



REQUEST FOR QUOTATION CIDB

Form No: RW SCM 00019 F
Revision No: 04
Effective Date: 16 Oct 2023

BID NUMBER:	10406494 R	CLOSING DATE:	19 January 2023	CLOSING TIME:	16:00 pm
DESCRIPTION:	ENGINEER-PROCURE-CONSTRUCT (EPC) OF POWER GENERATION USING HYDROPOWER SYSTEM TO POWER THE CATHODIC PROTECTION RECTIFIER UNITS AT RAND WATER				
NON-COMPULSORY BRIEFING SESSION DATE AND TIME	N/A	BRIEFING SESSION VENUE	N/A		
ISSUE DATE	13 December 2023				

BIDDING PROCEDURE ENQUIRIES MAY BE DIRECTED TO:

BUYER		SOURCING MANAGER	
CONTACT PERSON	Vongani Mageza	CONTACT PERSON	Jabulile Molema
TELEPHONE NUMBER	011 682 0675	TELEPHONE NUMBER	011 682 0393
E-MAIL ADDRESS	Enquiries: vmageza@randwater.co.za	E-MAIL ADDRESS	Enquiries : jmolema@randwater.co.za

SUPPLIER INFORMATION

SUPPLIER ENTITY NAME			
POSTAL ADDRESS			
STREET ADDRESS			
TELEPHONE NUMBER	CODE		NUMBER
CELLPHONE NUMBER			
E-MAIL ADDRESS 1			
E-MAIL ADDRESS 2			
VAT REGISTRATION NUMBER			CIDB GRADING
SUPPLIER COMPLIANCE STATUS	TAX COMPLIANCE SYSTEM PIN:		CENTRAL SUPPLIER DATABASE No: MAAA_____
B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE	[TICK APPLICABLE BOX] <input type="checkbox"/> Yes <input type="checkbox"/> No	B-BBEE STATUS LEVEL SWORN AFFIDAVIT (EMEs and QSEs)	[TICK APPLICABLE BOX] <input type="checkbox"/> Yes <input type="checkbox"/> No

BID SUBMISSION:

- a. Submissions must be made by the stipulated date and time to the email address stipulated above. Late submissions will not be accepted for consideration.
- b. All submissions must be made on the official forms provided (not to be re-typed) or in the manner prescribed in the bid document.
- c. Fully complete and sign Form of Offer
- d. No submissions will be considered from persons in the service of the state, companies with directors who are persons in the service of the state, or close corporations with members / persons in the service of the state.
- e. Rand Water will provide any clarifications / addenda / extension of closing date by no later than **three (3) calendar days** before

the closing date.

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SECTION A: BID

PART T1: BIDDING PROCEDURES

T1.1. BID NOTICE AND INVITATION TO BID

<p>Rand Water invites bids for the ENGINEER-PROCURE-CONSTRUCT (EPC) OF POWER GENERATION USING HYDROPOWER SYSTEM TO POWER THE CATHODIC PROTECTION RECTIFIER UNITS AT RAND WATER</p> <p>The technical requirements for the equipment are fully stated in the bid documentation. Potentially emerging or other enterprises that satisfy criteria stated in the Bid Data portion of the document may submit their bid offers.</p>	
Minimum Contractor CIBD Grading Required	It is estimated that tenderers must have a CIBD contractor grading designation of 3ME or higher
Contracting Strategy	Develop and Construct
Classification	Specialist work
Procurement Procedure	Rand Water uses a single volume approach.
Awarding Strategy	The maximum number of suppliers to be awarded this bid is <u>one</u> . <i>Where the award is made to more than one supplier, Rand Water shall negotiate with the highest ranking pre-determined number of suppliers in order to normalise the prices, prior to award</i>
Bid Submission	Bids must be submitted by the stipulated date and time on On-Line Bid Submission Systems. RFQ's submitted on e-mail will not be considered. Rand Water Online Bids Application or https://bids.randwater.co.za/
Bid Validity	Validity period of not more than 12 weeks is required from closing date of this RFQ. Rand Water reserves the right to extend the validity period for a period reasonable for business requirements.
Subcontracting	Where CIBD related works are subcontracted, each Subcontractor must also be registered with the appropriate CIBD grading Designations in accordance with the value of the work to be undertaken by that Subcontractor.
Rotation of Suppliers	In the spirit of providing equal opportunities to potential suppliers and in view of not supporting monopolies, Rand Water shall apply rotation of suppliers to ensure equitable share in Rand Water's awarded contracts.

T1.2. BID DATA

The conditions of this bid are the Standard Conditions of Tender as contained in the document *CIDB Standard for Uniformity in Engineering and Construction Works Contracts (August 2019) Annexure C* and may be obtained from the CIDB.

