

# PROPOSED CONSTRUCTION OF A GAUGING STRUCTURE IN THE LITTLE MOOI RIVER, KZN AS PART OF THE MOOI- MGENI TRANSFER SCHEME PHASE 2 (MMTS-2)

## BASIC ASSESSMENT

**Background Information Document**

**May 2012**

### 1. INTRODUCTION

TCTA as the implementing agent proposes to construct a gauging structure in the Little Mooi River situated in KZN on behalf of the Department of Water Affairs. Construction of the weir forms part of the second phase of the Mooi Mgeni Transfer Scheme (MMTS-2) (Spring Grove Dam).

The construction of the weir is proposed to be located on the farm Sans Souci B 8263 next to road P28-1 from Rosetta towards Kwamankonjane in the Little Mooi River. The MMTS-2 includes three new gauging structures to assist/ensure the effective operation of the Spring Grove Dam. The three gauging structures are located in:

- the Mooi River approximately 140m downstream of the toe of Spring Grove Dam,
- in the Mpozana River downstream of the existing outfall works (phase 1) of the MMTS, approximately 30m upstream of the waterfall, and
- in the Little Mooi River roughly 380m downstream of where the P28-1 (North) road crosses the river at bridge number CVH 1937. (Dr. P. Wessels, 2010)

The Little Mooi gauging structure will be used to supply information on the magnitude of flows in the upper reach of the Little Mooi River. This information, in combination with data gathered at an existing gauging station in the Hlatikulu River, will assist operators of the Spring Grove Dam to synchronise releases with natural flow events in the Little Mooi and Hlatikulu, thus optimising the use of stored water from the dam.

The Trans-Caledon Tunnel Authority (TCTA) is applying on behalf of the Department of Water Affairs (DWA) for Environmental Authorisation for the construction of the gauging structure in the Little Mooi River. Terra Works Environmental Consultants was appointed as independent consultants to undertake the required EIA.

### 2. PURPOSE OF THIS DOCUMENT

The purpose of this Background Information Document (BID) is to provide Interested and Affected Parties (I&APs) with background information about the proposed project and the EIA process to be undertaken. It also explains how you can become involved in the project, receive further information as the EIA progresses, identify issues and concerns that should be addressed in the EIA, and review and comment on the reports that are produced during the EIA.

This BID will help I&APs to:

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

### 3. BRIEF PROJECT DESCRIPTION

The construction of the gauging weir will entail:

- A 12m long horizontal weir, instrumentation hut and pump house.
- The provision of erosion protection measures to the river banks and floodplains.
- The construction of a sill. This sill acts as an intermediate drop structure and will help to dissipate some of the energy of the water flowing over the gauging structure.

- Additional erosion protection (rip-rap) on the left bank of the river downstream of the sill will be included. The right bank of the river will be protected by extending the right bank flank wall to a point 18m downstream of the crest line of the gauging structure. Rip-rap will be used to protect the river bank above and further downstream of the wall.

mark of the sea or an estuary, whichever distance is the greater but excluding where such infilling, depositing, dredging, excavation, removal or moving;  
 (a) is for maintenance purposes undertaken in accordance with a management plan agreed to by the relevant environmental authority; or  
 (b) occurs behind the development setback line.

#### 4. THE NEED FOR AN EIA

In terms of the EIA Regulations published in Government Notice R543 of 18 June 2010 in terms of Section 24 (5) of the National Environmental Management Act (Act No. 107 of 1998), certain listed activities as set out in Government Notice R544 and R546 (activities that trigger Basic Assessments) and R545 (activities that trigger Scoping and Environmental Impact Assessment processes or full EIAs) require Environmental Authorisation before they can proceed.

