



TENDER NO: 2022/057

**Supply, install, test and commission Remote Monitoring and Control
Systems for Cathodic Protection - Pilot Project**

VOLUME 1 – Tendering Procedures and Returnable Documents

Issued by:

Umgeni Water
310 Burger Street
Pietermaritzburg

Tender Queries:

Contact Name: Nosipho Mkhize
Telephone : 033 341 1062

Name of Tenderer: _____

National Treasury CSD Number: _____

Tip-Offs Anonymous Hotline:	Appeals/Objections
<p>Report unethical conduct at Umgeni Water on:</p> <p>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>	<p>Persons aggrieved by tender award decisions taken by Umgeni Water, may lodge an appeal within 7 days of the date of the intention to award advertisement.</p> <p>UW shall only consider written appeals/objections clearly stating reasons for appeal directed to:</p> <p>The Supply Chain Management Office, Attention: Supply Chain Management Email: appeals@umgeni.co.za</p>

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FOR INFORMATION USE ONLY

Tender Number: 2022/057.

Tender Title: Supply, install and commission Remote Monitoring and Control Systems of Cathodic Protection – PILOT PROJECT.

T1.1 TENDER NOTICE AND INVITATION TO TENDER

Umgeni Water is a state owned business enterprise and it operates within the South African legislative parameters of the Water Services Act 108 of 1997, Public Finance Management Act 1 of 1999 and Public Audit Act 25 of 2004.

Competent and experienced service providers are invited to tender for the following:

Procure, store, supply, install, test and commission Remote Monitoring and Control Systems for Midmar and Ixopo's Cathodic Protection.

In addition to the Eligibility Criteria specified in Clause F2.1 of the tender document, tenderers are required to fulfil the following:

Qualification and Association affiliation required 6 SD or 6 EP/EB

In addition to the Eligibility Criteria specified in Clause F2.1 of the tender document, tenderers are required to achieve a stipulated minimum threshold per designated sectors and products:

Industry/sector/sub-sector	Minimum threshold for local content
Electrical and telecom cables	90%

Tenderers are required to achieve at least 35% Contract Participation Goals (CPG) including a minimum 10% Black Women participation and another 10% for Local participation of the value of goods, services and works paid to one or more targeted enterprises to comply with Umgeni Water's BBBEE policy initiative.

Evaluation method:

The tender will firstly be evaluated on eligibility. If found to be eligible, it will be further evaluated in two stages i.e.

- Functionality shall be assessed. A minimum functionality score of 70 points is required for the tender to be considered further.
- Price & Preference using the 80/20 Preference Point Scoring System in terms of PPPFA

The physical address for submission of tender documents and the submission of tenders is:

Umgeni Water, 310 Burger Street, Pietermaritzburg.

Documents must be collected during working hours from 09h00 to 15h00 from 10 October 2022 to 24 October 2022

Tender documents shall only be sold during the said period and hours.

A non-refundable tender fee of R 200-00 payable by Electronic Fund Transfer is required before collecting the Tender Document. Proof of EFT payment is to be provided on collection. The said transfers may be made to:

BANK NAME: NEDBANK LIMITED
ACCOUNT NAME: UMGENI WATER BOARD – MAIN ACCOUNT
ACCOUNT NUMBER: 1196366594
REFERENCE: TENDER NO. 2022/057 and Company Name.

NOTE: 1 TENDER DOCUMENTS SHALL NOT BE ISSUED IF INCORRECTLY REFERENCED.

2 TENDERER TO FORWARD NOTIFICATION OF PAYMENT BY E-MAIL TO [Nosipho Mkhize] AT [nosipho.mkhize@umgeni.co.za]

NOTE: NO CASH PAYMENT WILL BE ACCEPTED WHEN ISSUING TENDER DOCUMENTS

Queries relating to the issue of these documents shall be addressed to: Ms Nosipho Mkhize Tel No.033 341 1062 insert, e-mail: nosipho.mkhize@umgeni.co.za

A compulsory clarification meeting with representatives of Umgeni Water shall take place at Midmar WW on 25 October 2022 starting at 11:00.

Only Tenderers who have collected the Tender documents may attend this compulsory meeting.

No tender documents will be issued at the clarification meeting. Therefore if tenderers pay during the collection period, they must ensure collection before the meeting.

Tenderers must ensure that they bring their documents to the clarification meeting for signing purposes. No concessions will be made for tenderers who do not have their tender documents in their possession.

The closing time for submission of tenders is 12h00 on 10 November 2022

Tenders are to be deposited in the tender box located outside the main entrance at Umgeni Water, 310 Burger Street, Pietermaritzburg.

Persons aggrieved by decisions or actions taken by Umgeni Water, may lodge an appeal within 7 days of the date of the intention to award advertisement appearing in the relevant print media.

The appeal (clearly stating reasons for appeal) and queries with regard to the decision of award are to be directed, in writing only to the Supply Chain Management Office,
Attention: Supply Chain Management
Email: appeals@umgeni.co.za

Note that appeals not addressed to the abovementioned email will not be considered.

Umgeni Water's standard conditions of tender are available on Umgeni Water's website www.umgeni.co.za/sustainable_development/sud.asp

For any other tender adverts, please visit this website.

Umgeni Water Reserves the Right to Award the Contract In Whole or In Part

T1.2 TENDER DATA (INCLUDING SPECIAL CONDITIONS OF TENDER)

The conditions of tender are the Umgeni Water Standard Conditions of Tender (document number: SCM009, a copy of which may be obtained from Umgeni Water Supply Chain Management office or can be downloaded from the following web site:

www.umgeni.co.za/sustainable_development/sud.asp

For purposes of this Contract the following Special Condition of Tender shall apply:

F.3.8 Test for responsiveness

Sub-Clause F.3.8.1 Add the following new sub-clause:

“d) Meets the minimum Functionality requirement stated in the Tender Data.”

F3.11.3 Method 2: Functionality, Price and Preference

Functionality

Each member of the Employer’s tender evaluation committee is to independently score each tender in respect of functionality offered in accordance with the provisions of F.3.11.9. The committee is then to calculate the final score for each tender as the average of the score from each committee member, rejecting all tender offers that fail to score the minimum number of points stated in the tender data, if any.”

The Standard Conditions of Tender make several references to the Tender Data for details that apply specifically to this tender. The Tender Data shall have precedence in the interpretation of any ambiguity or inconsistency between it and the Standard Conditions of Tender.

Each item of data given below is cross-referenced to the clause in the Standard Conditions of Tender to which it mainly applies.

Clause number	Tender Data
	F.1.1 Actions
F.1.1	The Employer is Umgeni Water
	F.1.2 Tender Documents
F.1.2	<p>The Tender Documents issued by the Employer comprise the following documents:</p> <p>VOLUME 1 – Tendering Procedures and Returnable Documents</p> <p>Part T1: Tendering procedures</p> <p>Part T2: Returnable documents</p> <p>VOLUME 2 – Offer, Contract, Price, Scope of Work and Site Information</p> <p>Part C1: Agreements and Contract data</p> <p>Part C2: Pricing data</p> <p>Part C3: Scope of work</p> <p>Part C4: Site information</p> <p>Part C5: Annexures</p> <p>C.5.1 Umgeni Water Insurance Summary and Claims Procedure</p> <p>C.5.2 Drawings</p> <p>C.5.3 Umgeni Water Insurance Summary and Claims Procedure</p> <p>C.5.4 Umgeni Water Particular Specification for OHSA 1993 Health and Safety</p> <p>C.5.5 Umgeni Water Particular Specification for 164mm to 2230mm Diameter Steel Pipes, Specials, Coatings and Linings</p> <p>C.5.6 Umgeni Water Technical Specifications - Operation and Maintenance (O&M) Manuals</p>

	<p>C.5.7 Umgeni Water Insurance Summary and Claims Procedure</p> <p>C.5.8 Umgeni Water SHEQ Guideline 5-43-1 Rules for Contractors on Site.</p> <p>C.5.9 Umgeni Water Particular Specification for Electrical Works.</p> <p>C.5.10 Umgeni Water Particular Specification Drawings.</p> <p>C.5.11 Umgeni Water Particular Specification for Instrumentation.</p> <p>C.5.12 Umgeni Water Particular Specification for Cable Type.</p> <p>C.5.13 Umgeni Water Particular Specification for Labelling.</p> <p>C.5.14 Umgeni Water Quality Assurance Procedures</p> <p>C.5.15 Asset Numbering Standard</p> <p>C.5.16 O-M Manual Version2</p> <p>C.5.17 Technical Spec of Materials and Workmanship for Cathodic Protection Installations</p> <p>C.5.18 SCADA Standard Specification Rev06</p>
	F.1.4 Communication and Employer's agent
F.1.4	<p>The Employer's agent is :</p> <p><u>Tender Queries</u></p> <p>Name: Nosipho Mkhize</p> <p>Address: 310 Burger Street, Pietermaritzburg, 3200</p> <p>Tel: 033 341 1062</p> <p>Email: Nosipho.mkhize@umgeni.co.za</p>
	F.2.1 Eligibility
F.2.1	<p>Umgeni Water will only consider submissions from tenderers who satisfy the following criteria:</p> <p>a) The tenderer completed the Bidders Disclosure Form (T2.2.2)</p> <p>b) Tenderers are required to achieve the stipulated minimum threshold as per the relevant Treasury Instruction Note on local content and production. (Refer to Returnable Document T2.2.8)</p> <p>c) Tenderers are required to achieve at least 35% Contract Participation Goals (CPG) including a minimum 10% Black Women participation and another 10% for Local participation of the value of goods, services and works paid to one or more targeted enterprises to comply with Umgeni Water's BBBEE policy initiative.</p> <p>A CIDB grading of 6 SD or 6 EB/EP or higher is required</p>
	F.2.7 Clarification meeting
F.2.7	<p>There shall be a compulsory clarification meeting. The details for which are stated in the Tender Notice and Invitation to Tender.</p> <p>Tenderers must sign the attendance list in the name of the tendering entity. Addenda will be issued to and tenders will be received only from those tendering entities appearing on the attendance list.</p>
	F.2.12 Alternative tender offers
F.2.12	No alternative tender offers shall be considered.
	F.2.13 Submitting a tender offer
F.2.13.3	Parts of each tender offer communicated on paper shall be submitted as an original.

F.2.13.5 and F.2.13.7	<p>The Employer's details and address for delivery of tender offers are stated in T1.1 Tender Notice and Invitation to Tender.</p> <p>Identification details The identification details which must be stated in the tender offer outer package are: Tender Number Title of Tender Closing Date Closing Time Tenderer's Name Tenderer's Address</p> <p>Tenders issued in more than one volume shall be returned in the same manner and bound separately as per the tender volumes issued. The tender box is available to the public 24 hours per day and 7 days per week. It is the Tenderers sole responsibility to ensure that tenders are placed in the tender box and only Tenders that have been placed in the tender box before the stipulated closing date and time shall be considered.</p>
F.2.13.6	A two-envelope system is not applicable
	F.2.15 Closing time
F.2.15	The closing time for submission of tender offers is as stated in T.1.1 Tender Notice and Invitation to Tender.
	F.2.16 Tender offer validity
F.2.16.1	The tender offer validity period is 120 days from the closing date.
	F.2.19 Inspections, tests and analysis
F.2.19	<p>Access shall be provided for the following inspections, tests and analysis: <i>Various TRUs, Test Posts – The Contractor is to arrange access with the land owners if required</i> <i>Factory Acceptance Testing (FAT) of TRUs & RMUs at the supplier sites</i> <i>Site Acceptance Testing (SAT) of TRUs & RMUs</i> <i>Testing of PLC/RMU code and SCADA at the supplier's facility</i> <i>UW shall provide the PLC code or SCADA program. For PLC/RTU the Contractor is to arrange with UW to collect the programs or retrieve the program themselves under the supervision of UW</i></p>
	F.2.20 Submit securities, bonds, policies, etc.
F.2.20	The Tenderer is required to submit with his Tender a letter of intent from an approved Financial Services Provider registered with the Financial Services Board to provide the Insurances to the format included in Part T2.2 of this procurement document.
	F.2.23 Certificates
F.2.23	<p>The Tenderer is required to submit with his tender:</p> <ol style="list-style-type: none"> 1) A Tax Compliance Status letter (with pin) issued by the South African Revenue Services. 2) Central Supplier Database (CSD) Report 3) Proof of good standing in terms of the COID Act 4) Certificate of Independent Bid Determination 5) A valid original or certified copy of B-BBEE Status Level Certificate or sufficient evidence to confirm status as a qualifying EME 6) Company Registration Certificate

	F.3.4 Opening of tender submissions															
F.3.4	Tenders shall be opened immediately after the closing time for tenders as stipulated in T1.1 Tender Notice and Invitation to Tender.															
	F3.8 Test for responsiveness															
F.3.8	The minimum qualifying Functionality Evaluation Score shall be 70 (Seventy) points															
	F.3.11 Evaluation of tender offers															
F.3.11.3	The procedure for the evaluation of responsive tenders is Method 2 (Financial Offer and Preference) in accordance with F.3.11.3 using formula 2 in F.3.11.7															
F.3.11.9	<p>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:</p> <table><tr><th colspan="2">Returnable Schedule</th><th>Weighting %</th></tr><tr><td>T2.2.09</td><td>Tenderer's Experience</td><td>30</td></tr><tr><td>T2.2.10</td><td>Experience of Key Personnel</td><td>30</td></tr><tr><td>T2.2.10</td><td>Quality Assurance and Environmental Management</td><td>10</td></tr><tr><td>T2.2.11</td><td>Method Statement</td><td>30</td></tr></table> <p><u>Failure to score a single point in any of the criteria listed above will deem the bid to be non-responsive and the bidder will be disqualified.</u></p> <p>The score allocated by each Bid Evaluation Committee member for a tender shall be the sum, of the scores relevant to each of the above listed returnable schedules multiplied by the percentage weighting for each as shown above.</p>	Returnable Schedule		Weighting %	T2.2.09	Tenderer's Experience	30	T2.2.10	Experience of Key Personnel	30	T2.2.10	Quality Assurance and Environmental Management	10	T2.2.11	Method Statement	30
Returnable Schedule		Weighting %														
T2.2.09	Tenderer's Experience	30														
T2.2.10	Experience of Key Personnel	30														
T2.2.10	Quality Assurance and Environmental Management	10														
T2.2.11	Method Statement	30														
	F.3.17 Provide copies of the contracts															
F.3.17	The number of paper copies of the signed contract to be provided by the Employer is one.															
	F3.18 Provide written reasons for actions taken															
F3.18	Refer to Section 39 of the Supply Chain Management Policy.															

T2.1 LIST OF ALL RETURNABLE DOCUMENTS AND SCHEDULES

The Tenderer shall complete and submit the following returnable schedules and documents:

	Tenderer's Check List	Page No.
T2.2.1 Authority for Signatory		T2.3
T2.2.2 Bidders Disclosure		T2.10
T2.2.3 Tax Compliance Status Letter Requirements		T2.13
T2.2.4 Proof of Attendance at the Compulsory Clarification/Site Meeting		T2.15
T2.2.5 Contract Participation Goals (CPG)		T2.16
T2.2.6 Tenderer's Experience		T2.19
T2.2.7 Key Personnel Assigned to the Work		T2.22
T2.2.8 Experience of Key Personnel		T2.23
T2.2.9 Proposed Organization and Staffing		T2.26
T2.2.10 Tenderer's Schedule of Plant and Equipment		T2.28
T2.2.11 Quality Assurance and Environmental Management		T2.30
T2.2.12 Method Statement		T2.32
T2.2.13 Preliminary Programme		T2.34
T2.2.14 Registration Certificate / Agreement / ID Document		T2.36
T2.2.15 Amendments, Qualifications and Alternatives		T2.37
T2.2.16 Record of Addenda to Tender Documents		T2.39
T2.2.17 VAT Registration Certificate		T2.40
T2.2.18 Schedule of Proposed Sub-Supplier		T2.41
T2.2.19 Proof of Purchase of Tender Document		T2.42
T2.2.20 Goods and Services Sourced Internationally		T2.43
T2.2.21 Letter of Good Standing in terms of COID Act		T2.45
T2.2.22 Preference Points claim form in terms of the PPPFA Regulations 2017, substantiated by the B-BBEE Verified Status Level Verification Certificate		[T2.46]
T2.2.23 Tenderer's Financial Standing		T2.53
T2.2.24 Suppliers Health and Safety Declaration		T2.54
T2.2.25 Pro forma OHS Notification		T2.55

T2.2.27 Letter of Intent for Performance Guarantee		T2.58
T2.2.28 Registration Certificates		T2.59
T2.2.29 Central Supplier Database (CSD) Report		T2.60

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T2.2.1 AUTHORITY FOR SIGNATORY

Fill in the relevant portion applicable to the type of organization

A. COMPANIES

If a Tenderer is a company, a certified copy of the resolution by the board of directors, personally signed by the chairperson of the board, authorizing the person who signs this Tender to do so, as well as to sign any contract resulting from this Tender and any other documents and correspondence in connection with this Tender and/or contract on behalf of the company must be submitted with this Tender, that is before the closing time and date of the Tender

AUTHORITY BY BOARD OF DIRECTORS

By resolution passed by the Board of Directors on 20

Mr/Mrs (whose signature appears below) has been duly authorized to sign all documents in connection with this Tender on behalf of

(Name of Company)

IN HIS/HER CAPACITY AS:

SIGNED ON BEHALF OF COMPANY:
(PRINT NAME)

SIGNATURE OF SIGNATORY: **DATE:**

WITNESSES:

B. SOLE PROPRIETOR (ONE - PERSON BUSINESS)

I, the undersigned

hereby confirm that I am the sole owner of the business trading as

.....

.....
SIGNATURE

.....
DATE

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C. PARTNERSHIP

The following particulars in respect of every partner must be furnished and signed by every partner:

Full name of Partner	Residential Address	Signature
.....
.....
.....
.....

We, the partners in the business trading as

hereby authorize
to sign this Tender as well as any contract resulting from the Tender and any other documents and
correspondence in connection with this Tender and /or contract on behalf of

..... Signature Signature Signature
--------------------	--------------------	--------------------

..... Date Date Date
---------------	---------------	---------------

D. CLOSE CORPORATION

In the case of a close corporation submitting a Tender, a certified copy of the Founding Statement of such corporation shall be included with the Tender, together with the resolution by its members authorizing a member or other official of the corporation to sign the documents on their behalf.

By resolution of members at a meeting on 20

at

Mr/Ms, whose signature appears below, has been authorized to sign all documents in connection with this Tender on behalf of (Name of Close Corporation)

.....
.....

SIGNED ON BEHALF OF CLOSE CORPORATION:

(PRINT NAME)

IN HIS/HER CAPACITY AS DATE:

SIGNATURE OF SIGNATORY:

WITNESSES: 1.

2.

E. CO-OPERATIVE

A certified copy of the Constitution of the co-operative must be included with the Tender, together with the resolution by its members authoring a member or other official of the co-operative to sign the Tender documents on their behalf.

By resolution of members at a meeting on 20

at

Mr/Ms, whose signature appears below, has been authorized to sign all documents in connection with this Tender on behalf of (Name of Co-Operative)

.....

SIGNATURE OF AUTHORIZED REPRESENTATIVE/SIGNATORY:

(PRINT NAME)

IN HIS/HER CAPACITY AS

DATE:

SIGNED ON BEHALF OF CO-OPERATIVE:

NAME IN BLOCK LETTERS:

WITNESSES: 1.

2.

F. JOINT VENTURES

If a tenderer is a joint venture, a certified copy of the resolution/agreement passed/reached signed by the duly authorised representatives of the enterprises, authorising the representatives who sign this tender to do so, as well as to sign any contract resulting from this tender and any other documents and correspondence in connection with the tender and/or contract on behalf of the joint venture must be submitted with this tender, before the closing time and date of the tender.

