OVERBERG WATER BAORD

OVERBERG WATER BOARD (OWB) AS AN ORGAN OF STATE SUBSCRIBES TO AND PROPAGATES BOTH THE NOTION OF BROAD BASED BLACK ECONOMIC EMPOWERMENT ACT, 2003 (Act No. 53 of 2003) (BBBEE), THE PREFERENTIAL PROCUREMENT POLICY FRAMEWORK ACT, 2000 (Act No. 5 of 2000) AND THE PREFERENTIAL PROCUREMENT REGULATIONS, 2022.

DUE AT 12:00 PM

(CLOSING DATE: 22 August 2025

BID RFP OW 004 2025/26

SUPPLY, DELIVER AND INSTALLATION OF A SUPERVISORY CONTROL AND DATA ACQUISITION (SCADA) SYSTEM FOR OVERBERG WATER (OWB) IN THE WESTERN CAPE.

SUBMIT BID DOCUMENTS TO:

Physical address:
1 Niblick Way, Ground Floor
Trident Park 3
Somerset West
7137

Non Compulsory site visit session
Date: 05 August 2025
Time: 9:30 am
Venue: Duivenhoks WTW (34°03'33.34"S 20°57'31.83"E)

Bidder's name, company address and stamp	

Contents

THE TENDER

PART T1: TENDERING PROCEDURES

T1.1 TENDER NOTICE AND INVITATION TO TENDER

Overberg Water Board invites tenders for the supply, deliver and installation of a supervisory control and data acquisition (SCADA) system for Overberg Water (OWB) in the western cape. The following tenderers who are registered with the Construction Industry Development Board (CIDB), or are capable of being so registered prior to the evaluation of submissions are eligible to submit tenders:

- Contractors who have a contractor grading designation equal to or higher than a contractor grading designation determined in accordance with the sum tendered for supply, deliver and installation of a supervisory control and data acquisition (SCADA) system for Overberg Water (OWB) in the western cape. It is estimated that the tenderer must have a CIDB contractor grading designation of a minimum of 5 EP/ME/CE or Higher.
- Tenders from contractors registered as potentially emerging enterprises but with a CIDB contractor grading designation lower than a contractor grading designation determined in accordance with the sum tendered, or a value determined in accordance with Regulation 25(1B) or 25(7A) of the Construction Industry Development Regulations, as per amended notice no. 357 of 2019, will not be accepted.
- Only tenderers that meet all the eligibility criteria under clause C.2.1 of the Tender Data will be considered.

Bid documents will be available on the e-tender website at www.etenders.gov.za, the i-tender website at www.cidb.org.za and OWB website at www.overbergwater.co.za from 25 July 2025 at 12:00 PM

The bids will be evaluated in three stages with stage one focusing on initial screening on Supply Chain Management (SCM) returnable requirements, stage two focusing on responsiveness to the functionality criteria and stage three focusing on price and B-BBEE as outlined in this bid document. Bidders who fail to meet the minimum requirements for each stage will not be considered further.

THE CLOSING DATE AND TIME FOR RECEIPT OF TENDERS IS 22 August 2025

Only Tenders complying with the following requirements will be considered:

I. The tender is for contractors who shall have a CIDB contractor rating as outlined above
II. Tenders sealed in envelopes conspicuously marked as follows:

Tender Bid No RFP OW 004 2025/26

OVERBERG WATER BOARD

OWB Head Office Reception

Physical address: **1 Niblick Way, Ground Floor, Trident Park 3, Somerset West,7137**

Bid Box is situated on Ground Floor, OWB Office at the above-mentioned address. Telegraphic, telephonic, telex, facsimile and late tenders will not be accepted.

Requirements for sealing, addressing, delivery, opening and assessment of tenders are stated in the Tender Data.

(SBD 1) PART A

RETURNABLE SCHEDULE 1: INVITATION TO BID AND THE TERMS AND CONDITIONS OF BIDDING INVITATION TO BID

YOU ARE HEREBY INVITED TO BID FOR REQUIREMENTS OF THE *OVERBERG WATER BOARD*					
BID NUMBER:	**RFP OW-004 2025/26**	CLOSING DATE:	**22 August 2025**	CLOSING TIME:	**12:00 PM**
DESCRIPTION	**SUPPLY, DELIVER AND INSTALLATION OF A SUPERVISORY CONTROL AND DATA ACQUISITION (SCADA) SYSTEM FOR OVERBERG WATER (OWB) IN THE WESTERN CAPE.**				
THE SUCCESSFUL BIDDER WILL BE REQUIRED TO FILL IN AND SIGN A WRITTEN CONTRACT FORM OR AGRREMENT OF FORM OF OFFER AND ACCEPTANCE.					
BID RESPONSE DOCUMENTS MAY BE DEPOSITED IN THE BID BOX SITUATED AT *Overberg Water Board Head Office Reception. Physical address: 1 Niblick Way, Ground Floor, Trident Park 3, Somerset West, 7137*					

SUPPLIER INFORMATION					
NAME OF BIDDER					
POSTAL ADDRESS					
STREET ADDRESS					
TELEPHONE NUMBER	CODE		NUMBER		
CELLPHONE NUMBER					
FACSIMILE NUMBER	CODE		NUMBER		
E-MAIL ADDRESS					
VAT REGISTRATION NUMBER					
TAX COMPLIANCE STATUS	TCS PIN:		OR	CSD No:	
B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE [TICK APPLICABLE BOX]	Yes No		B-BBEE STATUS LEVEL SWORN AFFIDAVIT		Yes No
[A B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE/ SWORN AFFIDAVIT (FOR EMES & QSEs) MUST BE SUBMITTED IN ORDER TO QUALIFY FOR PREFERENCE POINTS FOR B-BBEE]					

1. ARE YOU THE ACCREDITED REPRESENTATIVE IN SOUTH AFRICA FOR THE GOODS /SERVICES /WORKS OFFERED?	Yes No [IF YES ENCLOSE PROOF]	ARE YOU A FOREIGN BASED SUPPLIER FOR THE GOODS /SERVICES /WORKS OFFERED?	Yes No [IF YES, ANSWER PART B:3]
2. TOTAL NUMBER OF ITEMS OFFERED		3. TOTAL BID PRICE	R
4. SIGNATURE OF BIDDER		5. DATE	
6. CAPACITY UNDER WHICH THIS BID IS SIGNED			

BIDDING PROCEDURE ENQUIRIES MAY BE DIRECTED TO:		**TECHNICAL INFORMATION MAY BE DIRECTED TO:**	
DEPARTMENT	Overberg Water Board	DEPARTMENT	Overberg Water Board
CONTACT PERSON	Ms Zanele Tamarana	CONTACT PERSON	Mr. Xolani Mdletshe
TELEPHONE NUMBER	021 851 2155 ☐	TELEPHONE NUMBER	028 214 1207
FACSIMILE NUMBER	N/A	FACSIMILE NUMBER	N/A
E-MAIL ADDRESS	ztamarana@overbergwater.co.za	E-MAIL ADDRESS	xmdletshe@overbergwater.co.za

(SBD 1) PART B

TERMS AND CONDITIONS FOR BIDDING

1. BID SUBMISSION:	
1.1. BIDS MUST BE DELIVERED BY THE STIPULATED TIME TO THE CORRECT ADDRESS. LATE BIDS WILL NOT BE ACCEPTED FOR CONSIDERATION.	
1.2. ALL BIDS MUST BE SUBMITTED ON THE OFFICIAL FORMS PROVIDED–(NOT TO BE RE-TYPED)	
1.3. THIS BID IS SUBJECT TO THE PREFERENTIAL PROCUREMENT POLICY FRAMEWORK ACT AND THE PREFERENTIAL PROCUREMENT REGULATIONS, 2022	
2. TAX COMPLIANCE REQUIREMENTS	
2.1. BIDDERS MUST ENSURE COMPLIANCE WITH THEIR TAX OBLIGATIONS.	
2.2. BIDDERS ARE REQUIRED TO SUBMIT THEIR UNIQUE PERSONAL IDENTIFICATION NUMBER (PIN) ISSUED BY SARS TO ENABLE THE ORGAN OF STATE TO VIEW THE TAXPAYER'S PROFILE AND TAX STATUS.	
2.3. APPLICATION FOR THE TAX COMPLIANCE STATUS (TCS) CERTIFICATE OR PIN MAY ALSO BE MADE VIA E-FILING. IN ORDER TO USE THIS PROVISION, TAXPAYERS WILL NEED TO REGISTER WITH SARS AS E-FILERS THROUGH THE WEBSITE WWW.SARS.GOV.ZA.	
2.4. FOREIGN SUPPLIERS MUST COMPLETE THE PRE-AWARD QUESTIONNAIRE IN PART B: 3.	
2.5. BIDDERS MAY ALSO SUBMIT A PRINTED TCS CERTIFICATE TOGETHER WITH THE BID.	
2.6. IN BIDS WHERE CONSORTIA / JOINT VENTURES / SUB-CONTRACTORS ARE INVOLVED, EACH PARTY MUST SUBMIT A SEPARATE TCS CERTIFICATE / PIN / CSD NUMBER.	
2.7. WHERE NO TCS IS AVAILABLE BUT THE BIDDER IS REGISTERED ON THE CENTRAL SUPPLIER DATABASE (CSD), A CSD NUMBER MUST BE PROVIDED.	
3. QUESTIONNAIRE TO BIDDING FOREIGN SUPPLIERS	
3.1. IS THE ENTITY A RESIDENT OF THE REPUBLIC OF SOUTH AFRICA (RSA)?	☐ YES ☐ NO
3.2. DOES THE ENTITY HAVE A BRANCH IN THE RSA?	☐ YES ☐ NO
3.3. DOES THE ENTITY HAVE A PERMANENT ESTABLISHMENT IN THE RSA?	☐ YES ☐ NO
3.4. DOES THE ENTITY HAVE ANY SOURCE OF INCOME IN THE RSA?	☐ YES ☐ NO
3.5. IS THE ENTITY LIABLE IN THE RSA FOR ANY FORM OF TAXATION?	☐ YES ☐ NO
IF THE ANSWER IS "NO" TO ALL OF THE ABOVE, THEN IT IS NOT A REQUIREMENT TO REGISTER FOR A TAX COMPLIANCE STATUS SYSTEM PIN CODE FROM THE SOUTH AFRICAN REVENUE SERVICE (SARS) AND IF NOT REGISTER AS PER 2.3 ABOVE.	
3.6.	

NB: FAILURE TO PROVIDE ANY OF THE ABOVE PARTICULARS MAY RENDER THE BID INVALID.
NO BIDS WILL BE CONSIDERED FROM PERSONS IN THE SERVICE OF THE STATE.

SIGNATURE OF BIDDER: .....

CAPACITY UNDER WHICH THIS BID IS SIGNED: .....

DATE: .....

IMPORTANT NOTICE

Bidders should ensure that bids are delivered timeously to the correct address. If the bid is late, it will not be accepted for consideration. The bid box is open, 5 days a week, Monday to Friday, between 08h00 – 17h00 and to Friday. Not open on public holidays.

The bid box is located in Overberg Water Board

OWB Head Office Reception Physical address:

1 Niblick Way, Ground Floor, Trident Park 3, Somerset West, 7137

All bids must be submitted on the official forms

All bidders must sign a reception tender register when submitting their tender documents Writing must be in block letters and black ink.

This bid is subject to the Preferential Procurement Policy Framework Act and the Preferential Procurement Regulations, 2022, The General Conditions of Contract for Construction Works 3rd Edition 2015 and any other special conditions of contract specified by OWB.

BIDDING PROCEDURE ENQUIRIES

Name: Ms Zanele Tamarana
Office Telephone No.: (021) 851 2155
E-mail: ztamarana@overbergwater.co.za

TECHNICAL ENQUIRIES

Name: Mr. Xolani Mdletshe
Office Telephone No.: (028) 214 1207
E-mail: xmdletshe@overbergwater.co.za

T1.2 TENDER DATA

Clause number	Tender Data
	The conditions of tender are the Standard Conditions of Tender (Annex C as published/ amended by CIDB in August 2020) contained in Annex C of the CIDB Standard for Uniformity in Engineering and Construction Works Contracts (August 2019) as published in Government Gazette No 42622, Board Notice 423 of 2019 of 08 August 2019. (See www.cidb.org.za). The standard conditions of tender for procurements 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 tender data given below is cross-referenced to the clause in the standard conditions of tender to which it mainly applies.
C.1.1	The employer is the **Overberg Water Board**
C.1.2	For this contract, the following documents will be adopted: The **single volume** procurement document issued by the employer comprises of the following: **The Tender** **Part T1: Tendering procedures** T1.1 - Tender notice and invitation to tender T1.2 - Tender data **Part T2: Returnable documents** T2.1 - List of returnable documents T2.2 - Returnable schedules **The Contract** **Part C1 - Agreements and Contract data** C1.1 – Form of offer and acceptance C1.2 – Contract data C1.3 – Construction guarantee **Part C2 - Pricing Data** C2.1 – Pricing Instructions C2.2 – Bill of Quantities **Part C3 - Scope of Works** C3.1 – Description of the works C3.2 – Construction C3.3 - Annexures **Part C4 - Site Information**
C.1.4	The Employer's agent for the purpose of this tender is Mr Xolani Mdletshe or his successor who is chosen by the Employer. Address: **OWB Head Office Reception** **1 Niblick Way, Ground Floor, Trident Park, Somerset West, 7137** **Name:** Mr. Xolani Mdletshe **Office Telephone No.:** (028) 214 1207 **E-mail:** xmdletshe@overbergwater.co.za

C.1.5	**Cancellation and Re-Invitation of Tenders**
C.1.5.1	An employer may, prior to the award of the tender, cancel a tender if- a) due to changed circumstances, there is no longer a need for the engineering and construction works specified in the invitation; b) funds are no longer available to cover the total envisaged expenditure; or c) no acceptable tenders are received. d) there is a material irregularity in the tender process.
C.1.5.2	The decision to cancel a tender invitation must be published in the same manner in which the original tender invitation was advertised
C.1.5.3	An employer may only with the prior approval of the relevant treasury cancel a tender invitation for the second time.
C.1.6	**Procurement procedures**
C.1.6.1	Unless otherwise stated in the tender data, a contract will, subject to C.3.13, be concluded with the tenderer who in terms of C.3.11 is the highest ranked or the tenderer scoring the highest number of tender evaluation points, as relevant, based on the tender submissions that are received at the closing time for tenders.
C.1.6.2	**Competitive negotiation procedure**
C.1.6.2.1	Where the tender data require that the competitive negotiation procedure is to be followed, tenderers shall submit tender offers in response to the proposed contract in the first round of submissions. Notwithstanding the requirements of C.3.4, the employer shall announce only the names of the tenderers who make a submission. The requirements of C.8 relating to the material deviations or qualifications which affect the competitive position of tenderers shall not apply.
C.1.6.2.2	All responsive tenderers or at least a minimum of not less than three responsive tenderers that are highest ranked in terms of the evaluation criteria stated in the tender data shall be invited to enter into competitive negotiations based on the principle of equal treatment, keeping confidential the proposed solutions and associated information. Notwithstanding the provisions of C.2.17, the employer may request that tenders be clarified, specified and fine- tuned in order to improve a tenderer's competitive position provided that such clarification, specification, fine- tuning or additional information does not alter any fundamental aspects of the offers or impose substantial new requirements which restrict or distort competition or have a discriminatory effect.
C.1.6.2.3	At the conclusion of each round of negotiations, tenderers shall be invited by the employer to revise their tender offer based on the same evaluation criteria, with or without adjusted weightings. Tenderers shall be advised when they are to submit their best and final offer.
C.1.6.2.4	The contract shall be awarded in accordance with the provisions of C.3.11 and C.3.13 after tenderers have been requested to submit their best and final offer.
C.2	**Tenderer's obligations**

C.2.1

Eligibility

Only those tenderers who satisfy the following criteria are eligible to submit tenders:

a) CIDB registration

Registered with the CIDB, at close of tender, in a contractor grading designation equal to or higher than a contractor grading designation determined in accordance with the sum tendered, or a value determined in accordance with Regulation 25(1B) or 25(7A) of the Construction Industry Development Regulations, as per amended notice no. 357 of 2019, for a electrical engineering works - infrastructure (EP) or Mechanical Engineering ME or Civil Engineering CE class of construction work. Tenderers whose CIDB registration expires within the tender validity period, need to demonstrate that there is a reasonable chance of being registered in the appropriate grading designation during the tender evaluation period, by submitting a copy of their timely application for CIDB registration, with their tender submission. Tenders received from such tenderers who are not capable of being registered in the required contractor designation, within 10 working days after either expiry of their registration or after being requested to provide proof of registration, will be considered non-responsive. **Note that in terms of the Construction Industry Development Board Act, 2000 (Act No. 38 of 2000) a registered contractor must apply for renewal of registration three months before the existing registration expires.**

Tenderers registered as potentially emerging enterprises but with a CIDB contractor grading designation lower than a contractor grading designation determined in accordance with the sum tendered, or a value determined in accordance with Regulation 25(1B) or 25(7A) of the Construction Industry Development Regulations, as per amended notice no. 357 of 2019, are not eligible to have their tenders evaluated.

For the sake of clarity and subject to satisfactory proof of a tenderer's ability to perform the work specified at the tendered value, the Employer lists in the table below the margins it considers reasonable. However, in the event that the sum tendered exceeds the margins shown then such tender shall be deemed non-responsive.

Category of tender	Upper limits per CIDB Regulation 17	Employer's allowable margins
EP/ME/CE 1	R0.5 m	The Employer will use its discretion in terms of CIDB Practice Note 3 on allowable margins to be accepted
EP/ME/CE 2	R1.0 m	
EP/ME/CE 3	R3.0 m	
EP/ME/CE 4	R6.0 m	
EP/ME/CE 5	R10.0 m	
EP/ME/CE 6	R20.0 m	
EP/ME/CE 7	R60.0 m	
EP/ME/CE 8	R200.0 m	

Joint Ventures are eligible to submit tenders provided that: - every member of the joint venture is registered with the CIDB; - the lead partner has a contractor grading designation of not lower than one level below the required grading designation in the class of construction works under consideration and possesses the required recognition status; and - the combined contractor grading designation calculated in accordance with

the Construction Industry Development Regulations is equal to or higher than a contractor grading designation determined in accordance with the sum tendered for a EP/ME/CE class of construction work or a value determined in accordance with Regulation 25(1B) or 25(7A) of the Construction Industry Development Regulations, as per amended notice no. 357 of 2019.

