PROJECT PROPONENT

Eskom Transmission
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5.2 PROJECT INDEPENDENT ENVIRONMENTAL CONSULTANT

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Fax: (015) 296 4021
Contact person: Mr. K.D Musetsho

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