Authority to sign on behalf of the Joint Venture:

By resolution/agreement passed/reached by the joint venture partners on 20

Mr/Mrs , Mr/Mrs

Mr/Mrs and Mr/Mrs

(whose signatures appear below) have been duly authorised to sign all documents in connection with this tender on behalf of:

(Name of Joint Venture)

In his/her capacity as:

Signed on behalf of (COMPANY NAME):
(PRINT NAME)

Signature Date:

In his/her capacity as:

Signed on behalf of (COMPANY NAME):
(PRINT NAME)

Signature Date:

In his/her capacity as:

Signed on behalf of (COMPANY NAME):
(PRINT NAME)

Signature Date:

In his/her capacity as:

Signed on behalf of (COMPANY NAME):
(PRINT NAME)

Signature Date:

G. CONSORTIUM

If a tenderer is a consortium, a certified copy of the resolution/agreement passed/reached signed by the duly authorised representatives of the enterprises, authorising the representatives who sign this tender to do so, as well as to sign any contract resulting from this tender and any other documents and correspondence in connection with the tender and/or contract on behalf of the consortium must be submitted with this tender, before the closing time and date of the tender.

Authority to sign on behalf of the consortium:

By resolution/agreement passed/reached by the consortium partners on 20

Mr/Mrs ,
(whose signature appear below) have been duly authorised to sign all documents in connection with
this tender on behalf of:

(Name of Consortium)

In his/her capacity as:

Signature Date:

T2.2.2 BIDDER'S DISCLOSURE

1. PURPOSE OF THE FORM

Any person (natural or juristic) may make an offer or offers in terms of this invitation to bid. In line with the principles of transparency, accountability, impartiality, and ethics as enshrined in the Constitution of the Republic of South Africa and further expressed in various pieces of legislation, it is required for the bidder to make this declaration in respect of the details required hereunder.

Where a person/s are listed in the Register for Tender Defaulters and / or the List of Restricted Suppliers, that person will automatically be disqualified from the bid process.

2. BIDDER'S DECLARATION

- 2.1 Is the bidder, or any of its directors / trustees / shareholders / members / partners or any person having a controlling interest¹ in the enterprise, employed by the state? **YES/NO**

- 2.1.1 If so, furnish particulars of the names, individual identity numbers, and, if applicable, state employee numbers of sole proprietor/ directors / trustees / shareholders / members/ partners or any person having a controlling interest in the enterprise, in table below.

Full Name	Identity Number	Name of State institution

- 2.2 Do you, or any person connected with the bidder, have a relationship with any person who is employed by the procuring institution? **YES/NO**

- 2.2.1 If so, furnish particulars:

.....
.....

- 2.3 Does the bidder or any of its directors / trustees / shareholders / members / partners or any person having a controlling interest in the enterprise have any interest in any other related enterprise whether or not they are bidding for this contract? **YES/NO**

¹ the power, by one person or a group of persons holding the majority of the equity of an enterprise, alternatively, the person/s having the deciding vote or power to influence or to direct the course and decisions of the enterprise.

2.3.1 If so, furnish particulars:

.....
.....

3 DECLARATION

I, the undersigned, (name)..... in
submitting the accompanying bid, do hereby make the following statements that I certify to be
true and complete in every respect:

- 3.1 I have read and I understand the contents of this disclosure;
- 3.2 I understand that the accompanying bid will be disqualified if this disclosure is found not to be
true and complete in every respect;
- 3.3 The bidder has arrived at the accompanying bid independently from, and without consultation,
communication, agreement or arrangement with any competitor. However, communication
between partners in a joint venture or consortium² will not be construed as collusive bidding.
- 3.4 In addition, there have been no consultations, communications, agreements or arrangements
with any competitor regarding the quality, quantity, specifications, prices, including methods,
factors or formulas used to calculate prices, market allocation, the intention or decision to
submit or not to submit the bid, bidding with the intention not to win the bid and conditions or
delivery particulars of the products or services to which this bid invitation relates.
- 3.4 The terms of the accompanying bid have not been, and will not be, disclosed by the bidder,
directly or indirectly, to any competitor, prior to the date and time of the official bid opening or
of the awarding of the contract.
- 3.5 There have been no consultations, communications, agreements or arrangements made by the
bidder with any official of the procuring institution in relation to this procurement process prior
to and during the bidding process except to provide clarification on the bid submitted where so
required by the institution; and the bidder was not involved in the drafting of the specifications
or terms of reference for this bid.
- 3.6 I am aware that, in addition and without prejudice to any other remedy provided to combat any
restrictive practices related to bids and contracts, bids that are suspicious will be reported to
the Competition Commission for investigation and possible imposition of administrative
penalties in terms of section 59 of the Competition Act No 89 of 1998 and or may be reported
to the National Prosecuting Authority (NPA) for criminal investigation and or may be restricted
from conducting business with the public sector for a period not exceeding ten (10) years in
terms of the Prevention and Combating of Corrupt Activities Act No 12 of 2004 or any other
applicable legislation.

² Joint venture or Consortium means an association of persons for the
purpose of combining their expertise, property, capital, efforts, skill and
knowledge in an activity for the execution of a contract.

I CERTIFY THAT THE INFORMATION FURNISHED IN PARAGRAPHS 1, 2 and 3 ABOVE IS CORRECT.

I ACCEPT THAT THE STATE MAY REJECT THE BID OR ACT AGAINST ME IN TERMS OF PARAGRAPH 6 OF PFMA SCM INSTRUCTION 03 OF 2021/22 ON PREVENTING AND COMBATING ABUSE IN THE SUPPLY CHAIN MANAGEMENT SYSTEM SHOULD THIS DECLARATION PROVE TO BE FALSE.

.....
Signature

.....
Date

.....
Position

.....
Name of bidder

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T2.2.3 TAX COMPLIANCE STATUS LETTER REQUIREMENTS

It is a condition of a Tender that the taxes of the successful Tenderer **must** be in order, or that satisfactory arrangements have been made with South African Revenue Service (SARS) to meet the Tenderer's tax obligations.

- Bidders must ensure compliance with their tax obligations.
- Bidders are required to submit their unique personal identification number (pin) issued by SARS to enable the organ of state to verify the taxpayer's profile and tax status.
- Application for Tax Compliance Status (TCS) pin may be made via e-filing through the SARS website www.sars.gov.za.
- Bidders may also submit a printed TCS certificate together with the bid.
- In bids where consortia / joint ventures / sub-contractors are involved, each party must submit a separate TCS certificate / pin / CSD number.
- Where no TCS is available but the bidder is registered on the Central Supplier Database (CSD), a CSD number must be provided.
- No bids will be considered from persons in the service of the state, companies with directors who are persons in the service of the state, or close corporations with members in the service of the state.

T2.2.3 TAX COMPLIANCE STATUS LETTER REQUIREMENTS (Continued.....)

[Tax Compliance Status (TCS) Letter *obtained from SARS to be inserted here*]

FOR INFORMATION USE ONLY

T2.2.4 PROOF OF ATTENDANCE AT THE COMPULSORY CLARIFICATION / SITE MEETING

CERTIFICATE OF ATTENDANCE

TENDER No. | 2020/057 |

This is to certify that

(Tenderer)

of (address)

was represented by the person(s) named below at the compulsory meeting held for all Tenderers at

(location)

..... on (date)

starting at (time)

I / We acknowledge that the purpose of the meeting was to acquaint myself / ourselves with the site of the works and / or matters incidental to doing the work specified in the Tender documents in order for me / us to take account of everything necessary when compiling our rates and prices included in the Tender.

Particulars of person(s) attending the meeting:

Name: Signature:

Capacity:

Name: Signature:

Capacity:

Attendance of the above person(s) at the meeting is confirmed by the Purchaser's representative, namely:

Name: Signature:

Capacity: Date and Time:

T2.2.5 CONTRACT PARTICIPATION GOALS

Objective

The objective of Umgeni Water's empowerment initiative is to bring about meaningful transformation in all procurement projects and in particular in the built environment / construction and consulting industry through achieving one or more of the following objectives:

- Meaningful Economic Participation;
- Local Economic Development;
- Transfer of Technical, Management and Entrepreneurial Skills; and
- Creation of sustainable Black Enterprises

Contract Participation Goals

Contract Participation Goal (CPG) – the **final** value of services paid to the CPG Partner/s based on the **final** contract value.

At the time of awarding the contract the 35% minimum CPG amount will be based on the contract award value exclusive of the following:

- VAT, CPA and Contingencies.

During contract implementation, adjustments relating to Provisional Sums and Contingencies linked to the CPG allocation will be agreed upon between the parties to the contract, as and when the need arises.

CPG Partner/s – Service provider/s selected from Umgeni Water's Supply Chain Management (SCM) Enterprise Development Database. However, should the database not contain suitable CPG Partner/s, the tenderer may propose suitable CPG Partner/s for Umgeni Water's consideration.

Tenderers (the main supplier irrespective of BBBEE classification) who are on Umgeni Water's SCM Enterprise Development Database are not exempt from this requirement and are still required to have a CPG Partner.

Tenderers are required to achieve at least 35% Contract Participation Goals (CPG) including a minimum 10% Black Women participation and another 10% for Local participation of the value of goods, services and Works paid to one or more enterprises (CPG Partner/s)

- 35% includes any special materials
- 35% excludes VAT, CPA and Contingencies.
- The tenderer will be required to achieve the actual Rand value committed for CPG, adjusted according to the following:
 - Variation Orders – Each VO will be evaluated by the Employer's Agent and the Project Manager to determine whether it should be counted, in its entirety or partially, as part of CPG or not.
 - Re-measurable Items (including CPA, and provisional sums) – Each re-measurable item change will be evaluated by the Employer's Agent and the Project Manager to determine whether it should be counted as part of CPG or not.

Within 2 weeks of the award of contract, the tenderer will be required to submit a cash flow projection for the main contractor and the CPG Partner/s

Applicability

The CPG target is applicable to all contracts to be adjudicated through the Umgeni Water procurement process and shall be achieved through the following mechanisms:-

- CPG Partner/s selection is concluded **after** adjudication of tenders and **before** contract award is made.
- The CPG Partner/s shall be selected according to the following criteria:

- CPG Partner/s are to be obtained from Umgeni Water's database of suppliers specifically earmarked for CPG purposes.
- In the event of services where Umgeni Water does not have an applicable service provider on its database, the tenderer may propose a suitable CPG Partner/s for consideration by Umgeni Water.
- Main service provider may propose a suitable CPG Partner/s, but Umgeni Water reserves the right to provide or arrange a CPG Partner/s to work with the successful company.
- Sub-contracting of the CPG Partner/s at the same rate / price that the tenderer would have offered to Umgeni Water whilst making profit margins consistent to the profit margins that the main supplier would have made under normal trading processes.
- Value of the work to be sub contracted shall be at least **35% (minimum of 10% shall be due to Black Women participation and another 10% for Local participation)** of the total contract value excluding VAT, CPA and Contingencies.
- CPA is payable to the CPG Partner/s as per the indices stipulated in the contract document.
- The work allocated to the CPG Partner shall be performed by the CPG Partner directly and may not be allocated or sub-contracted out to other contractors/consultants/service providers.
- The main supplier **shall not** substitute any CPG Partner/s without the written approval of Umgeni Water.
- The working capital arrangements between the main supplier and the CPG Partner/s must be agreed upon between the two parties prior to commencement of works to ensure that the CPG Partner does not have cash flow challenges during contract implementation.

Invoicing and Payment

The monthly measurement and payment will be according to the following guideline:

- Submission of payment certificate by the Supplier – by 25th of each month, or the nearest previous working day. The submission from the supplier shall include the signature of the CPG Partner indicating agreement with the measurements and rates applicable to the work undertaken by the CPG Partner.
- Payment to the Supplier – on the last day of the following month;
- The CPG Partner must be paid within reasonable time but no later than 3 working days after the Main Supplier has been paid by Umgeni Water; and
- The submission from the Supplier must include a schedule that clearly shows the following:
 - Total Contract Sum
 - Total amount payable to CPG Partner/s excluding current month
 - Amount payable to CPG Partner for current month
 - % split of Total amount payable to Main supplier and CPG Partner/s

Monitoring and Reporting on CPG

- Umgeni Water will monitor CPG implementation on site. This may include direct contact with CPG Partner/s on site for verification purposes.
- The CPG Partner shall be in agreement with the measurement and payment for work completed, for the purposes of submitting payment certificates, as determined by the supplier. Should disagreements arise, Umgeni Water reserves the right to intervene to resolve the disagreement.
- CPG Partner/s shall attend all contractual meetings relevant to their scope of work including contract award negotiations, monthly contract site meetings and technical meetings where applicable.

Eligibility Criteria

For tenders where the CPG target is applicable, those that do not offer a **minimum** CPG participation of **35%** (including minimum 10% Black Women participation and another 10% for Local participation) according to the requirements mentioned above, will be deemed **ineligible**.

DECLARATION REGARDING CONTRACT PARTICIPATION GOALS

I, the undersigned, in submitting the accompanying bid:

(Bid Number and Description)

in response to the invitation for the bid made by:

UMGENI WATER

do hereby make the following declaration and certify the statements contained herein to be true and complete in every respect:

I certify, on behalf of: _____ that:
(Name of Bidder)

1. I have read and I understand the contents of this Declaration and the fully completed bid document accompanying this declaration;
2. I understand and declare that the accompanying bid will, and must, be disqualified if this Declaration is found not to be true and complete in every respect;
3. I understand and declare that in the event that this bid is successful, I will be required to, and shall, fully implement the commitments that are submitted with this bid, in particular regarding the Bidder's contract participation goals and commitments towards the allocation of certain portion of the contract to small and emerging entities. Failure to implement such commitments as outlined in the bid document (in particular, as detailed in the bill of quantities) and or failure to provide the relevant information within the prescribed period as determined in the Letter of Intention to Award the Bid, shall automatically disqualify this bid from further consideration and the Employer has the right to, and must, then award the bid to the next highest ranked bidder; and as a result I or the bidder or any of its directors shall have no recourse against Umgeni Water.
4. I am authorized by the bidder to sign this Declaration, and to submit the accompanying bid, on behalf of the bidder;
5. Each person whose signature appears on the accompanying bid has been authorized by the bidder to determine the terms of, and to sign the bid, on behalf of the bidder;
6. I am aware that, and do consent to, the disqualification of my or the bidder's future bids with Umgeni Water in the event that the commitments made herein are not fulfilled and that such non-fulfillment amounts to abuse of Umgeni Water's supply chain policies and procedures and/or empowerment objectives which must be penalized, over and above the contractual sanctions as agreed to in line with the contract signed with Umgeni Water, with a sanction of restricting me and or my company (the bidder) and or any of its directors from conducting business with Umgeni Water for a period not exceeding ten (10) years.
7. I consent that should my company (the Bidder) deviate from the commitments and the spirit of the CPG objectives as agreed to, shall amount to a repudiation of the contractual arrangement between the two parties (Umgeni Water and the Bidder); and Umgeni Water shall have the right to terminate the contract with immediate effect and without giving my company (the Bidder) prior notice to remedy the breach.

Full Names & Surname
(Duly authorized)

Signature

Date

Position

Name of Bidder

T2.2.6 TENDERER'S EXPERIENCE

The experience of the Tenderer or joint venture partners in the case of an unincorporated joint venture or consortium will be evaluated on the basis of experience in similar projects or similar areas and conditions in relation to the scope of work.

The evaluation will consider experience in relation to the management of programmes and projects and the provision of cost consulting services in relation to programmes of work as opposed to projects where bills of quantities have been used.

Tenderers should very briefly describe his or her experience in this regard relevant to the scope of work and attach this to this schedule.

The description should be put in tabular form with the following headings:

Description of work (service)	Period / Year	Value of work (i.e. the service provided) inclusive of VAT (Rand)	Company (Where the Service was provided)	Contact details

Scoring of the Tenderer's experience will be as follows: 30

DESCRIPTION	MAX POSSIBLE SCORE
<p>Company experience in the installation of Cathodic Protection systems. (Submit completion certificates or reference letter with the Purchase Order or appointment letter as proof of previous experience, if not submitted no score will be awarded).</p> <ul style="list-style-type: none"> 1 project – 10 points 2 projects – 15 points 3 projects – 25 points, 5 additional point for every project more than 3 projects to a maximum of 40 points <p>Company experience in the installation of Industrial Networks or Telemetry systems (GSM, Radio, Fibre, etc.) (Submit completion certificates or reference letter with the Purchase Order or appointment letter as proof of previous experience, if not submitted no score will be awarded).</p> <ul style="list-style-type: none"> 1 project – 25 points 2 projects – 35 points 3 projects – 45 points, 5 additional point for every project more than 3 projects to a maximum of 60 points <p>Note: A zero scoring in any of the two company experience required will result in disqualification</p>	100

T2.2.6 TENDERER'S EXPERIENCE (Continued)

INSERT HERE

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T2.2.7 KEY PERSONNEL 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.	Contracts/Project Manager	
2.	Electrical Engineer	
3.	CP Technician	
4.	Foreman/Site Supervisor	
5.		

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T2.2.8 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

- A. Contracts/Project Manager
- B. Electrical/Instrumentation Engineer
- C. CP Technician
- D. Foreman/site supervisor

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

- 1) General experience (total duration of activity), level of education and training and positions held by the key person.
- 2) 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 each key person of not more than 3 pages should be attached to this schedule.

Each 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 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

30

<p>Experience of Contracts/Project Manager (ND or higher) in project and/or contracts management from 2012 to date (post qualification):</p> <ul style="list-style-type: none"> • 1 Project – 5 points • 2 Projects – 7 points • 3 Projects – 10 points • 5 additional points for every project more than 3 Projects to a maximum of 20 points <p>Experience of an Electrical/Instrumentation Engineer (BSc/BEng/BTech or higher) in the integration of telemetry systems from 2012 to date (post qualification):</p> <ul style="list-style-type: none"> • 1 Project – 5 points • 2 Projects – 7 points • 3 Projects – 10 points • 5 additional points for every project more than 3 Projects to a maximum of 20 points <p>Experience of CP Technician (N3 or higher) in the installation of Cathodic Protection systems from 2012 to date (post qualification):</p> <ul style="list-style-type: none"> • 1 Project – 10 points • 2 Projects – 15 points • 3 Projects – 20 points 	100
---	-----

<ul style="list-style-type: none">• 5 additional points for every project more than 3 Projects to a maximum of 30 points <p>Experience of electrical and/or instrumentation foreman/site supervisor (Trade tested in electrical or instruments) in installation of Industrial network (e.g. PLC, SCADA, Telemetry) from 2012 to date (post trade test):</p> <ul style="list-style-type: none">• 1 Project – 10 points• 2 Projects – 15 points• 3 Projects – 20 points• 5 additional points for every project more than 3 Projects to a maximum of 30 points <p>Note: A zero scoring in any of these key personnel will result in disqualification</p>	
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T2.2.8 EXPERIENCE OF KEY PERSONNEL (Continued)

INSERT KEY PERSONNEL CVs HERE

FOR INFORMATION USE ONLY

T2.2.9 PROPOSED ORGANIZATION AND STAFFING – NOT APPLICABLE

The Tenderer should propose the structure and composition of their team i.e. the main disciplines involved, the key staff member / expert responsible for each discipline, and the proposed technical and support staff and site staff. The roles and responsibilities of each key staff member / expert should be set out as job descriptions. In the case of an association / joint venture / consortium, it should, indicate how the duties and responsibilities are to be shared.

The Tenderer must attach his / her organization and staffing proposals to this page.

The scoring of the proposed organization and staffing will be as follows:

No submission (score 0)	No Organizational and Staffing proposal submitted.
Poor (score 40)	The organization chart is sketchy; the staffing plan is weak in important areas. There is no clarity in allocation of tasks and responsibilities.
Satisfactory (score 70)	The organizational chart is complete and detailed, the technical level and composition of the staffing arrangements are adequate.
Good (score 90)	Besides meeting the “satisfactory” rating, staff are well balanced i.e. they show good co-ordination, complimentary skills, clear and defined duties and responsibilities. Some members of the project team have worked together before on limited occasions.
Very good (score 100)	Besides meeting the “good” rating, the proposed team is well integrated and several members have worked together extensively in the past.