C.2.1.1	Only those bidders who satisfy the following eligibility criteria are eligible to submit bids: (a) Availability of resources (b) Previous experience on contracts of a similar value and nature (c) Have registered with the CIDB and meet the required grading of construction work
C.2.2	**Cost of Tendering**
C.2.2.1	The Employer will not compensate the tenderer for any costs incurred in attending briefings, meeting, interviews or making any submissions in the office of the Employer
C.2.2.2	The cost of the tender documents charged by the employer shall be limited to the actual cost incurred by the employer for printing the documents. Employers must attempt to make available the tender documents on its website so as not to incur any costs pertaining to the printing of the tender documents.
C.2.3	**Check documents** Check the tender documents on receipt for completeness and notify the employer of any discrepancy or omission.
C.2.4	**Confidentiality and copyright of documents** Treat as confidential all matters arising in connection with the tender. Use and copy the documents issued by the employer only for the purpose of preparing and submitting a tender offer in response to the invitation.
C.2.6	**Acknowledge addenda** Acknowledge receipt of addenda to the tender documents, which the employer may issue, and if necessary apply for an extension to the closing time stated in the tender data, in order to take the addenda into account.
C.2.7	**Clarification meeting** There will be no clarification briefing. There will be a non compulsory site visit for those who want to familiarize themselves with the location and size of our water works. We will start at Duivenhoks then Ruensveld East and end at Ruensveld West. All coordinates are found on page 96 Non Compulsory site visit session Date: 05 August 2025 Time: 9:30 am Venue: Duivenhoks WTW (34°03'33.34"S 20°57'31.83"E)
C.2.8	**Seek clarification** Request clarification of the tender documents, if necessary, by notifying the employer at least five (5) working days before the closing time stated in the tender data.
C.2.9	**Insurance** Be aware that the extent of insurance to be provided by the employer (if any) might not be for the full cover required in terms of the conditions of contract identified in the contract data. The tenderer is advised to seek qualified advice regarding insurance.
C.2.10	**Pricing the tender offer**
C.2.10.3	This contract shall not be subject to Contract Price Adjustments, foreign fluctuations, etc and all rates and prices shall remain FIXED, final and binding.
C.2.11	**Alterations to documents** Do not make any alterations or additions to the tender documents, except to comply with instructions issued by the employer, or necessary to correct errors made by the tenderer. All signatories to the tender offer shall initial all such alterations.

C.2.12	**Alternative tender offers** No alternative tender offers will be considered
C.2.13	**Submitting a tender offer**
C.2.13.1	Submit one tender offer only as a single tendering entity to provide the whole of the works identified in the contract data and described in the scope of works, unless stated otherwise in the tender data.
C.2.13.2	Return all returnable documents to the employer after completing them in their entirety either electronically (if they were issued in electronic format) or by writing legibly in non-erasable ink.
C.2.13.3	Submit the parts of the tender offer communicated on paper as an original plus the number of copies stated in the tender data, with an English translation of any documentation in a language other than English, and the parts communicated electronically in the same format as they were issued by the employer.
C.2.13.4	Sign the original and all copies of the tender offer where required in terms of the tender data. The employer will hold all authorized signatories liable on behalf of the tenderer. Signatories for tenderers proposing to contract as joint ventures shall state which of the signatories is the lead partner whom the employer shall hold liable for the purpose of the tender offer.
C.2.13.5	Seal the original tender offer as separate packages marking the packages as **"ORIGINAL"**. Each package shall state on the outside the employer's address and identification details stated in the tender data, as well as the tenderer's name and contact address.
.2.13.6	Bidders are requested to deliver the submission in one envelope and **must be ring bound**. The Employer's address for delivery of tender offers and identification details to be shown on each tender offer package are: **Title to appear on envelope one (1):** 1. CONTRACT NO.: RFP OW-004 2025/25 **SUPPLY, DELIVER AND INSTALLATION OF A SUPERVISORY CONTROL AND DATA ACQUISITION (SCADA) SYSTEM FOR OVERBERG WATER (OWB) IN THE WESTERN CAPE.** This envelope must contain the Returnables, SCM Documentation and Relevant Annexures. This envelope must contain **printed copies** of all the pages in this document, duly completed and signed, **the pricing schedules (schedule of quantities).** For identification purposes, bidders are requested to ensure that the envelopes containing the company's bids are clearly marked and are easily identifiable by the company's logo or name. Location of tender box: Ground Floor of the Overberg Water Board Physical address: Location of tender box: OWB Head Office Reception
	Physical address: 1 Niblick Way, Ground Floor, Trident Park 3, Somerset West, 7137 Identification details: TENDER BOX
C.2.13.7	Seal the original tender offer and copy packages together in an outer package that states on the outside only the employer's address and identification details as stated in the tender data.
C.2.13.8	Accept that the employer will not assume any responsibility for the misplacement or premature opening of the tender offer if the outer package is not sealed and marked as stated.
C.2.13.9	Accept that tender offers submitted by facsimile or e-mail will be rejected by the employer.

C.2.14	**Information and data to be completed in all respects** Accept that tender offers, which do not provide all the data or information requested completely and, in the form, required, may be regarded by the employer as non-responsive.
C.2.15	**Closing time** The closing time for submission of tender offers is 22 August 2025 @ 12:00 PM The **Overberg Water Board** is not obliged to accept the lowest or any tender and reserves the right to accept any tender in whole or in part.
C.2.16	The tender offer validity period is 120 days from the closing date.
C.2.17	**Clarification of tender offer after submission** Provide clarification of a tender offer in response to a request to do so from the employer during the evaluation of tender offers. This may include providing a breakdown of rates or prices and correction of arithmetical errors by the adjustment of certain rates or item prices (or both). No change in the competitive position of tenderers or substance of the tender offer is sought, offered, or permitted.
C.2.18.2	The Tenderer shall, when requested by the Employer to do so, submit the names of all management and supervisory staff that will be employed to supervise the labour-intensive portion of the works together with satisfactory evidence that such staff members satisfy the eligibility requirements.
C.2.19	**Inspections, tests and analysis** Provide access during working hours to premises for inspections, tests and analysis as provided for in the tender data.
C.2.20	**Submit securities, bonds and policies** If requested, submit for the employer's acceptance before formation of the contract, all securities, bonds, guarantees, policies and certificates of insurance required in terms of the conditions of contract identified in the contract data.
	Provide access during working hours to premises for inspections, tests and analysis as provided for in the tender data.
C.2.23	The Tenderer is required to submit with his/her tender all documents and schedules listed under T2.1 and T2.2.
Add the following new clause C2.24	Canvassing and obtaining of additional information by tenderers
	The Tenderer shall not make any attempt either directly or indirectly to canvass any of the Employer's officials or the Employer's agent in respect of his tender, after the opening of the tenders but prior to the Employer arriving at a decision thereon. The Tenderer shall not make any attempt to obtain particulars of any relevant information, other than that disclosed at the opening of tenders.

Add the following new clause *C2.25*	Prohibitions on awards to persons in service of the state The Employer is prohibited to award a tender to a person - a) who is in the service of the state; or b) if that person is not a natural person, of which any director, manager, principal shareholder or stakeholder is a person in the service of the state; or c) a person who is an advisor or consultant contracted with the Department of Water and Sanitation and/or Overberg Water Board. **In the service of the state** means to be - a) a member of:- • any municipal council; • any provincial legislature; or • the National Assembly or the National Council of Provinces; b) a member of the board of directors of any municipal entity; c) an official of any municipality or municipal entity; d) an employee of any national or provincial department; e) provincial public entity or constitutional institution within the meaning of the Public Finance Management Act, 1999 (Act No.1 of 1999); f) a member of the accounting authority of any national or provincial public entity; or g) An employee of Parliament or a provincial legislature. In order to give effect to the above, the questionnaire for the declaration of interests in the tender of persons in service of state in part T2 of this procurement document must be completed.
C.3	**The employer's undertakings**
C.3.1	**Respond to requests from the tenderer** The Employer will respond to requests for clarification received via email up to five (10) working days before the tender closing time 22 August 2025 @ 12h00
C.3.2	**Issue Addenda** Addenda will be issued until ten (10) working days before the tender closing time 22 August 2025 @ 12h00
C.3.5	The time and location for opening of the tender offers are: The (BRR) Bid Received Register will be published on the website within 10 days of closing.
C.3.9	**Arithmetical errors, omissions and discrepancies**
C.3.9.1	Check the highest ranked tenders or tenderers with the highest number of tender
	evaluation points after the evaluation of tender offers in accordance with C.3.11 for: a) the gross misplacement of the decimal point in any unit rate; b) omissions made in completing the pricing schedule or bills of quantities; or c) arithmetic errors in: **i)** line item totals resulting from the product of a unit rate and a quantity in bills of quantities or schedules of prices; or the summation of the prices.

C.3.9.2

The arithmetical errors shall be corrected in the following manner:

a) Where there is a discrepancy between the amounts in words and amounts in figures, the amount in words shall govern.

b) If bills of quantities or pricing schedules apply and there is an error in the line item total resulting from the product of the unit rate and the quantity, the line item total shall govern and the rate shall be corrected. Where there is an obviously gross misplacement of the decimal point in the unit rate, the line item total as quoted shall govern, and the unit rate shall be corrected.

c) Where there is an error in the total of the prices either as a result of other corrections required by this checking process or in the tenderer's addition of prices, the total of the prices shall govern and the tenderer will be asked to revise selected item prices (and their rates if bills of quantities apply) to achieve the tendered total of the prices.

The Tender Offer will be rejected if the tenderer does not correct or accept the Correction of the arithmetical error in the manner described above.

C.3.11

Functionality, Price and Preference

The purpose of the evaluation is to ensure and promote compliance with the Constitution, specifically Section 217, which provides that when organs of state contract for goods or services, they must do so in accordance with a system which is fair, equitable, transparent, competitive and cost-effective. The evaluation of bids will be undertaken in 3 stages.

Stage 1: Mandatory

During this phase Supply Chain Management will check the below

Criteria	**Yes/No**
Organogram	
ECSA registration of Team Lead/Project Manager	
Mechanical and Electrical Trade Test certificate of Fitter and Electrical Artisans	
COIDA Registration Certificate	
Wireman's licence for the electrician	
It is estimated that tenderers must have a CIDB contractor grading designation of a minimum of 5 EP/ME/CE	

Stage 2: Initial screening (compliance) on Supply Chain Management returnable requirements

During this phase bid documents will be reviewed to determine the compliance with Standard Bidding Documents (SBD), SCM returnable, tax matters and contractor had registered on Central Data Base (CSD) and CIDB. All returnable documents must be submitted with the bid documents at the closing date and time of the bid. Bids which do not satisfy the compliance criteria will be disqualified and will not be evaluated further on pre-qualification criteria.

The bid proposal will be screened for compliance with administrative requirements as indicated below and bidders must circle the correct answer

Item No.	**Administrative Requirements**	**Check/Compliance**	**Non- submission shall result in disqualification**

1	Master Bid Document	provided and bound	*YES
2	1 Copy of Bid Document	provided and bound	**NO
3	Electronic copy (USB/DISK)	Provided and similarto Master Bid Document	**NO
4	SCM - SBD 1 – Invitation to Bid	Completed and signed	**NO
5	SCM - SBD 2 - Tax Clearance Certificate Requirements	Attached CSD registration number/SARS PIN and CSD summary report	**NO
6	SCM - SBD 4 - Declaration of Interest	Completed and signed	**NO
7	SCM - SBD 6.1 - Preference Points Claim Form in terms of the Preferential Procurement Regulations 2022	Completed and signed	**NO
8	SCM - SBD 6.2 – Local Content and annexure C, D and E	Completed and signed	**NO
9	In case of bids where Consortia / Joint Ventures, Consortia/Joint Venture agreement signed by both parties must be submitted with bid proposal	JV agreement completed and signed, if applicable	*YES
10	COIDA Certificate or Compensation Insurer: Federated Employers' Mutual Assurance Company Limited.	Submit a Valid COIDA certificate or A valid Letter of Good Standing must be handed in with the tender in this regard	*YES
11	It is estimated that tenderers must have a CIDB contractor grading designation of a minimum of 5 EP/ME/CE	Valid CIDB certificate and on the system on the day of evaluation	*YES
12	Fitter AND Electrical Artisans	Mechanical and Electrical Trade Test	*YES
13	BBBEE Certificate	Sworn affidavit / SANAS BEE Certificate	**NO
14	Wireman's licence for the electrician	Wireman licence	*YES

*YES – OWB reserves the right to reject proposals that are not submitted in the prescribed format or where information presented is illegible or incomplete and will not be further evaluated for Mandatory Requirements (Phase 2)

**NO – OWB reserves the right to request such information during the evaluation process of the proposal and such information must be presented within 5 working day.

Stage 3: Functional Evaluation

Stage 2: Functional Evaluation

The Functional Evaluation will be carried out to assess the Bidder's suitability to undertake the project, the Bidder's Company Experience, Current Resource, Current Expertise and project cost will be evaluated. Bidders who fail to obtain a **minimum 75%** for functionality under stage 3 will not be considered further.

i) In order to qualify for maximum points, the bidder's Contractor must have successfully completed related projects of *at least five (5) SCADA related projects.* (1 project gets 1, 2 projects get 2, 3 projects get 3, 4 projects get 4, 5 or more projects get 5)

ii) Team Lead must be registered as a professional Technologist or Engineer with the Engineering Council of South Africa (ECSA)

iii) In order to qualify for maximum points, the bidder must have in its employment one experienced Team lead – should be a sheet where they provide their organogram and attach CV – site personnel should be identified in that sheet. Number of years for maximum points: 15 years or more score maximum points.

iv) Should at any point during the contract, the tenderer require to replace any of its personnel, they can do so with equally or better qualified personnel. The difference in years of experience should be no less the five (5) if less than the original official the tenderer had included in their tender

v) Experience of an Electrician(with Wireman's licence) - that have experience working on water systems , all electricians must have a valid Wireman's licence recognised by the department of labour. Number of years 2 years = 1 point, 3 years = 2 points, etc

vi) Project plan/methodology – the Project plan must be well broken down with methodology. The deliverables should be clearly outline, timeframe/milestone, quality assurance & management of the project including staff deployment to each activity/deliverables. Training of Overberg Water's staff namely maintenance officers. SMART principle should be used

Functional Evaluation Criterion Summary

The maximum points allocation per criterion is summarised in the following table:- **Length of experience will be based on closing date of tender not evaluation date**

CRITERION (**minimum 65**)	POINTS
Contractor Experience	50
Team Capability and Experience	35
Project Plan/Methodology	15
TOTAL POINTS	100

CRITERIA	SUB-CRITERIA/CLAUSE	SCORE	EVIDENCE	
1. Company Experience in the industry	The bidder must indicate work experience of projects completed to the value of R 500 000 or above in supply, installation and commissioning of SCADA/Telemetry systems in the last 10 years. Substantial Evidence: The Bidder must submit reference letters on a client's letterhead which indicates the start and end date of years of services and the total price of the works rendered by the bidder.	**30**	reference letters on a client's letterhead	
	More than 4 similar projects successfully completed	30		
	4 similar projects successfully completed	24		
	3 similar projects successfully completed	18		
	2 similar projects successfully completed	12		
	1 similar projects successfully completed	6		
	The bidder must indicate depth of working experience with clients reference letters demonstrating the capability and quality of services rendered by the bidder in in supply, installation and commissioning of SCADA/Telemetry systems	**20**	Copies of appointment letter, reference letter and completion certificate	
	Substantial Evidence: The Bidder must submit an appointment letter of the highest value project they have completed to satisfaction. Evidence required will be appointment letter, completion certificate and reference letters on a client's letterhead which indicate the value, start and end date of the project rendered by the bidder			
	Above R15 000 000 project successfully completed	20		
	Between R15 000 000 - R10 000 000 project successfully completed	18		
	Between R10 000 000 - R4 000 000 project successfully completed	15		
	Between R4 000 000 - R2 000 000 project successfully completed	12		
	Between R2 000 000 - R1 000 000 project successfully completed	9		
	Between R1 000 000 - R500 000 project successfully completed	6		
	below R500 000 project successfully completed	0		

2. TEAM CAPABILITY	Team Capability and experience: Team Lead must be registered with ECSA as Pr Eng, Pr Tech Eng or Pr Techni. with mechanical/Electrical/civil engineering qualification. The lead Engineer must have experience working in the similar project. Bidders must submit as part of the proposal, the following: The organogram of proposed team; CVs of proposed team (Lead Engineer), Certified copies of qualifications of the Lead Engineer including the copy of ECSA registration . ECSA registration will be checked with ECSA Team leader must have experience in implementing SCADA related projects. S/he should have led projects that developed and implemented SCADA projects. Contact details for reference checks in line with the projects should be provided		Comprehensive CV, ECSA Registration and Certified Qualifications together with an Organogram	
	Team Lead/Project Manager : Years of experience in similar work	**20**		
	(above 15) years' of experience working in the similar projects	20		
	(10 ≤ x < 15) years' of experience working in the similar projects	16		
	(7≤ x < 10) years' of experience working in the similar projects	12		
	(5 ≤ x < 7) years' of experience working in the similar projects	8		
	(3 ≤ x < 5) years' of experience working in the similar projects	4		
	(x < 3) years of experience working in similar projects	0		
	The Certified Electrician with a Wireman's Licence. Copies of certified certificates must be attached to the proposal as proof, failure to attach, bidders will forfeit points. CVs of proposed team Artisan(Fitter); Certified copies of qualifications Artisan(Fitter) must include Trade Test Certificate			
	Certified Electrician: Years of experience in similar work with Wireman's Licence	**15**		
	(6) and above years' experience working in the similar projects	15		
	(5) years' experience working in the similar projects	12		
	(4) years' experience working in the similar projects	9		
	(3) years' experience working in the similar projects	6		
	(2) years' experience working in the similar projects	3		
	(below 2) years of experience working in similar projects	0		

3. Project Plan and Methodology	Capability: Methodology/Project Plan	**15**	Project Plan and Methodology	
	24hr/365 call out facility: Bidders must outline fault logging / call out process followed when clients report an urgent mechanical/electrical/ Instrumentation problem to the bidder's company. Escalation procedure must be outlined. Clearly state response times for critical and non- critical breakdowns specified in the terms of reference.			
	Project plan well broken down with methodology, deliverables, timeframe/milestone, quality assurance & management of the project including staff deployment to each activity/deliverables	15		
	Project plan provided with clear methodology, deliverables, timeframe/milestone & management of the project	12		
	Project plan provided with clear deliverables & timeframes/milestones	9		
	Project plan provided with no clear deliverables & timeframes/milestones	6		
	Project plan provided without milestones and how the deliverables will be attained	3		
	No project plan provided	0		
TOTAL SCORE		**100**	Minimum 75	

Stage 3: Price and B-BBEE

The procedure for the evaluation of responsive tenders is Method 2 where the tender is evaluated in terms of price and preferences. The score for the financial offer will be calculated using Formula 2 (option 1) of SANS294. The 80/20 Preference points system will be used, with a maximum of 80 is allocated for price on the following basis:

$$Ps = 80\left(1 - \frac{Pt - P\min}{P\min}\right)$$

Where

Ps = Points scored for price of bid under consideration
Pt = Price of bid under consideration
Pmin = Price of lowest acceptable bid

In terms of Regulation 5 (2) and 6 (2) of the Preferential Procurement Regulations, preference points must be awarded to a Bidder in accordance with the table below:

The specific goals allocated points in terms of this tender	Number of maximum points allocated (80/20 system)	Bidder's points claimed for specific goals (To be completed by Bidder)
Women Ownership	**5**	
Disability Ownership	**5**	
Youth Ownership	**5**	
Location of enterprise (local equals province) Western Cape	**2**	
B-BBEE status level contribution from level 1 to 2 which are QSE or EME	**3**	
TOTAL SCORED POINTS	**20**	

C.3.13.1

Tender offers will only be accepted on condition that:

a) the tenderer is registered with the Construction Industry Development Board in an appropriate contractor grading designation;

b) the bidder or any of its directors is not listed in the Register of Bid Defaulters in terms of the Prevention and Combating of Corrupt Activities Act of 2004 as a person prohibited from doing business with the public sector;

c) the bidder has not:
   i. abused the Employer's Supply Chain Management System; or
   ii. failed to perform on any previous contract and has been given a written notice to this effect.

d) Has completed the Compulsory Enterprise Questionnaire, SBD4, 6.1, 7.1 and there are no conflicts of interest which may impact on the tenderer's ability to perform the contract in the best interests of the employer or potentially compromise the tender process

Has submitted the documentation listed in T2.21 and T2.22

C.3.18

The number of paper copies of the signed contract to be provided by the employer is ONE.

