



**CLUSTER**  
**Trading Services**

**UNIT**  
**Water and Sanitation**

**DEPARTMENT**  
**Sanitation Operations**

**PROCUREMENT DOCUMENT**  
**INFRASTRUCTURE**

Documents are to be obtained, free of charge, in electronic format, from the [National Treasury's eTenders website](#) or the [eThekweni Municipality's website](#).

**Contract No:** 30661-5W

**Contract Title:** Construction of the Southern Wastewater Treatment Works Multidisciplinary Upgrades

**Est. CIDB Grade/ Class:** 9 9EP and 9ME

**CLARIFICATION MEETING AND QUERIES**

**Clarification Meeting:** Compulsory Clarification Meeting

**Meeting Location, Date, Time:** Southern Wastewater Treatment Works (@ co-ordinates - 29.955135360820552, 30.97299685576011) on 13 June 2025 at 11h00

**Queries can be addressed to:** Name: Shanir Ramjathan  
The Employer's Agent's: Tel: +27 (0)31 254 5700  
Representative: eMail: Shanir.r@ixengineers.co.za.co.za

**TENDER SUBMISSION**

**Delivery Location:** The Tender Box in the foyer of the Municipal Building  
166 KE Masinga Road, Durban

**Closing Date/ Time:** Friday, 04 July 2025 at 11h00

**FACSIMILE, eMAIL, or POSTED TENDERS WILL NOT BE ACCEPTED**

**Issued by:**

ETHEKWINI MUNICIPALITY

**Deputy Head:** Water and Sanitation

**Date of Issue:** 30/05/2025

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**VOLUME 6 OF 9**

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Tenderer Name:			VAT Registered: Yes No
	Price (excl)	VAT	Price (incl)
Submitted: R	R	R	R
Corrected: R	R	R	R

## INDEX to TENDER DOCUMENT - VOLUMES

**This Tender Document consists of 9 (Nine) Volumes as indicated in the table below.**

Volume	Description	Contents
1 of 9	Tender Document	Tendering Procedures Returnable Documents Agreement and Contract Data Scope of Work Site Information
2 of 9	Pricing Data	Pricing Assumptions / Instructions Bill of Quantities
3 of 9	Standard Specifications	Standard Specifications Amendments to standard Specifications
4 of 9	Electrical	Standard Specifications Particular Specifications - MV Particular Specifications - OHS Data Sheets
5 of 9	Mechanical	Standard Specifications Project Specifications - Mechanical Particular Specifications – Lifting Equipment Mechanical Data Sheets
<b>6 of 9</b>	<b>Building Work (This Document)</b>	<b>Particular Specifications</b>
7 of 9	HVAC Services	Project Specifications - HVAC Particular Specifications - HVAC Pricing Instructions - HVAC Returnable Schedule - HVAC Inspection Sheet - HVAC
8 of 9	Annexures	Quality Assurance, Transport, Installation, Testing and Commissioning Environmental Management Plan Employer's Health and Safety Specification Employers Standard Electrical Standard Specifications Employers Standard Mechanical Specifications Employer Control Instrumentation Project Specification
9 of 9	Drawings	General Drawings Electrical Drawings Mechanical Drawings Building Work Drawings Structural Drawings HVAC Drawings Civil Drawings

### Declaration by Tenderer

I, the undersigned, hereby declare and confirm that I have obtained all 9 (Nine) of the Tender Document Volumes as indicated in the table above.

**NAME (Block Capitals):** \_\_\_\_\_

**Date**

**SIGNATURE:** \_\_\_\_\_

**This Tender Document (Volume 6 of 9: BUILDING WORKS) consists of the following Documents.**

<b>PARTICULAR SPECIFICATIONS – BUILDING WORKS</b>
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# PARTICULAR SPECIFICATION : BUILDING WORKS

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## PARTICULAR SPECIFICATION : BUILDING WORKS

### 1. SCOPE

This specification deals with the general requirements of the building works to be executed as part of the upgrades to the Southern Wastewater Treatment Works Low-Level Pump Station. The building works consist of masonry demolishing works, new masonry brick work, reinforced concrete work, ironmongery and repairs to the existing structure.

### 2. ALTERATIONS

#### 2.1. View Site

Before submitting his tender the tenderer shall visit the site and satisfy himself as to the nature and extent of the work to be done and the value of the materials salvageable from the alterations. No claim for any variations of the contract sum in respect of the nature and extent of the work or of inferior or damaged materials will be entertained.