T2.2.9 PROPOSED ORGANIZATION AND STAFFING (Continued)

INSERT HERE

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T2.2.10 TENDERER'S SCHEDULE OF PLANT AND EQUIPMENT | NOT APPLICABLE |

The following are lists of major items of relevant equipment that I / we presently own or lease and will have available for this contract if my / our Tender is accepted.

- (a) **Details of major equipment that is owned by me / us and immediately available for this contract.**

DESCRIPTION (type, size, capacity etc)	QUANTITY	YEAR OF MANUFACTURE

Attach additional pages if more space is required

- (b) **Details of major equipment that will be hired, or acquired for this contract if my / our Tender is accepted**

DESCRIPTION (type, size, capacity etc)	QUANTITY	HOW ACQUIRED	
		HIRE/ BUY	SOURCE

Attach additional pages if more space is required

The Tenderer undertakes to bring onto site without additional cost to the Employer any additional plant not listed but which may be necessary to complete the contract within the specified contract period.

Failure to complete this form properly and correctly, will lead to the conclusion that the Tenderer does not have the necessary plant and equipment resources at its disposal, which will prejudice its Tender.

SIGNATURE: DATE:
(of person authorized to sign on behalf of the Tenderer)

T2.2.10 TENDERER'S SCHEDULE OF PLANT AND EQUIPMENT (Continued)

The scoring of the scheduled plant and equipment will be as follows: Not Applicable

	Unit	Very Good	Good	Satisfactory	Poor
Tracked Excavator (20 Ton or more)	No.	>3	3	2	<2
<i>Points Allocated</i>		25.0	20	10	0.0
*Tracked Side Boom Pipe Layer (45 ton or larger)	No.	>3	3	2	<2
<i>Points Allocated</i>		25.0	20	10	0.0
Tipper Trucks - total cub. meter capacity	m3	>40	40	30	<30
<i>Points Allocated</i>		25.0	20	10	0.0
*Crane (5 ton or greater crane capacity) - for pipe loading / off-loading	No.	>3	3	2	<2
<i>Points Allocated</i>		20.0	16	8	0.0
Self-powered Welding Machines (400Amp or more)	No.	>4	6	3	<3
<i>Points Allocated</i>		25.0	20	10	0.0
Power Generators (400Amp or more)	No.	>2	2	1	<1
<i>Points Allocated</i>		10.0	8	4	0.0
Compactors - (Bomag 90 equivalent)	No.	>4	4	2	<2
<i>Points Allocated</i>		10.0	8	4	0.0
Compactors - Wackers	No.	>6	6	4	<4
<i>Points Allocated</i>		10.0	8	4	0.0
Compressor (500cfm or more)	No.	>2	2	1	<1
<i>Points Allocated</i>		10.0	8	4	0.0
Workshop for Fabricating, Coating and Lining of Specials		>1	1	<1	-
<i>Points Allocated</i>		10.0	8	4	0.0
Grader (16.5t / 190kw or larger)	No.	>1	1	<1	-
<i>Points Allocated</i>		5.0	4	2	0.0
Dozer - D4 equivalent or larger	No.	>2	2	1	<1
<i>Points Allocated</i>		5.0	4	2	0.0
Water Carts	m3	>20	20	10	<10
<i>Points Allocated</i>		10.0	8	4	0.0
Pipe Transporting Trucks (7 Ton or more flat-bed)	No.	>4	4	2	<2
<i>Points Allocated</i>		10.0	8	4	0.0

* Side Boom and Cranes to have Spreader bars with Slings

T2.2.11 QUALITY ASSURANCE AND ENVIRONMENTAL MANAGEMENT

1. Does the Tenderer have a quality management system which is certified in terms of ISO 9001: 2015

YES	NO
-----	----

2. If “yes”, Tenderer to supply brief summary of structure of system:
.....
.....
.....
.....
.....
.....
.....
.....

3. If “no”, does the Tenderer intend to apply for certification?

YES	NO
Date	

By when?

OR

4. If “no”, does the Tenderer have its own system?

YES	NO
-----	----

5. If “yes”, please supply details of the system
.....
.....
.....
.....
.....

6. Does the Tenderer have an environmental management system which is certified in terms of ISO 14001

YES	NO
-----	----

7. If “yes”, Tenderer to supply brief summary of structure of system:
.....
.....
.....
.....
.....
.....
.....

8. If “no”, does the Tenderer intend to apply for certification?

YES	NO
Date	

By when?

OR

9. If “no”, does the Tenderer have its own system?

YES	NO
-----	----

10. If “yes”, please supply details of the system
.....
.....
.....
.....

If the Tenderer does not intend to apply for certification it shall submit details of the quality / environmental management system presently in place.

[The Tenderer shall insert here a copy of the company’s quality assurance plan, control procedures and the relevant documentation supporting its commitment to environmental management. In the event of these documents being too extensive to be included in the procurement document, an abbreviated version of the master document will be included, referring to the master document.]

Scoring of Quality Assurance and Environmental Management will be as follows: | 10 |
]

QUALITY ASSURANCE AND ENVIRONMENTAL MANAGEMENT	
No submission (score 0)	No Quality Assurance Plan & support documents submitted
Poor (score 40)	The organisation has its own developed Quality Assurance and Environmental Management system.
Satisfactory (score 70)	The organisation has applied for ISO 9001 or ISO 14001 certification, Or The organisation has a tailored detailed Quality Assurance and Environmental Management System that improves the project outcomes and the quality of the outputs.
Good (score 90)	The organisation is ISO 9001 or ISO 14001 certified.
Very good (score 100)	The organisation is both ISO 9001 and ISO 14001 certified.

T2.2.12 METHOD STATEMENT

The method statement must respond to the Scope of Work and outline the proposed approach / methodology. The method statement should articulate what value the Tenderer will add by in achieving the stated objectives for the project.

The Tenderer must as such explain his / her understanding of the objectives of the assignment and the Purchaser's stated and implied requirements, highlight the issues of importance, and explain the technical approach they would adopt to address them. The approach paper should explain the methodologies which are to be adopted, demonstrate the compatibility of those methodologies with the proposed approach. The approach should also include a quality plan which outlines processes, procedures and associated resources, applied by whom and when, to meet the requirements and indicate how risks will be managed and what contribution can be made regarding value management.

The method statement shall cover but not limited to the following:

- How the approval process will be undertaken and integrated into the project programme?
- The approval process is critical, and shall indicate from the kick off meeting (approval of project programme till project completion), the approval of datasheets, etc.
- Rehabilitation of the CP system
- DCVG/PCM testing before installation and after the installation/rehabilitation
- Retrofitting of telemetry system into existing TRUs, etc.
- Offsite work to be done prior to the installation of equipment (pre-programmed).
- Programming of the SCADA and PLC system
- Site Acceptance testing of the system
- Factory Acceptance testing of the electrical panel and instrumentation system.
- How commissioning and testing of the system will be conducted?

The Tenderer must attach his / her organization and staffing proposals to this page.

The scoring of the proposed organization and staffing will be as follows: | 30 |

Technical approach and methodology	
No submission (score 0)	No Method Statement submitted
Poor (score 40)	The technical approach and / or methodology is poor / is unlikely to satisfy project objectives or requirements. The Tenderer has misunderstood certain aspects of the scope of work and does not deal with the critical aspects of the project.
Satisfactory (score 70)	The approach is generic but tailored to address the general project objectives and methodology. The approach does not deal with the critical characteristics of the project. The quality plan, manner in which risk is to be managed is very generic.
Good (score 90)	The approach is specifically tailored to address the specific project objectives and methodology and is sufficiently flexible to accommodate changes that may occur during execution. The quality plan and approach to managing risk is specifically tailored to the critical characteristics of the project.
Very good (score 100)	Besides meeting the "good" rating, the important issues are approached in an innovative and efficient way, indicating that the Tenderer has outstanding knowledge of state-of-the- art approaches. The approach paper details ways to improve the project outcomes and the quality of the outputs.

T2.2.12 METHOD STATEMENT (Continued)

INSERT HERE

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T2.2.13 PRELIMINARY PROGRAMME – NOT APPLICABLE

The Tenderer shall detail below or attach a preliminary programme reflecting the proposed sequence and tempo of execution of the main work components. The programme shall be in accordance with the information supplied in the Contract, requirements of the Project Specifications and with all other aspects of his Tender.

The following is guiding information indicating what should be included in the preliminary programme:

- Introduce a program with dates e.g Gantt chart
- Careful consideration of the duration of the project and aligning this with the requirements of Umgeni Water's Procedures for health and safety while working on portable water works sites that are operational all the time.
- Carefully considered installation Plan ensuring no or minimum interruption to Umgeni Water's operations.
- Programme catering for the time to allow for observation of Umgeni Water's access protocols to sites and observation of COVID protocols in place at the time of implementation.
- Programme to allow for the convening of project Progress Meetings.

Programme to allow for the Testing, commissioning and handover plan implementation and rework should there be defects in equipment and or workmanship

The contract should note that the contract is required to be completed, commissioned and handed over to the Purchaser by the date specified in the contract data.

PROGRAMME													
Component / sub component	WEEKS / MONTHS												

Note: The programme must be based on the completion time as specified in the Contract Data. No other completion time that may be indicated on this programme will be regarded as an alternative offer, unless it is listed in supported by a detailed statement to that effect, all as specified in the Tender Data.

Scoring of the preliminary programme will be as follows: | |

	Suitability of programme
No submission (score 0)	No preliminary programme submitted
Poor (score 40)	Programme is inadequate and/or considered unrealistic and does not achieve required completion date
Satisfactory (score 70)	Programme is considered realistic and adequately shows the main components and compliance with completion date
Good (score 90)	Programme is considered realistic and includes the main components and sub subcomponents and compliance with completion date
Very good (score 100)	Programme is considered realistic and includes the main components and subcomponents and linkages and compliance with completion date

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T2.2.13 PRELIMINARY PROGRAMME (Continued)

INSERT HERE

FOR INFORMATION USE ONLY

T.2.2.14 REGISTRATION CERTIFICATE / AGREEMENT / ID DOCUMENT

Important note to Tenderer: The relevant supporting documents to the organization tendering i.e. Registration Certificates for Companies, Close Corporations and Partnerships, or Agreements and Powers of Attorney for Joint Ventures and Consortiums, or ID documents for Sole Proprietors, all as referred to in the foregoing forms and in T2.1, must be inserted here

INSERT HERE

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T2.2.15 AMENDMENTS, QUALIFICATIONS AND ALTERNATIVES

(This is not an invitation for amendments, deviations or alternatives but should the Tenderer desire to make any departures from the provisions of this contract he shall set out his proposals clearly hereunder. Umgeni Water will not consider any amendment, alternative offers or discounts unless forms (a), (b) and (c) have been completed to the satisfaction of the Purchaser).

I / We herewith propose the amendments, alternatives and discounts as set out in the tables below:

(a) AMENDMENTS - NOT APPLICABLE

PAGE, CLAUSE OR ITEM NO.	PROPOSED AMENDMENT

- [Notes: (1) *Proposals for amendments to the General and Special Conditions of Contract are not acceptable, and will be ignored;*
- (2) *The Tenderer must give full details of all the financial implications of the amendments and qualifications in a covering letter attached to his Tender.*

(b) ALTERNATIVES - NOT APPLICABLE

PROPOSED ALTERNATIVE	DESCRIPTION OF ALTERNATIVE

- [Notes: (1) *Individual alternative items that do not justify an alternative Tender, and an alternative offer for time for completion should be listed here.*
- (2) *In the case of a major alternative to any part of the work, a separate Bill of Quantities, programme, etc, and a detailed statement setting out the salient features of the proposed alternatives must accompany the Tender.*
- (3) *Alternative Tenders involving technical modifications to the design of the works and methods of construction shall be treated separately from the main Tender offer.]*

(c) UNCONDITIONAL DISCOUNTS

ITEM ON WHICH DISCOUNT IS OFFERED	DESCRIPTION OF DISCOUNT OFFERED

[Note: The Tenderer must give full details of the discounts offered in a covering letter attached to his Tender, failing which, the offer for a discount may have to be disregarded.]

Signature..... Date.....

T2.2.16 RECORD OF ADDENDA TO TENDER DOCUMENTS

I / We confirm that the following communications amending the Tender documents that I / we received from Umgeni Water or his representative before the closing date for submission of Tenders have been taken into account in this Tender.

A signed copy of each addendum shall be inserted after this page.

ADDENDUM No	DATE	TITLE OR DETAILS

.....
Signature
(of person authorized to sign on behalf of the Tenderer)

.....
Date

_T2.2.17 VAT REGISTRATION CERTIFICATE

[VAT Registration Certificate obtained from SARS to be inserted here]

FOR INFORMATION USE ONLY

T2.2.18 SCHEDULE OF PROPOSED SUB-SUPPLIERS

Important note to Tenderer: The relevant supporting documents to the organization tendering i.e. Registration Certificates for Companies, Close Corporations and Partnerships, or Agreements and Powers of Attorney for Joint Ventures and Consortiums, or ID documents for Sole Proprietors, all as referred to in the foregoing forms and in T2.1, must be inserted here

We notify you that it is our intention to employ the following Sub-Suppliers for work in this contract. If we are awarded a contract we agree that this notification does not change the requirement for us to submit the names of proposed Sub-Suppliers in accordance with requirements in the contract for such appointments. If there are no such requirements in the contract, then your written acceptance of this list shall be binding between us.

	Name and address of proposed Sub-Supplier	Nature and extent of work	Previous experience with Sub-Supplier.
1.			
2.			
3.			
4.			
5.			

Signature..... Date.....

Name..... Position.....

Tenderer.....

T2.2.19 PROOF OF PURCHASE OF TENDER DOCUMENT

INSERT HERE

FOR INFORMATION USE ONLY

T2.2.20 GOODS AND SERVICES SOURCED INTERNATIONALLY

NOT APPLICABLE

INTRODUCTION

The National Industrial Participation (NIP) Programme, which is applicable to all government procurement contracts that have an imported content, became effective on the 1 September 1996. The NIP policy and guidelines were fully endorsed by Cabinet on 30 April 1997. In terms of the Cabinet decision, all state and State Owned Entities purchases / lease contracts (for goods, works and services) entered into after this date, are subject to the NIP requirements. NIP is obligatory and therefore must be complied with. The Industrial Participation Secretariat (IPS) of the Department of Trade and Industry (DTI) is charged with the responsibility of administering the programme.

1. PILLARS OF THE PROGRAMME

- 1.1 The NIP obligation is benchmarked on the imported content of the contract. Any contract having an imported content equal to or exceeding US\$ 10 million or other currency equivalent to US\$ 10 million will have a NIP obligation. This threshold of US\$ 10 million can be reached as follows:
- (a) Any single contract with imported content exceeding US\$10 million.
or
 - (b) Multiple contracts for the same goods, works or services each with imported content exceeding US\$3 million awarded to one seller over a 2 year period which in total exceeds US\$10 million.
or
 - (c) A contract with a renewable option clause, where should the option be exercised the total value of the imported content will exceed US\$10 million.
or
 - (d) Multiple suppliers of the same goods, works or services under the same contract, where the value of the imported content of each allocation is equal to or exceeds US\$ 3 million worth of goods, works or services to the same government institution, which in total over a two (2) year period exceeds US\$10 million.
- 1.2 The NIP obligation applicable to suppliers in respect of sub-paragraphs 1.1 (a) to 1.1 (c) above will amount to 30 % of the imported content whilst suppliers in respect of paragraph 1.1 (d) shall incur 30% of the total NIP obligation on a pro-rata basis.
- 1.3 To satisfy the NIP obligation, the DTI would negotiate and conclude agreements such as investments, joint ventures, sub-contracting, licensee production, export promotion, sourcing arrangements and research and development (R&D) with partners or suppliers.
- 1.4 A period of seven years has been identified as the time frame within which to discharge the obligation.

2. REQUIREMENTS OF THE DEPARTMENT OF TRADE AND INDUSTRY

- 2.1 In order to ensure effective implementation of the programme, successful tenderers (Suppliers) are required to, immediately after the award of a contract that is in excess of R10 million (ten million Rands), submit details of such a contract to the DTI for reporting purposes.
- 2.2 The purpose for reporting details of contracts in excess of the amount of R10 million (ten million Rands) is to cater for multiple contracts for the same goods, works or services; renewable contracts and multiple suppliers for the same goods, works or services under the same contract as provided for in paragraphs 1.1.(b) to 1.1. (d) above.

3. TENDER SUBMISSION AND CONTRACT REPORTING REQUIREMENTS OF TENDERERS AND SUCCESSFUL TENDERERS (SUPPLIERS)

- 3.1 Tenderers are required to sign and submit this Section together with the tender on the closing date and time.

3.2 In order to accommodate multiple contracts for the same goods, works or services; renewable contracts and multiple suppliers for the same goods, works or services under the same contract as indicated in sub-paragraphs 1.1 (b) to 1.1(d) above and to enable the DTI in determining the NIP obligation, successful tenderers (Suppliers) are required, immediately after being officially notified about any successful tender with a value in excess of R10 million (ten million Rands), to contact and furnish the DTI with the following information:

- Tender / contract number.
- Description of the goods, works or services.
- Date on which the contract was accepted.
- Name, address and contact details of the government institution.
- Value of the contract.
- Imported content of the contract, if possible.

3.3 The information required in paragraph 3.2 above must be sent to the Department of Trade and Industry, Private Bag X 84, Pretoria, 0001 for the attention of Mr Elias Malapane within five (5) working days after award of the contract. Mr Malapane may be contacted on telephone (012) 3941401, facsimile (012) 3942401 or e-mail at Elias@thedti.gov.za for further details about the programme.

4. PROCESS TO SATISFY THE NIP OBLIGATION

4.1 Once the successful tenderer (Supplier) has made contact with and furnished the DTI with the information required, the following steps will be followed:

- (a) the Supplier and the DTI will determine the NIP obligation;
- (b) the Supplier and the DTI will sign the NIP obligation agreement;
- (c) the Supplier will submit a performance guarantee to the DTI;
- (d) the Supplier will submit a business concept for consideration and approval by the DTI;
- (e) upon approval of the business concept by the DTI, the Supplier will submit detailed business plans outlining the business concepts;
- (f) the Supplier will implement the business plans; and
- (g) the Supplier will submit bi-annual progress reports on approved plans to the DTI.

4.2 The NIP obligation agreement is between the DTI and the successful tenderer (Supplier) and, therefore, does not involve the purchasing institution.

Tender number	Closing date
Name of tenderer	
Postal address	
.....	
Signature	Name (in print)
Date	

**T2.2.21 LETTER OF GOOD STANDING IN TERMS OF COID ACT
(Compensation for Occupational Injuries and Diseases Act)**

INSERT HERE

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T2.2.22 PREFERENCE POINTS CLAIM FORM IN TERMS OF THE PREFERENTIAL PROCUREMENT REGULATIONS 2017

This preference form must form part of all tenders invited. It contains general information and serves as a claim form for preference points for Broad-Based Black Economic Empowerment (B-BBEE) Status Level of Contribution

NB: BEFORE COMPLETING THIS FORM, TENDERERS MUST STUDY THE GENERAL CONDITIONS, DEFINITIONS AND DIRECTIVES APPLICABLE IN RESPECT OF B-BBEE, AS PRESCRIBED IN THE PREFERENTIAL PROCUREMENT REGULATIONS, 2017.

1. GENERAL CONDITIONS

1.1 The following preference point systems are applicable to all tenders:

- the 80/20 system for requirements with a Rand value of up to R50 000 000 (all applicable taxes included); and
- the 90/10 system for requirements with a Rand value above R50 000 000 (all applicable taxes included).

1.2 The value of this tender is estimated to exceed/not to exceed R50 000 000 (all applicable taxes included) and therefore the 80/20 90/10 system shall be applicable.