PART T2: RETURNABLE DOCUMENTS AND SCHEDULES

T2.1 LIST OF RETURNABLE DOCUMENTS

The following documents must be returned by the Bidder for evaluation purposes in addition to the Schedule listed in previous paragraphs. ***Failure to supply the documents listed below will result in disqualification.***

THE FOLLOWING DOCUMENTS MUST BE FURNISHED **(FAILURE TO SUBMIT COMPULSORY DOCUMENTATION WILL RESULT IN YOUR BID BEING DISQUALIFIED)**		**YES**	**NO**
1	Tax Compliance (Provide PIN)	Yes ☐	No ☐
2	B-BEE Certificate issued by SANAS accredited verification agent/ OR AFFIDAVIT FOR EME/QSE ON DTI FORMAT	Yes ☐	No ☐
3	Proof of valid registration with CIDB	Yes ☐	No ☐
4	Signed Declaration of Interest	Yes ☐	No ☐
5	Certificate of Independent Bidder determination	Yes ☐	No ☐
6	Valid COIDA certificate issued by the Department of Labour	Yes ☐	No ☐
7	Fully Completed and Signed all other SBD forms	Yes ☐	No ☐
8	ECSA Certificates for the Team Lead	Yes ☐	No ☐
9	Wireman's licence for the electrician	Yes ☐	No ☐

T2.2 RETURNABLE SCHEDULES

Insert all the Forms required and re-number them

FORM A: ATTENDANCE REGISTER OF THE COMPULSORY CLARIFICATION MEETING

ATTACH THE ATTENDANCE REGISTER OF THE NON-COMPULSORY CLARIFICATION MEETING

FORM B: VENDOR NUMBER REGISTRATION WITH CENTRAL SUPPLIER DATABASE

1. Bidders must submit Vendor Number Registration with Central Supplier Database
2. Failure to submit the Vendor Number Registration with Central Supplier Database may result with the bidder being disqualified.

ENTITY NAME _____

CSD VENDOR NUMBER REGISTRATION .....

NAME .....

SIGNATURE OF BIDDER .....

DATE .....

CAPACITY UNDER WHICH BID IS SIGNED _____

FORM C: TAX

COMPLIANCECONDITIONS

PERTAINING TO TAX

TAX CLEARANCE CERTFICATE REQUIREMENTS

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

1. Any person who requires his or her tax compliance status to be disclosed to a Government institution or department, for purposes of submitting a bid or to confirm its good standing after the phasing out of paper based TCCs must request a unique security personal identification number (PIN) from SARS.
2. Very important to note is that the disclosure of a bidder's tax compliance status is an express condition for all acceptable Government bids. Failure to make the relevant disclosures will invalidate your bid and your response will be null and void.
3. The Government institution or department must use the PIN referred to above to verify a person's tax compliance status with SARS.
4. Bidders to complete the table below and provide a unique security personal identification number (PIN) from SARS which will enable the OWB to access online real-time verification of a person's tax compliance status with the electronic Tax Compliance Status (TCS) system. Failure to submit the PIN may result in the bid being disqualified. By completing the below form the bidder gives OWB permission to access their tax compliance status

Full name of bidder:	**Electronic Tax Compliance Status System PIN No:**

NAME: .....

SIGNATURE OF BIDDER .....

DATE .....

CAPACITY UNDER WHICH BID IS SIGNED .....

FORM D: PREFERENCE SCHEDULE

FORM E: PROOF OF REGISTRATION WITH CIDB

1. Attach original or certified copy of CIDB registration certificate to this page.

2. In the case of a joint venture / consortium (excluding consulting engineering partners) parties must each attach original or certified copy of their CIDB registration certificate.

Firm	**CRS Number**	**CIDB Grading**	**Lead Partner** (Indicate with X)
Combined CIDB Grading for Joint Venture / Consortium:			

(Calculator is available at https://registers.cidb.org.za/common/jvcalc.asp)

The undersigned, who warrants that he / she is duly authorised to do so on behalf of the enterprise, confirms that the contents of this schedule are within my personal knowledge and are to the best of my belief both true and correct.

Person authorized to sign the bid:

Full name (in BLOCK letters): _____

Signature: _____

Date: _____

FORM F: BIDDER'S DISCLOSURE (SBD 4)

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 interest[1] 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/ partnersor 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 isemployed 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 anyperson 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**

2.3.1 If so, furnish particulars:

……

……

[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.

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 consortium[2] 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 submitor 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.

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

[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.

PREFERENCE POINTS CLAIM FORM IN TERMS OF THE PREFERENTIAL PROCUREMENT REGULATIONS 2022

This preference form must form part of all tenders invited. It contains general information andserves as a claim form for preference points for specific goals.

NB: BEFORE COMPLETING THIS FORM, TENDERERS MUST STUDY THE GENERAL CONDITIONS, DEFINITIONS AND DIRECTIVES APPLICABLE IN RESPECT OF THETENDER AND PREFERENTIAL PROCUREMENT REGULATIONS, 2022

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1. GENERAL CONDITIONS

1.1 The following preference point systems are applicable to invitations to tender:

- 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 To be completed by the organ of state

(*delete whichever is not applicable for this tender*).

a) The applicable preference point system for this tender is the 90/10 preference point system.
b) The applicable preference point system for this tender is the 80/20 preference point system.
c) Either the 90/10 or 80/20 preference point system will be applicable in this tender. The lowest/ highest acceptable tender will be used to determine the accurate system once tenders are received.

1.3 Points for this tender (even in the case of a tender for income-generating contracts) shall be awarded for:

(a) Price; and

(b) Specific Goals.

1.4 To be completed by the organ of state:

The maximum points for this tender are allocated as follows:

	POINTS
PRICE	**80**
SPECIFIC GOALS	**20**
Total points for Price and SPECIFIC GOALS	**100**

1.5 Failure on the part of a tenderer to submit proof or documentation required in terms of this tender to claim points for specific goals with the tender, will be interpreted to mean thatpreference points for specific goals are not claimed.

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

2. DEFINITIONS

(a) **"tender"** means a written offer in the form determined by an organ of state in response to an invitation to provide goods or services through price quotations, competitive tendering process or any other method envisaged inlegislation;

(b) **"price"** means an amount of money tendered for goods or services, and includes all applicable taxes less all unconditional discounts;

(c) **"rand value"** means the total estimated value of a contract in Rand, calculated at the time of bid invitation, and includes all applicable taxes;

(d) **"tender for income-generating contracts"** means a written offer in the form determined by an organ of state in response to an invitation for the origination of income-generating contracts through any method envisaged in legislation that will result in a legal agreement between the organ of state and a third party that produces revenue for the organ of state, and includes, but is not limited to, leasing and disposal of assets and concession contracts, excluding direct sales and disposal of assets through public auctions; and

(e) **"the Act"** means the Preferential Procurement Policy Framework Act, 2000 (Act No. 5 of 2000).

3. FORMULAE FOR PROCUREMENT OF GOODS AND SERVICES

3.1. POINTS AWARDED FOR PRICE

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

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

80/20 **or** **90/10**

$$Ps = 80\left(1 - \frac{Pt - P\,min}{P\,min}\right) \text{ or } \quad Ps = 90\left(1 - \frac{Pt - P\,min}{P\,min}\right)$$

Where

Ps = Points scored for price of tender under consideration

Pt = Price of tender under consideration

Pmin = Price of lowest acceptable tender

FORMULAE FOR DISPOSAL OR LEASING OF STATE ASSETS AND INCOMEGENERATING PROCUREMENT

3.2.1. **POINTS AWARDED FOR PRICE**

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

80/20 **or** **90/10**

$$Ps = 80\left(1 + \frac{Pt - P\,max}{P\,max}\right) \text{ or } \quad Ps = 90\left(1 + \frac{Pt - P\,max}{Pmax}\right)$$

Where

Ps = Points scored for price of tender under consideration

Pt = Price of tender under consideration

Pmax = Price of highest acceptable tender

4. POINTS AWARDED FOR SPECIFIC GOALS

In terms of Regulation 4(2); 5(2); 6(2) and 7(2) of the Preferential Procurement Regulations, preference points must be awarded for specific goals stated in the tender. For the purposes of this tender the tenderer will be allocated points based on the goals stated in table 1 below as may be supported by proof/ documentation stated in the conditions of this tender:

In cases where organs of state intend to use Regulation 3(2) of the Regulations, which statesthat, if it is unclear whether the 80/20 or 90/10 preference point system applies, an organ of state must, in the tender documents, stipulate in the case of—

(a) an invitation for tender for income-generating contracts, that either the 80/20 or 90/10preference point system will apply and that the highest acceptable tender will be used to determinethe applicable preference point system; or

(b) any other invitation for tender, that either the 80/20 or 90/10 preference point system will applyand that the lowest acceptable tender will be used to determine the applicable preference point system, then the organ of state must indicate the points allocated for specific goals for both the 90/10 and 80/20 preference point system.

Table 1: Specific goals for the tender and points claimed are indicated per the table below.
(Note to organs of state: Where either the 90/10 or 80/20 preference point system is applicable, corresponding points must also be indicated as such.
Note to tenderers: The tenderer must indicate how they claim points for each preference point system.)

The specific goals allocated points in terms of this tender	**Number of points allocated (80/20 system) (To be completed by the organ of state)**
Women	5
People with disability	5
Youth (35 and below)	5
Location of enterprise western cape	2
B-BBEE status level contributors from level 1 and 2 which are EME or QSE	3
TOTAL points for specific goals	**20**

DECLARATION WITH REGARD TO COMPANY/FIRM

4.1. Name of company/firm…….
4.2. Company registration number: ……...
4.3. TYPE OF COMPANY/ FIRM

- Partnership/Joint Venture / Consortium
- One-person business/sole propriety
- Close corporation
- Public Company
- Personal Liability Company Pty Ltd
- Non-Profit Company
- State Owned Company

[Tick applicable box]

4.4. I, the undersigned, who is duly authorised to do so on behalf of the company/firm, certify that the points claimed, based on the specific goals as advised in the tender, qualifies the company/ firm for the preference(s) shown and I 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 paragraphs 1.4 and 4.2, the contractor may be required to furnish documentary proof to the satisfaction of the organ of state that the claims are correct;
iv) If the specific goals have been claimed or obtained on a fraudulent basis or any of the conditions of contract have not been fulfilled, the organ of state 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) recommend that the tenderer or contractor, its shareholders and directors, or only the shareholders and directors who acted on a fraudulent basis, be restricted 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

…….. **SIGNATURE(S) OF TENDERER(S)**
SURNAME AND NAME: …… **DATE:** ……
ADDRESS: …… …… …… ……

(e) forward the matter for criminal prosecution, if deemed necessary.

Table 1: Specific goals for the tender and points allocation are indicated as per the table below:
In terms of Regulation 4(2); 5(2) of the Preferential Procurement Regulations, preference points must be awarded for specific goals stated in the tender. For the purposes of this bid the bidder will be allocated points based on the bidder's goals claimed as per table 5. Bidder's goal claimed must be supported by proof/ documentation stated as per table 5 and the special conditions of this bid where applicable:

Table 1:

The specific goals allocated points in terms of this tender	Number of maximum points allocated (80/20 system)	Bidder's points claimed for specific goals (To be completed by Bidder)
Women Ownership	5	
Disability Ownership	5	
Youth Ownership	5	
Location of enterprise (local equals province) Western Cape	2	
B-BBEE status level contribution from level 1 to 2 which are QSE or EME	3	
TOTAL SCORED POINTS	20	

Specific goals" means specific goals as contemplated in section 2(1)*(d)* of the PPPFA Act which may include contracting with persons, or categories of persons, historically disadvantaged by unfair discrimination on the basis of race, gender and disability including the implementation of programs of the Reconstruction of Development Programme as published in *Government Gazette* No. 16085 date 23 November 1994.

"Ownership" means the percentage ownership and control, exercised by individuals within an enterprise.

"Disability" means, in respect of a person, a permanent impairment of a physical, intellectual, or sensory function, which results in restricted, or lack of, ability to perform an activity in the manner, or within the range, considered normal for a human being.

i. A blind person (in terms of the Blind Persons Act, 1968 (Act no.26 of 1968);
ii. A deaf person, whose hearing is impaired to such an extent that he/she cannot use it as a primary means of communication.
iii. A person who, as a result of permanent disability, requires a wheelchair, caliper or crutch to assist him/her to move from one place or another.
iv. A person who requires an artificial limb; or
v. A person who suffers from a mental illness (in terms of the Mental Health Act, 1973 (Act no. 18 of 1973).

"Youth" means, in respect of a person younger than 35 years of age.

"Location of enterprise" Local equals province. Where a project cuts across more than one province, the bidder may be located in any of the relevant provinces to claim and be allocated the points.

Women, disability, and youth will be measured by calculating the pro-rata percentage of ownership of the bidding company which meets the criterion. E.g., Company A has five shareholders each of whom own 20% of the company. Three of the five shareholders meet the criterion, i.e., they are women/disability/youth. Therefore, this bidder will obtain 60% of the points allowable for this goal.

Table 1: Documents required for verification of Bidder's claimed points

Documents/ information listed on the below table 6 must be submitted to support and verify points claimed as per **Table 1**

Specific Goal	Requires Proof Documents
Women Ownership	Full CSD Report
Disability Ownership	Full CSD Report(medical certificate)
Youth Ownership	Full CSD Report
Location of enterprise	Full CSD Report
B-BBEE status level contribution from level 1 to 2 which are QSE or EME	Valid B-BBEE certificate/sworn affidavit Consolidated B-BBEE certificate in cases of Joint Ventures (JV) Full CSD Report for each bidder who formed a (JV)

Failure on the part of a bidder to submit proof of documentation required in terms of this tender to claim specific goals with the bid, will be interpreted to mean that preference points for specific goals are not claimed and will not be allocated

FORM G: OHS ACT DECLARATION AND SUBMISSION

The Bidder declares him/herself/herself to be conversant with the following:

1. All the requirements, regulations and standards of the Occupational Health and Safety Act (Act 85 of 1993), hereinafter referred to as "The Act", together with its amendments and with special reference to the following Sections of the Act:
   i) Section 8: General duties of Employers to their employees
   ii) Section 9: General duties of Employers and self-employed persons to persons other than employees.
   iii) Section 13: Duty to Inform
   iv) Section 37: Acts or omissions by employees or mandatories
   v) Sub-section 37(2) relating to the purpose and meaning of this Agreement
2. Construction Regulations, 2014 (Government Notice R.84) pertaining to the Contractor and to all his Subcontractors, or any amendments thereto.

The Bidder declares that he has or will obtain the necessary knowledge, competence and resources to comply fully with all OHS requirements should he be awarded the contract.

The Bidder confirms that he has included with his bid a written proposal describing how he will comply with OHS requirements

Signature _____ Date _____

Name _____ Capacity _____

Bidder _____

FORM H: COID CERTIFICATE ISSUED BY DEPARTMENT OF LABOUR

The Bidder must submit valid ***COID CERTIFICATE FROM DEPARTMENT OF LABOUR***.

The Bidder hereby certifies that the COID CERTIFICATE as required by the Bid, has been submitted and is attached after this page

Signature _____ Date _____

Name _____ Capacity _____

Bidder _____

ATTACH AFTER THIS PAGE

FORM I: SCHEDULE OF BIDDER'S EXPERIENCE IN MAINTENANCE PROJECTS

OWB shall not be held responsible for incorrect judgement misled by unclear written letters/words on the forms below, to be completed by the Bidder(s). Attachment shall strictly be made where specified and at the correct location, any attachment other than what has been requested by OWB.

When completing Forms, Bidder(s) may make copies of the original Forms, should the provided forms be inadequate for their completion of the information required. Forms must be completed in full.

i) In order to qualify for maximum points, the bidder's Contractor must have completed construction of ***more than four(4) SCADA/Telemetry related project***

ii) Main contractor must have a CIDB contractor grading designation of a minimum of **5 EP/ME/CE OR higher**.

