

ENVIRONMENTAL IMPACT ASSESSMENT (EIA) FOR THE
PROPOSED MODIMOLLE SUBSTATION PROJECT

BACKGROUND INFORMATION DOCUMENT (BID)
OCTOBER 2016

BACKGROUND

The applicant appointed Texture Environmental as the independent Environmental Assessment Practitioner (EAP) to undertake the Environmental Impact Assessment (EIA) for the proposed Modimolle Substation project. The applicant is the municipality, currently referred to as “LIM368”, at the date of this application. The Modimolle Local Municipality and the Mookgophong Local Municipality has amalgamated and a new name has yet to be established. Motla Consulting Engineers (Pty) Ltd has been appointed for the design and project management of the new Modimolle Substation.

The proposed project is located approximately 2km north east of the Modimolle CBD, and falls within the Modimolle Local Municipality, Limpopo Province.

Bulk electricity supply infrastructure is needed to augment the supply to the expanding town of Modimolle. The town is expanding in a northern direction and many new developments are in the pipeline. Modimolle currently has one main substation from where it distributes 11kV into the town. The High Voltage yard and the transformers belong to Eskom from where 11kV is supplied to the municipal 11kV switching substation. Due to the expansion of the town and subsequent overloading of the existing substation and network expansion, there is a need for a new distribution substation and Eskom intake point. One 132/11kV Substation is therefore proposed to be constructed to address the need for firm supply.

This EIA will conform to the National Environmental Management Act 107 of 1998 and to the Environmental Impact Assessment Regulations published in GN R982/2014 - R985/2014 of 8 December 2014. The EIA will provide information about the proposed Modimolle Substation and its scope is restricted to this component of the project.

WHAT IS THE PURPOSE OF THIS BACKGROUND INFORMATION DOCUMENT (BID)?

This Background Information Document (BID) provides Interested and Affected Parties (I&APs) with background information about the proposed project and the Basic Assessment (BA) process to be undertaken in order to enable them to:

- Determine if they are interested in and/or affected by the proposed project;
- Better understand the project in order to enable them to provide comment; and
- Understand the environmental authorisation process so that they are able to participate effectively.

You are therefore invited to register as an I&AP using the attached Comments and Registration form if you deem yourself an I&AP and wish to partake in the process.

WHAT IS THE SCOPE OF THIS PROJECT?

The scope of work and components of the 132/11kV, 2 X 20MVA Substation will be as follows:

- Voltage levels will be 132/11kV.
- The transformers which will be installed will be 2 X 20MVA, 132/11kV outdoor ONAN transformers with on-load tap changer. It is anticipated at this stage that the vector group of the transformers will be YNd1.
- 2 X 132kV feeder bays. These will be conventional outdoor feeder bays with standard switchgear and CT's.
- 5 X 11kV feeder bays. These will also be conventional outdoor type with kiosk type circuit breakers and with a by-pass busbar.
- Control and battery room.
- Protection and Metering schemes. Conventional type swing frame panels per bay. Normal Overcurrent and Earth Fault protection for 11kV feeders, Differential protection for transformers and 132kV feeder bays.
- Telemetry or Telecontrol. RTU based telemetry with alarms and supervision of the substation.
- Auxiliary AC supply and AC distribution panel. Dual AC supply from the NEC/NER/AUX Transformers in the substation.
- Battery charger and battery bank with DC distribution panel. It is anticipated that NiCad batteries will be used. If lead-acid batteries are used, a separate battery room will be required.
- Substation platform, fence and access road. This will cater for water drainage of the substation platform. Access to the substation will mainly be from the R101 via the sand road.
- Eskom will build their own 132kV switching substation for control and billing purposes.

Viable alternatives (i.e. locality alternatives) will be investigated and the best options will be determined through the environmental and specialist studies, as well as public opinion.

WHERE IS THE PROJECT LOCATED?

The proposed project is located on Portion 1/419 of Nylstroom 419KR, Erf 9683 of Phagameng X10, near Modimolle town situated in the Modimolle Local Municipality, Limpopo Province.

The proposed project is set out in the Location Map below.



Figure 1 Location Map

The proposed position of the substation is indicated in the image below and is located adjacent to the R101.



Figure 2 Proposed site position

WHY AN EIA?

The EIA is a process created by legislation, which is used to ensure that the potential negative impacts that may occur due to the proposed development are avoided or mitigated. A Basic Assessment (BA) is applied to activities that are considered less likely to have significant environmental impacts and, therefore, unlikely to require a full-blown and detailed Scoping and Environmental Impact Assessment (EIA).