1.3 Preference points for this tender shall be awarded for:

- (a) Price; and
- (b) B-BBEE Status Level of Contribution.
(Refer Clause 5.7)

1.3.1 The maximum points for this tender are allocated as follows:

	POINTS
1.3.1.1 PRICE	80
1.3.1.2 B-BBEE STATUS LEVEL OF CONTRIBUTION	20
Total points for Price and B-BBEE must not exceed	100

1.4 Failure on the part of a tenderer to fill in and/or to sign this form and submit a B-BBEE Affidavit, Verification Certificate from a B-BBEE Verification Agency accredited by the South African National Accreditation System (SANAS) or a Registered Auditor approved by the Independent Regulatory Board of Auditors (IRBA), issued prior to 01 January 2017 together with the tender, will be interpreted to mean that preference points for B-BBEE status level of contribution are not claimed.

1.5 The purchaser reserves the right to require of a tenderer, either before a tender is adjudicated or at any time subsequently, to substantiate any claim in regard to preferences, in any manner required by the purchaser.

2. DEFINITIONS

2.1 "all applicable taxes" includes value-added tax, pay as you earn, income tax, unemployment insurance fund contributions and skills development levies;

2.2 "B-BBEE" means broad-based black economic empowerment as defined in section 1 of the Broad -Based Black Economic Empowerment Act;

- 2.3 “B-BBEE status level of contributor” means the B-BBEE status received by a measured entity based on its overall performance using the relevant scorecard contained in the Codes of Good Practice, or Sector Code on Black Economic Empowerment, issued in terms of section 9(1) of the Broad-Based Black Economic Empowerment Act;
- 2.4 “tender” means a written offer in a prescribed or stipulated form in response to an invitation by an organ of state for the provision of services, works or goods, through price quotations, advertised competitive tendering processes or proposals;
- 2.5 “Broad-Based Black Economic Empowerment Act” means the Broad-Based Black Economic Empowerment Act, 2003 (Act No. 53 of 2003);
- 2.6 “comparative price” means the price after the factors of a non-firm price and all unconditional discounts that can be utilized have been taken into consideration;
- 2.7 “consortium or joint venture” means an association of persons for the purpose of combining their expertise, property, capital, efforts, skill and knowledge in an activity for the execution of a contract;
- 2.8 “contract” means the agreement that results from the acceptance of a tender by an organ of state;
- 2.9 “EME” – (Exempted Micro Enterprise) means an Entity with annual turnover of R10 million or less
- 2.10 “Firm price” means the price that is only subject to adjustments in accordance with the actual increase or decrease resulting from the change, imposition, or abolition of customs or excise duty and any other duty, levy, or tax, which, in terms of the law or regulation, is binding on the Supplier and demonstrably has an influence on the price of any supplies, or the rendering costs of any service, for the execution of the contract;
- 2.11 “functionality” means the measurement according to predetermined norms, as set out in the tender documents, of a service or commodity that is designed to be practical and useful, working or operating, taking into account, among other factors, the quality, reliability, viability and durability of a service and the technical capacity and ability of a tenderer;
- 2.12 “non-firm prices” means all prices other than “firm” prices;
- 2.13 “person” includes a juristic person;
- 2.14 “QSE” – (Qualifying Small Enterprise) means an Entity that qualifies for measurement under the QSE scorecard with turnover of R10 million or more but less than R50 million.
- 2.15 “rand value” means the total estimated value of a contract in South African currency, calculated at the time of tender invitations, and includes all applicable taxes and excise duties;
- 2.16 “sub-contract” means the primary Supplier’s assigning, leasing, making out work to, or employing, another person to support such primary Supplier in the execution of part of a project in terms of the contract;
- 2.17 “total revenue” – means the total income of an entity from its operations as determined under South African Generally Accepted Accounting Practice, as per Codes of Good Practice on Black Economic Empowerment, issued in terms of section 9(1) of the Broad-Based Black Economic Empowerment Act and promulgated in the Government Gazette on 9 February 2007;
- 2.18 “trust” means the arrangement through which the property of one person is made over or bequeathed to a trustee to administer such property for the benefit of another person; and
- 2.19 “trustee” means any person, including the founder of a trust, to whom property is bequeathed in order for such property to be administered for the benefit of another person.

3. ADJUDICATION USING A POINT SYSTEM

- 3.1 The tenderer obtaining the highest number of total points will be awarded the contract.
- 3.2 Preference points shall be calculated after prices have been brought to a comparative basis taking into account all factors of non-firm prices and all unconditional discounts;
- 3.3 Points scored must be rounded off to the nearest 2 decimal places.
- 3.4 In the event that two or more tenders have scored equal total points, the successful tender must be the one scoring the highest number of preference points for B-BBEE.
- 3.5 However, when functionality is part of the evaluation process and two or more tenders have scored equal points including equal preference points for B-BBEE, the successful tender must be the one scoring the highest score for functionality.
- 3.6 Should two or more tenders be equal in all respects, the award shall be decided by the drawing of lots.

4. POINTS AWARDED FOR PRICE

4.1 THE 80/20 OR 90/10 PREFERENCE POINT SYSTEMS

A maximum of 80 or 90 points is allocated for price on the following basis:

$$P_s = 80 \left(1 - \frac{P_t - P_{\min}}{P_{\min}} \right) \quad \text{or} \quad P_s = 90 \left(1 - \frac{P_t - P_{\min}}{P_{\min}} \right)$$

Where:

- P_s = Points scored for comparative price of tender under consideration
 P_t = Comparative price of tender under consideration
 P_{\min} = Comparative price of lowest acceptable tender

5. Points awarded for B-BBEE Status Level of Contribution

- 5.1 In terms of Regulation 6 (2) and 7 (2) of the Preferential Procurement Regulations 2017, preference points must be awarded to a tenderer for attaining the B-BBEE status level of contribution in accordance with the table below:

B-BBEE Status Level of Contributor	Number of points (90/10 system)	Number of points (80/20 system)
1	10	20
2	9	18
3	6	14
4	5	12
5	4	8
6	3	6
7	2	4
8	1	2
Non-compliant contributor	0	0

- 5.2 Tenderers who qualify as EMEs in terms of the B-BBEE Act must submit a certificate issued by an Accounting Officer as contemplated in the CCA, prior to 01 May 2015 or a B-BBEE Affidavit with B-BBEE Status Level Certificates.
- 5.3 Tenderers other than EMEs must submit their original and valid B-BBEE status level Affidavit QSE (For entities whose turnover is between R10 Million and R50 Million, with 51% to 100% Black Ownership) verification certificate or a certified copy thereof, substantiating their B-BBEE rating issued by a Registered Auditor approved by IRBA (prior to 1 January 2017) or a Verification Agency accredited by SANAS.
- 5.4 A trust, consortium or joint venture, will qualify for points for their B-BBEE status level as a legal entity, provided that the entity submits their B-BBEE status level certificate for consortiums or joint ventures and affidavit for trusts.
- 5.5 A trust, consortium or joint venture will qualify for points for their B-BBEE status level as an unincorporated entity, provided that the entity submits their consolidated B-BBEE scorecard as if they were a group structure and that such a consolidated B-BBEE scorecard is prepared for every separate tender.
- 5.6 Tertiary institutions and public entities will be required to submit their B-BBEE status level certificates in terms of the specialised scorecard contained in the Amended B-BBEE Codes of Good Practice, Gazette No. 38766.
- 5.7 A person will not be awarded points for B-BBEE status level if it is indicated in the tender documents that such a tenderer intends sub-contracting more than 25% of the value of the contract to any other enterprise that does not qualify for at least the points that such a tenderer qualifies for, unless the intended sub-Supplier is an EME that has the capability and ability to execute the sub-contract.
- 5.8 A person awarded a contract may not sub-contract more than 25% of the value of the contract to any other enterprise that does not have an equal or higher B-BBEE status level than the person concerned, unless the contract is sub-contracted to an EME that has the capability and ability to execute the sub-contract.

6. TENDER DECLARATION

- 6.1 Tenderers who claim points in respect of B-BBEE Status Level of Contribution must complete the following:

7. B-BBEE STATUS LEVEL OF CONTRIBUTION CLAIMED IN TERMS OF PARAGRAPHS 1.3.1.2 AND 5.1

- 7.1 B-BBEE Status Level of Contribution: = (maximum of 10 or 20 points)

(Points claimed in respect of paragraph 7.1 must be in accordance with the table reflected in paragraph 5.1 and must be substantiated by means of a B-BBEE certificate issued by a Verification Agency accredited by SANAS or a Registered Auditor approved by IRBA (prior to 01 January 2017) or an Accounting Officer as contemplated in the CCA).

8. SUB-CONTRACTING

- 8.1 Will any portion of the contract be sub-contracted? **YES / NO** (delete which is not applicable)

- 8.1.1 If yes, indicate:

- i. what percentage of the contract will be subcontracted? %
- ii. the name of the sub-Supplier?
- iii. the B-BBEE status level of the sub-Supplier?
- iv. whether the sub-Supplier is an EME? YES / NO (delete which is not applicable)

9. DECLARATION WITH REGARD TO COMPANY/FIRM

- 9.1 Name of organization:

- 9.2 VAT registration number:

- 9.3 Company Registration number:

- 9.4 TYPE OF COMPANY/ FIRM

- ☐ Partnership/Joint Venture / Consortium
- ☐ One person business/sole propriety
- ☐ Close corporation
- ☐ Company
- ☐ (Pty) Limited

[TICK APPLICABLE BOX]

- 9.5 DESCRIBE PRINCIPAL BUSINESS ACTIVITIES

.....
.....
.....
.....

- 9.6 COMPANY CLASSIFICATION

- ☐ Manufacturer
- ☐ Supplier
- ☐ Professional supplier
- ☐ Other suppliers, e.g. transporter, etc.

[TICK APPLICABLE BOX]

- 9.7 Total number of years the company/firm has been in business?.....

9.8 I/we, the undersigned, who is / are duly authorised to do so on behalf of the company/firm, certify that the points claimed, based on the B-BBE status level of contribution indicated in paragraph 7 of the foregoing certificate, qualifies the company/ firm for the preference(s) shown and I / we acknowledge that:

- (i) The information furnished is true and correct
- (ii) The preference points claimed are in accordance with the General Conditions as indicated in paragraph 1 of this form
- (iii) In the event of a contract being awarded as a result of points claimed as shown in paragraph 7, the Supplier may be required to furnish documentary proof to the satisfaction of the purchaser that the claims are correct;
- (iv) If the B-BBEE status level of contribution has been claimed or obtained on a fraudulent basis or any of the conditions of contract have not been fulfilled, the purchaser may, in addition to any other remedy it may have –
 - (a) disqualify the person from the tendering process;
 - (b) recover costs, losses or damages it has incurred or suffered as a result of that person's conduct;
 - (c) cancel the contract and claim any damages which it has suffered as a result of having to make less favourable arrangements due to such cancellation;
 - (d) restrict the tenderer or Supplier, its shareholders and directors, or only the shareholders and directors who acted on a fraudulent basis, from obtaining business from any organ of state for a period not exceeding 10 years, after the audi alteram partem (hear the other side) rule has been applied; and
 - (e) forward the matter for criminal prosecution

.....
SIGNATURE(S) OF TENDERER(S):

DATE:.....

ADDRESS:.....
.....
.....

WITNESSES:

1.

2.

T2.2.22 .../continued B-BBEE STATUS LEVEL VERIFICATION CERTIFICATES

Tenderers not submitting a **valid original or a certified copy** B-BBEE Status Level Verification Certificate or are non-compliant contributors to B-BBEE do not qualify for preference points for B-BBEE but will not be disqualified from the tendering process.

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T2.2.23 TENDERER'S FINANCIAL STANDING

In terms of the standard conditions of Tender, the Tenderer shall provide information about its commercial position, which includes information necessary for the Purchaser to evaluate the Tenderer's financial standing.

To that end the Tenderer must provide with its Tender a bank rating, certified by its banker, to the effect that it will be able to successfully complete the contract at the Tendered amount within the specified time for completion.

However, should the Tenderer be unable to provide a bank rating with its Tender, it shall state the reasons as to why it is unable to do so, and in addition provide the following details of its banker and bank account that it intends to use for project:

Name of account holder:

Name of Bank:..... Branch:

Account number: Type of account:

Telephone number: Facsimile number:

Name of contact person (at bank:

Failure to provide either the required bank details or a certified bank rating with its Tender, will lead to the conclusion that the Tenderer does not have the necessary financial resources at its disposal to complete the contract successfully within the specified time for completion.

The Purchaser undertakes to treat the information thus obtained as confidential, strictly for the use of evaluation of the Tender submitted by the Tenderer.

SIGNATURE: DATE:

(of person authorized to sign on behalf of the Tenderer)

T2.2.24 SUPPLIERS HEALTH AND SAFETY DECLARATION

In terms of Clause 5(1)9(h) of the OHSA 1993 Construction Regulations 2014 (referred to as "the Regulations" hereafter), a Supplier may only be appointed to perform construction work if the Purchaser is satisfied that the Supplier has the necessary competencies and resources to carry out the work safely in accordance with the Occupational Health and Safety Act No 85 of 1993 and the OHSA 1993 Construction Regulations 2014.

To that effect a person duly authorized by the Tenderer must complete and sign the declaration hereafter in detail.

Declaration by Tenderer

1. I the undersigned hereby declare and confirm that I am fully conversant with the Occupational Health and Safety Act No 85 of 1993 (as amended by the Occupational Health and Safety Amendment Act No 181 of 1993), and the OHSA 1993 Construction Regulations 2014.
2. I hereby declare that my company / enterprise have the competence and the necessary resources to safely carry out the construction work under this contract in compliance with the Construction Regulations and the Purchaser's Health and Safety Specifications.
3. I hereby undertake, if my Tender is accepted, to provide a sufficiently documented Health and Safety Plan in accordance with CR7(1) of the Construction Regulations, approved by the Purchaser or its representative, before I will be allowed to commence with construction work under the contract. I hereby agree that my company/enterprise will not have a claim for compensation for delay or extension of time because of my failure to obtain the necessary approval for the said safety plan.
4. I confirm that copies of my company's approved Health and Safety Plan, the Purchaser's Safety Specifications as well as the OHSA 1993 Construction Regulations 2014 will be provided on site and will at all times be available for inspection by the Supplier's personnel, the Purchaser's personnel, the Engineer, visitors, and officials and inspectors of the Department of Labour.
5. I hereby confirm that adequate provision has been made in my Tendered rates and prices in the bill of quantities to cover the cost of all resources, actions, training and all health and safety measures envisaged in the OHSA 1993 Construction Regulations 2014, including the cost for specific items that may be scheduled in the bill of quantities.
6. I hereby confirm that I will be liable for any penalties that may be applied by the Purchaser in terms of the said Regulations for failure on my part to comply with the provisions of the Act and the Regulations as set out in Regulation 30 of the Regulations.
7. I agree that my failure to complete and execute this declaration to the satisfaction of the Purchaser will mean that I am unable to comply with the requirements of the OHSA 1993 Construction Regulations 2014, and accept that my Tender will be prejudiced and may be rejected at the discretion of the Purchaser.
8. I am aware of the fact that, should I be awarded the contract, I must submit the notification required in terms of Regulation 4 of the OHSA 1993 Construction Regulations 2014 (*example attached hereafter*) before I will be allowed to proceed with any work under the contract.

SIGNATURE: DATE:
(of person authorized to sign on behalf of the Tenderer)

T2.2.25 PRO FORMA OHS NOTIFICATION

**PRO FORMA NOTIFICATION FORM IN TERMS OF THE OCCUPATIONAL HEALTH AND SAFETY
ACT 1993, CONSTRUCTION REGULATIONS 2014**

[In terms of Regulation 4 of the Construction Regulations 2014, the successful Tenderer must complete and forward this form prior to commencement of work to the office of the Department of Labour.]

1. (a) Name and postal address of Supplier:

.....
(b) Name of Supplier's contact person:

Telephone number:

2. Supplier's compensation registration number:

3. (a) Name and postal address of Purchaser:

(b) Name of Purchaser's contact person or agent:

Telephone
number

4. (a) Name and postal address of designer(s) for the project:

.....
(b) Name of designer's contact person:

Telephone
number

5. Name of Supplier's construction supervisor on site appointed in terms of Regulation 6(1):

Telephone number:

6. Name/s of Supplier's sub-ordinate supervisors on site appointed in terms of regulation 6(2).

.....

7. Exact physical address of the construction site or site office:

8. Nature of the construction work:

9. Expected commencement date:

10. Expected completion date:

11. Estimated maximum number of persons on the construction site:

12. Planned number of Sub-contractors on the construction site accountable to Supplier:

13. Name(s) of Sub-contractors already chosen:

SIGNED BY:

SUPPLIER: DATE:

PURCHASER: DATE:

T2.2.26 LETTER OF INTENT FOR PUBLIC LIABILITY

INSERT HERE

FOR INFORMATION USE ONLY

T2.2.27 LETTER OF INTENT FOR PERFORMANCE GUARANTEE

[The Tenderer must attach hereto a letter from the bank or institution with whom it has made the necessary arrangements, to the effect that the said bank or institution will be prepared to provide the required performance guarantee when asked to do so. The Tenderer must also attach proof that the institution that will provide the performance guarantee is registered and in good standing with the Financial Services Conduct Authority.]

]

INSERT HERE

FOR INFORMATION USE ONLY

T2.2.28 REGISTRATION CERTIFICATES

Insert required registration Certificates such as CIDB

FOR INFORMATION USE ONLY

T2.2.29 CENTRAL SUPPLIER DATABASE (CSD) REPORT

Insert Here

FOR INFORMATION USE ONLY



CONTRACT NO: 2022/057

Supply, install and commission remote monitoring and control
systems of cathodic protection – PILOT PROJECT

VOLUME 2 – Offer, Contract, Pricing, Scope of Work and Site Information

Issued by:

Umgeni Water
310 Burger Street
Pietermaritzburg

Tender Queries:

Contact Name: Nosipho Mkhize
Telephone: 033 841 1090

Name of Service Provider:

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FOR INFORMATION USE ONLY

C.1 AGREEMENTS AND CONTRACT DATA

IMPORTANT NOTE ON C1.1:

ALL Tenderers MUST complete and sign Form A: OFFER (the first page hereafter).

Form B: ACCEPTANCE will be signed by the Employer and then only in the case of the successful Tenderer.

Form C: SCHEDULE OF DEVIATIONS must be signed by the Employer as well as the successful Tenderer after award of the contract.

Form D: CONFIRMATION OF RECEIPT must be signed by the successful Tenderer on receipt of a fully completed original copy of the Agreement including the Schedule of Deviations, if any.

FOR INFORMATION USE ONLY

C1.1 FORM OF OFFER AND ACCEPTANCE

A. OFFER

The Purchaser, identified in the Acceptance signature block, has solicited offers to enter into a contract in respect of the following works:

TENDER NO. 2022/057 – SUPPLY, INSTALL, COMMISSION OF REMOTE MONITORING AND CONTROL SYSTEM OF CATHODIC PROTECTION, THREE-YEAR CONTRACT

The Tenderer, identified in the Offer signature block, has examined the documents listed in the Tender Data and addenda thereto as listed in the Returnable Schedules, and by submitting this Offer has accepted the Conditions of Tender.

By the representative of the Tenderer, deemed to be duly authorized, signing this part of this Form of Offer and Acceptance the Tenderer offers to perform all of the obligations and liabilities of the Service Provider under the contract including compliance with all its terms and conditions according to their true intent and meaning for an amount to be determined in accordance with the conditions of contract identified in the Contract Data.

By the representative of the Tenderer, deemed to be duly authorized, signing this part of this Form of Offer and Acceptance the Tenderer offers to perform all of the obligations and liabilities of the Service Provider under the contract including compliance with all its terms and conditions according to their true intent and meaning for an amount to be determined in accordance with the conditions of contract identified in the Contract Data.

THE OFFERED TOTAL OF THE PRICES INCLUSIVE OF VAT IS:

(in words) Rand;

(in figures) R.....

The Tenderer confirms that he has read the Standard General Services Contract referred to in C1.2 Contract Data.

This Offer may be accepted by the Employer by signing the Acceptance part of this Form of Offer and Acceptance and returning one copy of this document to the Tenderer before the end of the period of validity stated in the Tender Data, whereupon the Tenderer becomes the party named as the Contractor in the Conditions of Contract identified in the Contract Data.

Signature(s) *(of persons authorized to sign the acceptance)*

Name(s)

Capacity

For the Tenderer:

(Insert name and address of organization)

.....