FORM J: COMPLETED PROJECTS (to be completed for each individual project)

Name of Bidder	
PROJECT No. 1	
Project Name	
Nature of Project	
Client (Responsible for supervision)	
Client Contact person	
Clients Contact Person (**name, tel/Cell no)**	
Clients Contact Person (email address)	
Consulting Engineer **(name, tel/Cell no)**	
Appointment Value	
Project Location (Province)	
Project Duration(months)	
Project Commencement Date (months/year)	
Is the Project Completed (Yes/No)	
Completion certificate attached (Yes or No)	
Estimated Completion Date (If not yet Completed)	
Completion Date (If Completed) (months/year)	
Main Contractor (Yes/No)	

Name of Bidder	
PROJECT No. 2	
Project Name	
Nature of Project	
Client (Responsible for supervision)	
Client Contact person	
Clients Contact Person (**name, tel/Cell no)**	
Clients Contact Person (email address)	
Consulting Engineer **(name, tel/Cell no)**	
Appointment Value	
Project Location (Province)	
Project Duration(months)	
Project Commencement Date (months/year)	
Is the Project Completed (Yes/No)	
Completion certificate attached (Yes or No)	
Estimated Completion Date (If not yet Completed)	
Completion Date (If Completed) (months/year)	
Main Contractor (Yes/No)	

Name of Bidder	
PROJECT No. 3	
Project Name	
Nature of Project	
Client (Responsible for supervision)	
Client Contact person	
Clients Contact Person (**name, tel/Cell)**	
Clients Contact Person (email address)	
Consulting Engineer **(name, tel/Cell no)**	
Appointment Value	
Project Location (Province)	
Project Duration(months)	
Project Commencement Date (months/year)	
Is the Project Completed (Yes/No)	
Completion certificate attached (Yes or No)	
Estimated Completion Date (If not yet Completed)	
Completion Date (If Completed) (months/year)	
Main Contractor (Yes/No)	

Name of Bidder	
PROJECT No. 4	
Project Name	
Nature of Project	
Client (Responsible for supervision)	
Client Contact person	
Clients Contact Person (**name, tel/Cell)**	
Clients Contact Person (email address)	
Consulting Engineer **(name, tel/Cell no)**	
Appointment Value	
Project Location (Province)	
Project Duration(months)	
Project Commencement Date (months/year)	
Is the Project Completed (Yes/No)	
Completion certificate attached (Yes or No)	
Estimated Completion Date (If not yet Completed)	
Completion Date (If Completed) (months/year)	
Main Contractor (Yes/No)	

Name of Bidder	
PROJECT No. 5	
Project Name	
Nature of Project	
Client (Responsible for supervision)	
Client Contact person	
Clients Contact Person (**name, tel/Cell no)**	
Clients Contact Person (email address)	
Consulting Engineer **(name, tel/Cell no)**	
Appointment Value	
Project Location (Province)	
Project Duration(months)	
Project Commencement Date (months/year)	
Is the Project Completed (Yes/No)	
Completion certificate attached (Yes or No)	
Estimated Completion Date (If not yet Completed)	
Completion Date (If Completed) (months/year)	
Main Contractor (Yes/No)	

Name of Bidder	
PROJECT No. 6	
Project Name	
Nature of Project	
Client (Responsible for supervision)	
Client Contact person	
Clients Contact Person (**name, tel/Cell no)**	
Clients Contact Person (email address)	
Consulting Engineer **(name, tel/Cell no)**	
Appointment Value	
Project Location (Province)	
Project Duration(months)	
Project Commencement Date (months/year)	
Is the Project Completed (Yes/No)	

FORM K: EXPERIENCE OF NOMINATED PERSONNEL

Bidders must have in their full time employment an experienced Team who has previously worked on SCADA projects and a registered with Department of Labour as Electrician with a Wireman's licence and also a person registered with ECSA as professional. The information will be verified with the references provided. The bidder must have in its employment a:-

The Team Lead/Project Manager and Electrician must have an experience working in the similar project . Bidders must submit as part of the proposal, the following:

- The organogram of proposed team,
- CVs of proposed team,
- Certified copies of qualifications of the Team Lead/Project Manager,
- Certified copies of Wireman's Licence of the proposed electrician that will be servicing

NB:

One individual may not be nominated for more than one role or position for this bid. If an individual is nominated for more than one role then the points will only be allocated for one of the roles and the bidder will score zero on any other role.

Should the bidder choose to present the required information in the attachments, then the bidder must **COMPLETE FORM (L) FIRST and then** make a clear reference to such attachments; and such attachments must provide the same information requested for in Form L.

TYPICAL FORMS TO BE COMPLETED BY THE BIDDERS

- **Form L (i) Team Lead / Project Manager**
- **Form M (ii) Electrician (With Wireman's Licence)**

FORM L (i) Team Lead / Project Manager

Post	Name	Qualifications (Diploma, Degree in etc)	Experience in years
Team Lead			

Signature _____ Date_____

Name _____ Capacity_____

Bidder _____

The Bidder must note that repeating the same year under different project will still be considered as one year's experience.

FORM M (ii) Electrician

Post	Name	Wireman's Licence	Experience in years
(Electrician)			

Signature _____ Date_____

Name _____ Capacity_____

Bidder _____

(A) ELECTRICIAN		
Name and Surname		
Experience in years' experience as Electrical Artisan Agent		
EXPERIENCE AS ELECTRICIAN IN SCADA INSTALLATION PROJECTS		
YEAR of Experience as Electrical Artisan	**Year 1 (… .....) (e.g.2019 etc)**	**Year 2 (… .....) (e.g.2018).**
Project Name		
Nature of Project		
Client (Responsible for supervision)		
Client Contact person		
Clients Contact Person (**name, tel/Cell no and fax no)**		
Clients Contact Person (email address)		
Consulting Engineer **(name, tel no and fax no)**		
Appointment Value		
Project Location (Province)		
Project Duration(months)		
Project Commencement Date (months/year)		
Is the Project Completed (Yes/No)		
Estimated Completion Date (If not yet Completed)		
Completion Date (If Completed) (months/year)		
Roles/Responsibilities performed by the Bidder on the project:		

Signature _____ Date_____

Name _____ Capacity

PART C1: AGREEMENT AND CONTRACT DATA

C1.1: FORM OF OFFER AND ACCEPTANCE

Offer

The employer, identified in the acceptance signature block, has solicited offers to enter into a contract for the procurement of:
SUPPLY, DELIVER AND INSTALLATION OF A SUPERVISORY CONTROL AND DATA ACQUISITION (SCADA) SYSTEM FOR OVERBERG WATER (OWB) IN THE WESTERN CAPE.

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 contractor 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 VALUE ADDED TAX IS:

Rand. . . . .
.....(in words);
R..... (in figures)

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) . . . . . .
Name(s) . . . . . .
Capacity . . . . . .

for the tenderer

(Name and . . . . . .
address of organization/) . . . . . .
. . . . . .

Name and signature of witness . . . . . Date . . . . . .

Acceptance

By signing this part of this 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:

Part C1: Agreements and contract data (which includes this agreement)
Part C2: Pricing data
Part C3: Scope of work
Part C4: Site information

and drawings and documents or parts thereof, which may be incorporated by reference into the above listed Parts.

Deviations from and amendments to the documents listed in the tender data and any addenda thereto as listed in the returnable 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 form of offer and acceptance. No amendments to or deviations from said documents are valid unless contained in this schedule.

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 securities, 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 fulfill 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 contractor**)** within five working 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(s) . . . . . .

Name(s) . . . . . .

Capacity . . . . . .

for the

Employer

Name and . . . . . .
signature
of witness . . . . . Date . . . . . .

Schedule of Deviations

Notes:

1. The extent of deviations from the tender documents issued by the Employer prior to the tender closing date is limited to those permitted in terms of the Conditions of Tender,

2. A Tenderer's covering letter shall not 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,

3. Any other matter 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,

4. 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 . . . . . .
. . . . . .
. . . . . .
. . . . . .

ONLY TO BE COMPLET
AT ACCEPTANCE STAGE

2 Subject . . . . . .
Details . . . . . .
. . . . . .
. . . . . .
. . . . . .
3 Subject . . . . . .
Details . . . . . .
. . . . . .
. . . . . .
. . . . . .
4 Subject . . . . . .
Details . . . . . .
. . . . . .
. . . . . .

By the duly authorised representatives signing this Schedule of Deviations, the Employer 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 the Employer 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(s) _____ _____

Name(s) _____ _____

Capacity _____ _____

_____

[Name and address of organisation]

Name and signature of witness _____ Date _____

~~ONLY TO BE COMPLETED AT~~

ACCEPTANCE STAGE

FOR THE EMPLOYER:

Signature(s) _____ _____

Name(s) _____ _____

Capacity _____ _____

_____

[Name and address of organisation]

Name and signature of witness _____ Date _____

CONFIRMATION OF RECEIPT

The Tenderer (now Contractor), 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 (if any) today:

The ..... *[day]*

of..... *[month]*

20..... *[year]*

at..... *[place]*

For the Contractor: .....
Signature

.....
Name

.....
Capacity

Signature and name of witness: .....
Signature

.....
Name

ONLY TO BE COMPLETEDAT ACCEPTANCE STAGE

C1.2 CONTRACT DATA

PROJECT TITLE:	**SUPPLY, DELIVER AND INSTALLATION OF A SUPERVISORY CONTROL AND DATA ACQUISITION (SCADA) SYSTEM FOR OVERBERG WATER (OWB) IN THE WESTERN CAPE.**
CONTRACT NO:	**RFP OW 004 2025/26**

C.1.2 Contract Data

The General Conditions of Contract for Construction Works, Third Edition (2015) published by the South African Institution of Civil Engineering, Private Bag X200, Halfway House, 1685, is applicable to this Contract and is obtainable from www.saice.org.za.

The General Conditions of Contract for Construction Works make several references to the Contract Data for specific data, which together with these conditions collectively describe the risks, liabilities and obligations of the contracting parties and the procedures for the administration of the Contract. **The Contract Data shall have precedence in the interpretation of any ambiguity or inconsistency between it and the General Conditions of Contract**.

Part 1: Data provided by the Employer

Clause	Data
1.1.1.13	**Clause 1.1.1.13: Defects Liability Period** The Defects Liability Period is 12 **months**, measured from the date of the Certificate of Completion
1.1.1.14	**Clause 1.1.1.14: Due Completion Date** The time for achieving Practical Completion is **6 months** after the Commencement Date
1.1.1.15	The name of the Employer is Overberg Water Board**,** represented by Mr. Xolani Mdletshe and/or such persons or person duly authorised to be the Employer in writing by Overberg Water.
1.1.1.26	The Pricing Strategy is day work rate
1.2.1.2	The Employer's address for receipt of communications is: **Delivery Address:** **Attention:** Supply Chain Manager: Supply Chain Management **Overberg Water Board** **1 Niblick Way** **Ground Floor, Trident Park 3** **Somerset West** **7137**
2.4.1	"in the event of any ambiguity, conflict or discrepancy between the various contract documents, lists and schedules, the order of precedence (from highest to lowest) shall be as follows: • The contract data • The form of offer and acceptance (Tender document) • General conditions of contract (GCC 2015) • Service Level Agreement • Contract forms

	• Scope of Work • SANS 1200 Standardised Specifications • Site Information • Construction drawings • Bill of quantities • The returnable schedules
3.1.3	The Contractor shall obtain the specific approval of the Employer before executing any of his functions or duties according to the following Clauses of the General Conditions of Contract: GCC 2015 3rd Edition 1. Clause 5.8.1 Non-working times 2. Clause 5.11.1 Suspension of the Works 3. Clause 5.12.1 Approval of any extension of time for completion 4. Clause 5.12.4 Acceleration of progress instead of extension of time 5. Clause 5.13.2 Reduction of a penalty for delay 6. Clause 6.3.2 The issuing of variation orders 7. Clause 6.8.4 The determination of additional or reduced cost arising from changes in the legislation 8. Clause 6.11 The agreeing of the adjustment of the sums for general items 9. Clause 10.1.5 The giving of a ruling on a Sub-Contractor's claim
4.3.3	"The Employer and the Contractor hereby agree, in terms of the provisions of section 37 (2) of the Occupational Health & Safety Act, 1993 (Act 85 of 1993, hereinafter referred to as 'the Act') that the following arrangements and procedures shall apply between them to ensure compliance by the Contractor with the provisions of the Act, namely: a) The Contractor undertakes that the appropriate officials and employees of the Contractor will fully acquaint themselves with all relevant provisions of the Act and the Regulations promulgated in terms of the Act; b) The Contractor undertakes that all relevant duties, obligations and prohibitions imposed in terms of the Act and regulations will be fully complied with; c) The Contractor hereby accepts sole liability for such due compliance with the relevant duties, obligations and prohibitions imposed by the Act and Regulations, and expressly absolves the Employer from itself being obliged to comply with any of the aforesaid duties, obligations, and prohibitions; with the exception of such duties, obligations and prohibitions expressly assigned to the Employer in terms of the Act and its associated Regulations; d) The Contractor agrees that any duly authorised official of the Employer shall be entitled to take such steps as may be necessary to ensure that the Contractor has complied with his undertakings as set out more fully in paragraphs (a) and (b) above, which steps may include, but will not be limited to,the right to inspect any appropriate site or premises occupied by the Contractor, or to inspect any appropriate records or Safety Plans held by the Contractor; e) The Contractor shall be obliged to report forthwith to the Employer any investigation, complaint or criminal charge which may arise as a consequence of the provisions of the Act and regulations, pursuant to work performed in terms of this Contract, and shall, on written demand, provide full details in writing of such investigation, complaint or criminal charge;

5.3.1	**Clause 5.3.1: Commencement of the Works** The documentation required before commencement with Works execution are: a) Health and Safety Plan (Refer to Clause 4.3) b) Initial programme (Refer to Clause 5.6) c) Security (Refer to Clause 6.2) d) Insurance (Refer to Clause 8.6)
5.3.2	**Clause 5.3.2: Timeframe to deliver documentation** The time to submit the documentation required before commencement with Works execution is **fourteen (14) days.**
5.4.4	"The Contractor shall bear all costs and charges for special and temporary rights of way required by him/her in connection with access to the Site. The Contractor shall also provide at his own cost any additional facilities outside the Site required by him/her for the purposes of the Works."
5.8.1	**Clause 5.8.1: Non-Working Times** The special non-working days are: 1. All gazetted public holidays falling outside the year end break.
5.12.2.	**Clause 5.12.2.: Some reasons for extension of time** **Clause 5.12.2.2: Abnormal climatic conditions.** *Add the following:* Regardless of the cause of any delay an extension of time will only be considered if it can be shown that the activity delayed is on the critical path indicated on the Programme of Works (Clause 5.6.1). No extension of time will be granted in respect of any delays attributed to normal climatic conditions. Normal climatic conditions shall be deemed to include normal rainfall and associated wet conditions and materials, strong winds and extremes of temperature. However, in the event that delays to critical activities exceed the number of working days listed below for each month, then abnormal climatic conditions shall be deemed to exist, and an extension of time shall be granted in accordance with the provisions of that clause. Claims for delays for abnormal climatic conditions shall be accompanied by substantiating facts and evidence, which shall be submitted timeously as each day or half-day delay is experienced. Should an extension of time be granted by the Employer's Agent such extension of time will be added to the Time for Completion. It shall be further noted that where the critical path is not affected, no extension of time for abnormal climatic conditions or for any other reason will be entertained. Rainfall of less than 12mm between 7am and 5pm shall not be deemed to be an inclement weather day.
5.13.1	**Clause 5.13.1: Penalty for Delay**

	The penalty for failing to complete the Works will be charges per day. The cost will be 0.1% of the contract sum per day
5.16.3	**Clause 5.16.3: Latent defect liability** The latent defect period is one (1) year for mechanical, Electrical and Instrumentation engineering works.
6.2.1	**Clause 6.2: Security** The security to be provided by the Contractor shall be a performance guarantee of **10%** of the Contract Sum. The performance guarantee shall contain the wording of the document included in C1.3. In the event that the contractor is unable to provide such a guarantee, a deduction of 10% shall be made to each payment certificate payable to the contractor with the accumulated amount only paid out at the end of the contract liability period.
6.5.1.2.3	**Delete in its entirety**
6.8.2	**Clause 6.8.2: Contract Price Adjustment** The Contract Price Adjustment **is not** applicable in this contract.
6.8.3	**Clause 6.8.3: Variation in Cost of Special Materials** Price adjustments for variations in the costs of special materials are not allowed
6.10.1.5	**Clause 6.10.1.5: Interim Payments - Materials on Site** No percentage advance on materials on site but not yet built into the Permanent Works is allowed for, or will be paid. This project shall be a **lump sum** payment once the project is complete. The will be no interim payments.
6.10.3	**Clause 6.10.3: Retention Money** The limit on retention is: 10% of the Contract Price.
6.10.4	**Clause 6.10.4: Delivery, dissatisfaction with and payment of payment certificate** Delete 28 days and add 30 days *Add the following to clause 6.10.4:* Notwithstanding the above, the Engineer shall be empowered to withhold the delivery of the payment certificate until the Contractor has complied with his obligations to report in terms of Clause 4.10.2 and as described in the Scope of Work.
8.6.1.1.2	**Clause 8.6.1.1.2: Insurance** The value of the materials supplied by the Employer to be included in the insurance sum is -Nil.

8.6.1.1.3	**Clause 8.6.1.1.3: Insurance** The amount to cover professional fees for repairing damage and loss to be included in the insurance sum is Nil.

8.6.1.3	**Clause 8.6.1.3: Insurance** The limit of indemnity for liability insurance is R 1 million for any single claim – the number of claims to be unlimited during the construction.
8.6.1.5	**Clause 8.6.1.5: Additional Insurance** Additional Insurance is required for the following: a) Where the contract involves manufacturing and/or fabrication of the works or part thereof at premises other than the Site, the Contractor shall satisfy the Employer that all materials and equipment for incorporation in the works are adequately insured during manufacture and/or fabrication. In the event of the Employer having an insurable interest in such works during manufacture or fabrication then such interest shall be noted by endorsement to the Contractor's Policies of Insurance.
9.2.1.3.8	Add the following: The Contractor has furnished inaccurate information during the execution of his works.
9.2.1.3.9	Add clause 9.2.1.3.9 after clause 9.2.1.3.8 An official or other role player committed any corrupt or fraudulent act during the procurement process or in the execution of the contract that benefited the Contractor.
10.4.1	The parties may at time agree to settle disputes with the help of an impartial third party
10.5	**Clause 10: Dispute Resolution** "Dispute resolution shall initially be by means of ad-hoc adjudication as per Clause 10.5.2. the number of adjudicators is one (1). Should adjudication not be successful, then the dispute shall be referred to Arbitration under the provisions ofClause 10.7.1."
10.5.3	The number of Adjudication Board Members to be appointed is one (1).
11	**Clause 11: Confidentiality** The Contractor shall treat the details of the Works comprised in this Contract as private and confidential (save in so far as may be necessary for the purposes hereof) and shall not publish or disclose the same or any particulars thereof in any trade or technical paper elsewhere without prior written consent of the Engineer.
12	**Clause 12: Amendments in writing** No amendments of this Contract or of any provisions or terms hereof and no waiver or relaxation or suspension of any of the provisions or terms of this Contract shall be of any force or effect unless reduced to writing and signed by both the parties hereto.