The proposed construction of the weir is listed in Regulations 544 and requires a Basic Assessment to be undertaken as part of the approval process. An application has been submitted under NEMA for inter alia the following activities (see Table 1):

**Table 1: Listed activities requiring Environmental Authorisation**

Notice & Activity	Activity Description
GN544 (11)	The construction of: (i) canals; (ii) channels; (iii) bridges; (iv) dams; (v) weirs; (vi) bulk storm water outlet structures; (vii) marinas; (viii) jetties exceeding 50 square metres in size; (ix) slipways exceeding 50 square metres in size; (x) buildings exceeding 50 square metres in size; or (xi) infrastructure or structures covering 50 square metres or more where such construction occurs within a watercourse or within 32 metres of a watercourse, measured from the edge of a watercourse, excluding where such construction will occur behind the development setback line.
GN544 (18)	The infilling or depositing of any material of more than 5 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 5 cubic metres from: (i) a watercourse; (ii) the sea; (iii) the seashore; (iv) the littoral active zone, an estuary or a distance of 100 metres inland of the highwater

#### 5. THE EIA PROCESS

The EIA process is guided by regulations made in terms of Section 24 (5) of NEMA. In addition to specifying the sorts of activities for which Environmental Authorisation is necessary, the regulations also set out the procedures for the preparation, submission, processing, consideration of and decisions on applications for Environmental Authorisation.

An EIA for Basic Assessment involves four phases:

1. Application and Initial Notification;
2. Basic Assessment Report (BAR) Phase; and
3. Environmental Authorisation Phase.

The process is intended to ensure an open and participatory approach to the assessment, with the full involvement of I&APs in order to ensure that all the impacts are identified and taken into consideration and that planning and decision-making is informed, transparent and accountable.

##### Application and Initial Notification

- Submit an EIA application to the National DEA;
- DEA acknowledgement of the EIA application;
- Notify the public of the proposed development through inter alia, newspaper adverts, notification letters, BIDs and notice boards.

##### Basic Assessment Report Phase

- Ensure that all key issues and environmental impacts that will be generated by the project are identified;
- Identify reasonable alternatives;
- Provide for the involvement of I&APs in the identification of issues through the PPP;
- Undertake detailed assessments of all issues and impacts identified;
- Identify mitigation measures and recommendations to reduce the significance of potential impacts;
- Produce a Draft Basic Assessment Report for public review so that I&APs can comment on the report and ensure that all relevant issues have been captured and mitigation measures proposed are adequate;
- Submit a Final Basic Assessment Report to the authorities for decision making.

### Environmental Authorisation Phase

- The Environmental Authorisation is issued once DEA has made a decision regarding the proposed project;
- The decision may be positive or negative based on *inter alia*, information received in the BAR phase;
- Notification of all Registered I&APs of the Environmental Authorisation and the appeal process.

## 6. CONSIDERATION OF ALTERNATIVES

The EIA Study will include the due consideration of alternatives as required by the EIA Regulations. The following alternatives will be considered:

- The “do nothing” alternative;
- Alternative location for the weir.

Two site locations in the Little Mooi River are considered.

1. The preferred site is located on the farm Sans Souci B 8263 next to road P28-1 from Rosetta towards Kwamankonjane in the Little Mooi River. The weir is proposed to be located roughly 380m downstream of where the P28-1 (North) road crosses the river at bridge number CVH 1937.
2. The use of an existing weir station on the Little Mooi at Dartington 3906. The measuring capacity of the existing station on the Little Mooi at Dartington, is only 18m<sup>3</sup>/s and it is not possible to increase the gauging capacity of the structure due to poor site conditions.

During the BAR Phase these alternatives will be assessed, taking into consideration the environmental and social significance of key issues associated with each option.

## 7. KEY ISSUES TO BE ASSESSED

Detail assessment of the alternatives identified will be done during the BAR Phase. The key issues that have been identified for assessment are shown in Table 2 below. Additional issues may also be raised during the draft BAR Phase.