Name & Signature of Witness

Date

B: ACCEPTANCE

By signing this part of the Form of Offer and Acceptance, the Employer identified below accepts the Tenderer's Offer. In consideration thereof, the Employer shall pay the Contractor the amount due in accordance with the Conditions of Contract identified in the Contract Data. Acceptance of the Tenderer's Offer shall form an agreement between the Employer and the Tenderer upon the terms and conditions contained in this Agreement and in the Contract that is the subject of this Agreement.

The terms of the contract are contained in:

- C.1 Agreement, and Contract Data, (which include this Agreement)
- C.2 Pricing Data, including the Bill of Quantities
- C.3 Scope of Work
- C.4 Site Information
- C.5 Annexures

and the schedules, forms, drawings and documents or parts thereof, which may be incorporated by reference into Parts 1 to 5 above.

Deviations from and amendments to the documents listed in the Tender Data and any addenda thereto listed in the Tender Schedules as well as any changes to the terms of the Offer agreed by the Tenderer and the Employer during this process of offer and acceptance, are contained in the Schedule of Deviations attached to and forming part of this Agreement. No amendments to or deviations from said documents are valid unless contained in this Schedule, which must be duly signed by the authorized representatives of both parties.

The Tenderer shall within two weeks after receiving a completed copy of this Agreement, including the Schedule of Deviations (if any), contact the Employer's agent (whose details are given in the Contract Data) to arrange the delivery of any other bonds, guarantees, proof of insurance and any other documentation to be provided in terms of the Conditions of Contract identified in the Contract Data. Failure to fulfil any of these obligations in accordance with those terms shall constitute a repudiation of this Agreement.

Notwithstanding anything contained herein, this Agreement comes into effect on the date when the Tenderer receives one fully completed original copy of this document, including the Schedule of Deviations (if any). Unless the Tenderer (now Service Provider) within five days of the date of such receipt notifies the Employer in writing of any reason why he cannot accept the contents of this Agreement, this Agreement shall constitute a binding contract between the parties.

Signature: (of person authorized to sign the acceptance)

Name: (of signatory in capitals)

Capacity: (of Signatory)

Name of Employer: (organization) Umgeni Water

Address 310 Burger Street, Pietermaritzburg

Telephone number: 033 3411111 **Fax number:**

AS WITNESS

Signature: **Name:** (in capitals)

Date:

C: SCHEDULE OF DEVIATIONS

The extent of deviations from the tender documents issued by Umgeni Water prior to the tender closing date is limited to those permitted in terms of the Tender Data and the Conditions of Tender.

A Tenderer's covering letter will not necessarily be included in the final contract document. Should any matter in such letter, which constitutes a deviation as aforesaid become the subject of agreements reached during the process of offer and acceptance, the outcome of such agreement shall be recorded here.

Any other matters arising from the process of offer and acceptance either as a confirmation, clarification or change to the tender documents and which it is agreed by the Parties becomes an obligation of the contract shall also be recorded here.

Any change or addition to the tender documents arising from the above agreements and recorded here shall also be incorporated into the final draft of the Contract.

1. **Subject:**
Details:
.....
2. **Subject:**
Details:
.....
3. **Subject:**
Details:
.....
4. **Subject:**
Details:
.....
5. **Subject:**
Details:
.....
6. **Subject:**
Details:
.....
7. **Subject:**
Details:
.....

By the duly authorized representatives signing this Schedule of Deviations, Umgeni Water and the Tenderer agree to and accept the foregoing Schedule of Deviations as the only deviations from and amendments to the documents listed in the Tender Data and addenda thereto as listed in the Tender Schedules, as well as any confirmation, clarification or change to the terms of the offer agreed by the Tenderer and Umgeni Water during this process of offer and acceptance.

It is expressly agreed that no other matter whether in writing, oral communication or implied during the period between the issue of the tender documents and the receipt by the Tenderer of a completed signed copy of this Agreement shall have any meaning or effect in the contract between the parties arising from this Agreement.

FOR THE TENDERER:

Signature:

Name:

Capacity:

Tenderer: *(Name and address of organization)*

Witness:

Signature:

Name:

Date:

FOR UMGENI WATER

Signature:

Name:

Capacity:

Witness:

Signature:

Name:

Date:

FOR INFORMATION USE ONLY

D: CONFIRMATION OF RECEIPT

The Tenderer, (now Service Provider), identified in the Offer part of this Agreement hereby confirms receipt from the Employer, identified in the Acceptance part of this Agreement, of one fully completed original copy of this Agreement, including the Schedule of Deviations on this

FOR THE CONTRACTOR:

Signature:

Name:

Capacity:

Signature and name of witness:

Signature:

Name:

FOR INFORMATION USE ONLY

C.1.2 CONTRACT DATA (INCLUDING SPECIAL CONDITIONS OF CONTRACT)

The Conditions of Contract are the Umgeni Water *Standard Services Contract* (document number: SCM027), a copy of which may be obtained from the Umgeni Water Supply Chain Management office or can be downloaded from the following web site: www.umgeni.co.za/sustainable_development/sud.asp

Each item of data given below is cross-referenced to the clause in the Conditions of Contract to which it mainly applies.

Special Conditions of Contract

1. National Treasury Central Supplier Database

The successful Tenderer is required to provide proof of registration with the National Treasury Central Supplier Database (CSD) prior to the award of contract.

2. Application of Contract Price Adjustment Factor

Contract Price Adjustment will be/not be applicable

3. Progress Payments

Payment of Payment Certificates shall be effected on or before but not later than the last day of the month following the month in which the Invoice and accompanying statement was dated".

PART 1: DATA PROVIDED BY THE EMPLOYER

Clause	Data
1	<p>The Purchaser is Umgeni Water</p> <p>The authorised and designated representative of the Purchaser is: Name: Nosipho Mkhize</p> <p>The address for receipt of communications is: Telephone: 033 341 1062 Facsimile: E-mail: nosipho.mkhize@umgeni.co.za Address: 310 Burger Street, PMB 3201</p>
1	The Contract is a supply, install, test and commission Remote Monitoring and Control Systems for Cathodic Protection.
1	The Period of Performance is 24 months from the Commencement Date.
3.4	<p>The authorized and designated representative of the Employer is: Name: Mfanasibili Nkonyane</p> <p>The address for receipt of communications is: Telephone: 033 341 1874 Facsimile: E-mail: mfanasibili.nkonyane@umgeni.co.za Address: 7 Portland Mkondeni 3201</p>
3.5	The location for the performance of the Contract is at various Umgeni Water pipelines
3.13	The programme shall be submitted within 14 Days of the Contract becoming effective.
8.6.1	Insurances(Insurance cover requirements must be confirmed with the Risk Department on award)
8.6.1.1.2	The Value of Plant and materials supplied by the Employer to be included in the insurance sum is R 0 (Nil Rand) (inclusive of VAT).
8.6.1.1.3	The amount to cover professional fees for repairing damage and loss to be included in the insurance sum is R1 000 000 (One Million Rand) (exclusive of VAT)
8.6.1.3	The limit of indemnity for liability insurance is: Public Liability R10 000 000 (Ten Million Rand) (exclusive of VAT).
8.6.1.5	The Contractor is required to provide the following minimum insurances: Not applicable
8.6.2	Deductibles for which the Contractor is liable for payment are: (subject to annual escalation(s) as per Umgeni Water annual summary of insurance arrangements and claims procedure):
8.6.2.1	Contract Works Deductible – R50 000 (Fifty Thousand Rand) (exclusive of VAT) for each and every incident.
8.6.2.2	Public Liability Deductible – R 15 000 (Fifteen Thousand Rand) (exclusive of VAT) for each and every incident.
8.6.2.3	SASRIA Deductible – 0.1% (Zero Point One Percent) of contract value minimum R 2 500 (Two Thousand Five Hundred Rand) maximum R 25 000 (Twenty Five Thousand Rand) (exclusive of VAT) for each and every incident.

5.5	The Service Provider is required to obtain the Employer's prior approval in writing before taking any of the following actions: a) Before procurement service provider must get approvals from UW project lead b) Before touching any UW infrastructure and systems c) Reporting onsite
7.2	The Service Provider is required to provide personnel in accordance with the provisions of Clause 7.2 and to complete the Personnel Schedule. <i>Note Delete row if this is not a requirement. Delete this note.</i>
8.1	The Service Provider is to commence the performance of the Services within 14 Days of date that the Contract becomes effective. <i>Note Insert number of days if required for rapid or delayed start or amend as appropriate. Delete this note.</i>
12.2.1/2/3	Interim settlement of disputes is to be by mediation
	In the event that the parties fail to agree on a mediator, the mediator is nominated by the Association of Arbitrators (Southern Africa)
12.2.4	Final settlement is by litigation. <i>Note Insert litigation or arbitration. Delete this note.</i>
13.1.3	All persons in a joint venture or consortium shall carry a minimum General indemnity insurance of the value stipulated in clause 5.4.1 of the Contract Data. <i>Note Generally this should be the requirement Delete row if not a requirement or amend wording as required or insert value in Rand. Delete this note.</i>
15	The interest rate will be prime interest rate of the Employer's bank at the time that the amount is due.

The additional conditions of contract are:

Note Insert additional conditions of contract or delete row. Delete this note.

PART 2: DATA PROVIDED BY THE SERVICE PROVIDER

Clause	Data														
1	<p>The Service Provider is.</p> <p>Name:</p> <p>Address:</p> <p>.....</p> <p>Telephone: Facsimile:</p>														
5.3	<p>The authorized and designated representative of the Service Provider is:</p> <p>Name:</p> <p>The address for receipt of communications is:</p> <p>Address:</p> <p>.....</p> <p>Telephone: Facsimile:</p>														
5.5 7.1.2	<p>The Key Persons and their jobs / functions in relation to the services are:</p> <table border="1"> <thead> <tr> <th>Name</th><th>Specific duties</th></tr> </thead> <tbody> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </tbody> </table>	Name	Specific duties												
Name	Specific duties														

PART C2: PRICING DATA

PRICING TO BE DONE BY MEANS OF BILL OF QUANTITIES

C2.1 Bill of Quantities

- 2.1.1 Definition of unit rates** – the tenderer is required to review the scope of work defined within C3 and to determine all the resources required resulting in the unit rates to achieve the work components within the scope.
- 2.1.2 Bill of Quantities** – the tenderer is required to fill in the Bill of Quantities and complete the pricing calculations set down in C2.2 Pricing Schedule, and carry forward the tender amount from the C2.2 Pricing Schedule to the Offer C1.1.
- 2.1.3 Payment** – the tenderer will be paid the amounts per quantity of each item delivered on a monthly basis.
- 2.1.4 Prices** – must remain firm for a 12-month period and thereafter, will be subject to CPI escalation on the anniversary of the contract. A 30-day notice period prior to price increases is required.
- 2.1.5** The service providers shall provide prices (VAT exclusive) for **ALL** items listed in the table. **Failure to provide prices in any of the items listed will deem this tender to be non-responsive.**

C2.2 Pricing Schedule – Bill of Quantities

Bill of Quantities

ITEM No	PAYMENT REF	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R-C
Part 1: PRELIMINARY AND GENERAL						
1.	SANS 1200A	SECTION : GENERAL				
1.1		<u>Contractual Requirements</u>				
1.1.1		Compliance with all the contractual requirements of the contract, including project programming, outage management, weekly progress reporting, materials management, meetings and quality.	Sum	1	R	R
1.1.2		Compliance with Environmental Management	Sum	1	R	R
1.2		Site Establishment				
1.2.1		Facility for Contractor				
		a) Offices & storage sheds complete with furniture and facilities (electricity, cabling, water, etc.)	Sum	1	R	R
		b) Contractors Tools & equipment	Sum	1	R	R
		c) Temporary Ablution facilities	Sum	1	R	R
		d) Certificate of Compliance for the Contractor facility	Sum	1	R	R
		e) Provision for water and electricity for various sites	Sum	1	R	R
1.3		Occupational Health & Safety Requirements				
1.3.1		Provision for Legal, Contractual & Safety Compliance. Compliance with OHSA of 1993 and Construction Regulations.	Sum	1	R	R
		SUBTOTAL - CARRIED FORWARD				R

ITEM No	PAYMENT REF	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		SUBTOTAL - BROUGHT FORWARD				R
1.3.2		Provision of personal protective equipment and clothing for all the contractor's staff, including sub-contractors. Even those related to COVID 19 requirement	Sum	1	R	R
a)		PPE for all employees (e.g. hardhat, overalls, safety shoes, gloves) – Contractor to specify				
		• Item 1	each		R	R
		• Item 2	each		R	R
		• Item 3	each		R	R
		• Item 4	each		R	R
		• Item 5	each		R	R
b)		COVID19 Requirements (Contractor to specify)				
		• Item 1	each		R	R
		• Item 2	each		R	R
		• Item 3	each		R	R
		• Item 4	each		R	R
		• Item 5	each		R	R
1.3.3		Barricading of work area.	Sum	1	R	R
		SUBTOTAL - CARRIED FORWARD				R

ITEM No	PAYMENT REF	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		SUBTOTAL - BROUGHT FORWARD				R
1.4		Materials				
1.4.1	6.8	The Contractor shall make allowance for the removal and disposal of old equipment. The Contractor shall provide disposal certificates.	Sum	1	R	R
1.4.2		Provide for maintaining insurance in terms of the COID Act.	Sum	1	R	R
1.5		De-establishment				
1.5.1		Removal of site establishment upon completion of construction and making good and restoring of the Site to the satisfaction of the Project Manager / Lead Engineer.	Sum	1	R	R
1.5.2		Rehabilitation of site as to the condition it was before the start of the project or better.	Sum	1	R	R
1.6		Time Related Items				
1.6.1		Contractual requirements	month	18	R	R
1.6.2		Contract supervision	month	18	R	R
1.7		Training				
1.7.1		The supplier / OEM of the Cathodic Protection and the remote monitoring and control system is to provide an accredited technical training sessions to UW personnel for 10 employees (5 days per session).				
		(a) Accredited Training	Sum	1	R	R
		(b) Training for the days required	days	5	R	R
		(c) Trainer Living Out Allowance	Sum	1	R	R
		(d) Accommodation	day	6	R	R
		(e) Travel	Sum	1	R	R
		SUBTOTAL - CARRIED FORWARD				R

ITEM No	PAYMENT REF	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		SUBTOTAL - BROUGHT FORWARD				R
1.8		Analytical Tools for CP Systems				
1.8.1		Pilot project to integrate analytical tools into the SCADA system for monitoring and control of CP systems	PSum	1	R1 000 000.00	R1 000 000.00
1.9		O & M Manuals				
1.9.1		Submit O&M manuals for the entire system as per UW O&M specification.	Sum	1	R	R
1.9.2		Update UW Cathodic Protection Specification inclusive of the Remote Monitoring.	Sum	1	R	R
1.10	6.10.	Testing and Commissioning				
1.10.1		Factory Acceptance Testing for the CP remote monitoring and control System at Manufacturing or Supplier sites (FAT tests).	Per system	4	R	R
1.10.2		Factory Acceptance Testing for TRU system at Manufacturing or Supplier site accommodation, transport to and from for UW personnel (3), and FAT tests.	Per system	4	R	R
1.10.3		Integration of new systems to existing system.	Per system	4	R	R
1.10.4		Commissioning of the system (mechanical installation, cold commissioning, hot commissioning, and wet commissioning).	Per system	4		
		a) Mechanical Installation and Pre-Cold Commissioning of CP systems, and remote control and monitoring system. Submit the completion checklist to UW for approval. Complete and issue the mechanical completion certificate in the presence of The Lead Engineer / Project Manager.	Per system	4	R	R
		b) Cold commissioning of the new system. Prepare cold commissioning checklist and submit to UW for approval. Complete and issue cold commissioning completion certificate per each system completed in the presence of The Lead Engineer / Project Manager.	Per system	4	R	R
		SUBTOTAL - CARRIED FORWARD				R

ITEM No	PAYMENT REF	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		SUBTOTAL BROUGHT FORWARD				R
		c) Pre-hot commissioning (switching ON of control voltage only) of the new system. Submit the checklist to UW for approval. Complete and issue pre-hot commissioning completion certificate per each system completed in the presence of The Lead Engineer / Project Manager.	Per system	4	R	R
		d) Hot commissioning (switching ON of main power) of the new system. Submit the checklist to UW for approval. Complete and issue hot commissioning completion certificate per each system completed in the presence of The Lead Engineer / Project Manager.	Per system	4	R	R
		e) Issuing of Certificate Of Compliance	Sum	1	R	R
1.11.		Handover				
1.11.1.		PLP Gate Review	Sum	1	R	R
1.11.2		Project Handover	Sum	1	R	R
1.11.3.		Lesson Learnt	Sum	1	R	R
1.11.4.		Proving Period(1 year)	Sum	1	R	R
1.12		Provision for safety and security				
1.12.1		Safety and security for the duration of the project	Sum	1	R	R
		SUBTOTAL - CARRIED FORWARD TO SUMMARY PAGE				R

ITEM No	PAYMENT REF	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		SUBTOTAL BROUGHT FORWARD				R
1.13		Access to site (clearings and negotiations with land owners)				
1.13.1		Clearings and negotiations with land owners	Sum	1	R	R
1.14.		DCVG Testing for pipeline before installation				
1.14.1.		Midmar system	km	150	R	R
1.14.2.		Ixopo system	km	15	R	R
1.15.		DCVG Testing after Installation of the project				
1.15.2.		Midmar system	km	150	R	R
1.15.5.		Ixopo system	km	15	R	R
1.16.		Maintenance of CP systems before installation.	Sum	1	R	R
1.17.		Maintenance of CP systems after installation (last month of the one year proving period).	Sum	1	R	R
		SUBTOTAL PART 1 - CARRIED FORWARD				R

ITEM No	PAYMENT REF	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
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2.		Part 2 : Midmar System				
2.1.	6.1.	Midmar System SCADA and Industrial Network system, configuration, software and Programming for wireless communication				
		(a) Material (RMU with telemetry system)	No	1	R	R
		(b) Software and Licencing	Sum	1	R	R
		(c) Labour	Sum	1	R	R
2.2.		251 Pipeline from Midmar Portable Water to St Josephs				
2.2.1.		Allow for the Provisional Amount for the Application and re-instatement of Eskom electricity supply for one TRU site	PSum	1	R100 000.00	R100 000.00
2.2.2.		Allow for the Provisional Amount for Assessment and repair of TRU anode ground beds for 2 TRU sites	PSum	1	R80 000.00	R80 000.00
2.2.3.	6.8	Decommission SAMCOR TRU and all its related accessories.				
		(a) Labour	Sum	1	R	R
		(b) Disposal and Transportation	Sum	1	R	R
2.2.4.	6.4.	Supply, install and commission an integrated TRU with remote monitoring system to replace the non-compatible SAMCOR TRU as per UW specification and project technical specification				
		(a) Material (RMU with telemetry system)	No	1	R	R
		(b) Material (Door tamper detection system)	No	2	R	R
		(c) Labour	Sum	1	R	R
		SUBTOTAL - CARRIED FORWARD				R

ITEM No	PAYMENT REF	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		SUBTOTAL - BROUGHT FORWARD				R
2.2.5.	6.3	Supply, install, test and commission battery-operated wireless communication units for all existing Test Posts				
		(a) Material	Each	8	R	R
		(b) Labour	Sum	1	R	R
3.2.7.	6.6.1. 6.6.3.	Installation of a concrete housing structure housing with a Tamper detection sensor for SAMCOR TRU				
		(a) Material (Concrete housing structure)	No	1	R	R
		(b) Tamper detection sensing system	No	2	R	R
	6.6.2.	(c) Concrete plinth	Sum	1	R	R
		(d) Labour	Sum	1	R	R
3.2.8.	6.7.	<u>Security Camera System</u>				
		(a) <u>Management Accessories</u>				
		(i) End user software	No	1	R	R
	6.7.1.	(ii) Network Video Recorders	No	1	R	R
		(iii) Network Switch 16P POE Gigabit Managed + 2P Gb SFP	No	1	R	R
		(iv) Network Switch 8P POE Gigabit Managed + 2P Gb SFP	No	1	R	R
		SUBTOTAL - CARRIED FORWARD				R