PART 2: DATA PROVIDED BY THE CONTRACTOR

The contractor is advised to read the *general conditions of contract for construction works, third edition, 2015* published by the South African institution of civil engineering, private bag x200, halfway house, 1685, in order to understand the implications of this contract data which is required to be completed. Copies of these conditions of contract may be obtained from www.saice.org.za.

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

<table>
<tr><th>Clause</th><th>Data</th></tr>
<tr><td>1.1.1.9</td><td>The name of the Contractor is:
....</td></tr>
<tr><td>1.2.1.2</td><td>The address of the Contractor is:
Address (physical): . . . .
. . . . . .
Address (postal): . . . . . .
. . . .
Telephone: . . . . . Facsimile: . . . . . .
e-mail: . . . . . .</td></tr>
<tr><td>6.2.1</td><td>The security to be provided by the Contractor shall be one of the following:
<table>
<tr><th>Type of Security</th><th>Contractor's choice
Indicate your choice with "Yes" to one of the below</th></tr>
<tr><td>Cash deposit of 10% of the Contract Sum, incl. VAT plus retention of 10% of the value of the Works.</td><td></td></tr>
<tr><td>Performance guarantee of 10% of the Contract Sum, incl. VAT plus retention of 5% of the value of the Works.</td><td></td></tr>
</table></td></tr>
</table>

C1.3 CONSTRUCTION GUARANTEE

GUARANTOR DETAILS AND DEFINITIONS

"Guarantor" means: .....

Physical address:

"Employer" means: .....

"Contractor" means: .....

"Engineer" means: .....

"Works" means:

"Site" means: .....

"Contract" means: The Agreement made in terms of the Form of Offer and Acceptance and such amendments or additions to the Contract as may be agreed in writing between the parties.

"Contract Sum" means: The accepted amount inclusive of tax of R .....

Amount in words: .....

"Guaranteed Sum" means: The maximum aggregate amount of R .....

Amount in words:

"Expire Date" means:

CONTRACT DETAILS

Employer's Agent issues: Interim Payment Certificates, Final Payment Certificate and the Certificate Completion of the Works as defined in the Contract.

PERFORMANCE GUARANTEE

1 The Guarantor's liability shall be limited to the amount of the Guaranteed Sum.

2 The Guarantor's period of liability shall be from and including the date of issue of this Performance Guarantee and up to and including the Expiry Date or the date of issue by the Engineer of the Certificate of Completion of the Works or the date of payment in full of the Guaranteed Sum, whichever occurs first. The Engineer and/or the Employer shall advise the Guarantor in writing of the date on which the Certificate of Completion of the Works has been issued.

3 The Guarantor hereby acknowledge that:

3.1 any reference in this Performance Guarantee to the Contract is made for the purpose of convenience and shall not be construed as any intention whatsoever to create an accessory obligation or any intention whatsoever to create a suretyship;

3.2 its obligation under this Performance Guarantee is restricted to the payment of money.

4 Subject to the Guarantor's maximum liability referred to in 1, the Guarantor hereby undertakes to pay the Employer the sum certified upon receipt of the documents identified in 4.1 to 4.3:

4.1 A copy of a first written demand issued by the Employer to the Contractor stating that payment of a sum certified by the Engineer in an Interim or Final Payment Certificate has not been made in terms of the Contract and failing such payment within seven (7) calendar days, the Employer intends to call upon the Guarantor to make payment in terms of 4.2;

4.2 A first written demand issued by the Employer to the guarantor at the Guarantor's physical address with a copy to the Contractor stating that a period of seven (7) days has elapsed since the first written demand in terms of 4.1 and the sum certified has still not been paid;

4.3 A copy of the aforesaid payment certificate which entitles the Employer to receive payment in terms of the Contract of the sum certified in 4.

5 Subject to the Guarantor's maximum liability referred to in 1, the Guarantor undertakes to pay to the Employer the Guaranteed Sum or the full outstanding balance upon receipt of a first written demand from the Employer to the Guarantor at the Guarantor's physical address calling up this Performance Guarantee, such demand stating that:

5.1 the Contract has been terminated due to the Contractor's default and that this Performance Guarantee is called up in terms of 5; or

5.2 a provisional or final sequestration or liquidation court order has been granted against the Contractor and that

the Performance Guarantee is called up in terms of 5; and the aforesaid written demand is accompanied by a copy of the notice of termination and/or the provisional/final sequestration and/or the provisional liquidation court order.

6 It is recorded that the aggregate amount of payments required to be made by the Guarantor in terms of 4 and 5 shall not exceed the Guarantor's maximum liability in terms of 1.

7 Where the Guarantor has made payment in terms of 5, the Employer shall upon the date of issue of the Final Payment Certificate submit an expense account to the Guarantor showing how all monies received in terms of this Performance Guarantee have been expended and shall refund to the Guarantor any resulting surplus. All monies refunded to the Guarantor in terms of this Performance Guarantee shall bear interest at the prime overdraft rate of the Employer's bank compounded monthly and calculated from the date payment was made by the Guarantor to the Employer until the date of refund.

8 Payment by the Guarantor in terms of 4 or 5 shall be made within seven (7) calendar days upon receipt of the first written demand to the Guarantor.

9 Payment by the Guarantor in terms of 5 will only be made against the return of the original Performance Guarantee by the Employer.

10 The Employer shall have the absolute right to arrange his affairs with the Contractor in any manner which the Employer may deem fit and the Guarantor shall not have the right to claim his release from this Performance Guarantee on account of any conduct alleged to be prejudicial to the Guarantor.

11 The Guarantor chooses the physical address as stated above for the service of all notices for al purposes in connection herewith.

12 This Performance Guarantee is neither negotiable nor transferable and shall expire in terms of 2, where after no claims will be considered by the Guarantor. The original of this Guarantee shall be returned to the Guarantor after it has expired.

13 This Performance Guarantee, with the required demand notices in terms of 4 or 5, shall be regarded as a liquid document for the purposes of obtaining a court order.

14 Where this Performance Guarantee is issued in the Republic of South Africa the Guarantor hereby consents in terms of Section 45 of the Magistrate's Courts Act No 32 of 1944, as amended, to the jurisdiction of the Magistrate's Court of any district having jurisdiction in terms of Section 28 of the said Act, notwithstanding that the amount of the claim may exceed the jurisdiction of the Magistrate's Court.

Signed at

Date .....

Guarantor's signatory: (1) .....

Capacity .....

Guarantor's signatory: (2) .....

PART C2: PRICING DATA AND BILL OF QUANTITIES

C2.1 PRICING INSTRUCTIONS

1. All bidders Mast bid on every item. Not bidding on all items may invalidate the tender. Overberg water reserves the right to appoint different bidders for different schemes. Overberg water reserves the right not to procure all the quantities of the items listed in the bill of quantities below.

2. The prices and rates to be inserted in the Bill of Quantities are to be the full inclusive prices for the work described under the items. Such prices and rates shall cover all costs and expenses that may be required in accordance with the provisions of the Scope of Work, and shall cover the cost of all general risks, liabilities, and obligations set forth or implied in the Contract Data, as well as overhead charges and profit. These prices shall be used as a basis for assessment of payment for additional work that may have to be carried out.

3. It will be assumed that prices included in the Bill of Quantities are based on Acts, Ordinances, Regulations, By-laws, International Standards and National Standards that were published 28 days before the closing date for tenders. (Refer to www.sabs.co.za or www.iso.org for information on standards).

4. Where the Scope of Work requires detailed drawings and designs or other information to be provided, all costs associated therewith are deemed to have been provided for and included in the unit rates and sum amount tendered for such items.

5. An item against which no price is entered will be considered to be covered by the other prices or rates in the Bill of Quantities. A single lump sum will apply should a number of items be grouped together for pricing purposes.

6. The quantities set out in the Bill of Quantities are approximate and do not necessarily represent the actual amount of work to be done. The quantities of work accepted and certified for payment will be used for determining payments due and not the quantities given in the Bills of Quantities.

7. Reasonable compensation will be received where no pay item appears in respect of work required in the Bills of Quantities in terms of the Contract and which is not covered in any other pay item.

8. The short descriptions of the items of payment given in the Bill of Quantities are only for the purposes of identifying the items. More details regarding the extent of the work entailed under each item appear in the Scope of Work. More information is also available in section 11.9. under general system requirements

C2.2 BILL OF QUANTITIES

			Ruensveld West			Ruensveld East			Duivenhoks			All
Item No.	Description	Unit	Qty	Unit Price (R)	Total Price (R)	Qty	Unit Price (R)	Total Price (R)	Qty	Unit Price (R)	Total Price (R)	Total Price (R)
			A	B	C=AxB	D	E	F=DxE	G	H	I=GxH	C+F+I
1. Abstraction Works												
1.1	Turn On/Off Control for Pumps	Each	2			2			2			
1.2	Pump set monitor	Each	1			1			1			
1.3	Flow Meters	Each	2			2			2			
2. Purification Works												
2.1	Turbidity Sensors	Each	1			1			1			
2.2	pH Sensors/Conductivity Sensors	Each	1			1			1			
2.3	Chlorine Analyzers	Each	1			1			1			
3. High Lift Pump Station												
3.1	Turn On/Off Control for Pumps	Each	3			3			3			
3.2	Pump set monitor	Each	1			1			1			
3.3	Flow Meters	Each	3			3			3			
4. Booster Pump Station												
4.1	Turn On/Off Control for Pumps	Each	3			0			4			
4.2	Pump set monitor	Each	1			0			2			
4.3	Flow Meters	Each	3			0			4			
5. Reservoirs												
5.1	Flow Meter	Each	8			12			9			
5.2	Ultrasonic Level Sensors	Each	8			12			9			
5.3	Water Quality Sensors (Chlorine)	Each	8			12			9			
6. Rising Main Pipeline												
6.1	Ultrasonic Flow Meters	Each	2			1			1			
7. Gravity Main Pipeline												
7.1	Ultrasonic Flow Meters	Each	30			15			22			
8. Client Meters												
8.1	flow and Pressure Transmitter and Sensor	Each	100			100			100			
	Total											
Subtotal 1												

9. Integration and Commissioning							
			Unit	Qty	Unit Price (R)	Total Price (R)	
9.1	50 inch display screen		Each	3			
9.2	100 inch display screen		Each	1			
9.3	SCADA Server (Main Control Room)		Lot	1			
9.4	Operator Workstations (SCADA Client PCs)		Lot	1			
9.5.1	SCADA Software		each	1			
9.5.2	SCADA Software License per year	FV = PMT * [((1 + i)^n - 1) / i]	i	n	PMT	FV	
	PV=Initial year's license fees i = percentage increase per year			15			
9.6	SCADA System Integration, Testing and support for 36 months		Lot	1			
9.7	Acoustic leak detection device		Each	2			
9.8	System Training		Group	3			
Subtotal 2							
TOTAL (Sub Total 1 + Sub Total 2)							
VAT 15%							
Contingency 10%							
TOTAL (VAT INCLUSIVE)							

SCADA Software License per year calculation example

PMT = 1 000 i = 3% n = 15 years	FV = PMT * [((1 + i)^n - 1) / i] =1 000 X [(1 + 0.03)^{15} 1)/0.03] =18 598.91

The rates above in the bill of quantities must be all inclusive. E.g travel, labour, material, profit ect. Quantities will be increased or decreased as per the client's determination.

SIGNED ON BEHALF OF THE TENDERER

_____

_____

DATE _____

PART C3: SCOPE OF WORK

C3.1 DESCRIPTION OF THE WORKS:

1. SCADA System

1.1. Background

The Overberg Water Board was established in 1993 with the amalgamation of Duivenhoks and Ruensveld water boards. The Overberg Water Board is one of the national water public entities under the Department of Water and Sanitation (DWS). It exists to complement the work of the department and primarily supports the Minister as the shareholder. It is a water board providing bulk water services in terms of the Water Services Act 108 of 1997 and is subjected to a number of applicable laws such as the Constitution, the National Water Act 36 of 1998, Public Finance Management Act 1 of 1999. Overberg Water discharges its services by placing its customers ahead of the delivery menu. It has a long history of service delivery and placing customers in the forefront since its inception. Overberg Water has been a pillar of hope to its customers in terms of the quality of drinking water. The Head Office of OW is situated in Somerset West which is approximately 40 km from the Cape Town CDB and 30 km from Cape Town International Airport. It also has three water schemes functioning as satellite offices and these are Ruensveld West, Caledon; Reunesveld East Swellendam and Duivenhoks in Heildeberg. It is also managing other systems in the Western Cape Province.

The Overberg Water's area of jurisdiction is the south-western Cape in the west to the Heildeberg/ Heidelberg districts in the east and bounded by the Langeberg Mountains in the north and by the Indian Ocean in the south. Its area includes the following towns: Caledon, Napier, Bredasdorp, Riviersonderend, Swellendam, Heildeberg, Heidelberg and a number of other smaller areas. It is situated in one of the water management areas, namely, the Breede-Olifants Catchment Management Agency (BOCMA) which measures approximately 72 000 square kilometres. The BOCMA is the sole water resource authority in the catchment. The BOCMA "gives effect to its function to investigate and advise water users on the protection, conservation, management and control of water resources in a cooperative manner" (BGCMA, 2015).

1.2. Purpose

The primary function of Overberg Water is mainly the provision of bulk drinking water to its customers. Viewing the location of OW schemes within the BOCMA area of jurisdiction naturally creates a symbiotic relation with the BOCMA in managing the water use.
The scope of the contract will consist of the supply, installation, testing, training and commissioning of a complete new SCADA system for Overberg Water Board (OWB) with associated equipment, fully configured, tested and commissioned in accordance with the specification.
As part of this contract, SCADA will be limited to equipment at the Schemes and offices as specified below as well as a 3G/4G interface to the central control room. The contractor shall be responsible for the supply, installation and commissioning of the interface.

1.3. Length of Project

The project must be completed within **6 (six) months** from date of award. This includes planning, procurement, installation, commissioning and training of Overberg Water Board staff.

2. SCADA Supply & Delivery

The supplier shall supply one complete SCADA system which shall include but not be limited to:

- All SCADA Software as required
- Computer hardware
- Computer software
- Uninterruptible Power Supply. Alternatively supplied from the DC system provided
- provision is made for the additional load in the sizing calculations.
- Patch Panel including all fibre leads
- 3G/4G interface
- All Engineering, configuration, testing & commissioning
- Training
- As built documentation OEM documentation

3. Equipment

All equipment required for the complete installation is included is in the scope of the successful Bidder, this includes all but is not limited to fibre optic cable, cables, circuit breakers, terminal strips, joints, terminations, software etc. 30 meter must be estimated per cable that will be required.

4. Documentation

The successful Bidder shall provide comprehensive as-built documentation upon completion of the project.

5. Labelling (General)

All cubicles, equipment and cables shall be clearly and permanently labelled. A uniform method of labelling shall be followed across the whole system. Each equipment item shall contain the original manufacturer's marking including the manufacturer's name, equipment type, model number, and serial number. In cases where this is not available an information plate must be manufactured attached to the device.

6. SCADA Functional Description

The successful supplier shall compile a functional design specification and once approved, followed by a detail design specification detailing the functionality for acceptance & approval by the client.

7. SCADA Functional design specification (FDS)

The successful supplier shall generate a functional design specification (FDS) document describing in sufficient detail how their system intends to offer the functionality specified and highlighting any aspect where the system offered deviate from the specification. The purpose of the FDS is for the supplier to prove that the proposed system complies with the minimum system requirements and/or to highlight where the system offered will provide the specified functionality in a different fashion.
The document will detail the overall system composition, proposed communication system design, software configuration and related equipment to ensure compliance with the specification.

The FDS document shall be to the satisfaction of and be approved by the OWB engineer before the detail design specification (DDS) is compiled. The FDS shall include (but not be limited to) the following topics:

7.1. Project Overview

- Scope of Supply
- Detailed proposed Project Plan, including Milestones, FAT, SAT, etc.

- System Security
- Network Security/ Remote Access
- System Overview

7.2. System Configuration

- Communication Servers
- Master station equipment (SCADA Server, printers, etc.)
- Master Station software
- Plant Communication
- Plant SCADA equipment (PC, printer, RTUs / relays / IEDs / VSDs)
- Interfacing with legacy equipment (Schemes)
- Interfacing with equipment from another Plant or Scheme

7.3. System Functional Description

- Log-on page
- Overview
- Display pages/ Screens
- Design
- Page Layouts
- Navigation
- Switching / Control Functions
- Events
- Alarms
- Analogues
- Reports
- Trending
- Graphical Displays
- Archiving
- Security
- Authorisation Rights
- Backups

7.4. Training

- Proposed Training Schedules
- Description of proposed content per module

8. Scada Detail Design Specification (DDS)

On acceptance of the FDS, the successful supplier shall generate a detail design specification (DDS) describing in detailing the functionality and deliverables of the system to be supplied. The purpose of the DDS is to document in detail exactly what the supplier will supply under this contract in terms

of hardware, software, functionality, training, documentation, etc. The DDS will also be used as the standard against which the factory acceptance testing & site acceptance testing will be performed / measured. The DDS document shall be to the satisfaction of the OWB engineer and shall be approved by the engineer before the SCADA system is configured / programmed. The DDS shall include (but not be limited to) the following topics:

Project Overview (As provided in FDS, but with latest updates)

9. Other Requirements

9.1. Equipment Installation in Enclosures

Subsystems and components shall be easily maintainable. It shall be possible to remove items of equipment for maintenance with minimal interference with respect to other equipment. Components which generate a lot of heat shall be adequately spaced from their mounting boards and from other components. All components shall be adequately supported and secured. Components shall not be mounted directly on wiring terminal blocks unless adequately protected from damage.

9.2. Cabling and Wiring

All multi-core cables shall be manufactured in accordance with SABS 1507-1990 (or SABS 150-1970) and visibly identified as of flame retardant, low toxicity types. Where a cable is to be installed in a location that may render it liable to mechanical damage, it shall be protected by wire armouring, or by other approved means. All cabling shall be neatly run and fitted in or upon such cable trays, trenches, ducts or conduits as may be appropriate to the layout and equipment. The scope of the contract will consist of providing a floor mounted metering panel with 4 x class 0.5 electricity consumption meters and associated communication equipment, fully configured, tested and commissioned in accordance with the specification. There will be one meter for each incomer and one for summation metering of the 4 incomers. 30 meter must be estimated per cable that will be required.

9.3. Warranty

The supplier will provide a warranty for a period of twelve months after handover of the system to RLM and shall provide the following services as part of the warranty support during this period: Repair or replace all faulty components damaged by normal operation or during first 12 months of operation. First line maintenance by trained and competent RLM personnel.
Respond to call outs as follows:
Scheme equipment interface and communication faults. Modules to be replaced within 5 working days of fault reports. Provide user support consisting of telephonic support of users who have successfully attended the relevant training course. The supplier shall regard the training courses as a method of minimising their user support costs during this period. The response time for user support requests shall be no longer than eight working hours.

