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**AMAOTI NO. 3 SECONDARY SCHOOL ON PORTION  
378 OF FARM RIET RIVIER 842, ETHEKWINI  
MUNICIPALITY, KWAZULU-NATAL**

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**Section 27 Motivation Report**

**Water Use Licence Application Reference No: WU25762**

**June 2023**

## 1. Background

The KwaZulu-Natal Department of Education (KZN-DOE) is implementing various projects within the province of KwaZulu-Natal under the School Building Programme which is aimed at providing formal schooling and teaching facilities to deliver quality education to learners in order to improve the quality of life of previously disadvantaged communities. One of the overarching objectives of the programme is to develop and transfer skills, create employment opportunities for the youth and ultimately reduce poverty. The aim of developing a new secondary school, which is in alignment with the School Building Programme, is to meet the growing demand for education in the area and provide learners with formal infrastructure which will facilitate, support and enhance the teaching and learning environment.

NCC Environmental Services (Pty) Ltd (NCC) has been appointed to act on behalf of the DoE to submit a Water Use License Application (WULA) required for the “proposed development of Amaoti No. 3 Secondary School on portion 378 of farm no. 842 Riet Rivier which is located in Ward 53 of the eThekweni Municipality, KwaZulu-Natal” (hereafter referred to as “the project”).

### 1.1 Project activity

The proposed school development footprint and associated infrastructure will be within the “regulated area of a watercourse” i.e. within 100m from the edge of a watercourse and within 500m from the delineated boundary of several wetlands. There is a portion of the development i.e. stormwater infrastructure (a concrete stormwater pipe and outlet headwall) that will be constructed directly within a wetland, namely HGM2, for purposes of erosion mitigation and to facilitate stormwater drainage for the new development. A quantity of material will be excavated from a trench across the wetland to accommodate the stormwater pipe. The depth of the trench from its point of origin at the stormwater attenuation pond is 2m shallowing to 0.5m at the outlet headwall. Upon completion the pipe will subsequently be backfilled to the original ground level.

### 1.2 Applicable water uses

The water use associated with the project which will require authorisation in terms of the National Water Act (Act No. 36 of 1998). A section 21(i) water use activity is “one which can lead to the altering of the bed, banks, course or characteristics of a watercourse” while a section 21(c) water use is “one which can impede or divert the flow of water in a watercourse”. Section 21(c) and (i) water uses have been confirmed as a result of the construction and operation of the school and associated infrastructure as the development activities will lead to the impeding and/or altering the flow of water in wetlands and watercourses in the regulated area for watercourses. Stormwater run-off will initially be attenuated in an attenuation pond and gradually discharged via an outlet headwall into the Ohlanga River. A portion of the stormwater infrastructure (attenuation pond pipeline and headwall) will be constructed directly within a wetland.

## 2. Section 27 Motivation

In terms of Section 27(1) of the National Water Act, in issuing a general authorisation or licence, a responsible authority must take into account all relevant factors which include:

- a) Existing lawful water uses;
- b) The need to address the results of past racial and gender discrimination;
- c) Efficient and beneficial use of water in the public interest;
- d) The socio-economic impact:
  - (i) Of the water use or uses if authorised; or,
  - (ii) Of the failure to authorise the water use or uses
- e) Any catchment management strategy applicable to the relevant water resource;
- f) The likely effects of the water use to be authorised on the water resource and on other water users;
- g) The class and the resource quality objectives of the water resource;
- h) Investments already made and to be made by the water user in respect of the water use in question;
- i) The strategic importance of the water use to be authorised;
- j) The quality of water in the water resource which may be required for the Reserve and for meeting international obligations; and,
- k) The probable duration of any undertaking for which a water use is to be authorised.

Where applicable and as far as possible, the relevant requirements listed as part of Section 27 Motivation are elaborated upon in the sections below.

### *(a) Existing lawful water uses*

To augment the water supply at the school for other non-consumptive purposes such as irrigation of sports fields, rainwater harvesting techniques may be installed to the school buildings. The storing and using of run-off water from a roof (rain water harvesting) is a Schedule 1 water use which does not require licensing and which can commence without informing the Department.

