PROPOSED MOOI – MGENI TRANSFER SCHEME PHASE 2 (MMTS-2)
ENVIRONMENTAL IMPACT ASSESSMENT

Background Information Document

1. INTRODUCTION

The Mooi Mgeni Transfer Scheme – Phase 2 (MMTS-2) is an inter-basin transfer between the Mooi and Mgeni Rivers and comprises a dam on the Mooi River at Spring Grove about 2km south-west of Rosetta Village and 8km upstream of the Mearns Weir in the KwaZulu-Natal Midlands. The project aims to augment the growing water requirements of the Mgeni System which supplies the water needs of Durban, Pietermaritzburg and surrounding areas.

An EIA Review for the MMTS-2 was submitted in January 2009 and included the following activities:

- Construction of the Spring Grove Dam, pump station and two gauging weirs;
- An artificial fish barrier on the Mooi River upstream of the Inchbrakie Falls on the farm Coldstream; and
- Construction of a transfer pipeline (including a breakwater pressure tank and outfall works from Spring Grove Dam to the Mpofana River).

A Record of Decision was issued by the Department of Environmental Affairs (DEA) on 15 June 2009 authorising the construction of the MMTS-2. This authorisation was subsequently appealed and on 28 September 2010 the Minister of Justice and Constitutional Development upheld the appeal against the pipeline but allowed the construction of the Spring Grove Dam and its associated works to proceed. A new environmental process with public participation now has to be undertaken for a scheme to transfer the water from the Spring Grove Dam to the Mpofana River.

The Trans-Caledon Tunnel Authority (TCTA) is therefore applying on behalf of the Department of Water Affairs (DWA) for Environmental Authorisation for the Water Transfer Scheme. Coastal & Environmental Services (CES) was appointed, in association with NMA Effective Social Strategists (Pty) Ltd (NMA), as independent consultants to undertake the required EIA. CES is the lead consultant responsible for the overall project management and EIA documentation while NMA will manage the Public Participation Process (PPP).

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 Water Transfer Scheme for MMTS-2 consists of the following:

- **Spring Grove Dam Pumping Station**
  A 5.8 MW pump station, with a maximum pumping capacity of 4.5 m³/s, will be located immediately downstream of the Spring Grove Dam on the right bank of the Mooi River.

- **Rising Main from the Pumping Station to the Break Pressure Tank at Gowrie**
  There will be an approximately 1600mm diameter pipeline from the Pumping Station to a new break pressure tank located at the watershed in Gowrie Village. The pipeline will cross smallholdings in Rosetta for the first 3km and thereafter will join the existing Mearns pipeline and run next to it in the existing servitude to the break pressure tank. The length of pipeline is about 6km.

- **Break Pressure Tank at Gowrie Village**
  The existing break pressure tank at Gowrie Village will be demolished and replaced by a new one with sufficient capacity for both the MMTS-1 and MMTS-2 systems. This new break pressure tank will be architecturally designed to blend in with the surrounding structures.

- **Section of new pipeline from Gowrie Village to the Mpofana River**
  A new 600mm diameter pipeline will be laid next to the existing MMTS-1 pipeline. The pipeline is approximately 8km long and will also discharge at the existing outfall works on the Mpofana River.

- **Outfall Works on the Mpofana River**
  The existing outfall works will be upgraded to accommodate the MMTS-2 system.

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 Notices 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.

This proposed Water Transfer Scheme includes several listed activities which will be addressed in a single application for environmental authorisation. These listed activities are presented in the table on page 2.
## Table 1: Listed activities requiring Environmental Authorisation