9.4. Spares

The supplier shall provide a list of spares for commissioning and maintenance within the scope of this project. The spares holding shall take into account the probability of failure as well as the effect on the system should a spare item not be available. The supplier shall also provide prices of spares with a guaranteed availability of ten years.

9.5. Maintenance

OWB requires a system where the maintenance requirement is minimal. Hardware maintenance shall be no more than what is required for a normal personal computer installation and the communication equipment shall be virtually maintenance free. Apart from normal back-ups and limited software upgrades (vendor specific and operating systems) no maintenance on the real-time database shall be necessary once the systems is fully configured an operational.

9.6. Training

The supplier shall provide training that shall be directly applicable to the actual equipment and software to be provided as part of the system offered. Generalised training based upon roughly similar equipment shall not be accepted. Training shall be provided at the following levels:

9.7. Engineering / System Administrator level.

Full access to the system & database, including system configuration, programming, testing & commissioning, to enable the authorised engineer / administrator to add, delete and make changes to the system as required.

9.8. Operational & Maintenance level.

Training as required to enable personnel to operate the system confidently and to identify basic problems in order to perform first line maintenance on the system.

9.8.1. Executive level.

A basic overview with sufficient information to provide management with a clear understanding of the system functioning & capabilities. The supplier shall specify the following details of all courses included within the scope of the offer:

- Course Title
- Description of course content
- Duration of course
- Maximum number of attendees
- Prerequisites for attendees
- Location of course

The courses shall be run in a disciplined fashion to ensure that RLM personnel who successfully complete the training courses shall be deemed to be competent.

9.9. Documentation to be submitted:

The supplier shall supply all documentation including manuals and drawings related to the design, installation and commissioning of the systems and equipment supplied as part of the contract. All drawings submitted to RLM shall be accompanied by an agreed drawing transmittal advice together with a master drawing register.
The training, operating and maintenance manuals shall be cross referenced and shall be the correct manual for the equipment installed and not for similar equipment items or systems.
RLM reserves the right to approve the format and content of all documentation. The supplier shall verify the quality of the document to ensure fitness for purpose both technically and typographically.

9.9.1. Documentation Software

The system documentation such as diagrams, functional specifications, training manuals, etc. shall be made available in commonly used software formats.

9.9.2. Documentation Synopsis

The supplier shall provide, together with his offer shall provide an overview of the documentation to be supplied. This shall describe the structure and content of the documentation to be provided together with the offer. A list of required
documentation is given below in this section.

9.9.3. Documents

The “as built” documents shall be updated and submitted to RLM not later than one month after the successful completion of the site acceptance test and system hand-over. The documents shall be supplied on electronic media at that stage. The final payment certificate will not be processed until it has been submitted.

9.10. Required Documents

Document Type

- System Functional & Detail Specifications
- System training manuals
- System test specification
- Computer hardware manuals
- Computer operating system manuals
- Computer database user manuals
- System user manuals
- System maintenance manual
- Communication training manual
- Communication user manual
- Communication configuration diagrams
- Modifications

The supplier shall provide additional and amended pages sufficient for all copies of manuals and drawing sets to ensure that all sets are complete. Amendment pages listing modifications and modification history shall be included in all documents. All changes to the system made during the warranty period shall be reflected in the documentation.

10. SCADA Testing

The supplier shall ensure that the system and its parts are fully tested before delivery and installation and shall then perform a final test after commissioning but prior to handover. The testing shall consist of original subsystem tests, followed by a factory acceptance test (FAT) at the supplier’s premises, finally culminating with the site acceptance test (SAT) in which the system as a whole is tested. The supplier shall give RLM notice in writing two weeks prior to any formal testing.

10.1. Factory Acceptance Tests (FAT)

Full factory acceptance tests shall be performed on subsystems during the manufacturing period. In this case full factory acceptance will be required on the complete individual substation SCADA system which will be shipped directly to site after their individual (subsystem) FAT.

10.2. Site Acceptance Test (SAT)

The system SAT shall be performed on all equipment in the scope of supply. The equipment shall be installed in the final location for its planned operation prior to performance of the SAT. The system SAT shall be conducted after all the various elements of the system have been installed in the field and have all successfully completed their individual subsystem SAT’s. The system SAT shall be performed with equipment in the locations in which they will eventually operate. This test shall demonstrate that the overall design of the system meets the functional and performance requirements of the specification in the field, using the actual communications network and including equipment supplied by others, to which the system is designed to interface. Interface testing to the

remote control room shall be performed jointly with the responsible RLM engineer. The contractor shall take full responsibility for the interface at the substation level while RLM will take responsibility for the interface at the central control room level.

10.3. Final System Acceptance (FSA)

RLM will accept the system by means of a formal take-over certificate when:
• The system and all items of equipment have successfully completed all the specified tests.
• All failures, problems and reservations noted during the tests have been corrected to RLM's satisfaction or a plan of corrective action has been agreed between RLM and the supplier.
• Hand over documentation and as built drawings have been submitted.

11. Performance Specification

This specification outlines the minimum performance and integration requirements for the monitoring and control system for the abstraction works, purification plant, pump stations, reservoirs, and pipeline network. The system must provide real-time telemetry and SCADA integration, enabling data-driven water utility operations.

11.1. Abstraction Works

- **Pump Control**: Ability to remotely start and stop two abstraction pumps.
- **Pump Monitoring**: Temperature, vibration, current, and voltage sensors to monitor motor and bearing condition, detect power issues, and enable preventive maintenance.
- **Flow Monitoring**: Electromagnetic/Ultrasonic flow meters to measure discharge flow and detect anomalies.
- **Pressure Monitoring**: Suction and discharge pressure sensors to optimize pump performance and detect potential cavitation or system blockages.

11.2. Purification Works

- **Water Quality Monitoring**:
    - Turbidity Sensors: Continuous monitoring before and after filtration.
    - pH Sensors: Monitor pH throughout the treatment process.
    - Conductivity Sensors: Assess salinity and dissolved ions.
    - Chlorine Analyzers: Ensure adequate residual chlorine levels.
    - Ammonia/Nitrite/Nitrate Sensors: Monitor nutrient levels for optimized dosing.
- **Flow and Pressure Monitoring**:
    - Electromagnetic/Ultrasonic flow meters to track inflow, internal flow paths, and outflow.
    - Pressure sensors for operational efficiency and fault detection.
- **Chemical Monitoring**:
    - Chemical feed flow meters to track dosing accuracy.
    - Chemical level sensors for real-time tank level monitoring.

11.3. High Lift Pump Station

- **Pump Control**: Start/stop functionality for three high-lift pumps.
- **Pump Monitoring**: Sensors for vibration, temperature, voltage, and current.
- **Flow and Pressure**: Electromagnetic/Ultrasonic flow meters and pressure sensors at all critical discharge and suction points.

11.4. Booster Pump Station

- **Pump Control**: Remote operation of three booster pumps.
- **Pump Monitoring**: Same sensor configuration as high lift station.
- **Flow and Pressure**: Comprehensive flow and pressure monitoring on both suction and discharge lines.

11.5. Reservoirs

- **Inflow**:
    - Flow and pressure monitoring.
    - Valve control via SCADA.
- **Level Monitoring**:
    - Ultrasonic level sensors with non-contact measurement and integrated flow control.
    - Hydrostatic pressure transducers for backup level measurement.
- **Water Quality Monitoring**:
    - Chlorine sensors.
- **Outflow**:
    - Flow and pressure sensors with automated control via SCADA.

11.6. Rising Main Pipeline

- **Flow and Pressure Monitoring**:
    - Permanent flow and pressure monitoring at key intersections.
    - Electromagnetic/Ultrasonic and clamp-on ultrasonic flow meters.
    - Pressure sensors/transmitters with alarm functionality.
- **Leak Detection**:
    - Pressure transient sensors.
    - Flow discrepancy alarms based on SCADA analytics.

11.7. Client Meters

- **Metering Points**:
    - Integrated Electromagnetic/Ultrasonic flow meter and digital pressure transmitter.
    - Telemetry output for direct SCADA integration (e.g., KROHNE Waterflux 3070 and WIKA S-20).

11.8. Gravity Main Pipeline

- **Flow and Pressure Monitoring**:
    - Continuous monitoring using electromagnetic or ultrasonic flow meters.
    - High/low-pressure sensors for alarm conditions.
- **Leak Detection**:
    - Pressure transient sensors and flow discrepancy detection via SCADA logic.

11.9. General System Requirements

- **SCADA Integration**: All devices must communicate using Modbus RTU/TCP, HART, or equivalent. Data must be accessible remotely via secure web or 4G/VPN connection.

- **Power Supply**: Where applicable, devices must be battery-powered with a minimum 5–10 year lifespan or solar-ready.
- **Data Logging & Alarming**: Local data storage, real-time alarm thresholds, and integration with central SCADA dashboard.
- **Environmental Protection**: Minimum IP65 (field) and IP68 (sensor heads) ingress protection.
- **Certification**: All meters and sensors to be ISO or equivalent certified with calibration certificates.

This serves as a baseline for the procurement and installation of an integrated water system SCADA monitoring solution. The system must ensure operational reliability, regulatory compliance, and efficient resource management.

Item No.	Description	Specification
1. Abstraction Works		
1.1	Turn On/Off Control for Pumps	The PLC must be an intelligent logic module designed for small-scale automation applications such as pump control, process monitoring, and remote telemetry. It must operate on a 24V DC power supply and should feature 8 inputs, supporting both analogue and digital signals, it must be highly versatile for different sensor integrations. The module must provide transistor outputs, ensuring fast switching and efficient control of connected devices. It must be equipped with an integrated Ethernet interface, support Modbus TCP/IP and MQTT, enabling seamless SCADA system connectivity and cloud integration for remote monitoring. Must have built-in web server that allows users to access real-time system data via a browser without additional software. The PLC must have 400 function blocks, allowing for flexible programming and logic customisation. Additionally, the backlit LCD display must provide essential system diagnostics and operational status, reducing downtime during troubleshooting. The device must support expansion modules, allowing for scalability in applications requiring additional I/O capacity. With an operating temperature range of -20°C to +55°C, must be designed for industrial environments, ensuring reliable performance in demanding conditions.
1.2	Pump Monitoring System	The Pump Monitoring System must be an advanced pump monitoring and protection system designed for submersible and dry-installed pumps. It must provide real-time condition monitoring, predictive maintenance, and fault diagnostics, helping to prevent unplanned downtime and improve operational efficiency. It must be equipped with built-in vibration, temperature, and electrical monitoring capabilities, ensuring early detection of potential pump failures. It must continuously records pump operating data, including motor temperature, vibration levels, phase current, and insulation resistance, providing operators with critical insights into pump health. The system must also feature

		automatic event logging and alarms, allowing maintenance teams to respond quickly to abnormalities. It must be designed for seamless integration into SCADA and telemetry systems, it must supports Modbus RTU and Profibus DP communication protocols, enabling remote access and data visualization. The interface must be user-friendly and include an LCD display for on-site diagnostics, as well as PC and mobile connectivity for remote monitoring. Must have an IP67-rated enclosure, must be built for harsh industrial environments, offering protection against dust, moisture, and vibration. It must be able to operate within a temperature range of -20°C to +70°C, making it suitable for extreme conditions. The system must be compatible with pumps used by Overberg, ensuring optimized performance and extended equipment lifespan.
1.3	Flow Meters	The meter must be able to communicate pressure and flow readings to a SCADA system 150 km away, the a flow meter and pressure sensor must be integrated with a robust communication system that can reliably transmit data over long distances. Battery Powered Electromagnetic Flow Meters – Features Long life span Suitable for most conductive liquids work mode: ‘‘Flow + Pressure’, Infrared remote control display and operation internal lithium batteries with a 10-year battery life. Multiple network interfaces: , RS485, HART and others. Accuracy: ±0.5% of reading Structure: remote with 10m cable Lining material: PTFE Electrodes: SS316L Sensor body: SS304 Transmitter housing: aluminium alloy with epoxy painting Temperature: -10~80℃ for sensor, -20~60℃ for transmitter Process connection: flange SABS 1123 1600/3 Power supply: 3.6V lithium battery Signal output: Pulse Protection Grade: IP68 Function: high and low alarm, empty pipe alarm, excitation alarm, self-diagnosis Complete with: Calibration Certificate
2. Purification Works		
2.1	Turbidity Sensors	Standard: ISO 7027 Probe Type: In-line Probe Material: Plastic Probe covered: Yes, prevents ambient light interference Debubbler: Yes Light source: LED Light source working life: ≥10 years Range (NTU): 0.01-1000

		Application	Potable, Process Waters
		Calibration period	≥ 1 year
		Calibration type	single point (no zero required)
		Drift	≤ 0.02 per month
		PLC interface	Simple, user friendly
		PLC display	Greyscale, high res
		PLC downloadable data logs	Yes
		PLC remote access	4G
		PLC mounting	wall
		Durability	IP65
		Alarm limits	Yes
		Temp range	0-50C
		Pressure range	0-10bar
		Accuracy NTU	0.01
		Response time	T90 ≥ 10s
2.2	pH Sensors /Conductivity Sensors	Standard	ISO 10523
		Probe Type	In-line
		Probe Material	Glass
		Probes working life	≥10 years
		Temp correction	Yes
		Range	0-14 pH units, 0.01 to 20 mS/cm
		Application	Potable, Process Waters
		Calibration period	≥ 6 months
		Calibration type	Lab
		PLC interface	Simple, user friendly
		PLC display	Greyscale, high res
		PLC downloadable data logs	Yes
		PLC remote access	4G
		PLC mounting	wall
		Durability	IP68
		Alarm limits	Yes
		Temp range	0-80C
		Pressure range	0-10bar
		Accuracy	0.01 pH, 1 mS/m
		Response time	T90 ≥ 100s
2.3	Chlorine Analyzers	Standard	US EPA
		Probe Type	In-line, residual chlorine
		Probe Material	Plastic housing/PLC, SS electrode
		Probes working life	≥10 years
		Range (mg/l)	0.005-2
		Application	Potable, Process Waters
		Calibration period	≥ 6 months
		Calibration type	DPD method
		Stability	≤ 1% per month
		PLC interface	Simple, user friendly
		PLC display	Greyscale, high res
		PLC downloadable data logs	Yes

		PLC remote access 4G PLC mounting wall Durability IP65 Alarm limits Yes Temp range 0-40C pH range 4-9 Accuracy mg/l 0.001 Response time T90 ≥ 120s
3. High Lift Pump Station		
3.1	Turn On/Off Control for Pumps	The PLC must be an intelligent logic module designed for small-scale automation applications such as pump control, process monitoring, and remote telemetry. It must operate on a 24V DC power supply and should feature 8 inputs, supporting both analogue and digital signals, it must be highly versatile for different sensor integrations. The module must provide transistor outputs, ensuring fast switching and efficient control of connected devices. It must be equipped with an integrated Ethernet interface, support Modbus TCP/IP and MQTT, enabling seamless SCADA system connectivity and cloud integration for remote monitoring. Must have built-in web server that allows users to access real-time system data via a browser without additional software. The PLC must have 400 function blocks, allowing for flexible programming and logic customisation. Additionally, the backlit LCD display must provide essential system diagnostics and operational status, reducing downtime during troubleshooting. The device must support expansion modules, allowing for scalability in applications requiring additional I/O capacity. With an operating temperature range of -20°C to +55°C, must be designed for industrial environments, ensuring reliable performance in demanding conditions.
3.2	Pump set monitoring	The Pump Monitoring System must be an advanced pump monitoring and protection system designed for submersible and dry-installed pumps. It must provide real-time condition monitoring, predictive maintenance, and fault diagnostics, helping to prevent unplanned downtime and improve operational efficiency. It must be equipped with built-in vibration, temperature, and electrical monitoring capabilities, ensuring early detection of potential pump failures. It must continuously records pump operating data, including motor temperature, vibration levels, phase current, and insulation resistance, providing operators with critical insights into pump health. The system must also feature automatic event logging and alarms, allowing maintenance teams to respond quickly to abnormalities. It must be designed for seamless integration into SCADA and telemetry systems, it must supports Modbus RTU and Profibus DP communication protocols, enabling remote access and data visualization. The interface must be user-friendly and include an

		LCD display for on-site diagnostics, as well as PC and mobile connectivity for remote monitoring. Must have an IP67-rated enclosure, must be built for harsh industrial environments, offering protection against dust, moisture, and vibration. It must be able to operate within a temperature range of -20°C to +70°C, making it suitable for extreme conditions. The system must be compatible with pumps used by Overberg, ensuring optimized performance and extended equipment lifespan.
3.3	Flow Meters	The meter must be able to communicate pressure and flow readings to a SCADA system 150 km away, the a flow meter and pressure sensor must be integrated with a robust communication system that can reliably transmit data over long distances. Battery Powered Electromagnetic Flow Meters – Features Long life span Suitable for most conductive liquids work mode: ‘‘Flow + Pressure’, Infrared remote control display and operation internal lithium batteries with a 10-year battery life. Multiple network interfaces: , RS485, HART and others. Accuracy: ±0.5% of reading Structure: remote with 10m cable Lining material: PTFE Electrodes: SS316L Sensor body: SS304 Transmitter housing: aluminium alloy with epoxy painting Temperature: -10~80℃ for sensor, -20~60℃ for transmitter Process connection: flange SABS 1123 1600/3 Power supply: 3.6V lithium battery Signal output: Pulse Protection Grade: IP68 Function: high and low alarm, empty pipe alarm, excitation alarm, self-diagnosis Complete with: Calibration Certificate
4. Booster Pump Station		
4.1	Turn On/Off Control for Pumps	The PLC must be an intelligent logic module designed for small-scale automation applications such as pump control, process monitoring, and remote telemetry. It must operate on a 24V DC power supply and should feature 8 inputs, supporting both analogue and digital signals, it must be highly versatile for different sensor integrations. The module must provide transistor outputs, ensuring fast switching and efficient control of connected devices. It must be equipped with an integrated Ethernet interface, support Modbus TCP/IP and MQTT, enabling seamless SCADA system connectivity and cloud integration for remote monitoring. Must have built-in web server that allows users to access real-time system data via a browser without additional software. The PLC must have 400 function blocks, allowing for flexible programming and logic customisation.

