



WATER SECTOR SUPPORT PROGRAMME (WSSP) 1
MONITORING CONSULTANT FOR PROJECTS IMPLEMENTED UNDER WSSP 1
CONTRACT No. SC/RP/NW-025/2024

**ENVIRONMENTAL SCOPING ASSESSMENT FOR THE CONSTRUCTION OF A
NEW RAW WATER INTAKE AND UPGRADE OF THE KATIMA MULILO
DRINKING WATER TREATMENT PLANT, ZAMBEZI REGION**

BACKGROUND INFORMATION DOCUMENT

Financed By:



Consultants:



In joint venture with:



August 2025

1 INTRODUCTION

The Namibia Water Corporation Ltd (NamWater) currently operates a drinking water treatment plant (DWTP) in Katima Mulilo as the main source of potable water for four bulk water supply schemes, i.e. the 1) Katima Mulilo, 2) Katima Mulilo – Linyanti, 3) Katima Mulilo – Mpacha – Sibbinda, and 4) Katima Mulilo – Bukalo – Ngoma schemes. Raw water for the DWTP is sourced from the Zambezi River at a concrete intake tower and pumped to the DWTP via an underground pipeline (Figure 3-1). Due to an increase in the current and foreseen demand for potable water in the town and in the Zambezi Region, NamWater intends to construct a new raw water intake and upgrade the DWTP. Planning and design processes have therefore been initiated to upgrade the DWTP to meet the future potable water demands within the extended supply area. The rehabilitation/extension of the DWTP is part of the project implemented under the Water Sector Support Program (WSSP1), financed by the KfW Development Bank. The program aims to improve and increase access, quality, security, and sustainability of water and sanitation services.

Geo Pollution Technologies (Pty) Ltd (GPT) was contracted by the design and supervision Consultant as environmental consultancy for the preparation of all required documentation for the application for an environmental clearance certificate (ECC) of the foreseen infrastructure works. Existing pipelines are not part of the study.

The ECC is required in terms of the announcement made under the Environmental Management Act (EMA) - “*list of activities that may not be undertaken without environmental clearance certificate: Environmental Management Act, 2007*”, as published in Government Notice No. 29 of Government Gazette No. 4878 of 2012. The main listed activities related to the project are:

- ◆ *The abstraction of ground or surface water for industrial or commercial purposes.*
- ◆ *Any water abstraction from a river that forms an international boundary.*

Apart from the EMA’s requirement for an ECC, development banks and international financiers require environmental assessment and compliance to approved environmental management plans as part of the conditions of provision of funding for projects with potential environmental impacts. To apply for an ECC, an environmental impact scoping assessment (EIA) and environmental management plan (EMP) will be prepared for submission by NamWater to the Department of Environmental Affairs (DEA) of the MEFT and the Ministry of Agriculture, Fisheries, Water and Land Reform (MAFWLR) as competent authority of matters related to surface water abstraction.

2 PURPOSE OF THE BID

The purpose of this background information document (BID) is to inform the public, stakeholders, inclusive of the MEFT and the MAFWLR, collectively referred to as interested and affected parties (IAPs), about the proposed project. It provides a brief overview of the project to allow IAPs to determine their level of interest in the proposed developments and whether they would like to be included in any future communication regarding the environmental process. The BID also serves to register the ECC application with the DEA and allows the DEA to determine a list of required documents to be submitted in support of an ECC. Through the BID, IAPs are thus invited to register with GPT for the project and to request additional information and/or provide initial comments on the project.

3 PROJECT DESCRIPTION

For 2040, the human water demand of the population in the extended supply area is forecasted at around 30,000 m³/day peak month daily demand. The potable water production capacity of the Katima Mulilo DWTP was therefore set to 36,000 m³/24 hr, to allow for downtime of 4 hr/day while still producing the required 30,000 m³, and with the option of further extension.