Three listing notices have been published in conjunction with the Environmental Impact Assessment Regulations (published in GN R982/2014 of 8 December in terms of section 24(5) of the National Environmental Management Act 107 of 1998 (the Act)). The three listing notices (GN R983/2014 - GN R985/2014) set out the activities, which require environmental authorisation before they can proceed.

Listing notice one (GN R983/2014) stipulates the activities requiring a BA. These are typically activities that have the potential to impact negatively on the environment but due to the nature and scale of such activities, these impacts are generally known.

A Basic Assessment (BA) is a more concise analysis of the environmental impacts of the proposed activity than a Scoping and EIA. However, a BA still requires public notice and participation, consideration of the potential environmental impacts of the activity, assessment of possible mitigation measures, and an assessment of whether there are any significant issues or impacts that might require further investigation.

The Basic Assessment Report (BAR) must provide the Department of Environmental Affairs (DEA) with sufficient information to consider the Application for Environmental Authorisation (BA Process) and to reach a decision. If the Department is however unable to decide the Application based on the BAR alone, the Department may request an Applicant to subject the Application to the more thorough Scoping and EIA process.

The listed activities for the proposed Modimolle Substation are the following (to be confirmed):

| Listed Activity | Activity/Project Description |
|--|--|
| <p><u>GN R983/2014 Activity 11</u> The development of facilities or infrastructure for the transmission and distribution of electricity-</p> <ul style="list-style-type: none"> (i) outside urban areas or industrial complexes with a capacity of more than 33 but less than 275 kilovolts; or (ii) inside urban areas or industrial complexes with a capacity of 275 kilovolts or more. | The proposal is for a new 132/11kV, 2 X 20MVA Substation. |
| <p><u>GN R983/2014 Activity 27</u> The clearance of an area of 1 hectare or more, but less than 20 hectares of indigenous vegetation, except where such clearance of indigenous vegetation is required for –</p> <ul style="list-style-type: none"> (i) the undertaking of a linear activity; or (ii) maintenance purposes undertaken in accordance with a maintenance management plan | The proposed development will entail the clearance of 1 hectare or more of vegetation. |
| <p><u>GN R983/2014 Activity 28</u> Residential, mixed, retail, commercial, industrial or institutional developments where such land was used for agriculture or afforestation on or after 01 April 1998 and where such development:</p> <ul style="list-style-type: none"> (i) will occur inside an urban area, where the total land developed is bigger than 5 hectares; or (ii) will occur outside an urban area, where the total land to be developed is bigger than 1 hectare. | The possibility exists that subsistence farming was practiced in the past on the site. The applicability of this activity will be confirmed. |
| <p><u>GN R985/2014 Activity 12</u> The clearance of an area of 300 square metres or more of indigenous vegetation.</p> <p>(a) In Eastern Cape, Free State, Gauteng, <u>Limpopo</u>, North West and Western Cape provinces:</p> <ul style="list-style-type: none"> (i) Within any critically endangered or endangered ecosystem listed in terms of section 52 of the NEMBA or prior to the publication of such a list, within an area that has been identified as critically endangered in the National Spatial Biodiversity Assessment 2004; (ii) Within critical biodiversity areas identified in bioregional plans; (iii) Within the littoral active zone or 100 metres inland from high water mark of the sea or an estuarine functional zone, whichever distance is the greater, excluding where such removal will occur behind the development setback line on erven in urban areas; or (iv) On land, where, at the time of the coming into effect of this Notice or thereafter such land was zoned open space, conservation or had an equivalent zoning. | To be confirmed. |

WHAT DOES THE BA PROCESS ENTAIL?

Application and initial notification

During this phase application for environmental authorisation for the commencement of the activity is made to the environmental authority. An initial notification process takes place whereby the public is informed of the proposed development through inter alia, newspaper adverts, notification letters and on site advertisements.

Public Participation Process (PPP) Phase

The purpose of this phase is:

- To identify interested and affected parties (I&APs) and relevant authorities
- The opening and maintaining of a register of all I&APs and key stakeholders on the database (on-going)
- To identify potential environmental impacts through investigation and PPP; and
- To describe and investigate the alternatives that may be considered.

