

Description	Lower Thukela Bulk Water Supply Scheme Phase 2 (LTBWSS Phase 2): Mandeni Pipeline Design Verification
Advert Date	16/10/2023
Closing Date and Time	23/10/2023 at 15:00 pm
Compulsory or Non-Compulsory Briefing Session	N/A
SCM Enquiries	Mandisa Madlala Tel: 033 341 1325 Email: mandisa.madlala@umgeni.co.za
Technical Enquiries	Silondiwe Gumede Tel: 033 341-3617 Email: silondiwe.gumede@umgeni.co.za
Contents of RFQ	<ol style="list-style-type: none"> 1. Invitation to quote 2. Bidders information 3. Terms and Conditions 4. Undertaking by Bidder 5. Terms of Reference/RFQ specifications 6. Price Schedule 7. Authority to Sign 8. Bidders disclosure [SBD 4] 9. Preference points claim form (SBD 6.1) 10. Contract Form [SBD 7.2]

Quotation Submission:	Tip-Offs Anonymous Hotline:
<p>Quotations clearly marked, 'RFQ Number and description of the required goods/services' uMngeni-uThukela Water (Head Office) Supply Chain Management Unit 310 Burger Street Pietermaritzburg 3201</p>	<p>Report unethical conduct at uMngeni-uThukela Water on: Toll Free Number: 0800 864 463 Email: umgeniwater@whistleblowing.co.za Toll Free Fax: 0800 212 689 Postal: Freepost KZN665, Musgrave, 4062 SMS: 33490 Online: www.whistleblowing.co.za</p> <p><i>Stop theft / fraud / dishonesty / bribery /blackmail / intimidation, and remain anonymous.</i></p>

SCOPE OF WORK /SPECIFICATIONS OF GOODS REQUIRED/ TERMS OF REFERENCE

1. Background

As a part of the Lower Thukela Bulk Water Supply Scheme Phase 2 (LTBWSS Phase 2), Umgeni-uThukela Water requires a Professional Service Provider (PSP) to undertake the external peer review of the Mandeni Pipeline hydraulic analysis. The Mandeni Pipeline is 6.8km long, DN900 steel pipe and shares a common in-line booster pump-station with the Southern Pipeline, which is 3km long, DN900 steel pipe. As such, the design has included the surge mitigation for the Southern pipeline and, it is to be included in the design review.

2. Description of goods/ services required

We are seeking an external peer review for the hydraulic analysis of the Mandeni Pipeline and a review of the surge mitigation measures for the existing Southern Pipeline. Definite solutions are required to reduce and/or eliminate the transient pressure problems indicated by the design software.

3. Deliverables/Key Outcomes.

The service provider must provide the following services:

- a) Visit uMngeni-uThukela Water's Head Office to discuss the hydraulics of the Projects with the respective Designer.
- b) Gather the required information and prepare an independent hydraulic model
- c) Correspond with/and enable the respective U.W. Designer to meet and work with the reviewer.
- d) Investigate and arrive at the best reasonable solution to the Transient problems of the Project. Discuss and explain the solutions with the U.W. Design team.
- e) Propose alternative solutions where there are shortcomings that will have a detrimental effect on the design and operation of the pipeline.
- f) If surge vessels are confirmed to be necessary on the Southern Pipeline, a completed design is required. This shall include the following;
 - i. The detailed design and drawings for the surge vessel and all interconnecting pipework
 - ii. The detailed design and drawings of the required modifications to the existing pipework
 - iii. The detailed design and drawings of all required chambers
 - iv. Scope of Work for the surge vessel installation
 - v. Complete Specifications for the surge vessel
 - vi. Operations and Maintenance manual
 - vii. Bill of Quantities and cost estimate
- g) The appointed Reviewer will be required to report to uMngeni-uThukela Water's Head Office at the end of the service to present the solutions.
- h) Submit the final hydraulic model to U.W. and supply signed hard and soft copies of signed Design Report for the Project.

4. Contract term

Refer to clause 8.3 below.

5. Other information

- a) Payment will be at the end of the Contract.
- b) New Intellectual Property arising as a result of the Contract will be the property of Umgeni Water.

6. Mandatory documentation/requirements

Minimum requirements are as follows:

- 1. SBD 4 – Bidders disclosure.
- 2. Qualification Certificates
- 3. Proof of professional registration with the Engineering Council of South Africa ECSA.