<table>
<thead>
<tr>
<th>Notice &amp; Activity</th>
<th>Activity Description</th>
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<tbody>
<tr>
<td>GN544 (9)</td>
<td>The construction of facilities or infrastructure exceeding 1 000 metres in length for the bulk transportation of water, sewage or storm water - (i) with an internal diameter of 0.36 m or more; or (ii) with a peak throughput of 120 litres / sec or more, excluding where: a. such facilities or infrastructure are for bulk transportation of water, sewage or storm water or storm water drainage inside a road reserve; or b. such construction will occur within urban areas but further than 32 metres from a watercourse, measured from the edge of the watercourse.</td>
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<tr>
<td>GN544 (11)</td>
<td>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 m² in size; (ix) slipways exceeding 50 m² in size; (x) buildings exceeding 50 m² in size; or (xi) infrastructure or structures covering 50 m² or more where such construction occurs within a watercourse or within 32 m of a watercourse, measured from the edge of a watercourse, excluding where such construction will occur behind the development setback line.</td>
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<tr>
<td>GN544 (18)</td>
<td>The infilling or depositing of any material of more than 5 m³ into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock or more than 5 m³ from: (i) a watercourse; (ii) the sea; (iii) the seashore; (iv) the littoral active zone, an estuary or a distance of 100m inland of the high-water 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.</td>
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<tr>
<td>GN544 (26)</td>
<td>Any process or activity identified in terms of section 53(1) of the National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004).</td>
</tr>
<tr>
<td>GN545 (10)</td>
<td>The construction of facilities or infrastructure for the transfer of 50 000 cubic metres or more water per day, from and to or between any combination of the following: (i) water catchments, (ii) water treatment works; or (iii) impoundments, excluding treatment works where water is to be treated for drinking purposes.</td>
</tr>
<tr>
<td>GN546 (14)</td>
<td>Clearance of an area of 5 hectares or more of vegetation where 75% or more of the vegetative cover constitutes indigenous vegetation, except where such removal of vegetation is required for: (3) the undertaking of a linear activity falling below the thresholds in Notice 544 of 2010. (a) In Eastern Cape, Free State, KwaZulu-Natal, Gauteng, Limpopo, Mpumalanga, Northern Cape, Northwest and Western Cape: i. All areas outside urban areas.</td>
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<tr>
<td>GN546 (4)</td>
<td>The construction of a road wider than 4 metres with a reserve less than 13.5 metres.</td>
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<tr>
<td>GN546 (16)</td>
<td>The construction of: (iv) infrastructure covering 10 square metres or more (a) In Eastern Cape, Free State, KwaZulu-Natal, Limpopo, Mpumalanga and Northern Cape: Outside urban areas, in: (aa) A protected area identified in terms of NEMPAA, excluding conservancies; (bb) National Protected Area Expansion Strategy Focus areas; (cc) Sensitive areas as identified in an environmental management framework as contemplated in chapter 5 of the Act and as adopted by the competent authority; (dd) Sites or areas identified in terms of an International Convention; (ee) Critical biodiversity areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans; (ff) Core areas in biosphere reserves; (gg) Areas within 10 kilometres from national parks or world heritage sites or 5 kilometres from any other protected area identified in terms of NEMPAA or from the core areas of a biosphere reserve.</td>
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</table>

### 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 involves four phases:

1. **Application and Initial Notification**
2. **Scoping Phase**
3. **Environmental Impact Assessment Phase (Including EMP)**
4. **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.

#### Scoping Phase
- Ensure that all key issues and environmental impacts that will be generated by the project are identified so that they can be assessed in greater detail in the EIA Phase;
- Identify reasonable alternatives;
- Provide for the involvement of I&APs in the identification of issues through the PPP;
- Produce a Draft Scoping Report for public review so that I&APs can comment on the report and ensure that all relevant issues have been captured for assessment in the EIA Phase;
- Submission of a Final Scoping Report and Plan of Study for EIA to the authorities for consideration.

#### EIA Phase
- Undertake detailed specialist assessments of all issues and proposed alternatives identified in the Scoping Phase;
- Identify mitigation measures and recommendations to reduce the
significance of potential impacts;
- Compile a Draft Environmental Management Plan (EMP) which describes management and mitigation measures to be implemented during the construction and operational phases of the project;
- Produce a Draft Environmental Impact Report (EIR) for public review so that I&APs can comment on the report;
- Submission of a Final Environmental Impact Report (EIR) and EMP 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 Scoping and EIA phases;
- 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 route alignments for the transfer pipeline; and
- Alternative locations for the break pressure tank.

In order to facilitate an analysis of the various route alignment options, the overall route from Spring Grove Dam to the discharge point on the Mpofana River has been divided in to 5 sections as follows:

- **Section 1** from Spring Grove Dam east for approximately 1.1km to the boundary between portions 98 and 96 of farm Springvale 2170; 
- **Section 2** from the boundary between Portions 98 and 96 of Farm Springvale 2170 to the boundary between Portions 161 and 7 of farm Springvale 2170; 
- **Section 3** from the end of section 2 along the existing Mearns pipeline servitude to the second location for the break pressure tank in Gowrie Village; 
- **Section 4** is from the break pressure tank location to the end of the Gowrie Golf course boundary; 
- **Section 5** runs from the Gowrie Golf Course boundary to the discharge point at the Mpofana River.

