

BACKGROUND INFORMATION DOCUMENT v2

ENVIRONMENTAL IMPACT ASSESSMENT

Extension of the Ash Dam Facility at Komati Power Station

October 2007

Introduction

Eskom Holdings Limited is in the process of re-commissioning the Komati Power Station which is located between Middelburg and Bethal in Mpumalanga Province (see Figure). The operation of a coal fired power station, such as Komati, produces large volumes of ash that is disposed of in specially designed ash dam facilities. The existing ash dam facilities at Komati do not have sufficient capacity and it is therefore necessary to develop a new ash dam facility. A number of alternative sites were considered during a screening process. A preferred site, located within the Komati Power Station property and adjacent to the existing ash dams, has been selected for the new ash dam. This site will be subjected to detailed investigations during the Environmental Impact Assessment (EIA) process. Two powerlines will have to be re-aligned to facilitate the development of the new ash dam. The project and the EIA process are discussed in more detail in this document.



Purpose of the background information document

The EIA process necessitates consultation with persons affected by or interested in the proposed project. This document provides introductory information on the proposed development of a new ash dam facility at Komati Power Station and provides stakeholders with the opportunity to register as interested and affected parties (IAP) in the EIA process.

The purpose of this document is to provide you, as an interested and/or affected party with:

- ❑ an overview of the project as proposed by Eskom;
- ❑ an overview of the Environmental Impact Assessment (EIA) processes;
- ❑ Details of how you can become involved in the EIA process, receive information or raise issues which may concern and/or interest you;

Please register yourself as an IAP and submit your comments on the proposed project to Synergistics on or before 20 September 2007.



Project motivation

Eskom Holdings Limited has commenced with the Return to Service Project in which existing, mothballed power stations, are re-commissioned in order to increase electricity supply in South Africa.

The Simunye Return to Service Project includes the Camden, Grootvlei and Komati Power Stations which will be returned to service between 2006 and 2009 and provide an additional 2 964 MW of generating capacity.

Komati Power Station was originally commissioned in 1961 and operated until 1990 when it was completely shutdown. Environmental authorisation for the re-commissioning of the Komati Power Station was granted in 2005 by the Mpumalanga Department of Agriculture and Land Administration. Upgrading and refurbishment of the power station is currently in progress. It is expected that the first unit will be re-commissioned in 2008 and that the operational life of the power station will be extended by a further 20 years.

The existing ash dam facilities at Komati, which are also being re-commissioned only have an estimated capacity for a further 18 months of ash deposition. It is therefore necessary to investigate the development of a new ash dam facility for Komati Power Station. It is estimated that a maximum of 21 million tons of ash will be produced by Komati Power Station.

The project

The project includes the development of a new ash dam facility to provide for additional ash deposition capacity at Komati Power Station. The ash dam will be constructed with the fine ash pumped from the power station as dilute slurry. The construction of an ash dam initially involves the creation of the outer dam walls with ash, after which the slurry is deposited into the dam.

The ash delivery pipes for the proposed dam will be taken off the existing systems.

Two powerlines that currently cross the preferred ash dam site will have to be re-aligned so that the ash dam can be developed.

Identification of alternative sites

The consideration of alternative sites for the ash dam facility at Komati Power Station has been considered by various investigations undertaken prior to the shutdown of the power station and by recent studies conducted as part of the current assessment.

Six sites and the area around the current ash dam facility were examined (see Figure). Each site was considered in terms of a number of biophysical, technical and social criteria and judged by collective expert opinion.

It was concluded, in terms of the biophysical, social and technical criteria considered, that it is preferable to construct the proposed ash dam at the existing dam site rather than disturb a new site.

Where will the project be located?

It is proposed that the new ash dam facility be located adjacent to the Komati Power Station on land owned by Eskom (Site 7). The site is located immediately next to the existing ash dams (see Figure). The ash dam site is bound to the west by power lines, to the east by ash dams 1 and 2, to the north by the ash water return water dam and to the south by an area that has been mined. The dam will cover an area of approximately 80 ha and rise to a final height of 40m.

The preferred site will be subjected to detailed investigations during the EIA process to identify and assess all potential environmental impacts associated with the proposed ash dam facility.