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

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

CLAUSE NUMBER (CIDB)	BID DATA
C.1.1	The Employer is Rand Water.
C.1.2	The bid documents issued by the Employer are detailed on the contents page of this bid document.
C.1.4	The Employer's Representative/s is stated on the cover page of this bid document.
C.1.6.3	The Employer shall evaluate this bid in accordance with the evaluation criteria stated in this bid.
C.2.1	<p><i>Only those Bidders who are registered with the CIDB, or are capable of being so prior to the evaluation of submissions, 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, for a 3ME or higher class of construction work, are eligible to have their tenders evaluated.</i></p> <p><i>Joint ventures are eligible to submit bids provided that:</i></p> <ol style="list-style-type: none"> <i>1. every member of the joint venture is registered with the cidb;</i> <i>2. the lead partner has a contractor grading designation in the ME class of construction work; or not lower than one level below the required grading designation in the class of works construction works under considerations and possess the required recognition status.</i> <i>3. 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 or ME class of construction work or a value determined in accordance with Regulation 25 (1B) or 25(7A) of the Construction Industry Development Regulations.</i>
C.2.7	The arrangement for a non-compulsory site meeting (where applicable) is as stated in the Notice and Invitation to Bid.
C.2.8	The due date for seeking clarification is as stated in the Bid Notice and Invitation to Bid.
C.2.12	<p>In addition to the information appearing in C2.12 of the CIDB Standard Conditions of Tender, the following statements shall apply:</p> <ul style="list-style-type: none"> • Calculations, drawings and all other pertinent technical information and characteristics as well as modified or proposed Pricing Data must be submitted with

	<p>the alternative bid offer to enable the Employer to evaluate the efficacy of the alternative and its principal elements, to take a view on the degree to which the alternative complies with the Employer's standards and requirements and to evaluate the acceptability of the pricing proposals.</p> <ul style="list-style-type: none"> • Calculations must be set out in a clear and logical sequence and must clearly reflect all design assumptions. • Pricing Data must reflect all assumptions in the development of the pricing proposal. • <i>The pricing of the alternative bid offer may not exceed the pricing of the main bid offer.</i> <p>Acceptance of an alternative bid offer will mean acceptance in principle of the offer. In the event that the alternative bid offer is accepted, it will be a contractual obligation for the Bidder to accept full responsibility and liability that the alternative bid offer complies in all respects with the Employer's standards and requirements.</p>
C.2.13.5	Bidders must submit one (1) copy of the bid document and returnables.
C.2.13.9	Bid submission must only be submitted on On-Line Bid Submission Systems.
C.2.15	The closing time for submission of bid offers is as stated in the Bid Notice and Invitation to Bid.
C.2.16	The bid offer validity period is as stated in the Bid Notice and Invitation to Bid. <i>No bid substitutions will be allowed after the closing date and time.</i>
C.2.23	See 2.1 List of Returnable Documents for a comprehensive list of certificates and additional documents required for submission with this bid.
C.3.4	Rand Water will make available the names, prices and preference points for submissions to interested parties who make request for such information, at least one (1) week after the closing date. <i>(CIDB Best Practice Guideline #A3 Evaluation tenders offers, February 2008)</i>
C.3.11	<p><i>Rand Water's evaluation process comprises of the following steps. Specific criteria to be utilised for this bid are contained in <u>T1.3 Evaluation Criteria</u></i></p> <p>a) Test for Responsiveness / Pre-qualification</p> <p><i>Refer to the criteria as stated in T1.3 of this bid document. All test for responsiveness must be met in order for the bid submission to be considered further.</i></p> <p>b) Functionality evaluation</p> <p><i>Refer to the criteria as stated in T1.3 of this bid document. A minimum score of 70 points must be obtained for the bid submission to be considered further.</i></p> <p>c) Price</p> <p>i. Price Analysis</p> <p>Rand Water uses a Financial Tolerance Range in order to assess how reasonable the market response prices are. These ranges will assist with eliminating bid prices that are deemed to be excessively high or low to complete the works. The higher limit ensures that Rand Water does not pay more than it believes the value of service or goods is worth, and the lower limit ensures that Rand Water is not exposed to risk of work not being</p>

completed or prices increasing subsequent to the award because the award price was too low to complete said scope.

ii. Specific goals

WHERE PROCUREMENT VALUE IS R0 < R50 000 000 (INCL. VAT):

$$P_s = 80 * \left(1 - \frac{P_t - P_{\min}}{P_{\min}} \right)$$

The following table will be used to calculate the score out of 20 for BBEE:

B-BBEE Status Level of Contributor	Number of Points
1	20
2	18
3	14
4	12
5	8
6	6
7	4
8	2
Non-compliant contributor	0

Where:

Ps = Points scored for comparative price of bid or offer under consideration

Pt = Comparative price of bid or offer under consideration

Pmin = Comparative price of lowest acceptable bid or offer.