		Additionally, the backlit LCD display must provide essential system diagnostics and operational status, reducing downtime during troubleshooting. The device must support expansion modules, allowing for scalability in applications requiring additional I/O capacity. With an operating temperature range of -20°C to +55°C, must be designed for industrial environments, ensuring reliable performance in demanding conditions.
4.2	Pump set monitoring	The Pump Monitoring System must be an advanced pump monitoring and protection system designed for submersible and dry-installed pumps. It must provide real-time condition monitoring, predictive maintenance, and fault diagnostics, helping to prevent unplanned downtime and improve operational efficiency. It must be equipped with built-in vibration, temperature, and electrical monitoring capabilities, ensuring early detection of potential pump failures. It must continuously records pump operating data, including motor temperature, vibration levels, phase current, and insulation resistance, providing operators with critical insights into pump health. The system must also feature automatic event logging and alarms, allowing maintenance teams to respond quickly to abnormalities. It must be designed for seamless integration into SCADA and telemetry systems, it must supports Modbus RTU and Profibus DP communication protocols, enabling remote access and data visualization. The interface must be user-friendly and include an LCD display for on-site diagnostics, as well as PC and mobile connectivity for remote monitoring. Must have an IP67-rated enclosure, must be built for harsh industrial environments, offering protection against dust, moisture, and vibration. It must be able to operate within a temperature range of -20°C to +70°C, making it suitable for extreme conditions. The system must be compatible with pumps used by Overberg, ensuring optimized performance and extended equipment lifespan.
4.3	Flow Meters	The meter must be able to communicate pressure and flow readings to a SCADA system 150 km away, the a flow meter and pressure sensor must be integrated with a robust communication system that can reliably transmit data over long distances. Battery Powered Electromagnetic Flow Meters – Features Long life span Suitable for most conductive liquids work mode: ‘‘Flow + Pressure’, Infrared remote control display and operation internal lithium batteries with a 10-year battery life. Multiple network interfaces: RS485, HART and others. Accuracy: ±0.5% of reading Structure: remote with 10m cable Lining material: PTFE Electrodes: SS316L Sensor body: SS304

		Transmitter housing: aluminium alloy with epoxy painting Temperature: -10~80℃ for sensor, -20~60℃ for transmitter Process connection: flange SABS 1123 1600/3 Power supply: 3.6V lithium battery Signal output: Pulse Protection Grade: IP68 Function: high and low alarm, empty pipe alarm, excitation alarm, self-diagnosis Complete with: Calibration Certificate
5. Reservoirs		
5.1	Outflow Flow Flow Meter	The meter must be able to communicate pressure and flow readings to a SCADA system 150 km away, the a flow meter and pressure sensor must be integrated with a robust communication system that can reliably transmit data over long distances. Battery Powered Electromagnetic Flow Meters – Features Long life span Suitable for most conductive liquids work mode: ‘‘Flow + Pressure’, Infrared remote control display and operation internal lithium batteries with a 10-year battery life. Multiple network interfaces, RS485, HART and others. Accuracy: ±0.5% of reading Structure: remote with 10m cable Lining material: PTFE Electrodes: SS316L Sensor body: SS304 Transmitter housing: aluminium alloy with epoxy painting Temperature: -10~80℃ for sensor, -20~60℃ for transmitter Process connection: flange SABS 1123 1600/3 Power supply: 3.6V lithium battery Signal output: Pulse Protection Grade: IP68 Function: high and low alarm, empty pipe alarm, excitation alarm, self-diagnosis Complete with: Calibration Certificate
5.2	Ultrasonic Level Sensors	Key Features: Measurement Range: Up to 12 meters Accuracy: ±1% of full scale Resolution: 1mm (0.04 inches) Operating Frequency: 200kHz ultrasonic signal Operating Temperature: -25°C to +60°C Ingress Protection: IP67-rated, suitable for outdoor use Power Supply: Internal battery with a 5-year lifespan Communication: LoRaWAN (for long-range, low-power IoT applications) Sigfox (low-bandwidth telemetry) GSM/4G (for real-time data transmission over cellular networks) SCADA Integration: Compatible with Modbus RTU over RS485 Cloud-based monitoring with REST API for remote data access Web dashboard and mobile app support Mounting:

		Standard 2-inch NPT thread for direct installation Can be mounted on plastic or metal tanks Environmental Ratings: Resistant to chemicals, UV exposure, and corrosion Suitable for water utilities, fuel management, and wastewater applications
5.4	Water Quality Sensors (Chlorine)	Standard: US EPA Probe Type: In-line, residual chlorine Probe Material: Plastic housing/PLC, SS electrode Probes working life: ≥10 years Range (mg/l): 0.005-2 Application: Potable, Process Waters Calibration period: ≥ 6 months Calibration type: DPD method Stability: ≤ 1% per month PLC interface: Simple, user friendly PLC display: Greyscale, high res PLC downloadable data logs: Yes PLC remote access: 4G PLC mounting: wall Durability: IP65 Alarm limits: Yes Temp range: 0-40C pH range: 4-9 Accuracy mg/l: 0.001 Response time: T90 ≥ 120s
6. Rising Main Pipeline		
6.1	Ultrasonic Flow Meters	The meter must be able to communicate pressure and flow readings to a SCADA system 150 km away, the a flow meter and pressure sensor must be integrated with a robust communication system that can reliably transmit data over long distances. Battery Powered Electromagnetic Flow Meters – Features Long life span Suitable for most conductive liquids work mode: ''Flow + Pressure', Infrared remote control display and operation internal lithium batteries with a 10-year battery life. Multiple network interfaces:RS485, HART and others. Accuracy: ±0.5% of reading Structure: remote with 10m cable Lining material: PTFE Electrodes: SS316L Sensor body: SS304 Transmitter housing: aluminium alloy with epoxy painting Temperature: -10~80℃ for sensor, -20~60℃ for transmitter Process connection: flange SABS 1123 1600/3 Power supply: 3.6V lithium battery Signal output: Pulse Protection Grade: IP68

		Function: high and low alarm, empty pipe alarm, excitation alarm, self-diagnosis Complete with: Calibration Certificate
7. Gravity Main Pipeline		
7.1	Ultrasonic Flow Meters	The meter must be able to communicate pressure and flow readings to a SCADA system 150 km away, the a flow meter and pressure sensor must be integrated with a robust communication system that can reliably transmit data over long distances. Battery Powered Electromagnetic Flow Meters – Features Long life span Suitable for most conductive liquids work mode: ''Flow + Pressure', Infrared remote control display and operation internal lithium batteries with a 10-year battery life. Multiple network interfaces: , RS485, HART and others. Accuracy: ±0.5% of reading Structure: remote with 10m cable Lining material: PTFE Electrodes: SS316L Sensor body: SS304 Transmitter housing: aluminium alloy with epoxy painting Temperature: -10~80℃ for sensor, -20~60℃ for transmitter Process connection: flange SABS 1123 1600/3 Power supply: 3.6V lithium battery Signal output: Pulse Protection Grade: IP68 Function: high and low alarm, empty pipe alarm, excitation alarm, self-diagnosis Complete with: Calibration Certificate
8. Client Meters		
8.1	Electromagnetic Flow Meters	1. Overview The system shall provide remote monitoring of flow and pressure from existing water meters and support IoT communication. It must be retrofit-compatible, battery-powered, and suitable for integration into SCADA or cloud-based platforms. 2. Functional Requirements 2.1 Flow & Pressure Monitoring Compatible with mechanical/electronic pulse-output water meters Flow range: Instantaneous + cumulative volume Pressure range: 0–16 bar; Accuracy: ±0.1 bar Configurable sampling (default: 15 min) 2.2 Communication & IoT Supports NB-IoT, LoRaWAN, 4G Protocols: MQTT, HTTPS, Modbus RTU/TCP, REST API Sends timestamped flow, pressure, total volume, battery and device status 2.3 Retrofit Design Fits DIN-standard meters and pulse-output types Mounting: Strap-on, clamp, or flange Pressure sensor via inline or saddle tee-fitting 2.4 Power Supply Internal lithium battery, ≥10-year lifespan Optional solar or external power support

		2.5 Enclosure & Environmental IP68-rated, UV- and corrosion-resistant Operating temp: -20°C to +70°C (transmitter), -10°C to +80°C (sensor) 2.6 Interface & Security Configurable via infrared/magnetic interface Supports OTA updates Encrypted transmission (AES-128 or better) 2.7 Compliance OIML R49 / EN 14154 / ISO 4064 CE, RoHS, RED compliant 3. Deliverables Flow transmitter unit Pressure sensor with mounting kit Configuration interface/tools Installation and user manuals Calibration and compliance certificates Overberg requires flow and pressure transmitters to be retrofitted to these meters. With a battery as stated in the specifications. (https://precisionmeters.co.za/wp-content/uploads/2024/06/Polymer-volumetric-piston-meter-brochure.pdf)
9. Integration and Commissioning		

9.1	50 inch display screen	**1. Display Characteristics** 1.1 Screen Size: 50 inches (measured diagonally) 1.2 Display Type: Direct LED (backlit) 1.3 Resolution: Ultra High Definition (UHD) 4K (3840 x 2160 pixels) 1.4 Refresh Rate: Minimum 120Hz (native) 1.5 HDR Support: Compatible with HDR10, HDR10+, and HLG formats 1.6 Picture Processor: Advanced UHD upscaling and contrast enhancement engine **2. Smart TV Platform** 2.1 Operating System: Built-in Smart TV OS with intuitive user interface 2.2 App Support: Preloaded and downloadable apps (e.g., YouTube, Netflix, Prime Video, Disney+) 2.3 remote Control 2.4 Screen Mirroring: Support for wireless casting from mobile, PC, and tablet (e.g., Miracast, AirPlay 2) 2.5 Web Browser: HTML5-compatible web browser included **3. Connectivity** 3.1 HDMI Ports: Minimum of 4 HDMI 2.1 ports 3.2 USB Ports: Minimum of 2 USB 2.0/3.0 ports 3.3 Wi-Fi: Dual-band Wi-Fi 802.11ac or higher 3.4 Ethernet Port: 1 x RJ45 LAN port 3.5 Bluetooth: Version 5.0 or higher 3.6 Audio Return Channel (eARC) support on HDMI

		4. Audio and Sound 4.1 Audio Output Power: Minimum 60W (2.2ch or higher) 4.2 Audio Features: Dolby Atmos or DTS:X compatibility 4.3 AI Sound Optimizer: Automatic audio adjustment based on room acoustics **5. Design and Build** 5.1 Bezel: Ultra-slim bezel for immersive viewing 5.2 Finish: Matte black or brushed metal finish 5.3 Stand: Central or dual-leg stand included; wall-mount compatible (VESA standard) **6. Power and Environmental** 6.1 Power Supply: 100–240V AC, 50/60Hz 6.2 Energy Efficiency: Minimum Energy Star or equivalent rating 6.3 Operating Temperature: 0°C to 40°C **7. Included Accessories** 7.1 Remote Control with voice command support 7.2 Power cable, user manual, and wall-mount adapter (if applicable) **8. Warranty** 8.1 Minimum of 24 months manufacturer warranty
9.2	100 inch display screen	**1. Display Characteristics** 1.1 Screen Size: 100 inches (measured diagonally) 1.2 Display Type: Direct LED (backlit) 1.3 Resolution: Ultra High Definition (UHD) 4K (3840 x 2160 pixels) 1.4 Refresh Rate: Minimum 120Hz (native) 1.5 HDR Support: Compatible with HDR10, HDR10+, and HLG formats 1.6 Picture Processor: Advanced UHD upscaling and contrast enhancement engine **2. Smart TV Platform** 2.1 Operating System: Built-in Smart TV OS with intuitive user interface 2.2 App Support: Preloaded and downloadable apps (e.g., YouTube, Netflix, Prime Video, Disney+) 2.3 Remote Control 2.4 Screen Mirroring: Support for wireless casting from

		mobile, PC, and tablet (e.g., Miracast, AirPlay 2) 2.5 Web Browser: HTML5-compatible web browser included **3. Connectivity** 3.1 HDMI Ports: Minimum of 4 HDMI 2.1 ports 3.2 USB Ports: Minimum of 2 USB 2.0/3.0 ports 3.3 Wi-Fi: Dual-band Wi-Fi 802.11ac or higher 3.4 Ethernet Port: 1 x RJ45 LAN port 3.5 Bluetooth: Version 5.0 or higher 3.6 Audio Return Channel (eARC) support on HDMI **4. Audio and Sound** 4.1 Audio Output Power: Minimum 60W (2.2ch or higher) 4.2 Audio Features: Dolby Atmos or DTS:X compatibility 4.3 AI Sound Optimizer: Automatic audio adjustment based on room acoustics **5. Design and Build** 5.1 Bezel: Ultra-slim bezel for immersive viewing 5.2 Finish: Matte black or brushed metal finish 5.3 Stand: Central or dual-leg stand included; wall-mount compatible (VESA standard) **6. Power and Environmental** 6.1 Power Supply: 100–240V AC, 50/60Hz 6.2 Energy Efficiency: Minimum Energy Star or equivalent rating 6.3 Operating Temperature: 0°C to 40°C **7. Included Accessories** 7.1 Remote Control with voice command support 7.2 Power cable, user manual, and wall-mount adapter (if applicable) **8. Warranty** 8.1 Minimum of 24 months manufacturer warranty
9.3	SCADA Server (Main Control Room)	This server will handle real-time monitoring, data logging, **management**, and **alarm historical data storage. Minimum Specifications** **Component Specification** **Processor (CPU)** — Intel Xeon Silver 4310 (12 cores, 2.1GHz) or AMD EPYC 7313 (16 cores, 3.0GHz) **RAM** — 32GB ECC DDR4 (expandable to 64GB)

		Storage	2 x 1TB SSD (RAID 1 for redundancy) + 4TB HDD for historical data
		Graphics Card (GPU)	NVIDIA Quadro T1000 (for multi-display support)
		Operating System	Windows Server 2019/2022 or Linux (Red Hat/Ubuntu Server)
		Network Interface	Dual Gigabit Ethernet (for redundancy and SCADA network)
		UPS (Backup Power)	2 kVA Online UPS for 30-minute backup
		Cooling System	Industrial-grade cooling for 24/7 operation
		SCADA Software Compatibility	Support for **Wonderware or Ignition**
9.4	Operator Workstations (SCADA Client PCs)	These PCs will be used for **monitoring and control** in the control room or remotely. **Minimum Specifications** **Component** — **Specification** **Processor (CPU)** — Intel Core i7-12700 (12 cores, 3.6GHz) or AMD Ryzen 7 7800X (8 cores, 4.2GHz) **RAM** — 16GB DDR4 (expandable to 32GB) **Storage** — 512GB SSD + 1TB HDD (for local logs) **Graphics Card (GPU)** — Integrated or NVIDIA GTX 1650 (for multi-display setup) **Monitor** — Dual 27-inch Full HD (1920x1080) **Operating System** — Windows 10/11 Pro or Ubuntu Linux **Network Interface** — 1 x Gigabit Ethernet	
9.5	SCADA Software	1. **Overview** The SCADA software shall be a web-based, modular industrial automation platform designed for real-time monitoring, control, and data acquisition across water utility infrastructure. It must support rapid development and deployment of SCADA applications in both centralized and distributed environments. 2. **Architecture Requirements** • The system shall support deployment on **Windows, Linux, or macOS** platforms. • It must be **web-launched and web-managed**, enabling remote configuration, monitoring, and user access via standard web browsers. • The platform shall allow for **centralized management of distributed assets** with support for edge computing nodes. 3. **Licensing Model** • The software must offer **unlimited clients, tags, and device connections** under a single server license to	

		accommodate future expansion without additional license fees. 4. **Data Integration and Protocols** • The platform shall support **OPC UA**, **Modbus TCP**, **BACnet**, **MQTT**, and **REST API** protocols for device communication. • Native integration with **SQL databases** (e.g., MySQL, MSSQL, PostgreSQL) is required for data logging, historical analysis, and custom reporting. 5. **Visualization & Interface** • The software must include tools for creating **responsive, mobile-friendly HMI interfaces**, supporting HTML5 standards. • It shall allow users to create dashboards, trends, alarms, and mimic diagrams accessible via desktops, tablets, and smartphones. 6. **Scripting and Automation** A Python-based scripting engine must be available for automating tasks, custom logic, and system integration. Support for event-driven and scheduled scripting is required. 7. **Security** The system shall support role-based access control, SSL encryption, and integration with external authentication systems such as Active Directory and OAuth2. 8. **Alarm Management** Built-in alarm notification system must support SMS, email, and voice notifications. Alarms should be logged with timestamped acknowledgment, severity levels, and historical reporting. 9. **Reporting and Historian** The platform must include built-in tools for report generation, PDF export, MS Excel export and data trending. Historical data should be queryable in real time via integrated SQL or tag historian tools.

		10. **Modularity and Extensibility** The software must support optional modules for edge computing, machine learning integration, and SCADA-as-a-Service (SaaS) deployments. A public SDK or API should be available for custom module development or integration with third-party systems. 11. **Support and Training** The vendor must provide access to comprehensive documentation, online training, and community support forums. Optional support tiers should be available for enterprise deployments requiring 24/7 SLA-backed assistance
9.6	SCADA System Integration and Testing	**1. System Integration:** • Configuration of SCADA software, RTUs/PLCs, sensors, meters, and telemetry devices. • Tag mapping, device driver setup, and network communication configuration (e.g., Modbus, OPC, MQTT). • Integration with existing IT infrastructure and databases, where applicable. 2. **Factory and Site Acceptance Testing**: • Factory Acceptance Testing (FAT): Conducted prior to deployment to verify hardware and software interoperability. • Site Acceptance Testing (SAT): On-site testing of system functionality, data accuracy, communications, control commands, alarm triggers, and operator interfaces. **3. Customer Support (36 Months):** • 36 months of technical support from the date of commissioning. • Includes remote and on-site diagnostics, software updates, and assistance with SCADA-related faults. • SLA-based response times for critical, major, and minor issues. • Optional remote monitoring service for proactive issue detection and resolution. • Quarterly system health checks and performance review reports. All integration and support services must ensure minimal downtime, full compliance with cybersecurity policies, and alignment with utility operational requirements.
9.7	Acoustic leak detection device	1. Purpose The instrument shall be used for detecting and locating underground water leaks in pressurized water pipeline networks.