#### 2.2. Explosives

No explosives whatsoever may be used for alteration purposes unless otherwise stated.

#### 2.3. General

The contractor shall carry out the whole of the works with as little mess and noise as possible and with a minimum of disturbance to tenants in the building and to adjoining premises and their tenants. He shall provide proper protection and provide, erect and remove when directed, any temporary tarpaulins that may be necessary during the progress of the works, all to the satisfaction of the principal agent.

Doors, fanlights, windows, fittings, frames, linings, etc which are to remain the property of the employer shall be carefully taken out, temporarily stored, transported over a distance to store and handed over to the employer.

Doors, fanlights, windows, fittings, frames, linings, etc which are to be re-used shall be thoroughly overhauled before refixing including taking off, easing and rehanging, cramping up, re-wedging as required and making good cramps, dowels, etc, and oiling, adjusting and repairing ironmongery as necessary, replacing any glass damaged in removal or subsequently and stopping up all nail and screw holes with tinted plastic wood to match timber, unless otherwise described. Re-painting or re-varnishing is given separately.

Prices for taking out of doors, windows, etc shall include for removal of all beads, architraves, ironmongery, etc.

Prices for taking out and removing doors and frames shall include for removing door stops, cabin hooks, etc.

With regard to building up of openings in existing walls, cement screeds and pavings, granolithic, tops of walls, etc, shall be levelled and prepared for raising of brickwork.

Making good of finishes shall include making good of the brick and concrete surfaces onto which the new finishes are applied, where necessary.

The contractor will be required to take all dimensions affecting the existing buildings on the site and he will be held solely responsible for the accuracy of all such dimensions where used in the manufacture of new items (doors, windows, fittings, etc).

### 3. EARTHWORKS

Tenderers are referred to the relevant clauses in the separate document: ASAQs Model Preambles for trades (2008 edition) and the ASAQs supplementary preambles which are incorporated in this Bill of Quantities.

Note : Where trade names and catalogue numbers are given, it shall be taken to mean to be followed by the words "equally approved".

#### 3.1. Nature of grounds

No claim for rock excavation will be entertained unless the contractor has timeously notified the Quantity Surveyor thereof prior to backfilling. "Soft rock" and "Hard rock" shall be defined in the "Earthworks" section and relevant Model Preamble. NOTE: All excavations are measured as been in "earth" and/or filling compacted to 95% modified AASHTO density unless otherwise specified. Descriptions of excavations shall be deemed to include for setting aside surplus excavated material in spoil heaps for use as filling or for depositing within a 150m of the perimeter of the excavations and spreading and roughly levelling as directed, as well as for increase in bulk and multiple handling of excavated material caused by the contractor's method of operation. Descriptions for carting away of excavated material shall be deemed to include loading excavated material onto trucks directly from excavations or, alternatively, from stockpiles situated on the building site and for bulking. NOTE: Working space for formwork to sides of all concrete, except columns, shall be measured only where the concrete face is less than 750mm from the face of the measured excavations. Working space for formwork to side of columns shall be measured for the width of the column face only where both: - the top of the column base is more than 1,5m below the commencing level of the excavations and - the column face is less than 500mm from the face of the measured excavations. No claim shall be considered for any working space for formwork to concrete other than as above described or for working space beyond the sides of trench excavations for the building of brick or block walls. Descriptions of excavations for working space shall be deemed to include for any additional risk of collapse so incurred and for the returning and compacting of the material as described.

#### 3.2. Carting away of excavated material

Descriptions of carting away of excavated material shall be deemed to include loading excavated material onto trucks directly from the excavations or alternatively from stock piles situated on the building site.

Note: All services to ancillary buildings to be terminated by contractor and made safe before commencement of demolitions.

### 4. MASONRY

Tenderers are referred to the relevant clauses in the separate document: ASAQs Model Preambles for trades (2008 edition) and the ASAQs supplementary preambles which are incorporated in this Bill of Quantities.

#### 4.1. Supplementary Preambles

Where trade names and catalogue numbers are given, it shall be taken to mean to be followed by the words "equally approved".

#### 4.2. Brickwork

##### 4.2.1. Sizes in Descriptions

Where sizes in descriptions are given in brick units, "one brick" shall represent the length and "half brick" the width of a brick

#### 4.2.2. Hollow walls etc.

Descriptions of hollow walls shall be deemed to include leaving every fifth perpend of the bottom course of the external skin open as a weep hole.

