

Proposed Mooi-Mgeni River Transfer Scheme Phase 2 (MMTS-2) (Spring Grove Dam and Appurtenant Works)

AIM OF THE PROJECT

The national Department of Water Affairs and Forestry (DWAF) is proposing Phase 2 of the Mooi-Mgeni Transfer Scheme (MMTS-2) to augment the growing water requirements of the Mgeni System (supplying the water needs of Durban, Pietermaritzburg and surrounding area). The MMTS2 will primarily encompass the construction of the proposed Spring Grove Dam and an associated transfer pipeline from the proposed dam to the Mpofana River. Other associated infrastructure and activities will also be required and are discussed below.

Cymbian Enviro-Social Consulting Services have been appointed by BKS (Pty) Ltd, the independent environmental consultant, to manage the Stakeholder Engagement Process. This process includes the consultation with parties that may be affected by, or have an interest, in the project.

Purpose of this document:

- Provide Background Information regarding the project.
- Provide an outline of the process being followed in conducting the Environmental Impact Assessment (EIA) Procedure.
- Inform members of the public of their rights and responsibilities regarding participation in certain parts of the EIA Procedure.
- Inform the public of the objective evidence surrounding the perceived impacts of the proposed project.
- Assist the public to formulate their comments in a manner that will ensure that they can be afforded due attention in certain parts of the EIA procedure.

If you would like to register as an Interested and Affected Party (I&AP), please contact Cymbian Enviro-Social Consulting Services:

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BACKGROUND INFORMATION

Phase 1

Phase 1 of the Mooi-Mgeni Transfer Scheme Pre-feasibility Study recommended a high dam at Mearns on the Mooi River from where the water would be transferred via the 11 km long Wellington Tunnel to the Mpofana River. From the Mpofana River outfall, water would run down from the Mpofana, to the Lions and the Mgeni rivers to be stored in the Midmar Dam.

At the conclusion of Phase 1 of the Mooi-Mgeni Transfer Scheme Pre-feasibility study the recommendations of Phase 1 were re-visited and re-assessed. It was found that the same yield could be obtained with a new and smaller scheme configuration than with the previously proposed large Mearns Dam and Wellington Tunnel. The scheme utilised the infrastructure of the old Mearns emergency transfer scheme, namely the pipeline and the pump station. New components consisted of an 8m high diversion weir on the Mooi River at Mearns, installation of a stand-by pump at the existing pump station (which was initially not installed) and the raising of the Midmar Dam by 3.5m to provide storage for the transferred water. Additionally, servitudes for an aqueduct were registered on the receiving Mpofana, Lions and Mgeni rivers. The construction of the first phase (MMTS-1) was authorised by the Minister of Water Affairs and Forestry in 1999, approved by the Minister of Environmental Affairs and Tourism in 2001, and constructed in 2003.

Phase 2

The Phase 2 Feasibility Study commenced in 2000 with a technical study and parallel EIA process. This study recommended that the MMTS-2 be developed in two stages in order to both delay capital expenditure and to minimise a severe impact on the Mgeni System water tariff.

The recommendation was that as a first stage only Spring Grove Dam (MMTS-2A) should be constructed upstream of the existing Mearns Weir and about 2 km south west from Rosetta village, in the KZN/Natal Midlands. During this stage water will be released from Spring Grove Dam down the Mooi River into the impoundment of the Mearns Weir (MMTS-1) from where it will be abstracted and transferred, using the spare capacity of the existing transfer infrastructure, into the Mgeni River catchment to augment the supplies of Midmar Dam.

As a second stage (MMTS-2B), it was recommended that a new pumping station be constructed at the Spring Grove Dam from where the bulk transfer from the Mooi to the Mgeni River would take place. The MMTS-2B would include the construction of a new transfer pipeline (14km long) from the Spring Grove Dam to the existing discharge point on the Mpofana River. This pipeline would follow a short route to the existing Mearns pipeline (3km), and thereafter a duplicate line would run parallel to the existing line and within the existing 25m wide servitude of aqueduct, to the discharge point in the Mpofana River (11km downstream). From the discharge point on the Mpofana River, the water will flow into the Lions River and finally into the Mgeni River just upstream of the Midmar Dam where the transferred water will finally be stored.