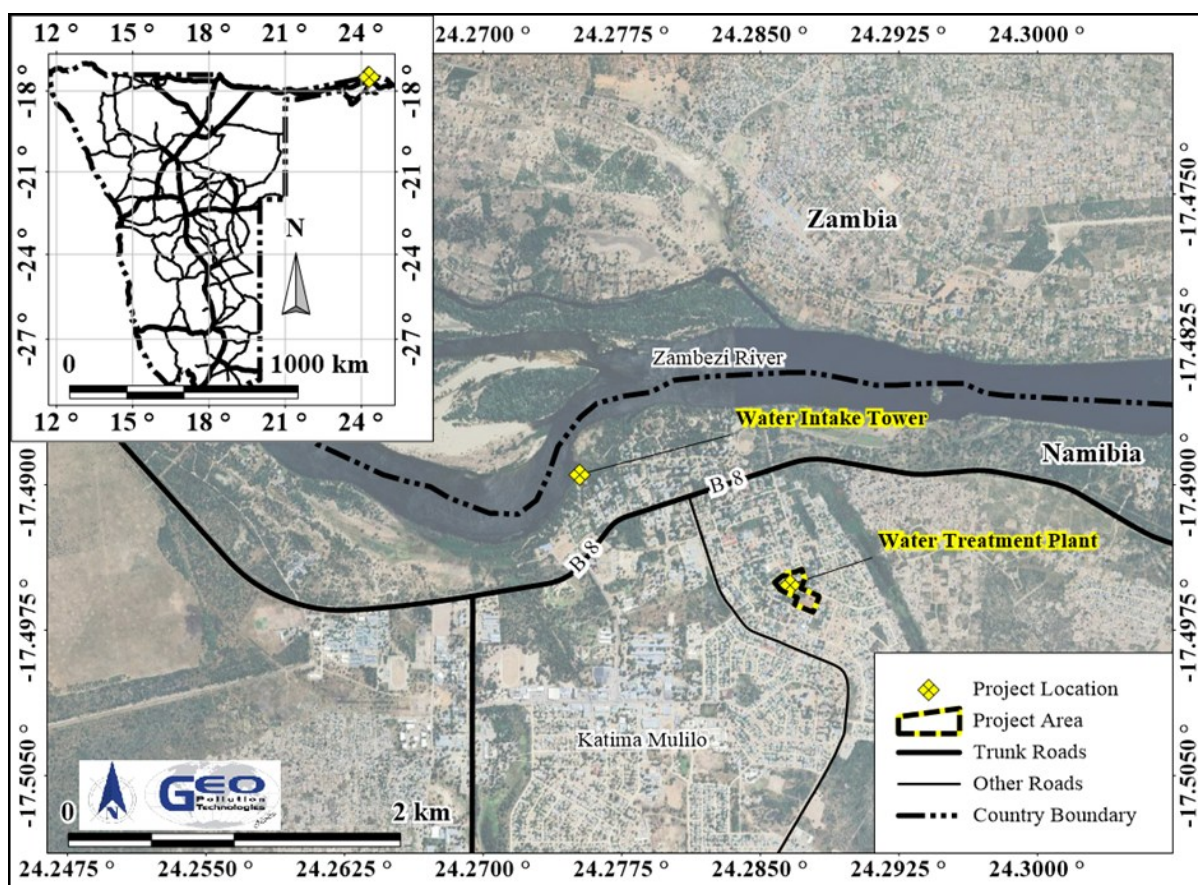


Figure 3-1 Locations of raw water abstraction point and drinking water treatment plant

To achieve this, a new raw water intake will be constructed to replace the old, dated and worn-out intake tower, pumps and associated infrastructure. The new intake will be constructed at the location of the existing raw water intake and will be linked to the existing raw water transmission main (pipeline commissioned in 2024) leading to the DWTP. The raw water abstraction will be designed for an additional 50% capacity catering to potential future extension of the DWTP. This additional capacity, being reserve capacity to meet the future water demand, will require a second water main to be laid, which, however, is not part of the present scope of the works. The intake design will also feature the installation of several duty pumps and stand-by pump, offering a sound redundancy concept to ensure stable and continuous raw water abstraction.

Two different design scenarios for the upgrade of the DWTP have been proposed and the final design has not yet been confirmed. Regardless of which scenario is decided on, the footprint will remain within the current DWTP property boundaries. The turbidity of the raw water varies based on upstream rain events and thus throughout the different seasons. The DWTP will thus be constructed to treat water of varying turbidity. The treatment stages presented in Figure 3-2 will form part of the design parameters of the DWTP, but the use of the various stages at any given time will depend on the turbidity of the water.