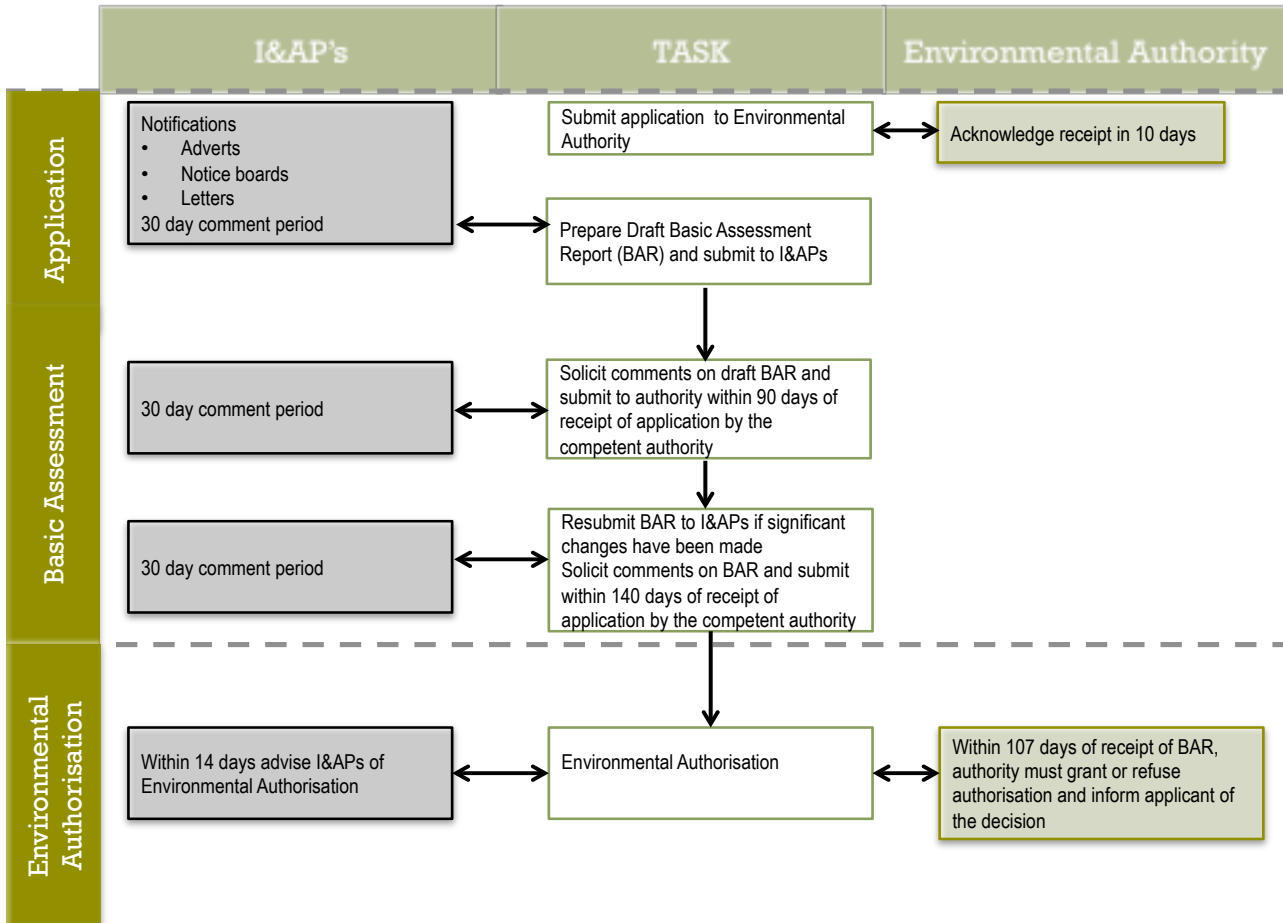
BA phase

This phase inter alia includes:

- Advertising the BA process and availability of the BID
- Consultation with and dissemination of information to I&APs through the BID, one-on-one consultation, public open days/focus group meetings/key stakeholder workshops
- Inviting I&AP comment and input on the draft BAR (30-day comment period)
- Recording all comments, issues and concerns raised by I&APs in a Comments and Response Report for inclusion in the final BAR.

Where necessary, mitigation measures are recommended to reduce the significance of potential impacts. Once the Final BAR has been submitted to the environmental authority, they will consider the Application.

The BA process is represented diagrammatically in the Schedule below:



ENVIRONMENTAL AUTHORISATION

An Environmental Authorisation (EA) (in terms of section 26 of the Act) will be issued to the applicant once the environmental authority, the Department of Environmental Affairs (DEA), has made a decision regarding the proposed development. This decision is based on inter alia, information received in the PPP phase.

WHAT IS THE PROGRAMME FOR THE BA?