Adjacent properties and land parcels within the surrounding township of Mawothi have existing municipal water and wastewater infrastructure for servicing the public (i.e. are municipal-owned) which are deemed to be lawful. Any new water uses will be applied for in terms of Section 21 of the National Water Act (NWA) (Act 36 of 1998). Apart from Schedule 1 water uses which entitle people to take water for reasonable domestic use, watering of animals grazing on the land, fire-fighting and for recreational purposes, no other known licensed ELUs currently exist for the property.

***(b) The need to redress the results of past racial and gender discrimination***

The proposed school development falls under the framework of the KwaZulu-Natal Department of Education's School Building Programme which is aimed at providing quality teaching facilities and to improve the quality of life of previously disadvantaged communities. The programme aims to create further job opportunities, develop and transferring skills and address the challenges of poverty and youth unemployment. According to the municipal IDP and SDF, the education sector and education levels in the eThekweni Municipality (EM) remains under-developed. This poses a significant challenge for the municipality which the provincial government is aiming to address in conjunction with the EM as well with other district municipalities across KZN as part of the new school build programme.

As an Organ of State, the KZN Department of Education intends on appointing a contractor in accordance with the BBBEE legal framework which is compliant with the BBBEE requirements for the construction phase of the project which will afford the potential opportunity to the local communities for job creation. Local communities will be employed directly by the construction contractor or by sub-contractors and during the operational phase, teachers and ground staff will be employed as permanent employees to facilitate with the day-to-day school functions. Temporary employment opportunities (skilled and semi-skilled) will also apply during the operational phase to the local community, for example for basic maintenance around the school grounds.

***(c) Efficient and beneficial use of water in the public interest***

The use of water must be sustainable by placing people and their needs at the forefront of its concern to serve their physical, psychological, developmental, cultural and social interests equitably including the basic human needs reserve (BHNR) whilst not impacting on the ecological reserve (ER) and downstream water users. The school development is in the public interest and the use of water in this context i.e. section 21(c) and (i), will be non-consumptive. No water will be taken from a natural water resource and potable water will be obtained from the existing municipal supply. During construction adequate design and mitigation measures will be implemented to ensure wetlands/watercourses are not polluted or degraded ecologically and appropriate rehabilitation measures will be undertaken once construction is complete. Appropriate engineering design will ensure that adequate protection of the water resource continues during the operational and maintenance of the school buildings and associated infrastructure.

***(d) The socio economic impact:***

***(i.) of the water use or uses if authorised***

The township of Mawothi in Ward 53 of the EM suffers from a low level of education, a high unemployment rate and low monthly income. During construction the capital expenditure is estimated at over R99 million of

which employment opportunities are expected to be almost R2 million. The proposed school development will provide the youth in the local community with enhanced education opportunities and will create a significant numbers of unskilled, semi-skilled and skilled jobs during construction and several permanent jobs during the operation of the school. There would therefore be beneficial socio-economic impacts associated with the proposed development and ultimately a cumulatively direct beneficial impact for the youth and for the local community and society in general.

***(ii.) of the failure to authorise the water use or uses***

If the proposed school development and associated water uses are not authorised, the socio-economic benefits outlined above will not be realised. Consequently, the township of Mawothi will be negatively affected and the livelihood of communities (particularly the youth) living in this area will not improve as is intended. The school, which is already informally operating with informal infrastructure and without formal ablution facilities, will continue to operate as it is currently doing if the water uses applied for are not authorised. In other words if the proposed school upgrade development with formal infrastructure, as is proposed, does not go ahead, the informal school will continue to operate with the very limited and basic infrastructure which it does so presently.

***(e) Any catchment management strategy applicable to the relevant water resource***

The Department of Water and Sanitation (DWS) in accordance with the National Water Act (NWA) recognises the past imbalances relating to water allocation and seeks to regulate water use by enforcing the equitable sharing of water and water-related benefits between historically advantaged individuals, who have been the 'high volume water users' and the historically disadvantaged individuals. Catchment Management Agencies (CMAs) are recognised in the NWA as operational institutions that actively support the implementation of integrated catchment management policies and strategies at local level. The agencies are tasked with ensuring that the Republic's water resources are protected, used, developed, conserved, managed and controlled in an equitable manner. CMAs are responsible for developing and implementing a catchment management strategy (CMS) that reflects the needs and concerns of all role-players and coordinating the activities of water users and water.