Once constructed, the Spring Grove Dam and new transfer infrastructure would increase the yield of the Mgeni System from the current 334 million m³/annum by 60 million m³/annum to 394 million m³/annum. The growth in water use within the Mgeni System has been so extensive over the last number of years and, even with water conservation and the demand management in place, the system is already severely stressed. The situation has deteriorated such that it is now necessary to construct both phases (2A and 2B) simultaneously and further argumentation is already required even after the MMTS-2 has been constructed. Currently, there is no other project that can replace the MMTS-2 to meet the current Mgeni System demands. Hence, no viable alternative is available.

Location (Refer to attached maps)

The proposed Spring Grove Dam will be located about 2km south west of Rosetta and approximately 3.5km north west of Nottingham Road. The dam will be on the Mooi River on portions of the farms: Rosetta 2983, Vaalekop 3297, Inchbrakie 14850, Riverholm 15967, Eberburg 2210, Spring Grove 2169 and Spring Vale 2170. The dam will extend upstream to above the Inchbrakie Falls which will be inundated.

The transfer pipeline from the Spring Grove Dam to the Mpofana River will traverse a wetland, some Rosetta smallholding properties, the R103 and the railway line before running parallel to the existing Mearns pipeline in the existing 25m wide servitude. At Gowrie, the pipeline will cross the access road to the N3. The water being transferred will discharge into the Mpofana River approximately 1.2km north of Balgowan. This pipeline will cross portions of the farms: Spring Vale 2170, Gowrie 1930, Waterford 15964 and Wilde Als Spruit 1085. The water in the Mpofana River will flow into the Lions River, then into the Mgeni River and into the Midmar Dam.

Coarse aggregate to be used in the construction of the dam could be mined from a potential quarry site located on the properties Wellington 2212 (80% of the quarry) and Springvale 2170 (20% of the quarry). The quarry site is situated on top of the mountain to the east of the Rosetta railway station.

An artificial fish barrier weir will be constructed on the Mooi River, about 1.5km upstream of Inchbrakie Falls on the farm 'Coldstream', upstream of the dam's inundation area.

Size

The dam will be approximately 10.3 km² (1035 hectares) in area when full, and will have a capacity of 141 million m³. The dam wall will be approximately 38m high with the dam site and dam basin area below the 1437 m above sea level contour, which extends up into the Mooi River for about 13 km up to Tunga Falls, which is located about 1.5 km upstream of Inchbrakie Falls.

The pipeline will consist of the following components:

- A new pump station at Spring Grove Dam will pump water at a rate of 4.5m³/second;
- 5640m of new rising main (uphill) pipeline (1400mm diameter) to Nottingham Road;
- 8325m of new gravity main (downhill) pipeline (600mm diameter) to the Mpofana River; and
- A break pressure tank on Gowrie Farm at Nottingham Road.

Existing Land Use

The main land uses in the dam basin are cattle (and dairy) farming, tourism and crop cultivation.

Surrounding Land Uses

The surrounding land uses are predominantly agriculture and tourism.

WHAT DOES THIS DEVELOPMENT ENTAIL?

The MMTS-2 will encompass:

- The construction of the Spring Grove Dam and pump station;
- An Eskom switch yard at the Spring Grove pump station;
- A river flow gauging weir on the Mooi River;
- The construction of a transfer pipeline from Spring Grove Dam to the Mpofana River;
- Extension of the existing outlet works on the banks of the Mpofana River;
- A river flow gauging weir on the Mpofana River downstream of the Mpofana outlet works but upstream of the Mpofana Falls;
- A break pressure tank on Gowrie Farm at Nottingham Road;
- An artificial fish barrier weir on the Mooi River upstream of Inchbrakie Falls on the farm 'Coldstream';
- Realignment of the access roads to the Vaalekop South Smallholdings and the properties Riverholm and Inchbrakie;
- Protection of the embankment of the Nottingham Road (en route to Loteni);
- Relocation of services such as power lines, telephone lines and water and sewage reticulation;
- Off-site rehabilitation of existing degraded wetlands on properties in the Mooi, Little Mooi and Mgeni rivers catchments;
- Location of a construction camp, housing, site office, parking, temporary storage of fuel, and storage of plant equipment and material; and
- A potential quarry site.