ITEM No	PAYMENT REF	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		(v) Surveillance AI HDD 12TB	No	2	R	R
		(vi) USB Powered Keyboard, mouse, microphone and speakers	No	1	R	R
		(b) <u>Cameras</u>				
	6.7.2.	(i) Sensing Network Camera	No	3	R	R
		(ii) Camera vandal proof housing.	No	3	R	R
		(c) <u>Cabling & Accessories</u>				
		(i) CAT6 TCP/IP LAN Network Cable: Drawn into conduits, laid on cable racks or fixed to building structures.	m	200	R	R
		(ii) CAT6 Line Termination RJ45.	No	10	R	R
		(iii) CAT6 POE In-line Surge Protector.	No	4	R	R
		(iv) Distribution box	No	1	R	R
		(v) Battery DC12-150	No	4	R	R
	6.7.3.	(vi) Router: WM4700-O - including 24 month data plan	No	1	R	R
		(vii) Battery storage box	No	2	R	R
		(viii) Switch	No	1	R	R
		(ix) Wireless bridge				
		SUBTOTAL - CARRIED FORWARD				R

ITEM No	PAYMENT REF	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		SUBTOTAL - BROUGHT FORWARD				
		(x) 18U 19" Network Cabinet: Floor Standing on wheels with tempered glass front 10 way power strip.	No	1	R	R
	6.7.4.	(xi) Pro 10kVA 8000W Pf 0.8 On-Line Tower UPS complete with batteries	No	2	R	R
		(xii) Bosal 25mm conduit, fittings and consumables	m	100	R	R
3.2.9.	6.5.	Supply Install and commission an Anti-Scale Mesh Aperture or similar and approved. Installation rate, including sand, stone, cement and labour				
		(a) Supply material (Anti-climb or similar and approved) panels including galvanized tech screws, welded post caps	m	60	R	R
		(b) Supply and install (double swing vehicle gate 2m x2m long	Item	1	R	R
		(c) Supply and install high security– razor coil	m	60	R	R
		(d) Supply and install 600mm deep anti-burrow or similar and approved	m	60	R	R
2.3.		251 Pipeline from Midmar Raw Water to Midmar WTW				
2.3.1.	6.2 6.6.3.	Supply, Install/retrofit and Commission Remote Monitoring Unit (RMU) and telemetry system on the Midmar Dam TRU. The TRU Housing shall be fitted with the door tamper detection sensor.				
		(a) Material (RMU with telemetry system)	No	1	R	R
		(b) Tamper detection sensing system	No	3	R	R
		(c) Labour	sum	1	R	R
		SUBTOTAL - CARRIED FORWARD				R

ITEM No	PAYMENT REF	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		SUBTOTAL - BROUGHT FORWARD				
2.3.2.	6.3.	Supply, install, test and commission battery-operated wireless communication units for all existing Test Posts				
		(a) Material	No	20	R	R
		(b) Labour	Sum	1	R	R
2.3.3.		Allow for the Provisional Amount for Assessment and repair of TRU anode ground beds for 1 TRU site	PSum	1	R40 000.00	R40 000.00
2.4.		61 Pipeline (World's view to Umlaas road)				
2.4.1.		Allow for the Provisional Amount for the Application and re-instatement of Eskom electricity supply for two TRU sites (Bisley and ED2 TRU's)	PSum	1	R200 000.00	R200 000.00
2.4.2.		Allow for the Provisional Amount for the identifying of anode ground bed, testing and remedial repairs for 3 TRU sites (ED2, Stockowners and Bisley TRU)	PSum	1	R120 000.00	R120 000.00
2.4.3.	6.2. 6.6.3.	Supply, Install/retrofit and Commission Remote Monitoring Unit (RMU) and telemetry system on the ED2 TRU. The TRU Housing shall be fitted with the door tamper detection sensor.				
		(a) Material (RMU with telemetry system)	No	1	R	R
		(b) Material (Tamper detection sensing system)	No	2	R	R
		(c) Labour	Sum	1	R	R
2.4.4	6.2. 6.6.3.	Supply, Install/retrofit and Commission Remote Monitoring Unit (RMU) and telemetry system on the Bisley TRU. The TRU Housing shall be fitted with the door tamper detection sensor.				
		SUBTOTAL - CARRIED FORWARD				R

ITEM No	PAYMENT REF	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		SUBTOTAL - BROUGHT FORWARD				R
		(a) Material (RMU with telemetry system)	No	1	R	R
		(b) Material (Tamper detection sensing system)	No	2	R	R
		(c) Labour	Sum	1	R	R
2.4.4.	6.2. 6.6.3.	Supply, Install/retrofit and Commission Remote Monitoring Unit (RMU) and telemetry system on the Stockowners TRU. The TRU Housing shall be fitted with the door tamper detection sensor.				
		(a) Material (RMU with telemetry system)	No	1	R	R
		(b) Material (Tamper detection sensing system)	No	2	R	R
		(c) Labour	Sum	1	R	R
2.4.5.	6.3.	Supply, install, test and commission battery-operated wireless communication units for all existing Test Posts				
		(a) Material	Each	12	R	R
		(b) Labour	Sum	1	R	R
2.4.6.	6.7.	Supply ,Install and commission a security camera system ED2 TRU				
		(a) <u>Management Accessories</u>				
		(i) End user software	No	1	R	R
	6.7.1.	(ii) Network Video Recorders	No	1	R	R
		(iii) Network Switch 16P POE Gigabit Managed + 2P Gb SFP	No	1	R	R
		(iv) Network Switch 8P POE Gigabit Managed + 2P Gb SFP	No	1	R	R
		SUBTOTAL - CARRIED FORWARD				R

ITEM No	PAYMENT REF	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		SUBTOTAL - BROUGHT FORWARD				R
		(v) Surveillance AI HDD 12TB	No	2	R	R
		(vi) Monitors: 55" LED Backlight TV/Monitor to be installed at Mkondeni Guard House	No	1	R	R
		(vii) USB Powered Keyboard, mouse, microphone and speakers	No	1	R	R
		(b) <u>Cameras</u>				
	6.7.2.	(i) Sensing Network Camera	No	3	R	R
		(ii) Camera vandal proof housing.	No	3	R	R
		(c) <u>Cabling & Accessories</u>				
		(i) CAT6 TCP/IP LAN Network Cable: Drawn into conduits, laid on cable racks or fixed to building structures.	m	200	R	R
		(ii) CAT6 Line Termination RJ45.	No	10	R	R
		(iii) CAT6 POE In-line Surge Protector.	No	2	R	R
		(iv) Distribution box	No	1	R	R
		(v) Battery DC12-150	No	8	R	R
	6.7.3.	(vi) Router: WM4700-O - including 24 month data plan	No	1	R	R
		(vii) Battery storage box	No	1	R	R
		(viii) Switch	No	1	R	R
		(ix) Wireless bridge	No	1	R	R
		SUBTOTAL - CARRIED FORWARD				R

ITEM No	PAYMENT REF	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		SUBTOTAL - BROUGHT FORWARD				R
		(x) 18U 19" Network Cabinet: Floor Standing on wheels with tempered glass front 10 way power strip.	No	1	R	R
	6.7.4.	(xi) Pro 10kVA 8000W Pf 0.8 On-Line Tower UPS complete with batteries	No	4	R	R
		(xii) Bosal 25mm conduit, fittings and consumables	m	100	R	R
3.4.7.	6.5.	Supply Install and commission an Anti-Scale Mesh Aperture or similar and approved. Installation rate, including sand, stone, cement and labour.				
		(a) Supply material (Anti-climb or similar and approved) panels including galvanized Tech screws, welded post caps	m	40	R	R
		(b) Supply and install Swing vehicle gate 2m x2m long	item	1	R	R
		(c) Supply and install high security razor coil	m	40	R	R
		(d) Supply and install 600mm deep anti-burrow or similar and approved	m	40	R	R
2.5.		56 Pipeline - Midmar WTP (Mill Falls PS) to Howick West PS to Groenkloof PS				
2.5.1.		Allow for the Provisional Amount for the Application and re- instatement of Eskom electricity supply for one TRU site	PSum	1	100 000.00	R100 000.00
2.5.2.		Allow for the Provisional Amount for Assessment and repair of TRU anode ground beds for 1 TRU site	PSum	1	R40 000.00	R40 000.00
2.5.3.	6.8.	Decommission Groenkloof TRU and all its related accessories.				
		(a) Labour	Sum	1	R	R
		(b) Transportation	Sum	1	R	R
		SUBTOTAL - CARRIED FORWARD				R

ITEM No	PAYMENT REF	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		SUBTOTAL - BROUGHT FORWARD				R
2.5.4.	6.4.	Supply, install and commission an integrated TRU with remote monitoring system to replace the non-compatible Groenkloof TRU as per UW specification and project technical specification				
		(a) Material (RMU with telemetry system)	No	1	R	R
		(b) Material (Tamper detection sensing system)	No	2	R	R
		(c) Labour	Sum	1	R	R
2.5.5.	6.3.	Supply, install, test and commission battery-operated wireless communication units for all existing Test Posts				
		(a) Material	No	20	R	R
		(c) Labour	Sum	1	R	R
2.6.		Howick west PS to Mpophomeni Rising main				
2.6.1.		Allow for the Provisional Amount for the Application and re-instatement of Eskom electricity supply for one TRU site	PSum	1	100 000.00	R100 000.00
2.6.2.		Allow for the Provisional Amount for Assessment and repair of TRU anode ground beds for 1 TRU site	PSum	1	R40 000.00	R40 000.00
2.6.3.	6.8.	Decommission Mpophomeni TRU and all its related accessories.				
		(a) Labour	Sum	1	R	R
		(b) Transportation	Sum	1	R	R
2.6.4.	6.4.	Supply, install and commission an integrated TRU with remote monitoring system to replace the non-compatible Mpophomeni TRU as per UW specification and project technical specification				
		SUBTOTAL - CARRIED FORWARD				R

ITEM No	PAYMENT REF	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		SUBTOTAL - BROUGHT FORWARD				R
		(a) Material (RMU with telemetry system)	No	1	R	R
		(b) Material (Tamper detection sensing system)	No	3	R	R
		(c) Labour	Sum	1	R	R
2.6.5.	6.3.	Supply, install, test and commission battery-operated wireless communication units for all existing Test Posts				
		(a) Material	No	4	R	R
		(b) Labour	Sum	1	R	R
2.6.6.	6.6.1. 6.6.3.	Installation of a Concrete Housing Structure with a Tamper Detection sensor for the Mpophomeni TRU				
		(a) Material (Vandal proof TRU concrete housing structure)	No	1	R	R
		(b) Material (Tamper detection sensing system)	No	3	R	R
	6.6.2.	(c) Concrete plinth	Sum	1	R	R
		(d) Labour	Sum	1	R	R
2.7.		Richmond Pipeline (take off from 61 Pipeline to Richmond)				
2.7.1.		Allow for the Provisional Amount for the Application and re-instatement of Eskom electricity supply for one TRU site	PSum	1	R100 000.00	R100 000.00
2.7.2.		Allow for the Provisional Amount for Assessment and repair of TRU anode ground beds for 3 TRU site	PSum	1	R120 000.00	R120 000.00
2.7.3.	6.2. 6.6.3	Supply, Install/retrofit and Commission Remote Monitoring Unit (RMU) and telemetry system on the Farm TRU (Richmond).The TRU Housing shall be fitted with the door tamper detection sensor.				
		(a) Material (RMU with telemetry system)	No	1	R	R
		(b) Material (Tamper detection sensing system)	No	3	R	R
		SUBTOTAL - CARRIED FORWARD				R

ITEM No	PAYMENT REF	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		SUBTOTAL - BROUGHT FORWARD				R
		(c) Labour	Sum	1	R	R
2.7.4.	6.2. 6.6.3	Supply, Install/retrofit and Commission Remote Monitoring Unit (RMU) and telemetry system on the Sugar Cane Farm (Richmond) TRU. The TRU Housing shall be fitted with the door tamper detection sensor.				
		(a) Material (RMU with telemetry system)	No	1	R	R
		(b) Material (Tamper detection sensing system)	No	2	R	R
		(c) Labour	Sum	1	R	R
2.7.5.	6.2. 6.6.3	Supply, Install/retrofit and Commission Remote Monitoring Unit (RMU) and telemetry system on the Cabbage Farm TRU (Richmond).The TRU Housing shall be fitted with the door tamper detection sensor.				
		(a) Material (RMU and telemetry system)	No	1	R	R
		(b) Material (Tamper detection sensor)	No	3	R	R
		(c) Labour	Sum	1	R	R
2.7.6.	6.3.	Supply, install, test and commission battery-operated wireless communication units for all existing Test Posts				
		(a) Material	No	12	R	R
		(b) Labour	Sum	1	R	R
2.8.		63 Pipeline (off take from 61 Pipeline) to Thornville				
2.8.1.		Allow for the Provisional Amount for the Application and re-instatement of Eskom electricity supply for one TRU site	PSum	1	R100 000.00	R100 000.00
2.8.2.		Allow for the Provisional Amount for Assessment and repair of TRU anode ground beds for one TRU site	PSum	1	R40 000.00	R40 000.00
		SUBTOTAL - CARRIED FORWARD				R

ITEM No	PAYMENT REF	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		SUBTOTAL - BROUGHT FORWARD				R
2.8.3.	6.2. 6.6.3.	Supply, Install/retrofit and Commission Remote Monitoring Unit (RMU) and telemetry system on the Thornville TRU. The TRU Housing shall be fitted with the door tamper detection sensor.				
		(a) Material (RMU with telemetry system)	No	1	R	R
		(b) Material (Tamper detection sensing system)	No	3	R	R
		(c) Labour	Sum	1	R	R
2.8.4.	6.3.	Supply, install, test and commission battery-operated wireless communication units for all existing Test Posts				
		(a) Material	No	4	R	R
		(b) Labour	Sum	1	R	R
		PART 2 SUBTOTAL - CARRIED TO SUMMARY PAGE				R

ITEM No	PAYMENT REF	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
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3.	Part 3 : Ixopo system					
3.1.	6.1.	Ixopo SCADA Configuration including Hardware, software and Programming for wireless communication				
		(a) Material (telemetry system)	No	1	R	R
		(b) Software and Licencing	Sum	1	R	R
		(c) Labour	Sum	1	R	R
3.2.		Ixopo Pipeline				
3.2.1.		Allow for the Provisional Amount for Assessment and repair of TRU anode ground beds for 1 TRU site	Psum	1	R40 000.00	R40 000.00
3.2.2.	6.2.	Supply, install and commission an integrated TRU with remote monitoring system to replace the non-compatible Ixopo TRU as per UW specification and project technical specification				
		(a) Material (TRU with RMU and telemetry system)	No	1	R	R
		(b) Material (Tamper detection sensing system)	No	3	R	R
		(c) Labour	Sum	1	R	R
3.2.3.	6.3.	Supply, install, test and commission battery-operated wireless communication units for all existing Test Posts				
		(a) Material	No	4	R	R
		(b) Labour	Sum	1	R	R
PART 3 SUBTOTAL - CARRIED TO SUMMARY PAGE						R

SUMMARY OF BILL OF QUANTITIES

PART	DESCRIPTION	AMOUNT R-C
PART 1:	Preliminary And General	R
PART 2:	Midmar System	R
PART 3:	Ixopo system	R
A SUBTOTAL (Part 1 + Part 2 + Part 3) (Use to calculate CPG amount and percentage)		R
B CONTINGENCIES Add 15% of Subtotal A		R
C SUBTOTAL (A + B)		R
D ESCALATION Add 10% of Subtotal C		R
E SUBTOTAL (C + D)		R
F VALUE ADDED TAX Add 15 % of Subtotal E		R
TOTAL (E+F)		R

PART C3: SCOPE OF WORK

1. Employer's objectives

The objective of this project is mainly to achieve a simple, efficient and cost effective way of obtaining pertinent continuous operational Data from CP systems. The aim is to enhance the effectiveness of its operation and to ensure impressive pipeline integrity by implementing the following:

- Remote control and monitoring of CP systems;
- Reporting (Alarm management) on CP system and pipeline status;
- Exportable and graphical interpretation of site data on SCADA;
- Cost economical, optimized operation of Umgeni CP systems;
- Detection system for theft and vandalism attempts;

Minimize CP system potential failures and advance effective system maintenance

2. Description of the services

The scope of work is distributed per site as follows:

2.1. Midmar System

2.1.1. Telemetry and SCADA Configuration

- 2.1.1.1. Supply, deliver, install/configure the Midmar Water Work's PLC, Telemetry and SCADA for Communication to and from the TRUs and Test posts of the Midmar system
- 2.1.1.2. Program Telemetry/SCADA system
- 2.1.1.3. Integrate analytic tools
- 2.1.1.4. Program analytical tools and Dashboards
- 2.1.1.5. Develop an Asset Health system (data acquisitions, dashboards, analytic tools, analysis)
- 2.1.1.6. Integrate the Asset Health system with Midmar WW SCADA systems.

2.1.2. 251 Pipeline from Midmar Dam Water to Midmar WW

- 2.1.2.1. Supply, install, test and commission 15 years battery-operated wireless communication units for all existing Test Posts;
- 2.1.2.2. Supply, install/retrofit, test and commission Remote Monitoring Unit (RMU) with wireless communication to the existing TRU. The system must integrate with the existing Midmar WW SCADA System;
- 2.1.2.3. Assessment and repair of TRU and anode ground beds
- 2.1.2.4. Supply, install, test and commission security system using door tamper detection sensors and camera system. The system is to be integrated into the TRU RMU.

2.1.3. 251 Pipeline from Midmar WaterWorks to St Josephs Reservoir

- 2.1.3.1. Decommission and dispose the SAMCOR TRU and all its related accessories.
- 2.1.3.2. Supply, install, test and commission a TRU with an integrated remote monitoring system (RMU). The system must integrate with the existing Midmar WW SCADA System.
- 2.1.3.3. Apply and re-instate electricity for the SAMCOR TRU. Test and commission the TRU
- 2.1.3.4. Assessment and repair of TRU and anode ground beds
- 2.1.3.5. Installation of Concrete housing with Tamper Detection sensor for 1 TRU
- 2.1.3.6. Supply and install Clearview fencing or similar strength fencing around the SAMCOR TRU structure. The fencing must be within the TRU servitude.
- 2.1.3.7. Supply, install, test and commission security system using door tamper detection sensors and camera system. The system is to be integrated into the TRU RMU.

2.1.4. 61 Pipeline World's View Reservoir to Umlaas Road Reservoir

- 2.1.4.1. Apply and re-instate power for ED2 and Bisley TRU's. Commission the TRU's.
- 2.1.4.2. Supply, install/retrofit and commission Remote Monitoring Units (RMU's) with wireless communication to the 3 existing TRUs. The system must integrate with the existing Midmar WW SCADA System;
- 2.1.4.3. Supply, install, test and commission battery-operated wireless communication units for all existing Test Posts;
- 2.1.4.4. Assessment and repair of TRU anode ground beds for the pipeline

- 2.1.4.5. Supply, Install and Commission Fencing for ED2 TRU
- 2.1.4.6. Supply, install, test and commission security system using door tamper detection sensors and camera system. The system is to be integrated into the TRU RMU.