Rand Water does not bind itself to accept the bid with the lowest price

BBBEE STATUS (Pp = 20 maximum)

Quantification of procurement contribution to B-BBEE

Points will be awarded to a bidder for attaining the B-BBEE status level of contribution in accordance with the table below:

B-BBEE Status Level of Contributor	Number of point (80/20 system)
1	20
2	18
3	14
4	12
5	8
6	6
7	4
8	2

	<table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td style="padding: 2px;">Non-compliant contributor</td> <td style="padding: 2px; text-align: center;">0</td> </tr> </table> <p>Bidders will not be disqualified from the bidding process for not submitting a certificate substantiating the B-BBEE status level of contribution or is a non-compliant contributor. Such a bidder will score zero (0) out of maximum of 10 for B-BBEE</p> <p>d) Objective Criteria Refer to the criteria as stated in <u>T1.3 Evaluation Criteria</u> of this bid document.</p> <p>A bid must be awarded to the bidder who scored the highest total number of points in terms of the preference point systems (price and B-BBEE points), unless objective criteria in terms of section 2(1)(f) of the Act justify the award of the bid to another bidder.</p> <p>SUMMARY</p> <p>The total number of functionality/ quality (PF) shall be the sum total of the product of quality criteria by weight allocated.</p> <p>The total number of adjudication points (PT) shall equal the sum of the bid price points (Ps) and the BBBEE status points (PP) i.e.</p> <p>PT = Ps + PP</p> <p>Rand Water does not bind itself to accept the bid with the highest number of adjudication points.</p>	Non-compliant contributor	0
Non-compliant contributor	0		
C.3.17	The number of paper copies of the signed contract to be provided by the Employer is 1 (one).		

T1.3. EVALUATION CRITERIA

T1.3.1. TEST FOR RESPONSIVENESS/ PRE-QUALIFICATION

1. Letter of Good Standing from the Department of Labour or an Accredited Institution.

2. Only those tenderers who are registered with the cidb, or are capable of being so prior to the evaluation of submissions, 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, for a 3 ME or higher ME class of construction work, are eligible to have their tenders evaluated.

3. Fully complete and sign Form of offer and Acceptance.

T1.3.2. FUNCTIONALITY EVALUATION

Bid submissions will be evaluated on the criteria outlined in items (A-D) below. Each Item (A to D) has an assigned “Weight” and “Rating” scale. During the evaluation process, Bidders shall be assigned a “Rating” for each item in A to D.

The maximum “Score” that a Bidder can achieve will be equal to the “Weight” for a particular item. The Total Scores of each functionality criterion will be multiplied by its weight and then the total score summed up to a total score out of 100.

A detailed description of the “Rating” scales and associated adjudication documentation are as follows:

FUNCTIONALITY CRITERIA		WEIGHT
1.	<p>Previous Related Experience (Similar to current RFQ Scope/Work)</p> <p>The rating of this item is based on a four-point scale:</p> <ul style="list-style-type: none"> • None = 0 % - No submission or submission below weak requirements. • Weak = 33.3% - 1 Company reference with a performance score of 80% or above. • Moderate = 66.7% - 2 Company references both with a score of 80% or above. • Good = 100% - 3 Company references all three with a score of 80% or above. 	10
2.	<p>Human Resource Capacity</p> <p>Adjudicated based on Human Resource Capacity Schedule required for the execution of the scope of work. The purpose is to establish an overall picture of the company's human resource capacity and ability to undertake the work. The main requirements are:</p> <ol style="list-style-type: none"> I. Hydraulics Engineer/ Technologist with Engineering Degree in either Civil, Mechanical or Chemical with a track record in conduit hydropower design and optimisation (minimum 10 years engineering experience) which is registered with ECSA as Pr. Eng. Or Pr. Tech. Eng., II. Computer Science Engineer, or Scientist with a qualification in Artificial Intelligence. III. Project Manager with any Engineering Degree and 5 years engineering experience. 	20