Walls in two skins described as "bagged and sealed" shall be deemed to include having the outer face of the inner skin bagged with 1:6 cement and sand mixture and sealed with two coats "Brixal" bitumen emulsion waterproofing coating.

#### 4.2.3. Face bricks

Bricks shall be ordered timeously to obtain uniformity in size and colour. The Principal Agent is, from time to time, at liberty to request batching information and these must be produced within 48 hours thereof.

#### 4.2.4. Pointing

Descriptions of recessed pointing to fair face brickwork and face brickwork shall be deemed to include square recessed, hollow recessed, weathered pointing, etc.

#### 4.2.5. Bagged and sealed walls

Walls in two skins described as "Bagged and Sealed" shall be deemed to include having the outer face and inner face skin bagged with 1:6 cement and sand mixture and sealed with two coats bitumen emulsion waterproof coating.

#### 4.2.6. Samples (Provided to Architect/Engineer)

Samples of all masonry building units, except those for walls described as "load bearing", shall consist of a minimum of 6 units. Samples of building units to be used in walls described as "load bearing" shall consist of 30 units from every 10,000.00 units delivered to site.

### 5. WATERPROOFING

Tenderers are referred to the relevant clauses in the separate document: ASAQS Model Preambles for trades (2008 edition) and the ASAQS supplementary preambles which are incorporated in this Bill of Quantities.

#### 5.1. Supplementary Preambles

Waterproofing of roofs, basements, etc. shall be laid under a ten year guarantee. Waterproofing to roofs shall be laid to even falls to outlets etc. with necessary ridges, hips and valleys. Descriptions of sheet or membrane waterproofing shall be deemed to include additional labour to turn-ups and turn-downs

### 6. FLOOR COVERINGS, WALL LININGS, ETC

Tenderers are referred to the Model Preambles for All Trades as published by the Association of South African Quantity Surveyors (Tel. 011-315 4140) and the Architectural and Structural Works Information before pricing this Bill of Quantities

#### 6.1. Proprietary items or materials

Proprietary items or materials where specified are to be of the brand specified or other approved by the Representative / Agent

#### 6.2. Fixing

Floor coverings, wall linings, etc shall, where applicable, be fixed with adhesive as recommended by

the manufacturers of the flooring, linings, etc

## 7. METALWORK

Tenderers are referred to the relevant clauses in the separate document: ASAQs Model Preambles for trades (2008 edition) and the ASAQs supplementary preambles which are incorporated in this Bill of Quantities.

Where trade names and catalogue numbers are given, it shall be taken to mean to be followed by the words "equal or other approved".

### 7.1. Supplementary Preambles

Tenderers are referred to architect's drawings annexed to these bills of quantities/accompanying these bills of quantities for tender purposes

### 7.2. Descriptions

Descriptions of bolts shall be deemed to include nuts and washers

Descriptions of expansion anchors and bolts and chemical anchors and bolts shall be deemed to include nuts, washers and mortices in brickwork or concrete

Metalwork described as "holed for bolt(s)" shall be deemed to exclude the bolts unless otherwise described

Items described as "plugged" shall be deemed to include screwing to fibre, plastic or metal plugs at not exceeding 600mm centres

### 7.3. Aluminium doors, windows, etc

#### 7.3.1. POWDER COATING TO SABS 1274 TYPE 6 SAFETY GLAZING TO SABS 1263 TYPE 1

All aluminium work to be approved as per AAAMSA. All extrusion sizes to be as per AAAMSA approved sizes. Tenderers are to note that should there be any doubt or obscurity as to the meaning and intent of any description, the tenderer must have the same rectified with the Architect and allow for accordingly in his tender. The tenderer is to include in his rates for all that he considers necessary for the proper construction and erection of windows, doors and shop fronts. No claims whatsoever will be afterwards admitted due to the tenderer having failed to comply with any of these conditions. Rates shall include for the following:

- a) All opening and fixed lights, coupling mullions and transoms, fittings, standard ironmongery, factory fitted burglar proofing, etc. as required and specified
- b) Complete glazing as specified with and including glazing beads and gaskets as specified and glazed in accordance with the manufacturer's written instructions. All glazing to comply with NBR of SABS 0400
- c) Building in and fixing into preformed openings. All opening sizes must be verified on site before manufacture commences. Costs for additional packing etc. must be included in the overall rates
- d) Suitably protecting all exposed aluminium and glass surfaces with an approved tape and durable plastic sheeting. Such protection is to be removed at completion of the contract and the surface cleaned down and left perfect. Any damage, scratches, etc. to the finished product will definitely be unacceptable.
- e) Silicone pointing with an approved silicone sealant recommended by AAAMSA on all external window, door, shop fronts and structure junctions. f) Any and all additional supports, brackets, etc. required other than that shown on the drawings that is deemed necessary for the proper manufacture



and installation of the windows, doors and shop fronts. In this regard, the tenderer is advised to refer to all drawings and schedules available for perusal at the Architect's office in order to satisfy himself of the requirements of this clause