The proposed school development site and the watercourse where the section 21(c) and (i) water uses would be is within quaternary catchment U30B in the Mvoti-Mzimkulu Water Management Area (WMA 11) in the eThekweni Municipality, KwaZulu-Natal Province. The WMA authorisation office is based in Durban which is also the head office of the proto-Catchment Management Agency (CMA) namely the Pongola-Mzimkulu. The full establishment of the CMA to co-ordinate all water-related activities in the relevant catchments is still to be finalised which will *inter alia* provide an effective mechanism for stakeholder participation in water

resource management. Whilst there is a business case for the establishment of a single CMA, there is currently not a fully established CMA to co-ordinate all water-related activities in the catchment area (U30B) to provide an effective mechanism for stakeholder participation in water management.

***(f) The likely effect of the water use to be authorised on the water resource and on the water users***

There are potential turbidity impacts, surface water pollution and associated biotic impacts from spills/leaks of hazardous substances such as oils, grease and hydrocarbons during the construction phase. During both the construction and operational phase, any high rainfall events or flooding could impact negatively on the physical structure and physico-chemical characteristics of the watercourse leading to a further decline in habitat and water quality due to the higher volume of water and sediment run-off that is generated from the developed i.e. hard surfaces. To minimise these erosion, turbidity and increased sedimentation risks and impacts, mitigation measures have been provided in the Wetland/Watercourse Delineation & Risk Assessment, Basic Assessment Report (BAR), Environmental Management Programme (EMPr), Stormwater Management Plan, Floodline Assessment and Geotechnical Assessment. In addition, the design, layout and planning of the entire development was assigned to qualified engineers.

***(g) The class and the resource quality objectives of the water uses***

The Minister of Water and Sanitation is required to establish a classification system, and to determine the class and resource quality objectives (RQOs) for all or part of the resources considered to be significant. The determination of the preliminary class or RQOs is a competency of the DWS. The South African Water Quality Guidelines is one of the tool sets used as a basis for establishing RQOs.

A reserve determination study relating to water resources in the Mvoti to Umzimkulu catchments was carried out by the national authority (DWS) with gazetting of the Ecological Reserve published in GN1097 dated 12 October 2018 (Government Gazette No. 41970). The Present Ecological State (PES) of the Ohlanga River is largely modified ('D'). The average wetland Ecological Importance and Sensitivity (EIS) for the Mvoti WMA is 'Moderate' for catchment U30B with an average 'C/D' wetland PES. The ecological category (EC) is also a 'C/D'. The REC for wetlands (HGM1, HGM2 & HGM3) is for no further decline to the 'C' PES and EIS ratings. Maintaining a 'C' REC should be attainable for these wetlands however this will be contingent on both adequate design and rehabilitation being carried out effectively after construction. Maintaining wetland functioning and integrity during the operational phase of the school is important for these freshwater resources which remain threatened in an ever expanding urban (built) environment.

***(h) Investments already made and to be made by the water user in respect of the water use in question***

The applicant (KZN-DoE) has made budgetary provision available across the province for a number of new school developments. In the context of this particular development, there has already been significant investment in the form of professional and consulting fees where a team of service providers comprising various specialist disciplines were appointed by the applicant via the applicant's agent to design the various components of the development, assess the impacts of the development and provide specialist motivations and recommendations based on the terms of reference of developing a new school. This included assessments and meetings to confirm the need for a water use license based on the legal framework and the water uses in question and subsequently undertaking the WULA process inclusive of the three (3) phases. Liaison with the local municipality was undertaken to obtain written confirmation of the availability of bulk sewer service infrastructure to be connected with the proposed new school. Qualified civil engineers were appointed to design the civil infrastructure within the constraints of the site and a freshwater specialist undertook a watercourse risk assessment to provide measures to minimise negative impacts on freshwater resources. The preparation and submission of the various administrative requirements as well as the preparation and submission of the various technical requirements (studies, reports, plans and assessments, etc) was undertaken.

