

# **BACKGROUND INFORMATION DOCUMENT**

## **ENVIRONMENTAL IMPACT ASSESSMENT PROCESS**

**For the proposed**

**MANINGI SUBSTATION, SANDOWN EXTENSION 24,  
SANDTON**

**DEAT REF: 12/12/20/1174**

**April 2008**

**Prepared by:**

Marsh Environmental Services  
A Division of Marsh (Pty) Ltd

# **MARSH**



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## 1. BACKGROUND

Marsh Environmental Services has been appointed by Eskom Distribution to undertake an Environmental Impact Assessment Process for the proposed development of a substation required for the transmission and distribution of electricity in the Sandton area.

In terms of Government Notice R 386 promulgated in terms of Sections 24 of the National Environmental Management Act (NEMA) (Act No. 107 of 1998), the proposed activity requires authorization for:

*The construction of facilities or infrastructure, including associated structures or infrastructure, for the transmission and distribution of electricity above ground with a capacity of more than 33 kilovolts and less than 120 kilovolts. (Activity 1(l))*

## 2. LOCALITY

The proposed site at which the construction and operation of the facility is to occur is Erf 304 of Sandown Extension 24. The site is situated on Adolf Street, within a gated community approximately 2.2 kilometers from the Sandton CBD.

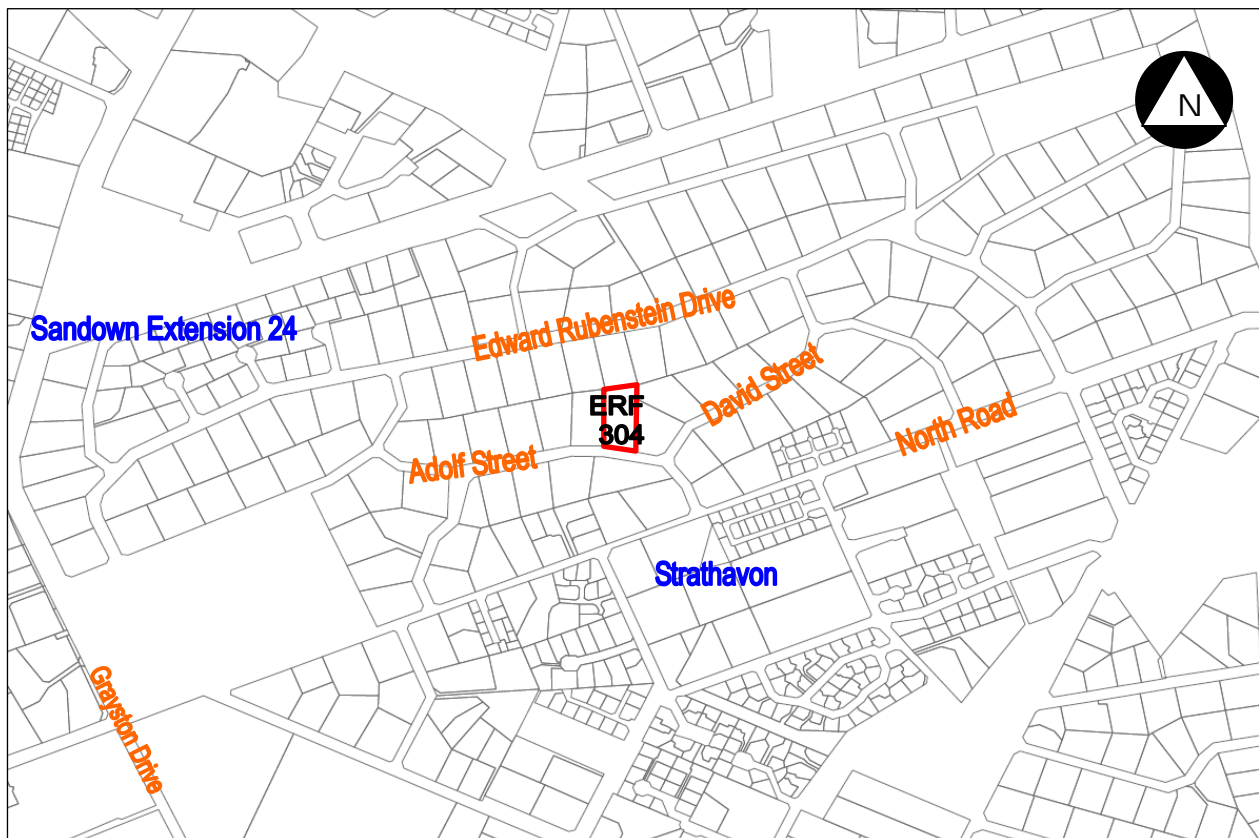


Figure 1: Locality plan

### **3. SITE SELECTION PROCESS**

Identification of the site is the result of intensive planning on the part of the Eskom technical team. From a strategic perspective, Sandown Extension 24 was identified for the following reasons:

- Sandown Extension 24 is equidistant from the existing Athol and Benmore substations.
- Capacity of the Athol and Benmore substations will be exceeded in the near future due to increased load demand in the general area.
- A trend towards residential densification and associated energy demands in the immediate area has been identified.
- The proposed facility can be readily linked to existing electrical infrastructure without the use of overhead cables.