2.1.5. 56 Pipeline – Midmar WW (Mill falls PS) to Howick West PS to Groenkloof PS

- 2.1.5.1. Decommission 1 x TRU (Groenkloof) and all their related accessories.
- 2.1.5.2. Supply, install and commission 1 x TRU with remote monitoring system to replace the non-compatible Groenkloof TRU as per UW specification and project technical specification
- 2.1.5.3. Supply, install, test and commission battery-operated wireless communication units for all existing Test Posts;
- 2.1.5.4. Assessment and repair of TRU anode ground beds

2.1.6. Howick West PS to Mpophomeni Rising Main

- 2.1.6.1. Decommission 1 x TRU (Mpophomeni TRU) and all their related accessories.
- 2.1.6.2. Supply, install and commission 1 x TRU with remote monitoring system to replace the non-compatible Mpophomeni TRU as per UW specification and project technical specification
- 2.1.6.3. Supply, install, test and commission battery-operated wireless communication units for all existing Test Posts;
- 2.1.6.4. Assessment and repair of TRU anode ground beds

2.1.7. Richmond Pipeline

- 2.1.7.1. Apply, re-instate power for the Sugar Cane Farm TRU. Commission the TRU.
- 2.1.7.2. Supply, install/retrofit and commission Remote Monitoring Units (RMU's) with wireless communication to the 3 existing TRUs. The system must integrate with the existing Midmar Water Works SCADA System;
- 2.1.7.3. Supply, install, test and commission battery-operated wireless communication units for all existing Test Posts
- 2.1.7.4. Assessment and repair of TRU anode ground beds
- 2.1.7.5. Installation of door tamper detection sensors for 3 TRU's

2.1.8. Thornville Pipeline

- 2.1.8.1. Application and Installation of Eskom Power for Thornville Pump station TRU. Commission the TRU
- 2.1.8.2. Supply, install/retrofit and commission Remote Monitoring Units (RMU's) with wireless communication to the existing TRU. The system must integrate with the existing Midmar WW SCADA System;
- 2.1.8.3. Supply, install, test and commission battery-operated wireless communication units for all existing Test Posts;
- 2.1.8.4. Assessment and repair of TRU anode ground beds

2.2. DV Harris System

2.2.1. Telemetry and SCADA Configuration

- 2.2.1.1. Configure the DV Harris Water Work's PLC, Telemetry and SCADA for Communication to and from the TRUs and Test posts of the DV Harris and Umshwathi system
- 2.2.1.2. Program Telemetry/SCADA system
- 2.2.1.3. Integrate analytic tools
- 2.2.1.4. Program analytical tools and Dashboards
- 2.2.1.5. Develop an Asset Health system (data acquisitions, dashboards, analytic tools, analysis)
- 2.2.1.6. Integrate the Asset Health system with the DV Harris SCADA systems.

2.2.2. 53 Pipeline (DV Harris WW to Umlaas Road Reservoir)

- 2.2.2.1. Decommission 2 x TRU's (Umlaas road and DV Harris TRU) and all their related accessories

- 2.2.2.2. Supply, install and commission a TRU with remote monitoring system to replace the non-compatible Umlaas road TRU
- 2.2.2.3. Apply and re-instate power for Mlaas road TRU. Commission the TRU.
- 2.2.2.4. Supply, install, test and commission battery-operated wireless communication units for all existing Test Posts;
- 2.2.2.5. Assessment and repair of TRU anode ground beds

2.2.3. Eston Pipeline (Umlaas Road Reservoir to Eston Reservoir)

- 2.2.3.1. Decommission the existing Eston TRU's and all its related accessories
- 2.2.3.2. Supply, install and commission a TRU with remote monitoring system to replace the non-compatible Eston TRU
- 2.2.3.3. Apply, re-instate power for Mlaas road TRU. Commission the TRU
- 2.2.3.4. Supply, install, test and commission battery-operated wireless communication units for all existing Test Posts;
- 2.2.3.5. Assessment and repair of TRU anode ground beds
- 2.2.3.6. Installation of a Concrete Structure Housing for the TRU
- 2.2.3.7. Supply, Install and Commission Fencing for Eston TRU
- 2.2.3.8. Supply, Install and Commission a security camera system for Eston TRU

2.2.4. Lion Park Pipeline (Umlaas to Lion Park)

- 2.2.4.1. Apply and re-instate power for Lion park TRU. Commission the TRU
- 2.2.4.2. Supply, install/retrofit and commission Remote Monitoring Units (RMU's) with wireless communication to the existing TRU. The system must integrate with the existing DV Harris SCADA System;
- 2.2.4.3. Supply, install, test and commission battery-operated wireless communication units for all existing Test Posts;
- 2.2.4.4. Assessment and repair of TRU anode ground beds

2.3. Ixopo System

2.4.1. Telemetry and SCADA Configuration

- 2.4.1.1. Configure the Ixopo Water Work's PLC, Telemetry and SCADA for Communication to and from the TRUs and Test posts of the Ixopo system
- 2.4.1.2. Program Telemetry/SCADA system
- 2.4.1.3. Integrate analytic tools
- 2.4.1.4. Program analytical tools and Dashboards
- 2.4.1.5. Develop an Asset Health system (data acquisitions, dashboards, analytic tools, analysis)
- 2.4.1.6. Integrate the Asset Health system with the Ixopo SCADA systems.

2.4.2. Ixopo Pipeline

- 2.4.2.1. Supply, install and commission a TRU with remote monitoring system to replace the non-compatible Umlaas road TRU. The system must integrate with the existing Ixopo SCADA System;
- 2.4.2.2. Supply, install, test and commission battery-operated wireless communication units for all existing Test Posts;
- 2.4.2.3. Assessment and repair of TRU anode ground beds

2.5. Direct current voltage gradient (DCVG) Survey

Conduct a two-stage assessment on the pipeline integrity; 1) Before installation, and 2) at the last two months of the proving period.

2.6. Asset Health System for CP system

Develop an Asset Health System with integrate analytical tools and algorithms into the SCADA systems (Midmar WW, Spring Grove WW, DV Harris WW and Ixopo WW).

2.7. Maintenance of CP System

Yearly preventive maintenance on the CP systems (TRUs, TPs, Ground beds, NDUs, cabling, etc)

3. Extent of the services

The project involves the integration of telemetry systems into existing TRUs and test posts (TPs), and analytical tools and algorithms into the SCADA system for ease of maintenance, monitoring and control of UW Cathodic Protection systems for better protection of the organisational buried underground steel pipelines.

4. Use of reasonable skill and care

The service provider shall have the following:

- Qualified, competent and experienced technocrats within the Water Industry.
- Construction experience
- Machine Learning techniques experience and expertise
- PLC/RTU and SCADA systems programming

5. Co-operation with other services providers

- SCADA system
- PLC system
- Telemetry system

6. Brief - Technical Specifications

6.1. Telemetry and SCADA Integration

The high-level topology is to collect data from various sources (TPs, NDUs, TRUs, and Groundbeds), transmit the collected data to the Remote Monitoring Units (RMUs) through various telemetry systems (Sigfox/GSM/Radio/Fiber). The RMUs will transmit all data received to the SCADA system for monitoring, control and analysis using various telemetry systems (Sigfox/GSM/Radio/Fiber). The telemetry system is a two-way communication between the RMUs and SCADA.

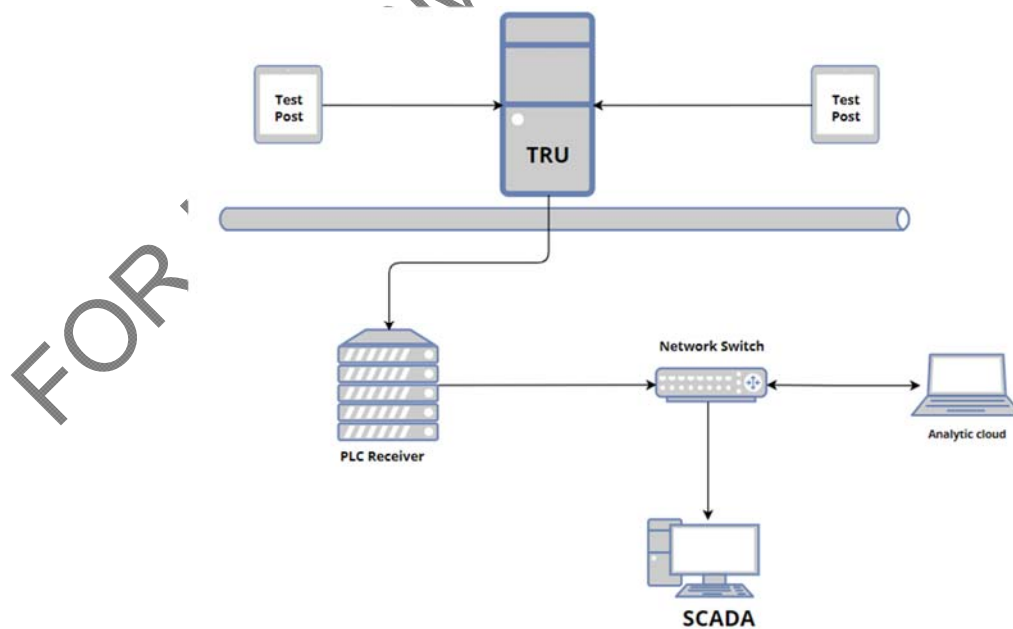


Figure 1: Remote Monitoring System network topology

Site Transceiver Technical Special		
Description	Engineer's requirements	Contractor's Offer
Housing	IP67 moulded ABS box with O-ring seals, and separate battery & electronics compartments	
Power input:	12 V/24 V DC	
Backup Battery:	The telemetry unit shall be fitted with 4 Alkaline D-Cell batteries to provide back-up power during long term deployments or power for short term deployments. Internal battery Capacity is 13,000mAH @ 6vDC (based on 75% efficiency)	
Antenna:	Standard 0dB whip antenna, plugged directly onto housing. Optional 3dB Omni-directional antenna with 10m cable	
Frequency	To be specified by service provider	
Channels	10 @ 0.05 MHz spacing	
Channel select:	Push button switches inside housing	
Power output	500mW maximum	
Dimensions:	To be specified by service provider	
Internal aerial	Yes	
Programming display	Two x seven-segment LED	

Base Transceiver Technical Specification		
Description	Engineer's requirements	Contractor's Offer
Housing	Painted aluminium housing, with connections for antenna, PC interface and external DC power.	
Power input:	12V /24V DC, via cable supplied.	
Antenna:	3dB Omni-directional antenna with 10m cable.	
Frequency	To be specified by service provider	
Channels	10 @ 0.05 MHz spacing	
Channel select:	Push button switches on front panel	
Power output	500mW maximum	
Dimensions:	To be specified by service provider	
Internal aerial	Yes	
PC Interface	9 pin D type connector with RS232 output to PC. 9 pin to 9 pin interface cable supplied.	
Programming display	Two x seven-segment LED	

Antenna		
Description	Engineer's requirements	Contractor's Offer
Gain over ½ wave dipole	3dB	
VSWR	Better than 1.5:1 over the operating band	
Max Input Power	150W	
Input Impedance	50Ω	
Bandwidth	±2% of centre frequency	
Polarisation	Vertical	
Half Power Beamwidth	32°	
Connection	10m length of RG213 terminated N type socket and PVC sleeve	
Radiating Elements	Brass rod plasfilm coated	
Encapsulation	Reinforced glass fibre tube	
Length	1.160m @ 460MHz	

PLC/RTU Specification

PLC Technical specification		
Description	Engineer's requirements	Contractor's offer
Inputs	4 ANALOG, 8 DIGITAL	
Output Type	Digital	
Voltage Category	24 V dc	
Kit Included	Yes	
Number of Outputs	6	
Network Type	Modbus/Ethernet tcp/ip	
Communication Port Type	RS232, RS485	
Program Capacity	4 kB	
Programming Language Used	Function Block, Ladder Logic, Structured Text	
Programming Interface	Operating Panel	
Minimum Operating Temperature	-20°C	
Depth	80mm	
Dimensions	90 x 100 x 80 mm	
Memory	8 kB	
Maximum Operating Temperature	+65°C	

6.2. Remote Monitoring Unit (RMU) Specifications

The following Remote Monitoring Unit specifications shall be applicable for both the Retrofitted RMU's and those that will come with the newly installed TRU's.

The remote monitoring unit shall be able transmit via telemetry systems the status of the CP system monitored parameters in real-time into the Plant main SCADA system and store data onsite. The remote monitoring unit shall be able to alert the Control Room and Asset Management when any of the monitored parameters enter into an alarm and faulty state, or when the CP system malfunction. The RMU shall also come with a 5-10 inch HMI for monitoring purposes.

The RMU for retrofit and for new installations should incorporate the following features:

RMU Features	
Engineer's requirements	Contractor's Offer
Pipe potential reading	Yes/No
Output voltage reading	Yes/No
Current output	Yes/No
AC power	Yes/No
Circuit breaker and fuse status	Yes/No
Remote reset of AC and DC circuit breakers	Yes/No
Door tamper	Yes/No
Ambient temperature	Yes/No
Display Pipeline reference voltage readings along its route	Yes/No
Date and Time Display	Yes/No
GSM Signal Strength GSM	Yes/No
Unit battery level	Yes/No
Running hours and Off hours	Yes/No
Fault/Alarm Notification SMS/Email	Yes/No
GPS Coordinates of the fitted unit	Yes/No
Display site specific name	Yes/No
Integration OPC/Cloud/Web interface for live monitoring	Yes/No
Biometrics Integration access monitoring to TRU units	Yes/No
Live Graph Display last hours' activity on SCADA	Yes/No
64 GB Logging capacity	Yes/No
Internet connection capabilities	Yes/No
Reports shall be scheduled and generated from any data point with CSV attached	Yes/No
Alarms shall be generated and emailed out via event handlers	Yes/No

RMU Technical specification		
Description	Engineer's requirements	Contractor's offer
CPU	Quad core 64-bit 1,4Ghz	
RAM	1GB	
Logging Memory	SD Card 8 - 64GB	
Peripherals	USB 2.0, Ethernet, Wifi, BT	
Screen	3 - 7" TFT Touch Scree	
Power	5V/3A with 48 hour Battery Backup	
GSM	3G/4G/LTE (for remote login and engineering)	
Housing	Glass Reinforced Polyester or Steel IP 20	
Mounting	Screw mount 4 x M5 or custom steel mounting	
Supply	230VAC, 24VDC, 12VDC, 5VD	
Protocols	BACnet, Modbus, MQTT, SNMP, DNP3, SQL, HTTP, OPC-DA, MBus	

6.3. Test Post battery-operated monitoring units

The battery powered Remote monitoring units to be installed on the test posts shall adhere to the following Specifications or similar approved

Test post battery operated monitoring units		
Engineer's requirements		Contractor's Offer
Monitored parameters :		
• Output Voltage		Yes/No
• Output current		Yes/No
• Structure to reference electrode potential		Yes/No
• AC Power status		Yes/No
• Ambient Temperature		Yes/No
• Tamper Detection		Yes/No
• Send Signals every 24 hours		Yes/No
• GPS Location		Yes/No
Description	Engineer's Offer	Contractor's Offer
Battery life	15 year life span or better	
Communication	2G;4G;LTE Cat-M1 & NB-IoT Enabled	
GPS Enabled	Yes	

6.4. Transformer Rectifier Unit (TRU) with integrated RMU Installation specification

The Contractor shall supply an integrated TRU with RMU system. The TRU shall conform to the latest standards and UW Specification (to be developed in this project).

Transformer Rectifier unit (TRU) specification		
Description	Engineer's Requirement	Contractor's Offer
Single phase current	Up to 50 A (depending on existing power)	
Three phase current	Up to 200 A (depending on existing power)	
Thyristor based units	3-Phase or Single Phase full bridge rectification.	
Output ripple	controlled	
MOV Rating	40 kA	
Spark Gap	100 kA	
Analog signal input impedance	>100 Mohm	
Over current protection	To be done with appropriately rated circuit breaker or semiconductor fuses	
Control	PLC controlled using 3 term control loops on either of the control modes available	
Data Logging	To do sub second data logging of all collected data onto removable 4GB SD card. Data stored in Excel format	
Network protocol	GSM based monitoring system shall be integrated into the unit that can do online logging at 10sec intervals	

Programming	The unit shall be programmed to any timing cycle to interrupt the output to simulate the operation of a DC interrupter. A current limit shall be programmed for the interruption cycle.	
Industrial Protocols to be used	Modbus IP/Modbus Serial/Ethernet/CanBus/Profibus Slave	
Control system	To be fully programmable	
Parameters to be available for logging and monitoring		
1. DC Output Voltage 0-100V		Yes/No
2. DC Output Current 0-300A		Yes/No
3. Reference Potential +10V to -10V		Yes/No
4. Output Set point		Yes/No
5. Control Mode		Yes/No
6. 6 Digital Inputs		Yes/No
7. 6 Digital Outputs		Yes/No
Parameters to be controlled		
o DC Output Voltage 0-100V		Yes/No
o DC Output Current 0-300A		Yes/No
o Reference Potential +10V to -10V		Yes/No
o Output Set point		Yes/No
o Control Mode		Yes/No
o 6 Digital Outputs		Yes/No

6.5. TRU Fencing

The Contractor needs to supply, Install and commission an Clear-Vu/Anti-climb Mesh Aperture or similar approved - 12.7mm x 76.2mm (spacing) , 4mm (coating)/ Height 2.2m high x 2.9m wide, square posts 80 mm x 80 mm x 2 mm HD galvanized and P.E (Polyester Electrostatic) coating and color black.

Fence Height:

- The minimum height of the perimeter fence shall be 2.2 meter-high above the finished natural ground level

Poles/ Posts

- High tensile square posts to be used (80mm x 80mm x 2600mm high)
- Poles should be 2600mm
- The post to be hot dip galvanized in accordance to ISO 1461
- The distance between the poles must be such a way that the welded mesh panels fit tight against each other and to provide the required structural stability and sturdiness
- Poles must not be less than 60mm in cross section and must not be capable of being bent

by human force, or easily bent when accidentally pumped by a car

- Poles must be locking mechanism to enable the mesh panels to be fully secured against each other and lock into place along the entire length
- Poles shall be hot dip galvanized then be polyester electrostatic coated
- Panel poles must have a flash panel post finish with no climbing aid from both the inside and outside of the fence

FOUNDATIONS

- Foundations for the poles shall be 200mm x 200mm in cross section and 600mm deep
- A 25 Mpa/19mm 28 days' strength of concrete to be used.

Anti-Climb Mesh Panels

- Mesh panels shall be high tensile steel mesh wrap
- Mesh panels shall be 2.2m high above the finished ground level where the ground is relevantly flat
- The width of the mesh panels must be according to manufacturer's design specification to enable a structural stable fence but shall not be more than 2.9 m wide
- Where the site or ground level is sloping the mesh panels shall also be stepped to follow the topographical profile, where this occurs the steps shall cover the whole width of the mesh panel
- The diameter of the mesh strands both shall be 4mm horizontal and 4mm vertical
- The panels aperture size (centre to centre) shall be 9mm vertical and 76.2mm horizontal
- All the mesh panels must be secured along the entire length of the poles with a mechanism and using anti vandal bolts that cannot be tempered with or manoeuvred with standard tools
- All mesh panels fixtures shall be on the inside of the fence and not be accessible from the outside.
- The mesh panels, poles and fixtures shall be hot deep galvanised and be polyester electrostatic coated

Over climb prevention

- 100mm high toughened steel razor ninja spikes to be fixed on top of the fence of the mesh wire panels along the entire length of the fence
- To be secured tight with anti-vandal shear nuts and bolts from the inside of the fence
- Spikes shall also be hot deep galvanised then be polyester coated

Anti-Burrow/Anti-Dig

- A mesh panel to be the same specification as the mesh panel above the ground shall be secured along the lower edge integrated angle along the full width of the fence between the post
- The anti-dig mesh panels shall be at least 600mm below the finished ground level with anti-vandal bolts on the inside and against the concrete foundations for the posts

Below is the data sheet to be filled by the contractor

TRU Fencing Data sheet		
Description	Engineer's Requirement	Contractor
Type of Fence	Anti-climb Mesh Aperture or similar and approved	
Fence Spacing	12.7mm x 76.2mm	
Coating	Marine fusion bond	
Fence Height	2.4 m high above the finished natural ground level	
Panel Width	3.305 m	
diameter of the mesh strands	3mm horizontal and 3mm vertical	
Over Climb prevention		
Height	100mm	
Type	High Security Razor coil	
Coating	hot deep galvanised then be polyester coated	
Panel Posts		
Post type	Taper post	
Square post height	3m	
Square post coating	Marine Fusion bond.	
Anti-Burrow		
Size	600 mm deep	
Concrete strength	25 Mpa/19mm 28 days'	

6.6. Concrete Structure Housing

6.6.1. Housing overview

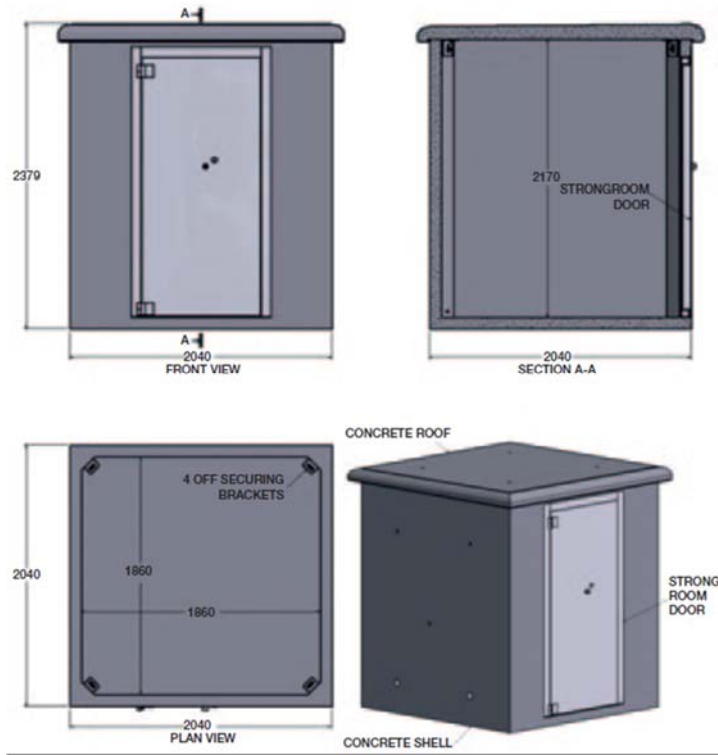


Figure 2: TRU Housing structure

This housing is made up of pre-cast concrete housing. its length of 2040-mm, width 2040-mm and height of 2379-mm. A side review consists of two circles, 50.75 cm from the side of concrete to the centre of a diameter of a circle and 10 cm from the top to centre to diameter. A back and top of a housing is fully sealed with concrete. It shall also have a strong room door (Steel door).