The preferred powerline route runs parallel to, and on the eastern side of the R35 provincial road.

ENVIRONMENTAL IMPACT ASSESSMENT PROCESS

Project description

Construction (mid to late 2008)

Construction would entail inter alia site preparation that would comprise the following activities:

- ❑ Site clearance.
- ❑ Borrowing of construction & earthworks materials.
- ❑ Excavation of subsoil drains and cut-off trenches.
- ❑ Construction of the starter wall.
- ❑ Installation of ash delivery pipes.

Operation (2009 to 2021)

Operations will involve the deposition of ash, as slurry, into the dam. The ash will be conveyed from the power station to the ash dam through an existing series of pipes. The outer walls of the ash dam will be constructed with ash during the day and this dam will be filled with ash at night. Water in the ash either evaporates or is drained from the dam for re-use in the power station.

Enviro-Legal requirements

EIA Regulation 387, promulgated in terms of Chapter 5 of the National Environmental Management Act (No. 107 of 1998) identifies certain activities which may not commence without environmental authorisation from the competent authority.

With reference to the schedule the “*construction of facilities or infrastructure, including associated structures or infrastructure, for- (a) the generation of electricity where – (ii) the elements of the facility cover a combined area in excess of 1 hectare*”, “*the final disposal of general waste covering an area of 100 square metres or more*” and “*any development activity, including associated infrastructure, where the total area of the development area is, or is intended to be, 20 hectares or more*” are such listed activities triggered by the development of the ash dam facility.

In terms of the EIA Regulations in terms of Section 24(5) of the National Environmental Management Act (NEMA, No 107 of 1998), Eskom requires authorisation from the Department of Environmental Affairs and Tourism (DEAT) for the undertaking of the proposed project as outlined in Chapter 3 of Regulation 385. In order to obtain authorisation for this project, comprehensive, independent environmental studies must be undertaken in accordance with the EIA regulations. The project has been registered with DEAT, as the competent authority, under application reference number 12/12/20/1007.

Exemption application

An application for exemption, in terms of Section 51 of EIA Regulation No 385, from the consideration of alternatives during the EIA study, Section 32(h), has also been lodged with DEAT.

Environmental consultants

Synergistics Environmental Services (Pty) Ltd has been appointed as independent environmental consultants responsible for undertaking the environmental impact assessment studies for the proposed project. A Scoping and Environmental Impact Assessment are to be conducted in accordance with the Environmental Impact Assessment Regulations (No. 385) published under Chapter 5 of the National Environmental Management Act. Reports from these studies will be submitted to the DEAT in support of the application for environmental authorisation of the new ash dam facility.

Public meeting

A public meeting will be held in Komati Village. All interested and affected parties are invited to attend the meeting which will be held as follows:

Date: **13 September 2007**
Time: **12h00**
Venue: **Igwababa Hall (Komati Club House)**

ENVIRONMENTAL IMPACT ASSESSMENT PROCESS

Environmental Impact Assessment Process

The EIA process to be followed is illustrated below:



Environmental Scoping

Scoping involves the identification of key environmental issues to be investigated in the EIA. This will include consultation with IAPs in order to identify their issues and concerns. Public and individual stakeholder meetings will be held. The scope of work for further investigations and specialist studies will be developed. The Scoping Report will be made available for public review and comment.

Environmental Impact Assessment

The EIA involves the undertaking of specialist investigations (including groundwater, ecology, archaeology and air quality studies) to determine the existing environmental conditions. The studies will assess the significance of the impact of the project on the environment. Feedback will be given to the IAPs of the specialists findings.