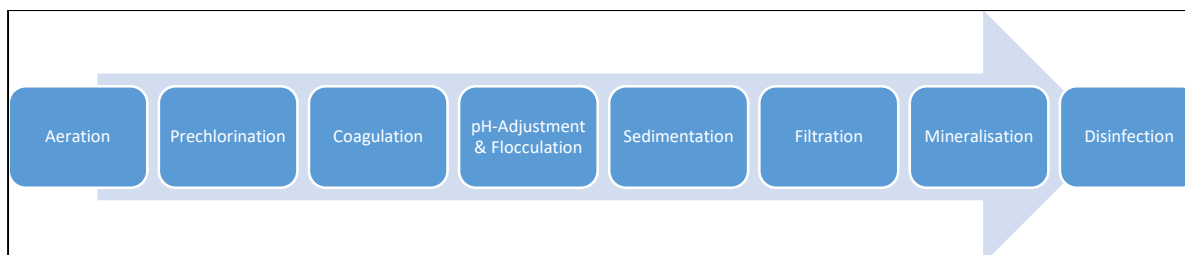


Figure 3-2 Raw water treatment steps

The current DWTP has two 3,000 m³ ground reservoirs for potable water storage, and a new project is presently being implemented by the MAFWLR which will construct a new 12,000 m³ reservoir within the DWTP's premises.

The operation of the filters requires periodic backwashing which will generate backwash water with high concentration of solids which will ultimately be dewatered to form disposable sludge. The proposed steps for handling of filter backwash water and sludge are presented in Figure 3-3. The various stages and ultimate location of sludge disposal will be elaborated on in the environmental assessment.

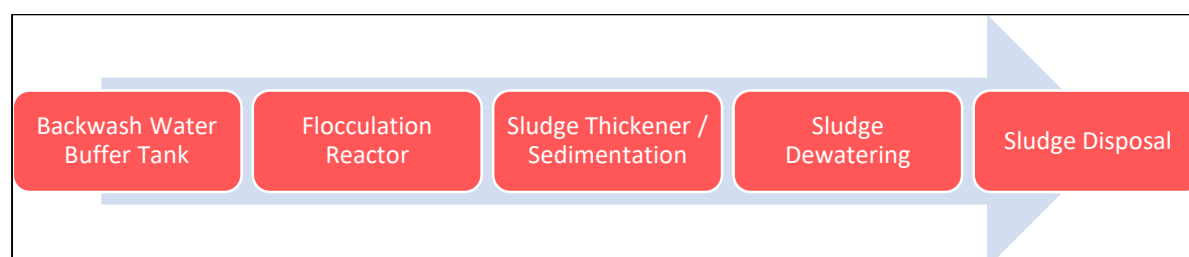


Figure 3-3 Sludge and backwash water steps

The existing and proposed site overview is provided in Figure 3-4. Some existing buildings, such as a redundant house and shed, will be demolished to make way for the new DWTP. The location of the new 12,000 m³ reservoir may still be changed depending on the final design of the DWTP. The plant layout will be presented the environmental assessment report.