6.6.2. Concrete base plinth

The concrete base plinth shall be 304 cm x 304 cm. The thickness of it should be 0.25m with a mesh wire REF 617

6.6.3. Tamper Detection Sensor

The TRU Housing structure shall be fitted with a door tamper detection sensor. The Tamper Detection sensor is an application ready Sigfox/or similar enabled transceiver. A smart sensor perfectly suited for tamper detection applications. This sensor provides connection to national and global network infrastructure for reliable and secure communications. This standalone rugged small form factor sensor device delivers real time tamper detection data for many use cases and can be configured accordingly. This can be a very useful tool to prevent vandalism on the existing CP system.



Figure 3: Tamper Detection Sensor

The Tamper detection sensor shall have the following features

- Tamper detection data through Sigfox/similar compliant radio networks
- Perfect for Security, Vandalism and Monitoring applications
- Low power Passive Infrared Sensor support
- Movement detection
- Magnetic Switch Support (open / close states)
- Rugged IP67 enclosure
- Fully Internal battery powered
- Long range connectivity
- Low Cost Low power design with up to 10+ year autonomy
- Small, Compact and easy to install and conceal
- It shall have the following Peripheral Options:
 - Digital and Analog IO
 - Bluetooth
 - GPS
 - Early warning and alarm
- It shall have the following Warning capabilities:
 - Tamper Detect
 - Battery end of life
 - Over Temperature

Temper Detection Sensor Technical Specifications		
Description	Engineer's Requirements	Contractor's Offer
Description		
Dimensions	110 x 58 x 30 mm	
Weight	100 grams	
Housing	IP67	
Antennas	All Integrated (Internal	
	ICAS , EN 300-220,EN 301-489,EN 60950; CE	
Firmware		
Network Protocol	Sigfox/similar	
Transmission cycles	2,50,100 or 140 frames per day	
Data Encryption	AES128	
Performances		
SF RF Power	14dBm(25Mw)	
SF RF Sensitivity	up to -127dBm	

6.7. Security Camera System

The security camera system shall comprise of the following components or similar approved:

6.7.1. Network Video Recorder

Network Video Recorder	
Engineer's requirements	Contractor's Offer
316 Channel Compact 1U 1HDD WizSense Network Video Recorder 2 Channel 2 x HDMI Output.	
Video Storage Capacity: 32 Cameras, 14 Days Continuous at 1080P resolution.	
1-channel face detection and recognition (AI by NVR);	
1-channel perimeter protection (AI by NVR);	
up to 10 face databases and 5,000 face images;	
4-channel SMD Plus (AI by NVR) AI by camera: Face detection and recognition, perimeter protection,	
SMD Plus 6 attributes: Gender; age group (6); glasses; expressions (8); mouth mask; beard	

6.7.2. Sensing Network Camera

Sensing Network Camera	
Engineer's requirements	Contractor's Offer
5MP Smart Dual Illumination Active Deterrence Fixed-focal Bullet Wiz-Sense Network Camera DH-IPC-HFW3549T1P-AS-PV-0360B-S3	
5-MP 1/2.7" CMOS image sensor, low luminance, and high definition image.	
Intelligent monitoring: Intrusion, tripwire (the two function support the classification and accurate detection of vehicle and human)	
Abnormality detection: Motion detection, privacy masking, scene changing, audio detection, no SD card, SD card full, SD card error	

6.7.3. Router Including 24 Month data plan

Data sheet		
Software		
Description	Engineer's requirement	Contractor's offer
WAN Connection Modes	Static IP, DHCP, PPPOE and 4G	
VPN	VPN client (PPTP, L2TP, IPSEC) VPN server (PPTP, L2TP, IPSEC)	
Wi-Fi	802.11b/g: Up to 54 Mbps 802.11n: Up to 150 Mbps	
Encryption	WEP, WPA and WPA2	
NAT	Support port mapping	
Network Mode	Southeast Asia version: B1/B3/B5/B8/B38/B39/B40/B41 Oceania and North American version: B1/B2/B3/B4/B5/B7/B8/B28/B40 European version: B1/B3/B5/B7/B8/B20/B38/B40/B41	
System Management	Support import and export of configuration file Support local upgrade Support system log	
Hardware		
Memory	128 M	
WAN Port	One 10/100 M RJ-45 port	
LAN Port	Four 10/100 M RJ-45 ports	
Serial Port	1 RS232 serial port, port rate: 115200 b/s	
Antenna	Cellular: 2 standard SMA female ports with impedance of 50Ω Wi-Fi: 1 standard SMA male port with impedance of 50Ω	
Indicators	Power, System, Online, SIM, Local Network, WAN, Wi-Fi and Signal Strength indicators	
SIM/UIM Card Port	1.8V/3V SIM/UIM card	
Reset	Restore factory defaults	
Operating Temperature	-35°C to +75°C (-31°F to +167°F)	
Operating Humidity	5%–95%	
Power Consumption	6.6W	
Power Supply	DC 12V/1.5A	
Dimensions (L × W × H)	207 mm x 135 mm x 28 mm (8.15" × 5.31" × 1.10")	
Weight	0.8 kg (1.76 lb)	

6.7.4. UPS Data Sheet (10 kVA on-line Tower Ups)

UPS Technical Specifications		
Description	Engineer's requirement	Contractor's Offer
Type	True double-conversion online UPS	
Input Voltage	110-300 V-AC	
Input power factor correction	0.99	
Output power factor	0.8	
Convertor Mode availability	Yes	
ECO mode operation for energy saving	Yes	
Battery Design	Hot-swappable battery design	
Generator Compatible	Yes	

6.8. Decommissioning & Disposal

The materials/Assets to be removed are as follows:

- The following TRU's shall be decommissioned and transported together with their related accessories to Midmar WW Workshop:
 - SAMCOR TRU
 - Groenkloof TRU
 - Mpophomeni TRU
- The following TRU's shall be decommissioned and transported together with their related accessories to Mkondeni Workshop:
 - Eston TRU
 - Mlaas Road TRU
 - DV Harris TRU
 - Table Mountain TRU
 - Ixopo TRU

6.9. Training

The Cathodic Protection Remote monitoring training shall be between intermediate and expert level. The training shall be tailor made for the operation of the newly installed remote monitoring system for all the various pipelines and SCADA operation. The training shall cover both the theoretical and practical components. The theoretical part shall be the standard OEM offering, and the practical part shall be tailor made for the system. The training session shall consist of 10 Technicians/Artisans

The training shall include but not limited to the following:

- Theory of Cathodic Protection
- Operation of Transformer Rectifier Units and Test posts
- Operation of the newly installed Remote Monitoring Units

- CP Remote Monitoring data analysis (Alarms, Notifications, Faults and proper data handling)
- Troubleshooting, Emulation, Hardware and software considerations
- On-job Training

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6.10. Commissioning and Testing

The following steps shall be followed:

- Factory Acceptance Testing
- Site Acceptance Testing
- Cold Commissioning
- Hot Commissioning (including Pre-Hot commissioning)
- Wet Commissioning / Testing of the entire system.

6.11. Direct Current Voltage Gradient (DCVG) Survey

The Contractor is to conduct DCVG survey on all UW – Emthonjeni Region pipelines:

- The Survey team shall be competent and skilled in DCVG Survey
- Calibrated and certificated meter shall be used to conduct the DCVG survey
- Follow approved national or international standards for survey set up, methodology, gathering field data, assessment of CP system hardware, etc.
- The Contractor shall engage with land owners for access to CP systems within their land
- Submission of technical, commercial and business reports.

6.12. Asset Health System for CP system

The Contractor is to appoint a specialists contractor in the development of the Asset Health system related to the Water Industry CP system. The Asset Health system shall consist of the following minimum requirements:

- Structured and unstructured data source system integration
- Integrated seamlessly with SCADA System
- Uses a hybrid system (local and cloud)
- Develop analytical tools and dashboards
- Develop algorithms for the control and monitoring of the CP system
- Integrate the Asset Health system into the SCADA system

7. **Reference data**
Umgeni Water Specifications
OEM Manuals
National and International Standards

8. Applicable national and international standards

SANS
IEC
ANSI
BS
Other Related standards

9. Particular/Generic specifications

- Umgeni Water Insurance Summary and Claims Procedure
- Drawings
- Umgeni Water Insurance Summary and Claims Procedure
- Umgeni Water Particular Specification for OHSA 1993 Health and Safety
- Umgeni Water Particular Specification for 164mm to 2230mm Diameter Steel Pipes, Special Coatings and Linings
- Umgeni Water Technical Specifications - Operation and Maintenance (O&M) Manuals
- Umgeni Water Insurance Summary and Claims Procedure
- Umgeni Water SHEQ Guideline 5-43-1 Rules for Contractors on Site
- Umgeni Water Particular Specification for Electrical Works.
- Umgeni Water Particular Specification Drawings.
- Umgeni Water Particular Specification for Instrumentation.
- Umgeni Water Particular Specification for Cable Type.
- Umgeni Water Particular Specification for Labelling.
- Umgeni Water Quality Assurance Procedures
- Asset Numbering Standard
- O-M Manual Version2
- Technical Spec of Materials and Workmanship for Cathodic Protection Installations
- SCADA Standard Specification Rev06

10. Approvals

The Project Manager / Lead Engineer is responsible for all approvals:

- Approval of program
- Approval of specifications/datasheets before procuring of equipment.

11. Procurement

Umgeni Water SCM Procedure

12. Access to land / buildings / sites

- The Contractor is to submit the Safety File for approval by UW.
- Access to the site by the Contractor will be arranged by the Project Manager / Lead Engineer. The SHERQ Department and Security will need to approve the access to site.
- The Contractor is to adhere to all UW access requirements.
- The access for the Contractor is restricted to only the place where work will be taking place, and their activities shall not impact day to day operations for UW.

13. Planning and programming

- Microsoft Office Project or similar
- The Contractor is to submit a detailed program for the entire project indicating project timelines and key deliverables for each phase.

14. Software application for programming

- SCADA, PLC/RTU and Telemetry systems
- Cloud system and Asset Health system
- Cathodic Protection Remote Monitoring system
- Sensors

- 15. Quality management**
- ISO 9001
 - ISO 14001
 - UW Quality Management System (QCP)
 - ISO 18086:2019
 - ISO 21857:2021
 - NACE SP0169:2013
- 16. Format of communications**
- O-M Specification for submission of final documentations
 - Communications is via all platforms
- 17. Key personnel**
Refer to Returnable Schedule T2.2.17 and C1.2 Part 2: Contract Data to be provided by the Service Provider.
- 18. Management meetings**
- *Monthly meetings*
 - *Weekly reporting of progress. Report to be submitted to the PM / Lead Engineer.*
 - *Adhoc meetings as required by the PM/Lead Engineer*
- 19. Forms for contract administration**
State requirements, if any, for use of standard forms for contract administration purposes and attach pro forma documents as annexures (Refer to Part C5).
- Also state if forms are available in electronic format.*
- 20. Electronic payments**
The service provider will be paid electronically through the normal Umgeni Water procedures
- 21. Daily records**
Service Provider shall sign daily register
- 22. General indemnity insurances**
Refer to C.1.2 Contract Data Clause 5.4.1 and state number of copies and the place where policies are to be presented.
- 23. Payment certificates**
GCC 2015
Monthly payments
- Preliminary and General as per BOQ and activities
 - 50% payments after FAT
 - 75% payment with materials on site
 - 95% after project handover
 - 5% retention after 1 year proving period. Proving period starts after practical completion certificate.
- 24. Use of documents by the Employer**
The Operational manuals shall be used for operating the system and for any maintenance issues
- 25. Property provided for the Service provider's use**
- Ablution facilities
 - Water and Electricity
- 26. Proof of compliance with the law**
Proof of statutory / professional registration is required for key personnel as applicable in the following fields:

-
- Master Electrician

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PART C4: SITE INFORMATION

Equipment Location	Area/Section	Co-ordinates/Location
Mearns Pipeline to Balgowan outlet to Midmar Dam		
Mearns Pump Station TRU	Mooi River	29°14'51.7"S,29°58'15.2"E
Balgowan Outlet TRU	Mooi River	29°23'19.6"S,30°03'41.7"E
Spring Grove Farm TRU	Mooi River	29°17'30"S,29°59'8.6"E
Nottingham Road to balgowan TRU	Mooi River	29°22'48.90"S, 30° 2'5.60"E
Nottingham Road TRU	Mooi River	29°21'10.15"S, 29°59'56.05"E
251 Pipeline from Midmar Raw Water to Midmar WTW		
Midmar Dam TRU	Midmar	29°29'30.76"S,30°12'31"E
251 Pipeline from Midmar Portable Water to st Josephs		
SAMCOR TRU	Midmar	29°29'37.2"S,30°14'22.75"E
61 Pipeline World's view to Umlaas road		
ED2 TRU	Midmar - 61	29°38'39.9"S,30°21'12.5"E
Bisley TRU	Midmar - 61	29°40'33.8"S,30°23'43.5"E
Stockowners TRU	Midmar - 61	29°42'24.6"S,30°27'25.8"E
53 Pipeline (DV Harris to Umlaas Road)		
Mlaas Road TRU	DV Harris	29°42'46.4"S,30°29'57.3"E
DV Harris Plant	DV Harris	29°42'46"S,30°29'57"E
56 Pipeline - Midmar WTP (Mill Falls PS) to Howick West PS to Groenkloof PS		
Groenkloof TRU	Midmar	29°34'14.89"S,30°17'19"E
Howick west PS to Mpophomeni Rising main		
Mpophomeni TRU	Midmar	29°32'14.702"S,30°15'519"E
Eston Pipeline (Umlaas Road to Eston)		
Eston-Sugar Cane Farm	Eston TRU	29°51'09"S,30°31'25"E
Lion Park Pipeline (umlaas RD to Lion Park)		
Lion Park TRU	Lion Park	29°41'42"S,30°29'41"E
Richmond Pipeline (take off from 61 Pipeline to Richmond)		
Farm TRU(Richmond)	Richmond	29°46'33.4"S,30°21'27.7"E
Sugar Cane Farm TRU	Richmond	29°51'51.3"S,30°16'58.3"E
Cabbage Farm TRU	Richmond	29°49'46.9"S,30°19'35.2"E

Equipment Location	Area/Section	Co-ordinates/Location
63 Pipeline (off take from 61 Pipeline) to Thornville		
Thornville Reservoir TRU	Richmond	29°44'42.6"S,30°24'24.4"E
Ixopo Pipeline		
Ixopo TRU	Ixopo	Inside Ixopo Waste plant
69 Belfort Pipeline (Claridge to Wartburg)		
Costa Mint Farm TRU	Wartburg	29°28'16.3"S,30°28'23.5"E
Fountain Estata CPU	Wartburg	29°26'54.8"S,30°32'30.5"E
Off takes Pipeline (Wartburg to Dalton Pipeline)		
Schroeders TRU	Wartburg	29°23'37.1"S,30°33'51.1"E
Phase 2 Pump Station TRU	Wartburg	29°21'49.9"S,30°35'30.3"E
Bruyns Hill Pipeline (Wartburg to Bruyst Hill Pipeline)		
Old Bruynshill Pump Station	Wartburg	29°26'51.6"S,30°37'18.4"E
Faun Leas TRU	Wartburg	29°26'2.2"S,30°35'31.5"E
Bruynshill TRU	Wartburg	29°25'40.1"S,30°34'22.4"E
Water Pipeline 11204 (Calridge to Table Mountain Pipeline)		
Table Mountain TRU	Table Mountain	29°35.256"S,30°30.806E

PART C5: ANNEXURES

- C.5.1 Umgeni Water Insurance Summary and Claims Procedure
- C.5.2 Drawings
- C.5.3 Umgeni Water Insurance Summary and Claims Procedure
- C.5.4 Umgeni Water Particular Specification for OSHA 1993 Health and Safety
- C.5.5 Umgeni Water Particular Specification for 164mm to 2230mm Diameter Steel Pipes, Specials, Coatings and Linings
- C.5.6 Umgeni Water Technical Specifications - Operation and Maintenance (O&M) Manuals
- C.5.7 Umgeni Water Insurance Summary and Claims Procedure
- C.5.8 Umgeni Water SHEQ Guideline 5-43-1 Rules for Contractors on Site.
- C.5.9 Umgeni Water Particular Specification for Electrical Works.
- C.5.10 Umgeni Water Particular Specification Drawings.
- C.5.11 Umgeni Water Particular Specification for Instrumentation.
- C.5.12 Umgeni Water Particular Specification for Cable Type.
- C.5.13 Umgeni Water Particular Specification for Labelling.
- C.5.14 Umgeni Water Quality Assurance Procedures
- C.5.15 Asset Numbering Standard
- C.5.16 O-M Manual Version2
- C.5.17 Technical Spec of Materials and Workmanship for Cathodic Protection Installations
- C.5.18 SCADA Standard Specification Rev06



CONTRACT NO: 201/------

CONTRACT TITLE

VOLUME 3 – Annexures (Omit if not applicable)

Issued by:

Umgeni Water
310 Burger Street
Pietermaritzburg

Prepared by:

Umgeni Water
310 Burger Street
Pietermaritzburg

Note to compiler: If prepared by a Consultant, delete Umgeni's detail and insert that of the Consultant. Delete this note.

Tender Queries:

Contact Name: (insert SCM Practitioner's name)

Telephone: insert contact person's tel.no.

Technical Queries:

Contact Name: insert contact person's name

Telephone: insert contact person's tel. no.

Name of Tenderer:

ANNEXURE to C1.2

ANNEXURE to C3.1 *Add as necessary and create a fly-sheet for each. Delete this note.*

Disclaimer

Personal Information (PI) requested in this form is mandatory for operational and administrative processes, and to comply with regulatory requirements. Umgeni Water will take reasonable steps to ensure that the Personal Information collected on this form is processed responsibly, kept safe and confidential, and does not unjustifiably infringe your privacy. This is in compliance to the Protection of Personal Information Act No. 4 of 2013.