FUNCTIONALITY CRITERIA		WEIGHT
	<p>The rating of this item is based on a four-point scale:</p> <ul style="list-style-type: none"> • None = 0 % - No submission or a submission below weak. • Weak = 33.3% - Project organogram not reflecting the minimum resources needs for the scope of work as outlined. • Moderate = 66.7% - Project organogram partially addressing the resource needs for the scope of work as outlined, however meeting both Hydraulic Engineer and Computer Scientist requirements. • Good = 100% - Company organogram adequately addressing the resource needs for the scope of work as outlined above. 	
3.	<p>Equipment Resource Capacity</p> <p>Adjudicated based on Equipment Resource Capacity (Plant, Equipment, vehicles, computers, software's etc.). The purpose is to establish an overall picture of the company's equipment resource capacity and ability to undertake the work and will therefore be services/goods specific. The main equipment required is the software to conduct hydropower simulation calculations and the artificial intelligence software to assist with the control and monitoring of the proposed plant remotely.</p> <p>The rating of this item is based on a four-point scale:</p> <ul style="list-style-type: none"> • None = 0 % - No submission or submission is below weak. • Weak = 33.3% - Other related equipment are submitted but no proof of software to conduct hydropower simulation calculations and the artificial intelligence software to assist with the control and monitoring of the proposed plant remotely. • Moderate = 66.7% - Other related equipment are submitted with a proof of software to conduct hydropower simulation calculations but without the proof of artificial intelligence software to assist with the control and monitoring of the proposed plant remotely. • Good = 100% - Other related equipment are submitted with a proof of software to conduct hydropower simulation calculations and the proof of artificial intelligence software to assist with the control and monitoring of the proposed plant remotely. 	30
4.	<p>Method Statement</p> <p>The method statement shall provide the concept design with simulation results based on the parameters provided for each site. It must be comprehensive and sequential with a clear indication on how the work will be executed.</p> <p>The rating of this item is based on a four-point scale:</p> <ul style="list-style-type: none"> • Good = 100% - The submission has a comprehensive method statement with concept design, simulation results and very clear on Artificial Intelligence use to monitor the system. <p>The rating of this item is based on a four-point scale:</p> <ul style="list-style-type: none"> • None = 0 % - No submission or below weak requirements. • Weak = 33.3% - The submission has a comprehensive method statement but without concept design and simulation results but silent on the use of Artificial Intelligence. • Moderate = 66.7% - The submission has a comprehensive method statement with concept design coupled by the related simulation results with results but only silent on the use of Artificial Intelligence. • Good = 100% - The submission has a comprehensive method statement with concept design, simulation results and very clear on Artificial Intelligence use to monitor the system. 	40
TOTAL		100

Responses are required to meet a minimum of 70 percent to be further evaluated.

T1.3.3. PREFERENCE POINT SYSTEM

The (80/20) Preferential Point System will be used to evaluate price and preference on this quotation.

PART T2: RETURNABLE DOCUMENTS

T2.1. LIST OF RETURNABLE DOCUMENTS

1.1.1.1. All documentation listed in table T2.1 below shall form part of the Contract. *The Bidder must utilise this list as a checklist prior to bid submission.*

1.1.1.2. Non-submission of any item listed only under the column “Required for Bid Evaluation” may result in the bid being rejected by the Employer.

1.1.1.3. Attach additional pages if more space is required.

Table T2.1 List of Returnable Documents

ITEM	DESCRIPTION OF DOCUMENT TO BE RETURNED	REQUIRED FOR BID EVALUATION	ONLY REQUIRED AFTER BID AWARD
T2	Returnable schedules (supplied with the bid document)		
T2.2.1	Compulsory Enterprise Questionnaire including SBD 4	•	
T2.2.2	Record of Addenda to RFQ Documents	•	
T2.2.3	Proposed Subcontractors	•	
T2.2.4	Alternative Bid	•	
T2.2.5	Qualifications to Bid	•	
T2.2.6	Requirements with regard to fluctuations in the cost of labour and materials	•	
T2.2.7	FOB Prices of imported equipment/materials for which foreign exchange would be required and importing charges	•	
T2.2.8	Record of Previous Experience, Quality of Workmanship and Safety	•	
T2.2.9	Human Resource Capacity Schedule	•	
T2.2.10	Equipment Resource Capacity (Plant and Equipment)	•	
C1.1	Letter of Bid (Form of Offer and Acceptance)	•	
C1.2	Contract Agreement		•
C2.2	Pricing Schedule / Bill of Quantities (BoQ) The Bidder is required to submit the following: 1 Printed format and signed version of the completed pricing schedule or BoQ.	•	
C3.1	Dates for Delivery and Completion NOTE: A DETAILED PROJECT PROGRAMME MUST BE INCLUDED WITH THE BID SUBMISSION	•	
R 1	Required documentation not issued with the bid document:		
R 1.1	Certificate of Contractor Registration issued by CIDB OR	•	