These five sections of the pipeline route are based on the various route alternatives available, the existing cadastral boundaries and the presence or absence of servitude rights. This will also optimise engagement with groups of I&APs who will be affected differently and have different issues of concern in each of the five route sections. It also facilitates a more detailed and definitive analysis of the various alternatives.

The preliminary pipeline route established during the original EIA Review for the project ran from the Spring Grove pumping station eastwards through a number of small holdings over a distance of approximately 3km up to the existing Mearns pipeline servitude. This route was the route successfully appealed against in the original EIA Review, and is referred to as the Route A Original DWA on the attached map. A decision was made not to consider this route further, even though it is technically sound, as the unacceptable social impacts of this route have already been confirmed by the successful appeal against this route.

In the BKS report *Spring Grove Dam and Appurtenant Works Pipeline Route Assessment May 2010*, three routes were described that were considered environmentally acceptable from an initial route selection perspective. This study was carried out following the appeal on the Route A Original DWA Route. This report investigated a number of alternatives and, from this report, two routes were identified as viable, namely Route Alt A1 and the Alt Umgeni Route. A number of options (refinements) to these routes have now been suggested, and these are referred to as the Yellow Route, Blue Route and Rising Main Alternative. An alternative route to the gravity main will also be considered and this is referred to as the Gravity Main Alternative. Two alternatives for the Break Pressure Tank in Gowrie Village will also be considered (refer to the attached map for all these alternatives).

During the Scoping Phase all these alternatives will be assessed in a screening level assessment based on sustainability appraisals and risk assessments taking into consideration the environmental and social significance of key issues associated with each option, and then considering the technical and financial feasibility of these (i.e. the potential to mitigate key issues through technical or routing options). Technical and financial feasibility is essentially the degree of difficulty to mitigate impacts, bearing in mind that mitigation must be effective, practical and cost effective.

7. KEY ISSUES TO BE ASSESSED

The screening level assessment will be used to identify which alternatives should go forward for detailed assessment during the EIA Phase. The key issues that have been identified for assessment are shown in Table 1 below. Additional issues may also be raised during the Scoping Phase for assessment during the EIA Phase.

**Table 2: Description of impacts associated with the alternatives and options for the MMTS-2 Water Transfer Scheme.**

<table>
<thead>
<tr>
<th>Impact</th>
<th>Cause and Comment</th>
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</thead>
<tbody>
<tr>
<td>Environmental Impacts – Construction Phase</td>
<td></td>
</tr>
<tr>
<td>Topography</td>
<td>The construction of the Water Transfer Scheme will require excavations which in turn will impact on the topography of the area. Depending on the geology of the proposed routes some blasting may be required which may then impact on the geology of the area.</td>
</tr>
<tr>
<td>Removal of topsoil and soil erosion</td>
<td>The construction of the Water Transfer Scheme will require the clearing of vegetation which will result in exposed soil surfaces. This will increase the chances of soil erosion. This may be of considerable concern in areas adjacent to wetlands and/or drainage areas.</td>
</tr>
<tr>
<td>Surface- and ground-water pollution</td>
<td>Various substances may result in the pollution of surface and groundwater sources. Construction activities may lead to sediment being deposited into wetlands and/or drainage areas. Pollution may occur from poor vehicle maintenance and improper storage of hazardous materials such as fuel, etc.</td>
</tr>
<tr>
<td>Flora</td>
<td>During the construction phase there may be impacts on natural vegetation including destruction of or damage to indigenous and riparian vegetation, the removal of intact communities, species of special concern and/or trees protected in terms of the National Forest Act (Act No. 84 of 1998) and the introduction of alien species.</td>
</tr>
<tr>
<td>Fauna</td>
<td>Impacts on fauna may primarily be due to habitat disturbance and/or restriction of migration corridors.</td>
</tr>
<tr>
<td>Wetlands</td>
<td>During the construction phase there may be impacts on wetlands in terms of vegetation clearing (intact communities, species of special concern, etc.) and pollution (sediment, solid waste, poor vehicle maintenance, etc.). All wetlands are protected in terms of the National Water Act (Act No. 36 of 1998) and should be avoided where possible.</td>
</tr>
</tbody>
</table>
### Socio-Economic Impacts – Construction Phase