ENVIRONMENTAL AUTHORISATION

The completion of the EIA is required in terms of section 22 (3) of the Environment Conservation Act (Act 73 of 1989).

In order to finalise the application, the EIA will be undertaken in compliance with the EIA Regulations published in Government Notices R1182, R1183 and R1184 of 5 September 1997 in terms of Sections 21, 22, 26 and 28A of the Environment Conservation Act (No 73 of 1989) (ECA), as well as the principles of the National Environmental Management Act (No 107 of 1998) (NEMA). The EIA process from the old regulations is being followed in this project because the application has already been submitted (in January 2004).

The EIA application has been referred from the KZN DAEA to the national Department of Environmental Affairs and Tourism (DEAT) on the basis that the proponent is a national government department (i.e. DWAF).

An amendment of the application form to include listed activities 1(a), (c), (d), (l), (m) and (o), 2(c) and 10; an application for exemption from complying with the EIA Regulations in terms of Section 28A of the ECA for the submission of a Scoping Report; and a Plan of Study for EIA have been submitted to DEAT and after consultation with the KZN DAEA; approved.

The DEAT reference number is 12/12/20/220; the KZN DAEA reference number is EIA/4610 and the DWAF reference number is 2006-352.

PROCESS TO BE FOLLOWED

The proposed Environmental Authorisation process will thus consist of the following phases:

- Consultation with Environmental Authorities;
- EIA review approach;
 - Site visit;
 - Review of all environmental work performed prior to December 2006;
- Stakeholder Engagement;
- Issue Reporting;
- Additional specialist studies;
- Environmental Impact Report;
 - Description of nature and activities of the proposed project;
 - Impact assessment;
 - Identification of mitigation measures;
 - Maximisation of positive impacts;
- Environmental Management Plan (EMP) for the Construction Phase (including a fire management plan);
- Application for a mining permit (to develop a quarry) in terms of Section 106 (2) of the Mineral and Petroleum Resources Development Act (Act 28 of 2002) – MPRDA;
- Decision-making by Environmental Authorities.

EIA Review Approach

BKS has reviewed and analysed the available specialist and supporting reports that were performed as part of the Environmental Scoping Report (ESR) (up to January 2004), as well as the bridging reports undertaken (between January 2004 and October 2006). The purpose of this review was to identify possible constraints and impacts that could have been overlooked, classify the subsequent steps to be followed in assembling the required information for the EIA process and identify potential changes to the identified mitigation measures.

The following reports have been reviewed and analysed:

- Council for Geoscience: Geological Survey (CGS): Feasibility level investigation for the proposed Spring Grove Dam (Report No 1999-0051);