Upon identification of the catchment area a process of determining a specific site was undertaken. On analysis of the surrounding properties and following extensive discussions with various landowners, Erf 304 of Sandown Extension 24 was purchased by Eskom.

### **4. WHY THE NEED FOR ANOTHER SUBSTATION ? (NEED & DESIRABILITY)**

Sandton is a very dense area supplied by Eskom and City Power and is currently experiencing significantly accelerated load growth. An increase in residential densities in the area (as experienced in Strathavon), are increasingly expected and loads of approximately 20MVA per block are anticipated. Options are very limited as the load is putting significant pressure on the existing infrastructure. The load forecast is based on current consumer demand and projected escalations up to the year 2060. This demand must be met in order to prevent load shortages. The proposed Maningi substation will serve to cater for much of the expected load increase and requires immediate attention in order to avoid prolonged outages.

### **5. PROJECT SPECIFICATIONS**

The proposed substation will consist of the following components:

- Four transformers each of which is approximately 6m in height, and contains 20 000 liters of oil;
- Overhead buzz bars approximately 1m – 1.5m above the transformers;
- Cooling fans;
- Two enclosed switchgear buildings;
- Perimeter wall and internal electric fence for security purposes;
- Lighting for security purposes;
- Lightning mast to protect the facility from lightning.

Cables linking the facility to the grid will be situated underground. No overhead cables will be required to link the substation to the grid.

## 6. PERCEIVED ENVIRONMENTAL IMPACTS & MITIGATION MEASURES

Public participation is used as a tool to assist in identifying potential environmental impacts associated with the project. Various perceived environmental impacts associated with a facility of this nature have been identified, the impact of which will be mitigated by way of various design and implementation mechanisms as specified by the specialist project team. These relate to:

- Mitigation of potential noise impacts (low frequency humming);
- Mitigation of potential visual impacts;
- Mitigation of heat emissions;
- Mitigation of potential oil spills contained in transformers;
- Mitigation of potential fire risk;
- Mitigation of heat emissions;
- Mitigation of potential traffic impacts during the construction phase.

The proposed substation will be designed to minimize both the visual and noise impacts on surrounding properties through the construction of relatively high boundary walls and designing the structures in a manner which compliments the residential character of the area. The site is not regarded to present significant environmental limitations in terms of faunal, floral, water and heritage resources.

## 7. THE APPLICATION PROCESS

In terms of environmental legislation, the proposed activity is listed as an activity requiring that a Basic Assessment Process (BAP) be undertaken, and that a Basic Assessment Report (BAR) be submitted to the competent authority for review and processing. The competent authority in this case is the National Department of Environment and Tourism (DEAT). The application is limited to environmental authorization in terms of NEMA. The expected timeframes are indicated in Table 1:

**Table 1: Expected timeframes**

Public participation process	Public review and comment of Draft BAR	Finalise BAR	Submit BAR to DEAT	Await submission of Record of Decision from DEAT
April & May 2008	May & June 2008	July 2008	July 2008	September 2008

## 8. THE PUBLIC PARTICIPATION PROCESS

The purpose of Public Participation Process is to ensure that the rights and needs of all parties are taken into account, as well as to protect the interests of the public, before a decision concerning the proposed development is taken. The public participation process provides people who may be affected by the proposed development the opportunity to provide comment and raise issues of concern about the project, or to offer suggestions in order to enhance the project benefits. Comments and issues raised during the public participation process will be captured, evaluated and included in a Comment and Response Report, which will be incorporated into the BAR that will be made available for public review.

## 9. PUBLIC FEEDBACK & PUBLIC MEETING

A comments and response form is attached to this document. Should you wish to register as an interested and affected party (I&AP) and provide feedback regarding the proposed development, please submit this feedback to the MES contact person. Registering as an I&AP will ensure that you are placed on a database of persons to be informed of any progress regarding the proposed activity.

**Please ensure that feedback is directed to MES before 22 May 2008.**

A **public participation meeting** where I&AP's will have the opportunity to discuss the proposed activity with the consultants and the applicant will be scheduled based on public feedback. The details of a public participation meeting will be provided to I&AP's who register before **6 May 2008**.

## 10. PROJECT ENVIRONMENTAL CONSULTANTS

### **Marsh Environmental Services (MES), A Division of Marsh (Pty) Ltd**

MES is an environmental service provider to Southern African and international government, business and industry, and is committed to enhancing environmental investigations through pro-active risk management.

### **MES CONTACT PERSON**

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