		It must provide accurate results in outdoor environments and be suitable for use by non-technical personnel through an intuitive interface. 2. Functional Requirements Detection Method: Acoustic-based leak detection using vibration and sound wave analysis. Measurement Depth: Capable of detecting leaks at depths of up to 5 meters. Detection Modes: General Detection Mode: For wide-area preliminary scanning. Locating Mode: For precise pinpointing of the leak location. Frequency Range: Must operate in a frequency range of 1 Hz to 10,000 Hz. Sensitivity: Adjustable gain and volume settings (minimum 10 levels) to adapt to varied pipeline conditions and environmental noise. 3. Display and Interface Display: Minimum 7-inch high-resolution digital touch LCD screen. User Interface: Intuitive, graphical user interface with real-time signal waveform display and numerical analysis. Languages: Must support multiple languages including English, French, Spanish, Arabic, and others. 4. Power and Portability Battery Life: Rechargeable battery providing at least 15 hours of continuous operation. Charging Time: Not more than 8 hours for full charge. Operating Temperature: Functional within a range of -20°C to +50°C. Weight: Main unit weight not exceeding 1 kg for portability. Accessories: Durable carry case. High-sensitivity acoustic sensor. Noise-cancelling headphones for use in high-traffic areas. 5. Additional Features

		Data Logging: Must provide storage for leak sound recordings and signal strength values for future reference. Headphones: Industrial-grade noise-cancelling headphones must be included to minimize ambient interference. Construction: Rugged design, with IP65 or higher ingress protection rating. 6. Warranty and Support Warranty: Minimum 12-month manufacturer's warranty. Training: On-site training for operators must be provided upon commissioning. Support: Local technical support and access to spare parts must be guaranteed.
9.8	System Training	Training of Overberg Officials at Three Schemes Ruensveld West 34°05'42.97"S 19°18'52.46"E Ruensveld East 34°04'34.69"S 20°14'44.63"E Duivenhoks 34°03'33.34"S 20°57'31.83"E

12. Software: Real-Time Monitoring And Control

This software specification defines the performance, visualization, and integration requirements for a SCADA-based software platform designed to monitor, control, and analyse a water distribution network in real time.

12.1. Real-Time Graphical Monitoring and Visualization

The software platform shall provide a graphical user interface (GUI) for monitoring and control of water infrastructure. It shall support the use of custom graphics and images to:

- Create schematic diagrams of the water distribution system, including pipelines, pump stations, reservoirs, flow meters, valves, and treatment facilities.
- Display water system status through real-time animations and tag-driven expressions to reflect flow, pressure, level, and valve status.
- Monitor complex flow switching schemes, bypass routes, or reservoir filling/emptying sequences in real time.

The platform shall allow full interactive monitoring using:

- Animated water distribution diagrams driven by live telemetry.
- Data overlays including pressure zones, flow rates, reservoir levels, and pump statuses.

12.2. Device Control and Actuation

The software platform shall allow the user to send commands to remote field devices for operations such as:

- Starting and stopping pumps.
- Opening and closing valves.
- Triggering flow diversion or flushing sequences.
- Activating alarms, adjusting setpoints, or toggling operational modes.

12.3. Real-Time Data Tables

A web-enabled interface shall provide side-by-side, real-time tabular displays of key operational data including:

- Flow, pressure, level, quality readings (pH, chlorine, turbidity).
- Pump and valve statuses.
- Alarm states and system diagnostics.

12.4. Trending and Historical Analysis

The software shall provide a data trending application for the real-time and historical visualization of parameters such as:

- Flow rates (L/s, m^3/h), pressures (bar), levels (m), and chemical readings (mg/L).
- Energy usage data for pump stations (optional).

Graphs shall support zooming, time range selection, data export, and comparison between multiple variables.

12.5. Graphical Monitoring Capabilities

The platform shall support advanced graphical functions including:

- HTML5 graphics for cross-platform accessibility.
- Responsive design that adapts to any screen size or device.
- JavaScript integration to customize component behaviors.
- Import of Scalable Vector Graphics (SVG) for schematic creation.
- A built-in library of standard water infrastructure icons (e.g., valves, reservoirs, pumps).
- Intuitive navigation via clickable elements within the graphic (no menus required).
- Reusable components and JavaScript scripts stored in shared libraries.
- Multi-instance editing where updating one component updates all instances.
- Support for various image formats (.gif, .png, .bmp, .jpeg, .tif) and CAD backgrounds with layered displays.

This software platform shall enable operators and engineers to effectively visualize, manage, and optimize operations in real time across the water distribution network through a SCADA interface integrated with telemetry, control, and data analysis capabilities.

13. SOFTWARE: Alarm and Event Analysis and Notification

The software platform shall support the creation of standard and user-defined alarm hierarchies based on site-specific water network elements such as pump stations, pipelines, reservoirs, and treatment plants.

Alarm performance shall meet the following criteria:

- Alarms must be displayed in the operator interface within **10 seconds** of being triggered in the field device.
- Alarms with timestamps shall be retrievable directly from devices that support **onboard event logging**.
- The system shall support **1ms resolution** timestamps where available from field instrumentation.
- The platform shall support the creation of software-based alarms with 1ms timestamp precision based on real-time readings.
- Alarm types supported shall include: timestamped digital (e.g., pump on/off), analog (e.g., high pressure), multi-digital (e.g., pump fault + valve closed), and compound alarms triggered by logic conditions.

A mobile notification module shall be available and shall leverage the platform's native **high-availability and hot-standby redundancy** features to ensure reliability. It shall not depend on standalone or third-party redundancy systems.

A web-based **event and alarm analysis interface** shall be included, with the following features:

- Intelligent grouping of related alarms into "incidents" to assist in root cause analysis (e.g., pump trip → pressure drop → reservoir low).
- Automatic categorization of alarms/incidents by severity, location, and cause.
- Filterable dashboards for browsing historical and active alarms, organized by source (e.g., zone, device), priority, and status.
- Pop-up detail windows for each alarm/incident showing location, timestamp, cause, and associated events.
- Thumbnail previews of pressure/flow/water quality data linked to each incident.

The system shall offer a **timeline view** for each incident:

- Alarms/events stacked in chronological order for sequence-of-event (SOE) analysis.
- Color-coded indicators for event start and end times.
- Highlighted zones to indicate where dense alarm activity occurred.
- Indicators showing linked trend or waveform data if applicable (e.g., sudden pressure drop).

A **Smart Data Analyzer** module shall allow operators to:

- Toggle visibility of data streams (e.g., flow, pressure, chlorine levels).
- Calculate and display RMS, min/max, and averages; zoom, pan, and export to CSV.
- View interactive time-aligned graphs of sensor inputs (e.g., pressure spikes vs. pump switching).
- Compare multiple data sets (e.g., inflow/outflow across different points) side-by-side for event diagnosis.

14. Software - Data Analytics and Visualization

The software platform shall include an interactive, web-based dashboard application with real-time updates for visualizing operational and analytical data related to the water distribution system. Dashboards may include flow, pressure, water quality (e.g., turbidity, pH, chlorine), reservoir levels, energy usage for pumps, system health indicators, historical trends, images, and content from accessible URLs.

Authorized users shall be able to create, edit, and share dashboards using only a web browser, without requiring any additional software for dashboard design or publication. This includes full control over graphic elements, units, time ranges, and layout customization.

The dashboard application shall support unattended kiosk-style display modes:

- Users may assign individual dashboards to a slideshow that cycles through specified views at user-defined time intervals.
- Multiple kiosk instances can operate independently on any web-capable device.

The dashboard shall include a library of standard visualization components (gadgets), including:

- Bar, pie, trend, real-time value display, and web page viewer gadgets.

The dashboard shall also offer advanced analytical widgets tailored for water network monitoring, such as:

- Period-over-period comparisons (e.g., daily or weekly flow trends),
- Geographic heat maps (e.g., chlorine levels across zones),
- Pareto charts showing top alarm contributors,
- Sankey diagrams to illustrate water transfer across pump stations or reservoirs.

15. Reporting and Performance Analysis

The platform shall include a web-based reporting module that allows authorized users to generate, edit, and manage reports based on pre-formatted templates (minimum 64). Reports may cover:

- Water billing or usage allocation (by zone or customer meter),
- Treatment plant performance and chemical dosing efficiency,
- Pump station and pipeline operating parameters,
- Water quality compliance (e.g., residual chlorine, pH, turbidity),
- Alarm and incident response logs.

The reporting module shall support scheduled, event-based, or manual distribution in common file formats: .csv, .xlsx, .pdf, .tiff, .html, and .xml.

16. Technical Infrastructure and Cybersecurity

The software shall be installable on physical servers or virtual machines and support modern Windows Server and non-server operating systems.

Cybersecurity features shall include:

- Secure development lifecycle practices.

- Two-factor authentication (2FA), usable offline within isolated networks.
- Compatibility with environments enforcing deep packet inspection on Modbus traffic.
- TLS 1.3 encryption for all server-client communications.
- Certification authority (CA) based authentication.
- AES256 encryption and SHA-512 hashing for credentials.
- FIPS-compliant deployment support and application whitelisting.

The platform shall integrate with **Active Directory (AD)** for:

- Centralized user management across multiple domains.
- Enforcing Windows-based password and account policies.
- Role-Based Access Control (RBAC) for permissions and access levels.

17. Data Logging and Redundancy

The system shall support logging up to **100,000 historical tags** at **1-minute intervals** and store this data for a minimum of **2 years**.

Logged data shall be viewable and exportable via a web interface with report types such as single-site usage, multi-site comparison, trends, and tabular views, formatted in XML, Excel, Word, or PDF.

The software shall automatically acquire and archive high-resolution device data (alarms, trends, waveforms) without manual configuration. This includes:

- Timestamps accurate to 1ms with preservation of device clock sync information (e.g., GPS, NTP, PTP).
- Device-reported timestamp quality flags.

18. Communications and Protocol Support

The platform shall support Modbus RTU/TCP integration with:

- Dynamic scaling of values without requiring dedicated scaling registers.
- Master-mode polling and register writing.
- Custom device driver creation for third-party Modbus devices.

OPC integration shall include:

- **OPC AE Server** for alarm/event sharing.
- **OPC DA Server 2.01** with default tag mappings for native devices and support for custom tag creation.
- **OPC DA Client 2.01** for real-time interoperability.
- **OPC UA Client 1.01** for secure data exchange with OPC UA systems.

19. Web and Interoperability

The platform shall support web content widgets for embedding external applications and enable direct access to reporting and dashboard modules via individual URLs.

Web services support shall include:

- A server interface to share real-time, historical, and alarm/event data.
- A secure, web-based configuration interface.
- Remote alarm acknowledgment by authorized users.

20. ETL, Synchronization, and Failover

An **Extract, Transform, Load (ETL)** engine shall support import/export of data from/to .csv, .xml, Wonderware Historian, and OLE DB-compatible databases.

Redundancy and failover capabilities shall include:

- Hot-standby secondary nodes with real-time data mirroring.
- Instant failover with historical data sync and backfill.
- Device-level redundancy (up to 8x) per endpoint.

The system shall maintain full functionality—including logging, alarming, and control—throughout failover events.

21. Device Support and Internationalization

A unified device integration tool shall support Modbus, IEC 61850, IEC 60870-5-104, and DNP3 protocols with:

- Default tag mapping via a common data model.
- Custom driver definition support.

Configuration management shall allow offline project setup and migration.

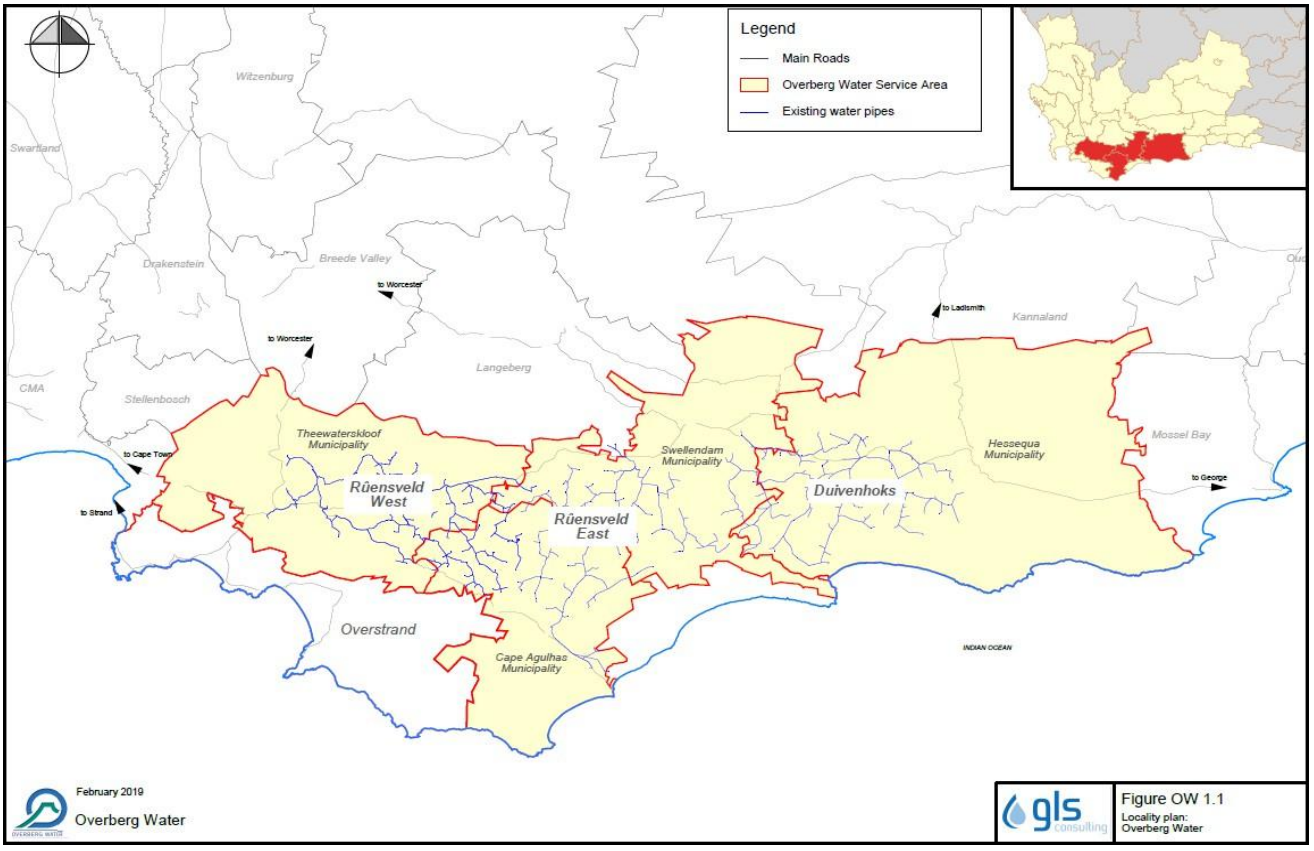
The platform shall support multiple languages and international formats, with factory support for **English** and others upon request.

PART C4: SITE INFORMATION

C4.1 LOCATION FOR THE WORKS

The project is located at the following Overberg Water Board offices, the Successful bidder will be required to perform work in the following operational areas.

OPERATIONAL AREA	WTW	Nearest Town	Coordinates
AREA 1	Rûensveld-West WTP	Caledon	34°05'42.97"S 19°18'52.46"E
	Rûensveld-West Workshop	7 New Cross Street, Caledon	34°14'01.77"S 19°25'50.26"E
	Rûensveld-West Admin Office	5 Demper Street,Caledon	34°13'59.69"S 19°25'32.04"E
AREA 2	Rûensveld-East WTP	Swellendam	34°04'34.69"S 20°14'44.63"E
	Duivenhoks WTP	Heidelberg	34°03'33.34"S 20°57'31.83"E
	Duivenhoks Admin Office	Heidelberg	34°05'17.52"S 20°57'21.43"E
AREA 3	Somerset West	3, Ground, Trident Park2, 1 Niblick Way, Somerset West Cape Town	34°05'12.38"S 18°49'14.20"E



Reservoir Coordinate and inlet pipe diameter

Name	Coordinates	Pipe diameter (mm) for flow meter
Rûensveld West		
Maraisdal WTP clear well	34°05'41.9"S 19°18'53.2"E	400
Rûensveld West reservoir R1	34°05'41.9"S 19°18'53.2"E	350
Rûensveld West reservoir R1A	34°07'47.6"S 19°23'09.5"E	350
Rûensveld West reservoir R2	34°13'25.8"S 19°25'32.1"E	400
Rûensveld West reservoir R3	34°13'07.3"S 19°25'26.1"E	300
Rûensveld West reservoir R4	34°15'04.3"S 19°38'48.7"E	150
Rûensveld West reservoir R5	34°11'23.3"S 19°46'03.3"E	125
Rûensveld West reservoir R6	34°13'44.8"S 19°55'28.0"E	140
Rûensveld East		
Rûensveld East WTP clear well	-34.076181; 20.244810	200
Rûensveld East reservoir R1	-34.129251; 20.301405	200
Rûensveld East reservoir R2	-34.138784; 20.311917	110
Rûensveld East reservoir R3	-34.271300; 20.080704	160
Rûensveld East reservoir R4	-34.389343; 20.031171	90
Rûensveld East reservoir R5	-34.292772; 20.205220	160
Rûensveld East reservoir R6	-34.450215; 20.104498	160
Rûensveld East reservoir R7	-34.317293; 20.431373	160
Rûensveld East reservoir R8	-34.326095; 20.492097	75
Rûensveld East reservoir BRE3	-34.192693; 20.364850	50
Rûensveld East reservoir BW4	-34.220239; 20.103299	90
Rûensveld East reservoir BRC9	-34.393589; 20.160374	160
Duivenhoks		
Duivenhoks WTP clear well	34° 3'33.37"S 20°57'32.09"E	250
Duivenhoks reservoir R1	34° 3'9.69"S 20°55'24.09"E	100
Duivenhoks reservoir R2	34° 3'41.34"S 20°56'21.96"E	200
Duivenhoks reservoir R3	34°10'29.02"S 20°54'19.40"E	150
Duivenhoks reservoir R4	34° 7'50.55"S 21° 1'56.03"E	150
Duivenhoks reservoir R5	34°13'22.28"S 20°47'38.65"E	110
Duivenhoks reservoir R6	34°14'6.92"S 20°40'19.48"E	90
Duivenhoks reservoir R7	34° 8'48.61"S 20°35'36.37"E	110
Duivenhoks reservoir R8	34° 4'7.86"S 20°56'46.31"E	250

22. PART C5: COMPILING THE TENDER DOCUMENT

Binding Method
The entire tender document must be securely *ring-bound* (preferably with a durable plastic or wire ring binder) to allow easy page turning and to keep pages intact.

Dividers
Clearly labelled *dividers or index tabs* must be inserted to separate the main sections of the tender. Each divider must be durable and easily visible when the document is closed.

Table of Contents
The document must include a detailed *Table of Contents* at the front, indicating all sections and sub-sections with corresponding page numbers.

No Loose Pages
No loose or stapled pages will be accepted — the entire submission must form a single, bound document.

Labelling
The cover page must clearly display the *Tender Name, Tender Number, and Bidder's Details*.

Additional Documents
Any annexures or supporting documents must be placed in the correct section and clearly referenced in the Table of Contents.