- CGS: MMTS: Spring Grove Dam Site: Feasibility Level Construction Materials Investigation (Report No 1999-0052);
- CGS: An Assessment of the Seismic Hazard Potential for the Site of the Mearns and Spring Grove Dams (Report No 1999-0026);
- CGS: Fish Barrier Weir: Mooi River: First Engineering Geological Feasibility Report (Report No 2003-0212);
- MMTS-1: Receiving Streams EIA (Nov 2000);
- MMTS-1: Receiving Streams EMP (May 2002);
- Main Report for MMTS-2 (Jan 2004);
- Water Resources Analysis (Supporting Report 1, Jan 2004);
 - Stochastic Hydrology, Yield Determination and Operating Rules with the MMTS-2 in place (Oct 2006);
- Dam Design (Supporting Report 2, Jan 2004);
- Transfer Infrastructure (Supporting Report 3, Jan 2004);
- Environmental Impact Assessment (Supporting Report 4, Oct 2002);
 - Biophysical Impact Assessment (Supporting Report 7, Oct 2002);
 - Identification of Water Falls Close to Inchbrakie Falls (DWAF Internal Report, Oct 2002);
 - Impact of submerging Inchbrakie Falls Plants (Bridging Study 1, May 2004);
 - Technical Feasibility of Building a Fish Barrier (DWAF Internal Report, Dec 2003);
 - Provision of a Fish Barrier (Bridging Study 2, Jan 2005);
 - Investigation of the Presence of Smallmouth Bass Upstream of Spring Grove Dam (Bridging Study 6, Aug 2005);
 - - Environmental Impact Assessment for the proposed Fish Barrier on the Mooi River Upstream of Spring Grove Dam (Bridging Study No 7, May 2006);
 - Identification of wetlands for rehabilitation (Bridging Study 3, Mar 2004);
 - Social Impact Assessment (Supporting Report 8, Oct 2002);
 - Historical and Cultural Sites and Graves (Bridging Study 4, Nov 2004);
 - Record of Public Participation (Supporting Report 10, Oct 2002);
- Water Quality Assessment (Supporting Report 5, Jan 2004); and
- Costing and Engineering Economy (Supporting Report 6, Jan 2004).

Stakeholder Engagement

During this phase the following interested and affected parties will be consulted:

- Relevant Authorities at various tiers of government;
- Relevant Resident Associations;
- Landowners in the area;
- The proponent; and
- The public at large.

The Stakeholder Engagement Process is designed to illicit a joint effort by stakeholders to produce better decisions than if they had acted independently.

The following activities will be utilised to achieve the aforementioned objective:

- Advertising the
 - Announcement of the Project including an invitation to register as a stakeholder;
 - 1st Public meeting;
 - 2nd Public meeting; and
 - Record of Decision
 in English in the following newspapers: the Estcourt and Midlands News, The Mirror, The Natal Witness, The Mercury; and in Zulu in The Echo.
- Placement of poster advertisements, site notices at various points frequented by the public in the towns of Rosetta and Nottingham Road.
- Distribution of Background Information Documents to registered stakeholders.
- Uploading information on the project website (www.mmts2.co.za) for public review.
- Ongoing consultation with the stakeholders and authorities via meetings, telephonic discussions and written communication.
- Compilation of an Issues Report.
- ***A second public meeting has been tentatively scheduled for this project on the 23rd of May 2007.***

Additional specialist studies

The following additional studies have been approved in the Plan of Study for EIA for the proposed development:

- An update of the Ecological Assessments (including fauna, vegetation, wetland and Red Data);
- A Heritage Impact Assessment (based on the Historical and Cultural Sites and Graves study);
- An update of the Social Impact Assessment (including lawful entitlements for water use, changes in property values, land claims, sub-division of land and new developments);

- A new Traffic Impact Assessment;
- An update of the Water Quality Assessment;
- Prepare updated maps for construction areas, borrow areas, quarries and stockpiles; and
- An update of the Stakeholder Engagement Process.

Environmental Impact Report

The studies conducted prior to December 2006, the additional specialist studies as well as the Issues Report will be incorporated in the Environmental Impact Report (EIR). The EIR will describe the development and will identify potential impacts generated by the construction and operation of the proposed project. An Environmental Management Plan (EMP) will also be provided which will make recommendations for the mitigation of the potential impacts.

The draft EIR will be made available to the public for comment prior to finalisation and submission.

Mining Permit

An EMP, in accordance with the requirements of the MPRDA, will be developed indicating the environmental impacts from the quarry and the proposed mitigation measures. The EMP will be developed at the commencement of the EIA process, and will also form part of the EIR and will be made available to the public for comment prior to finalisation and submission.