***i) The strategic importance of the water use that has been authorised***

The authority (DWS) must take the National Water Resource Strategy (NWRS, June 2013) into account when evaluating a GA/WULA to ensure that the principles of the NWA and the National Water Policy are taken into consideration in a project of this nature. The National Water Resource Strategy sets out how to achieve the following core objectives:

- water supports development and the elimination of poverty and inequality;
- water contributes to the economy and job creation; and
- water is protected, used, developed, conserved, managed and controlled sustainably and equitably.

In the context of the applicant's new build programme across the province, this school has strategic importance in that it will support development that contributes to the economy, job creation, elimination of poverty and inequality. Authorising the proposed school development and associated water uses, as applied for, will result in the creation of a significant number of unskilled, semi-skilled and skilled jobs on site during construction. Once operational, a new school with new, improved formal infrastructure will provide students/learners with a conducive learning environment for the purposes of achieving a good education, thereby enhancing their opportunity to secure formal employment for their future. The new school will serve to provide formal education and better access to basic services for local people, and the youth in particular, in

a more dignified manner. With effective infrastructure design and implementation of risk mitigation measures, water will be protected, used, developed, conserved, managed and controlled sustainably and equitably.

**(j) The quality of water in the water resource which may be required for the Reserve and for meeting international obligations**

International obligations are not applicable. In terms of the Reserve Determination of water resources for the Mvoti to Umzimkulu catchments (DWS, 2018), no water quality RQOs or water quality metrics have specifically been gazetted yet for U30B. An RMD study on river RQOs in the Mvoti to Umzimkulu WMA (DWS, 2015) did not include any detailed water quality assessments. PES data and literature sources were used including a Google Earth layer of land use from the eThekweni Municipality. Narrative and numerical water quality RQOs for one of the immediately adjacent catchments (U30A) were established (See **Table 1**) which could be used as a proxy for catchment U30B in the absence of its own gazetted RQOs. Identified river water quality issues included turbidity, nutrients, toxics and faecal coliforms/*E. coli*.

**Table 1:** Narrative and numerical water quality RQOs for U30A (DWS<sup>1</sup>, 2015).

Narrative RQO	Numerical RQO		
Ensure that <b>turbidity</b> or <b>clarity</b> levels stay within Acceptable limits	A moderate change from present with temporary high sediment loads and turbidity during runoff events (Aquatic ecosystems: driver).		
Ensure that <b>nutrient</b> levels are within Acceptable limits	50 <sup>th</sup> percentile of the data must be less than or equal to 0.025mg/L PO <sub>4</sub> -P (Aquatic ecosystems: driver).		
Ensure that <b>toxics</b> are within Ideal limits or A Categories	95 <sup>th</sup> percentile of the data must be within the TWQR for toxics. Numerical limits can be found in DWAF <sup>2</sup> (1996) and DWAF <sup>3</sup> (2008).		
Meet faecal coliform and <i>E. coli</i> targets for recreational / other (full or partial contact) use*	Potential health risks in terms of counts / 100 ml (See SA NMMP guidelines).		
	<b>Low</b>	<b>Medium</b>	<b>High</b>
	<b>&lt; 600</b>	<b>600 - 2000</b>	<b>&gt; 2000</b>

<sup>1</sup>Department of Water and Sanitation, South Africa, April 2015. Classification of Water Resources and Determination of the Comprehensive Reserve and Resource Quality Objectives in the Mvoti to Umzimkulu Water Management Area: Volume 1: River Resource Quality Objectives. Prepared by: Rivers for Africa eFlows Consulting (Pty) Ltd.

<sup>2</sup>Department of Water Affairs and Forestry (DWAF), South Africa. 1996. South African water quality guidelines. Volume 1: Domestic Use.

<sup>3</sup>Department of Water Affairs and Forestry (DWAF). 2008. Methods for determining the water quality component of the Ecological Reserve for Rivers. Report prepared for Department of Water Affairs and Forestry, Pretoria, South Africa by P-A Scherman of Scherman Consulting.

\*Guidelines are provided in the absence of data or knowledge of recreational activities in the area.

**(k) The probable duration for any undertaking that a water use has been authorised**

The pre-construction and construction phase of the school development project is envisaged for a duration of 12-24 months. The operation phase will be long term for the lifespan of the school development i.e. greater than 20 years. Therefore the water use applied for through this process is required to extend for the duration of the operation phase of the built infrastructure which will be equivalent to >20 years.