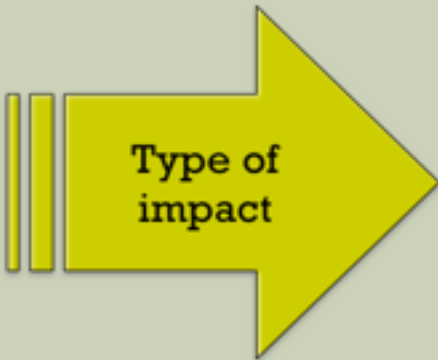
The following preliminary programme is envisaged for the BA:

| | | |
|--|--|--|
| <u>PPP Phase</u> October 2016 to December 2016 | <u>DEA review and Decision making</u> January 2017 to April 2017 | <u>Environmental Authorisation</u> May 2017 |
|--|--|--|

WHAT ARE THE POTENTIAL IMPACTS ASSOCIATED WITH THE PROJECT?

Electrical infrastructure may create a number of environmental impacts. A number of potential environmental issues have been identified and are listed here to assist I&APs to better understand the investigations to be undertaken as part of the environmental assessment process. The preliminary list of potential environmental impacts includes:

What are the potential impacts associated with the development?
Distribution projects/lines may create a number of environmental impacts. Potential environmental issues:



- ◆ **BIOPHYSICAL**
 - ◆ Fauna and Flora
 - ◆ Avifauna (Birds)
 - ◆ Land capability and agricultural areas
 - ◆ Visual
 - ◆ Waste / Pollution
 - ◆ Surface Water
- ◆ **SOCIO-ECONOMIC**
 - ◆ Impacts on existing infrastructure
- ◆ **SOCIO-CULTURAL**
 - ◆ Archaeological and Palaeontological sites

All significant issues identified will be collated into a Comment and Responses Report and will be included in the Draft and Final BAR.

SPECIALISTS

The project team will identify potential issues and assess these impacts in terms of their significance in accordance with the guidelines for BA in terms of Regulation 19. Specialist studies will be conducted to assess the significance of all impacts identified.

The specialist project team is represented diagrammatically in the Schedule below:



WHAT IS THE PURPOSE OF PUBLIC PARTICIPATION?

Public participation (PP) is a joint effort between stakeholders, the Applicant, technical specialists and decision-makers who work together to produce better decisions than they would have done had they acted independently. The Public Participation Process (PPP) aims to inform a wide range of I&APs about the proposed project and the environmental impact assessment process. It is a tool to allow the public to exchange information and to express their views and concerns about the proposed development. All contributions from I&APs will be fully documented, evaluated and responded to in the BA.

The public participation process (PPP) provides opportunities for I&APs to be involved right from the outset of the BA.

The PPP includes the following steps to ensure effective public participation:

- Step 1: Register I&APs and key stakeholders on a database (on-going)
- Step 2: Advertise the BA process and availability of the BID (local press, on-site and letters)
- Step 3: Consultation with and dissemination of information to I&APs through the BID, one-on-one consultation, public meetings/public open days /key stakeholder workshops during the BA phase
- Step 4: Invite I&AP comment and input on the draft BAR (30-day comment period)
- Step 5: Record all comments, issues and concerns raised by I&APs in an Issues and Responses Report for inclusion in the final BAR.

GETTING INVOLVED

You can get involved in the BA by:

- Registering as an I&AP using the attached Comment and Registration Form and returning it to the public participation consultant by post, fax or email using the details provided below;
- Examining the information provided in this BID, completing the attached Comment and Registration Form and returning it to the public participation consultant by post, fax or email using the details provided below;
- Attending any meetings that will be held during the BA so that you can obtain further information, interact with the project team members and raise issues and concerns. Should you register as an I&AP you will be invited to attend these meetings;
- Contacting the public participation consultant by email or fax should you have a query, wish to make a comment or require further information; and
- Reviewing and commenting on the draft BAR within the 30-day review periods provided. If you register as an I&AP you will automatically receive any further information that is distributed as part of this BA and be invited to public meetings. Should you wish to comment on the draft reports that will be made available for public review it is important that you take note of the 30-day review period and the deadlines for submission of comments. Comments can be submitted in writing via fax, email or post, using either the Comment Form provided or your own format, to Ria Pretorius: Texture Environmental using the contact details below. (Email or fax is recommended).

PUBLIC PARTICIPATION OFFICE CONTACT DETAILS:

Ria Pretorius
Texture Environmental Consultants
PO Box 36593, Menlo Park, Pretoria, 0102
fax 086 689 1515; mobile 082 568 6344
ria@peopletexture.co.za