Doors and windows shall comply with AAAMSA design criteria. Glazing shall comply with SAGGA regulations. Glass shall be laminated performance glass as shown on the window schedules/drawings appended to these bills of quantities (as described in the headings to window description). Glass thickness shall comply with SAGGA regulations irrespective of thicknesses shown on the schedules/drawings. Doors and windows shall be supplied with protective tape and plastic and shall be removed only once surrounding trades have been completed. For purpose made windows and doors, refer to drawings annexed to (issued separately with) these bills of quantities

The following certificates shall be provided prior to commencement of site work:

1. A copy of the relevant AAAMSA Performance Test Certificate from the manufacturer/contractor supplying the architectural aluminium product
2. A Certificate of Conformance confirming that anodising or powder coating has been processed in accordance with SANS 999 and SANS 1796 respectively
3. A powder guarantee of not less than 15 years issued by the powder manufacturer. The specific conditions contained in this guarantee shall form part of the powder coating process
4. A Certificate of Conformance confirming that glazing has been installed in accordance with SANS 0137, ensuring that safety glazing materials have been installed in the mandatory areas and that each individual pane of safety glazing materials has been permanently marked
5. A warranty from the manufacturer of the laminated safety glass and/or hermetically sealed glazing units guaranteeing the products against delamination and colour degradation for a period of not less than five years

#### **7.4. Quantities and Measurement**

The quantities have been measured on an overall basis taking into account that the drawings will be issued to the tenderers and tenderers will be producing their own designs. Accordingly the measurements are not in accordance with the Standard System of measurement.

The simplified overall basis of measurement applied herein is intended to provide a basis for tenders to be based upon the same basic quantities and for final measurement and valuation of the works as executed.

It is, furthermore, the only basis of measurement upon which final re measurement and valuation will be made.

If tenderers require any additional items to be measured or taken into account in re measurement they are to set these out at the end of this Bill in the space provided and include the cost in their tender.

Tenders and rate will be assumed to include all sundry items and everything necessary for the completion of the work in accordance with the intent of the design.

The Contractor shall supply all scaffolding, hoisting and craneage necessary

#### **7.5. Design, supply, delivery and electrification of natural anodized aluminium windows, doors, shop fronts, etc.**

Tenderers are instructed to refer to the Architects schedules, drawings and related specifications in respect of the above-mentioned which is appended to these Bills of Quantities. Items shall be manufactured by an approved specialist, as per "Wispeco" or other equal and approved who shall provide samples, as when requested for the Architect's approval. All costs associated with the provision of samples shall be included in the overall rates and no additional claim for costs, in this regard, will be entertained. All aluminium work to be approved as per AAAMSA. All extrusion sizes to be as per AAAMSA approved sizes.

Tenderers are advised to refer to the window schedule together with related specifications which indicate and detail the various windows, etc. as specified. These drawings, schedules and specifications are available at the offices of the architect. Tenderer's are to note that should there be any doubt or obscurity as to the meaning and intent of any description, the tenderer must have the same rectified with the Architect and allow accordingly in his tender. The tenderer is to include in his rates for all that he considers necessary for the proper construction and erection of windows, doors and shop fronts. No claim whatsoever will be afterwards admitted due to the tenderer having failed to comply with any of these conditions. Rates shall include for the following: All openings and fixed lights, vertical sides, coupling mullions and transomes, fittings, floor springs, all ironmongery to Architects specification, etc., as required and specified. All exposed aluminium surfaces to be 25 micron thermosash natural ANODIZED aluminium as "Wispeco" or other equal and approved, unless otherwise stated, as per the Architects specifications. Complete glazing as specified with and including glazing be as and gaskets as specified and glazed in accordance with the manufacturers written instructions. All glazing to comply with part N of NBR. Building in and fixing into preformed openings. All opening sizes must be verified on site before manufacture commences. Costs for additional packing, caulking, etc., must be included in the overall rates. Suitably protecting all exposed aluminium and glass surfaces with an approved protection tape and durable plastic sheeting. Such protection is to be removed at completion of the contract and the surface cleaned down and left perfect. Any damage, scratches, etc., be the finished product will definitely be unacceptable. Shop drawings as required by the Architect. A contractor shall provide a copy of the approved AAAMSA Performance Test Certificate from the manufacturer, prior to commencement of the works.