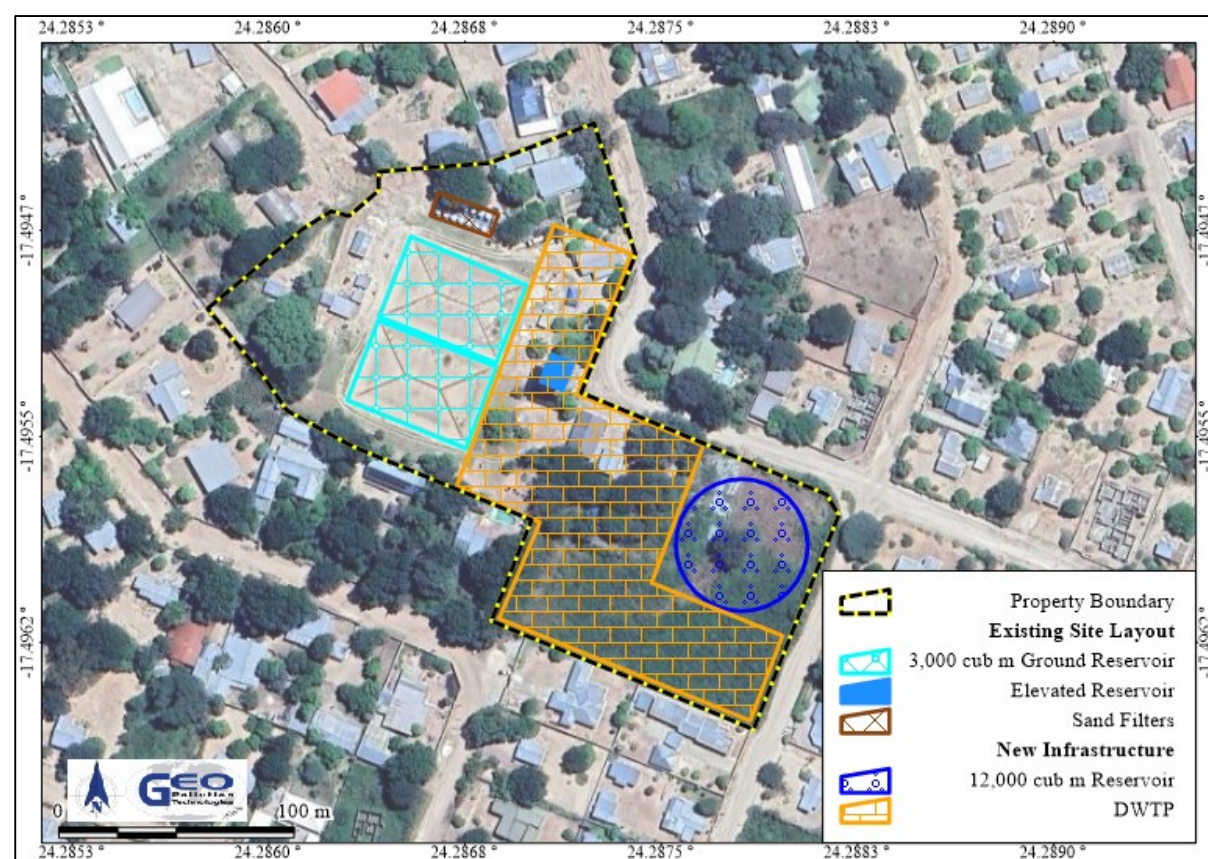


Figure 3-4 Existing and proposed site layout overview

4 ENVIRONMENTAL ASSESSMENT PROCESS

4.1 PLANNING PHASE

While planning for construction, operations, and decommissioning of the raw water intake and DWTP, it is the responsibility of NamWater to ensure they are, and remain, compliant with all legal

requirements. NamWater must also ensure that all required management measures are in place prior to, and during all phases, to ensure potential impacts and risk are minimised. Typical planning activities include:

- ◆ Obtain permits and approvals from local and national authorities.
- ◆ Ensure compliance to land use rights.
- ◆ Appoint a health, safety and environmental coordinator or similar to implement the EMP.
- ◆ Provide for a fund to cater for environmental incidents such as pollution clean-up and ecological restoration if ever required.
- ◆ Ensure all appointed contractors and employees enter into agreements which includes the EMP.
- ◆ Establish and / or maintain a reporting system to report on aspects of construction, operations and decommissioning as outlined in the EMP and as required by the DEA.

4.2 CONSTRUCTION

Construction activities will involve vegetation clearing and earthworks in order to prepare the sites for the construction and installation of infrastructure. This will involve a combination of manual labour and heavy machinery (e.g. excavators) operations. Linear infrastructure such as site specific pipelines and electrical cables will be installed in trenches. Concrete foundations will be cast in order to provide stable and level surfaces for the construction of buildings and installation of infrastructure associated with the various treatment processes. The DWTP will also be connected to the raw water transmission main and connections with the potable water main upgraded or deviated where necessary.

4.3 OPERATIONAL PHASE

Dedicated operational personnel will be responsible for operating the DWTP and the raw water intake. Operations will entail the abstraction of raw water from the Zambezi River and the treatment of the water to the applicable standards for potable water. This will require regular testing and analysis of raw water and produced potable water samples to ensure quality meets the Namibian requirements. Day to day operations will include administrative tasks, site cleaning, security, waste management (inclusive of sludge disposal) and related activities.