7. Other documents

In addition to this Bid document, the documents listed below will be presented to the successful tenderer:

- a) Design Calculations
- b) Design Drawings
- c) Detailed Design report
- d) Surge Analysis Report
- e) The operation Performance information for the existing/proposed High Lift Pumpstation

8. Special conditions

Condition of employment:

- 1. The appointed candidate will be required to report to Umgeni Water's Head Office at the commencement of the service for a period of 1 day.
- 2. During the day at Umgeni Water, the service provider will have access to all relevant drawings, calculations and current hydraulic models utilizing Pipe2020(Surge).
- 3. The analysis and report is to be completed and submitted within 4 weeks of your receipt of the Umgeni Water order. 60 working hours have been estimated to complete the work. This number is re-measurable, but must be supported by a record of time spent on the work. **The 60 hours is not to be exceeded without prior approval from Umgeni Water.**

9. Pricing

- a) The bidder shall provide the price proposal as detailed in SBD 3.1
- b) The bidders's price must be fully inclusive, and each item must be clearly specified.
- c) All additional costs must be clearly specified and included in the total quotation price, (e.g. transport, labour, etc.).
- d) All prices must be VAT inclusive.
- e) The bidder is responsible for all the cost that they shall incur related to the preparation and submission of the quotation.

10. Evaluation Process

The RFQ will be evaluated using a three (03)-evaluation approach:

- **First stage:** Mandatory/ Administrative Requirements. The quotation will firstly be evaluated on eligibility. If found to be eligible, it will move to the second stage.

- **Second Stage:** The functionality shall be assessed. A minimum functionality score of 70 (seventy) points is required for the tender to be considered further.
- **Third Stage:** Price and Preference goals using the 80/20 Preference Point Scoring System in terms of PPPFA

10.1 First stage: Mandatory/ Administrative Requirements

1. SBD 4 – Bidders disclosure completed and signed
2. The Design Reviewer must have a BSc Eng / BTech (Civil Engineering)
3. The Design Reviewer must be registered as Pr.Eng or Pr.Tech Eng. with the Engineering Council of South Africa ECSA.

10.2 Second Stage: Functionality

The table below lists the returnable schedules that set out the scoring criteria and sub-criteria, and the percentage weighting for the score achieved against the relevant schedule:

Returnable Schedule	Weighting %
Experience of Key Personnel	100%

10.2.1 KEY PERSONNEL EXPERIENCE ASSIGNED TO THE WORK

Insert in the table below the key personnel and their proposed function.

KEY PERSONNEL SCHEDULE

No.	Proposed Function	Key Person Name
1.	The Design Reviewer	

EXPERIENCE OF KEY PERSONNEL

Provide relevant information as prescribed below for the following Key Persons proposed in the tender to fulfil the following positions:

Key Person Positions

- 1) Design Reviewer

The experience of key person, relevant to the scope of work, will be evaluated from the following:

- a) Professional registration with the Engineering Council of South Africa.
- b) The education, training, and experience of the person, in the specific sector, field, subject, etc. which is directly linked to the scope of work.

A CV of key person of not more than three pages should be attached to this schedule. The proposed person's CV must clearly articulate/detail/show expertise as per requirements for experience.

CV should be structured under the following headings:

1. Personal particulars;
 - name.

- date and place of birth.
 - place (s) of tertiary education and dates associated therewith.
2. Qualifications.
 3. Name of current employer and position in enterprise.
 4. Overview of last 10 years of experience (year, organization, position, and projects).
 5. Outline of recent assignments/experience that has a bearing on the scope of work.
 6. Minimum 10 years' work experience in the design and hydraulic analysis of Bulk Water Pipelines, **attach CV as proof** (incorporating an advanced level of hydraulic analysis and transient analysis using relevant computer design software). This will be assessed using the CV presented.

The scoring of the experience of key staff will be as follows: [100]

DESCRIPTION Experience of the Design Reviewer:	MAX POSSIBLE SCORE
<p>a) Number of years working in Civil Engineering</p> <ul style="list-style-type: none"> • Above 10 years up to 15 years – 35 points • Above 15 years up to 20 years – 40 points • Above 20 years up to 25 years – 45 points • Above 25 years – 50 points (max) 	100
<p>b) No. of projects in the design and hydraulic analysis of bulk water pipelines (incorporating an advanced level of hydraulic analysis and transient analysis using relevant computer design software). The Bulk water pipeline must be for steel pipes of minimum of 5km in length and a min of 600mm in diameter</p> <ul style="list-style-type: none"> • 1 project – 12 points • 2 projects – 25 points • 3 projects – 35 points • 4 projects – 40 points • 5 projects – 45 points • 6 projects – 50 points (max) 	

PLEASE NOTE THE PURPOSE OF THIS DOCUMENT IS FOR INFORMATION USE ONLY AND MUST NOT BE USED FOR SUBMITTING BID OFFERS. BIDDERS ARE TO REQUEST THE OFFICIAL BID DOCUMENT BY EMAIL FROM Mandisa.madlala@umgeni.co.za