<table>
<thead>
<tr>
<th>Impact Name</th>
<th>Cause and Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traffic</td>
<td>During the construction phase large construction vehicles will be utilising the existing road network. This may result in impeding traffic flow and damage to the existing road infrastructure.</td>
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<tr>
<td>Access</td>
<td>It is possible that access to properties may be restricted or impeded upon during the construction of the Water Transfer Scheme. In terms of businesses this may have financial implications. It is also possible that access to the existing servitude may be impeded upon which will result in the lack of maintenance.</td>
</tr>
<tr>
<td>Health and safety to immediate communities</td>
<td>Health and safety aspects will mostly pertain to activities defined under the Occupational Health and Safety Act (Act No. 85 of 1993). However, risks (such as children getting injured from construction activities) to communities are possible.</td>
</tr>
<tr>
<td>Air quality</td>
<td>Impacts on air quality will primarily be as a result of increased dust levels associated with the required excavation, vegetation clearing, grading and other construction activities.</td>
</tr>
<tr>
<td>Noise</td>
<td>It is anticipated that there will be an increase in noise levels during the construction phase of the development which will be associated with the operation of construction vehicles and equipment.</td>
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<tr>
<td>Home security</td>
<td>Influx of workers into the area could increase the incidence of theft</td>
</tr>
<tr>
<td>Pollution from solid waste</td>
<td>It is anticipated that the proposed development will produce solid waste in the form of excavated soil and vegetation and general waste such as litter during the construction phase.</td>
</tr>
<tr>
<td>Agriculture</td>
<td>There may be temporary loss of crops and grazing during construction along the servitude - possibly small areas lost permanently after rehabilitation.</td>
</tr>
<tr>
<td>Visual</td>
<td>The change in land use and construction activities may result in visual impacts.</td>
</tr>
<tr>
<td>Archaeological, paleontological and historical sites</td>
<td>It could be possible that sites of archaeological, paleontological and/or cultural significance are present on or near the proposed development site.</td>
</tr>
</tbody>
</table>

### Socio-Economic Impacts – Operational Phase

<table>
<thead>
<tr>
<th>Impact Name</th>
<th>Cause and Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access impacts</td>
<td>Access to the servitude for maintenance could impact on property owners</td>
</tr>
<tr>
<td>Social amenities</td>
<td>It is possible that one or more of the routes assessed will have to cross certain amenities such as the existing golf course.</td>
</tr>
<tr>
<td>Visual intrusion and landscape quality</td>
<td>It is possible that air and scour valve structures could be visually intrusive.</td>
</tr>
</tbody>
</table>

**8. PUBLIC PARTICIPATION**

Public participation is a joint effort between stakeholders, the proponent, 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 aims to inform a wide range of I&APs about the proposed project and the EIA process. It is a tool to allow the public to exchange information and express their views and concerns about the proposed development. Scoping facilitates the identification of issues and concerns early in the EIA process and thus ensures that they are incorporated into the project planning to assist in the selection of optimum routes for the proposed pipelines. All contributions from I&APs will be fully documented, evaluated and responded to in the EIA.

The PPP provides opportunities for I&APs to be involved right from the outset of the EIA. The PPP includes the following steps to ensure effective public participation:

**STEP 1:** Register I&APs and key stakeholders on the database (ongoing)

**STEP 2:** Notification of the EIA process and availability of the BID (adverts in local and regional press, letters to Registered I&APs, site notices)

**STEP 3:** Consultation with and dissemination of information to I&APs through the BID, one-on-one consultation, public meetings, public open days and focus group meetings during the Scoping and EIA phases

**STEP 4:** Invite I&AP comment and input on the Draft Scoping and Environmental Impact Reports (40-day comment period)

**STEP 5:** Record all comments, issues and concerns raised by I&APs in an Issues and Response Report for inclusion in the Final Scoping and Environmental Impact Reports

It should be noted that the 523 I&APs on the Register of I&APs from the previous EIA which was completed in 2009 were automatically included on the Register of I&APs for this EIA. All directly impacted land owners potentially affected by the alternatives being considered in this EIA have also been identified and included on the Register.

However, should you wish to be removed from the new Register of I&APs, or have your contact details changed, or should you wish to register as a new I&AP, please complete the enclosed response form accordingly and submit it to NMA.

A registration and comments form is included with this BID for your convenience and can be used to express your views regarding this proposed development. Please feel free to add comments on a separate page should the space provided not be enough. The names of all registered I&APs, together with the comments received will be incorporated into the Scoping and Environmental Impact Reports and will be submitted to DEA.

Please submit your name, contact information (address, telephone number, e-mail address, postal address) and written comments to the contact person at NMA as indicated below.

**Public Participation Contact Details**

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