Firefighting and health and safety equipment and procedures will be in place according to accepted standards and the regulations including the Health and Safety Regulations of the Labour Act. Environmental compliance monitoring and public liaison will continue throughout operations.

4.4 DECOMMISSIONING PHASE

Decommissioning of the entire facility is not foreseen during the validity of the ECC. Decommissioning will however be assessed, since activities like the removal of old infrastructure during construction and maintenance activities or upgrades form part of decommissioning. Where decommissioning occur, rehabilitation of the area may be required. Decommissioning will entail partial or complete removal of infrastructure, including buildings and underground infrastructure. After decommissioning, any pollution present on the site must be removed or remediated.

4.5 PRELIMINARY IDENTIFIED IMPACTS

During the environmental assessment and preparation of the EMP, all components of the environment will be considered. However, only those components which are, or may be, significantly impacted, or are deemed to be sensitive, will be assessed in detail. These include the following:

- ◆ Human component (contractor, employee and visitor health and safety).
- ◆ Infrastructure (aesthetics, fire, integrity, etc.).
- ◆ Neighbours (dust, noise, aesthetics, waste, traffic).
- ◆ Groundwater, surface water and soil (water abstraction, chemical and hydrocarbon spills, effluent generation and disposal, general waste, etc.).
- ◆ Ecosystem and biodiversity (dust, spilled products, pollutants, greenhouse gas emissions).

- ◆ Social and cultural aspects (demographic processes, sense of place, community services, etc.).
- ◆ Economic characteristics (employment, training, skills, revenue).

5 PUBLIC CONSULTATION

Geo Pollution Technologies invites all IAPs to register for the environmental assessment process and to provide in writing, any comments on, and concerns regarding, the project. This correspondence must include:

- ◆ Name and surname
- ◆ Organization represented or private interest
- ◆ Position in the organization
- ◆ Contact details
- ◆ Any direct business, financial, personal or other interest which you may have in the approval or refusal of the application

All contributions by IAPs become public knowledge and will be circulated along with the reports as per the EMA requirements. The comments, inputs and suggestions will also be submitted to the DEA along with how any issues have been addressed in the environmental assessment. The public participation process will remain ongoing during the environmental assessment. However, all comments and concerns should be provided timeously to ensure incorporation into the final report. The deadline for submission of comments will be communicated to all registered IAPs.

For any additional information the project team may be contacted at:



Your Rights as an IAP according to the Environmental Management Act, No7 of 2007, Government Notice No 30 (Environmental Impact Assessment Regulations)

Section 23.

- (1) A registered interested or affected party is entitled to comment in writing, on all written submissions made to the Environmental Commissioner by the applicant responsible for the application, and to bring to the attention of the Environmental Commissioner any issues which that party, believes may be of significance to the consideration of the application, as long as -*
 - (a) comments are submitted within 7 days of notification of an application or receiving access to a scoping report or an assessment report;*
 - (b) the interested and affected party discloses any direct business, financial, personal or other interest which that party may have in the approval or refusal of the application.*
- (2) Before the applicant submits a report compiled in terms of these regulations to the Environmental Commissioner, the applicant must give registered interested and affected parties access to, and an opportunity to comment in writing on the report.*
- (3) Reports referred to in sub regulation (2) include*
 - (a) scoping reports;*
 - (b) scoping reports amended and resubmitted;*
 - (c) assessment reports; and*
 - (d) assessment reports amended and resubmitted.*
- (4) Any written comments received by the applicant from a registered interested or affected party must accompany the report when the report is submitted to the Environmental Commissioner.*
- (5) A registered interested or affected party may comment on any final report that is submitted by a specialist reviewer for the purposes of these regulations where the report contains substantive information which has not previously been made available to a registered interested or affected party.*

Section 24:

The applicant responsible for an application must ensure that the comments of interested and affected parties are recorded in reports submitted to the Environmental Commissioner in terms of these regulations, and comments by interested and affected parties on a report which is to be submitted to the Environmental Commissioner may be attached to the report without recording those comments in the report itself.