**Table 2: Description of impacts associated with the alternatives and options for the Little Mooi River Weir.**

Impact	Cause and Comment
<b>Impacts – Construction Phase</b>	
Botanical	Vegetation removal; Areas disturbed by construction could be invaded by exotic plants which could outcompete indigenous plants.
Fauna	The proposed project could disturb animals through noise and physical barriers, and may cause animals to leave the area.
Aquatic ecology	The construction of a gauging weir in the Little Mooi River will form a new barrier to upstream

	migration of fish species. Watercourse impedance or diversion. Bank destabilisation and erosion. Water quality deterioration (through increased turbidity, accidental spills, poor waste and sanitation management, erosion from aggregate stores, disturbance of fine sediment).
Visual	Visual impact due to construction activities.
Noise	Construction of the proposed weir could lead to increased ambient noise levels.
Socio-economic	Influx of construction workers employed on the project. Increased risk of stock theft, poaching and damage to farm infrastructure associated with construction workers. Increased risk of veld fires associated with construction related activities Impact of heavy vehicles, including damage to roads, safety, noise and dust. Loss of agricultural land associated with construction related activities.
<b>Impacts – Operational Phase</b>	
Aquatic ecology	Impeding flow and flow alteration. Flood protection. Safety risk. Riparian vegetation. Erosion Alteration of the bed or banks of the watercourse. Impaired fish movement
Heritage	The site was investigated for <i>in situ</i> Stone Age artefacts and Quaternary fossils. There is no evidence of intact or capped Stone Age or agriculturalist archaeological or Quaternary fossil material within the confines of the footprint.
Visual	The proposed weir will be visible from the landowners residence situated north of the site on a hill.
Noise	Ambient noise levels could increase during operation of the weir.
Socio-economic	Creation of employment and business opportunities. The operational phase will also create opportunities for skills development and training.

## 8. PUBLIC PARTICIPATION

Public participation will be the cornerstone of the Basic Assessment for this proposed project. The principles of the National Environmental Management Act (NEMA), govern many aspects of EIAs, including public participation. The key objective of public participation during this Basic Assessment is to provide interested and/or affected parties (I&APs) with sufficient and transparent information on an ongoing basis. The public participation process (PPP) also allows you the opportunity to comment on the findings of the Basic Assessment Report that will be made available for public review.

It is important that the relevant I&APs are identified and involved in the PPP from the outset of the proposed project.

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

STEP 1: Notification to I&AP's of the applicant intent to submit an EIA for Basic Assessment with the Competent Authority

STEP 2: Advertise the EIA Notice for Basic Assessment (local newspapers)

STEP 3: Register I&AP's on the project database (on-going throughout Basic Assessment process)

STEP 4: Consultation with and transfer of information to I&AP's through consultation, public meetings, etc.

STEP 5: Record all comments raised by I&AP's within a Comments and Response Report, which will form an integral part of the Basic Assessment Report

STEP 6: Invite I&AP's comments and input on the Basic Assessment Report (Comment period as stipulated by GN R 543).

If you consider yourself an I&AP for this proposed project, we urge you to make use of the opportunities created by the public participation process to become actively involved in the process and provide comment or concerns which affect and/or interest you, or about which you would like more information. Your input into this process forms a key part of the Environmental Studies and we would like to hear from you to obtain your views on the proposed project.

By completing and submitting the accompanying Registration and Comment form, you automatically register yourself as an I&AP for this proposed project and it will ensure that your comments and/or concerns raised regarding the proposed project will be noted.

We look forward to your contributions. Please also feel free to suggest other stakeholders to be consulted. Please submit your name, contact information (address, telephone number, e-mail address, postal address) and written comments to the contact person at Terra Works as indicated below.

### ***Public Participation Contact Details***

Contact Person: Samuel Pauw  
Terra Works  
Bloemfontein

Tel: 051-412 6350  
Fax: 051-412 6351/  
0866634343

E-mail: [info@terraworks.co.za](mailto:info@terraworks.co.za)

Postal Address: P.O. Box 28242  
Danhof, 9310