Decision-making

The final EIR will be handed to the authorities for decision-making. Their decision will be provided in a written Record of Decision (ROD). Once the ROD has been received, an advertisement will be placed in the newspapers, notifying the public of the ROD and where it will be available to view.

Relevant Authorities

The authorities responsible for administering and implementing the legislation are:

- The Department of Environmental Affairs and Tourism;
- The KZN Department of Agriculture and Environmental Affairs;
- Ezemvelo KZN (Wildlife);
- The South African Heritage Resources Council;
- Amafa iKwaZulu Natali (Heritage KwaZulu Natal); and
- The Department of Water Affairs and Forestry.

Project Team

BKS (Pty) Ltd have been appointed by DWAF as an independent environmental consultant to undertake the work required to prepare and submit the EIA for the MMTS-2. Peter Teurlings of BKS is the registered professional natural scientist is leading the Project Team.

BKS have sub-contracted the following specialist companies:

- Cymbian Enviro-Social Consultants - Paula Tolksdorff and Warren Kok (Public Participation Process);
- Dr Kay Brügge – (Social Impact Assessment);
- eThembeni Cultural Heritage - Beth Wahl (Heritage Impact Assessment);
- Exigent Environmental cc – Ina Venter, Jacolette Adam, Mieke Barry, Ansie Swanepoel (Ecological Impact Assessment);
- Afrosearch - Dr David de Waal (Facilitation);
- Green Gain Consulting – Advocate Nicolai Massyn (Legal); and
- Taryn Haley, Skylab Designs (Website).

In addition, the following specialists employed by BKS are part of the EIA Technical Project Team:

- Estelle van Niekerk (Water Resources Analysis and Hydrology);
- Mike Howard (Water Quality);
- Danie Badenhorst (Dam Design);
- Khotso Moletsane (Geotechnical);
- Gibson Qezu and MC Barnard (Traffic Impact Assessment); and
- Gerna Clifford (Cost and Engineering Economy and Transfer Infrastructure).

HOW CAN YOU GET INVOLVED?

- Register as an Interested and Affected Party (if you have not already done so) by contacting Cymbian Enviro-Social Consulting Services;
- Attend public meetings and read information to stay well-informed;
- Propose ideas to solve problems that arise during the consultation process;
- Voice your concerns about proposals and their potential impact;
- Assist with information that will contribute to a thorough study;
- Visit the project website at www.mmts2.co.za for information and updates; and
- Attend the second public meeting tentatively set for the 23rd of May 2007.

YOU ARE HEREBY INVITED TO THE 1ST PUBLIC MEETING WHERE YOU WILL BE AFFORDED THE OPPORTUNITY TO COMMENT ON THE PROPOSED PROJECT. THE MEETING WILL BE HELD ON THE 16TH APRIL 2007 AT 15H00 AT THE NOTTINGHAM ROAD FARMERS' ASSOCIATION HALL.

Draft Agenda for the 1st Public Meeting

1. Welcome and opening	D de Waal	(5 mins)
2. Purpose of the meeting	D de Waal	(5 mins)
3. Introduction of the Project Team	D De Waal	(10 mins)
4. Video – overview of the project		(16 mins)
5. Brief historical background	J Geringer	(15 mins)
6. EIA process and EMP for the quarry	P Teurlings	(15 mins)
7. Implementation process	J Geringer	(10 mins)
8. Report back on interim studies (2004-2006)	P Teurlings	(10 mins)
9. New specialist studies		
• Traffic assessment	MC Barnard	(10 mins)
• Ecological assessment	A Swanepoel	(20 mins)
• Heritage assessment	B Wahl	(10 mins)
• Social assessment	K Brügge	(20 mins)
10. Public Participation Process and concerns identified	P Tolksdorff	(15 mins)
11. Question and answer session	D de Waal	(30 mins)
12. Way forward	P Teurlings	(5 mins)
13. Closing	D de Waal	(5 mins)

Refreshments will be served



DEPARTMENT: WATER AFFAIRS AND FORESTRY
REPUBLIC OF SOUTH AFRICA