Note: Tenderers shall refer to the relevant Architect's Joinery schedules and relevant drawings attached with these Bills of Quantities, which indicate both the location and unit types of the various fittings together with sizes, details, etc. Type reference refer to the Architect's joinery schedule. Size are to be verified on site prior to the manufacture of any fittings. For complete details and specification of each fittings refer to drawings included in these Bills of Quantities after this Bill. Should any detail or specification be unclear the Tenderer is to contact the Architect for clarification.

## **8. PLASTERING**

Tenderers are referred to the relevant clauses in the separate document: ASAQS Model Preambles for trades (2008 edition) and the ASAQS supplementary preambles which are incorporated in this Bill of Quantities.

Where trade names and catalogue numbers are given, it shall be taken to mean to be followed by the words "equal or other approved".

## **9. PLUMBING AND DRAINAGE (PROVISIONAL)**

Tenderers are referred to the relevant clauses in the separate document: ASAQS Model Preambles for trades (2008 edition) and the ASAQS supplementary preambles which are incorporated in this Bill of Quantities.

Where trade names and catalogue numbers are given, it shall be taken to mean to be followed by the words "equal or other approved".

Concrete Pipes: Pipes shall be jointed with ogee joints with rubber collars or socket and spigot joints with rubber rings.

Vitrified Clay Pipes: Pipes shall rest on solid ground and, where necessary, pockets of sufficient size shall be cut around joints to enable the jointing to be properly performed or, alternatively, pipes shall be bedded full length on and including unreinforced concrete laid in a semi-dry state immediately before pipes are laid.

uPVC pipes and fittings: Sewer and drainage pipes and fittings shall be jointed and sealed with butyl

rubber rings. Soil, waste and vent pipes and fittings shall be solvent weld jointed uPVC pressure pipes and fittings. Pipes for water supply shall be of the class stated

Pipes of 40mm diameter and smaller shall be plain ended with solvent welded uPVC loose sockets and fittings.

Pipes of 50mm diameter and greater shall have sockets and spigots with push-in type integral rubber ring joints. Bends shall be uPVC and all other fittings shall be cast iron, all with similar push-in type joints.

Copper Pipes: Pipes shall be hard drawn and half hard pipes of the class stated.

Class 0 (thin walled hard drawn), pipes shall not be bent.

Class 1 (thin walled half hard), Class 2 (half-hard) and Class 3 (heavy walled half-hard) pipes shall only be bent with benders with inner and outer formers.

Fittings to copper waste, vent and anti-syphon pipes, capillary solder fittings and compression fittings shall be "Cobra Water tech" Capillary solder fitting and shall comply with ISO 2016. Only compression fittings shall be used in walls or in ground. Lead Pipes and Taps All soldered joints shall be wiped and brass unions shall be used for jointing lead to steal. Reducing Fittings Where fittings have reducing ends or branches they are described as "reducing".

In the case of pipes with diameters not exceeding 60mm only the largest end or branch size is given. Should the contractor wish to use other fittings and bushes or reducers he may do so on the understanding that no claim in this regard will be entertained. In the case of pipes with diameters exceeding 60mm all sizes are given and no claim for extra bushes, reducers, etc will be entertained.

## **10. PAINTWORK**

Where trade names and catalogue numbers are given, it shall be taken to mean to be followed by the words "equal or other approved".

### **10.1. Paint Specifications**

All painting shall be done in accordance with the specifications unless otherwise described COLOURS. Unless otherwise described all PAINT WORK shall be deemed to have to colour value in excess of 7 on the Munsell system in accordance with SANS 1091

## **11. PRICING THE BILL OF QUANTITIES**

The General Preambles for Trades 2017 published by the Association of South African Quantity Surveyors shall be deemed to be incorporated in these bills of quantities and no claims arising from brevity of description of items fully described in the said General Preambles will be entertained

Supplementary preambles and/or specifications are incorporated in these bills of quantities to satisfy the requirements of this project. Such supplementary preambles and/or specifications shall take precedence over the provisions of the General Preambles

The contractor's prices for all items throughout these bills of quantities shall take account of and include where applicable for all of the obligations, requirements and specifications given in the General Preambles and in any supplementary preambles and/or specifications