Environmental Management Plan (EMP)

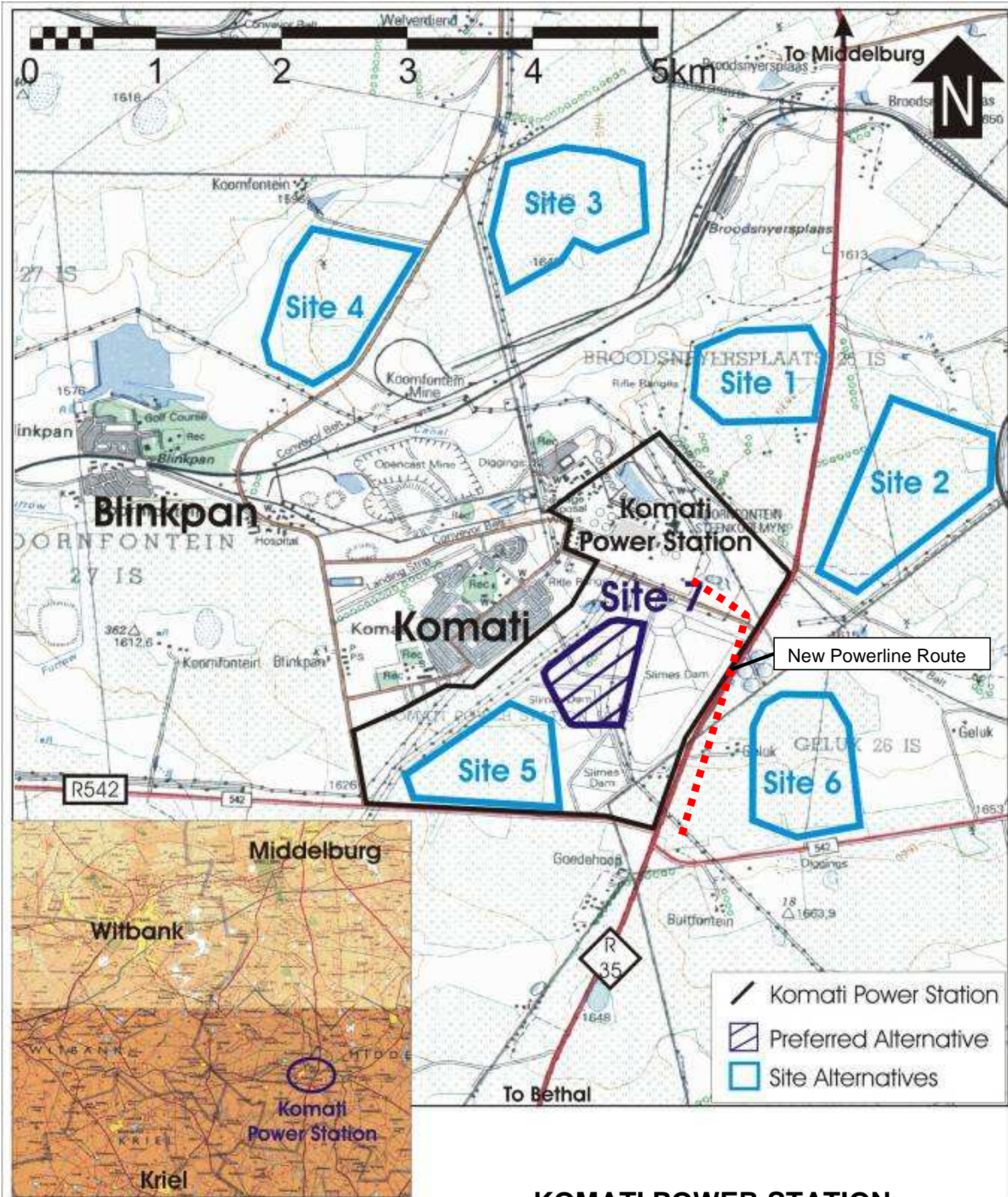
The EMP involves the documentation of detailed management measures required to ensure that negative impacts are minimised and positive impacts are enhanced where possible. The EIA Report and the EMP will be made available for public review and comment.

YOU CAN BE INVOLVED THE PROCESS BY:

- Registering as an IAP.
- Submitting your issues, concerns and questions in writing.
- Providing us with the names of additional people that can be contacted.
- Attending the public meetings on the project.
- Reviewing the Scoping Report, EIA and EMP.
- Providing us with comments in writing.

QUESTIONS CAN BE DIRECTED TO:

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KOMATI POWER STATION

Figure: Location of Komati Power Station, the Alternative and the Preferred Ash Dam Sites.