ITEM	DESCRIPTION OF DOCUMENT TO BE RETURNED	REQUIRED FOR BID EVALUATION	ONLY REQUIRED AFTER BID AWARD
	A copy of the application form for registration in terms of the CIDB Act		
R 1.2	Prof of tax compliance status and a valid SARS Tax PIN	•	
R 1.3	Letter of Good Standing from the Department of Labour or an Accredited Institution	•	
R 1.4	Resolution Letter for the Main Contractor (a letter authorising the person completing the bid to sign on behalf of the company)	•	
R 1.5	Resolution Letter for the Subcontractor/s (a letter authorising the person completing the bid to sign on behalf of the company)	•	
R 1.6	Subcontracting Agreement	•	
R 1.7	Certified copy of B-BBEE Certificate or Certified copy of Sworn Affidavit for EMEs or QSEs. <i>The DTIC B-BBEE Certificate</i> No acceptance of IRBA (Independent Regulatory Board for Auditors) BBEE Certificate.	•	
R 1.8	Main Contractor's internal Safety and Health Policy and Project Specific SHE Plan (compliance with the project specific SHE specification)		•
R 1.9	Comprehensive SHERQ Plan (compliance with SHERQ Specification, including written agreement on Safety, Health and Environmental matters and all documents required for SHERQ compliance)		•
R1.10	Contractors tools and Equipment Inventory		•
R 1.11	Staff list		•
R1.12	Site Clearance Certificate		•
R1.13	Job Creation Report/Statistics (To be submitted Monthly)		•
R1.14	ISO 9001 Certification /proof of In-house Quality Management System (must include proof of a Document Control System and proof of a Non-conformity Management System) including Sample/template of Quality Control Plan and appointment of Quality Representative		•
R1.15	Detailed Project Programme in the following: <ol style="list-style-type: none"> 1) Gantt Chart Format 2) Level 2 schedule activities 3) Credible and Aligned to Rand Water's Programme 4) Resource loaded schedule Monthly cash flows, project to completion.	•	

T2.2. RETURNABLE SCHEDULES

T2.2.1. COMPULSORY ENTERPRISE QUESTIONNAIRE

The following particulars must be furnished. In the case of a joint venture, separate enterprise questionnaires in respect of each partner must be completed and submitted.

Section 1: Name of enterprise: _____

Section 2: VAT registration number, if any: _____

Section 3: CIDB registration number, if any: _____

Section 4: CSD Number: _____

Section 5: Particulars of sole proprietors and partners in partnerships:

Name *	Identity Number *	Personal income tax number *

* Complete only if sole proprietor or partnership and attach separate page if more than 3 partners

Section 6: Particulars of companies and close corporations

Company registration Number:	
Close Corporation number:	
Tax reference number:	

Section 7: SBD 4 issued by National Treasury must be completed for this bid.

I the undersigned, who warrants that he/she is duly authorized to do so on behalf of the enterprise:

- authorizes the employer to verify the Bidders tax clearance status from the South African Revenue Services that it is in order;
- confirms that the neither the name of the enterprise or the name of any partner, manager, director or other person, who wholly or partly exercises or may exercise, control over the enterprise appears on the Register of Tender Defaulters established in terms of the Prevention and Combating of Corrupt Activities Act of 2004;
- confirms that no partner, member, director or other person, who wholly or partly exercises, or may exercise, control over the enterprise appears, has within the last five years been convicted of fraud or corruption;
- confirms that I / we are not associated, linked or involved with any other bidding entities submitting bid offers and have no other relationship with any of the Bidders or those responsible for compiling the scope of work that could cause or be interpreted as a conflict of interest; and
- confirms that the contents of this questionnaire are within my personal knowledge and are to the best of my belief both true and correct.

Name of Bidder: _____

Signed by or on behalf of Bidder: _____ Official Capacity: _____

Date: _____

BIDDER'S DISCLOSURE

- **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.

- **Bidder's declaration**

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

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

Full Name	Identity Number	Name of State institution

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

2.2.1 If so, furnish particulars:

.....

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

2.3 Does the bidder or any of its directors / trustees / shareholders / members / partners or any person having a controlling interest in the enterprise have any interest in any other related enterprise whether or not they are bidding for this contract?

YES/NO

- If so, furnish particulars:

.....

• **DECLARATION**

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

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

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

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

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

.....
Signature

.....
Date

.....
Position

.....
Name of bidder

T2.2.2. RECORD OF ADDENDA TO BID DOCUMENT

We acknowledge receipt of communications from the Employer amending the bid document before the submission of this bid offer. We confirm that these amendments have been taken into account in this bid offer.

Notice Number	Date	Title or Details
A.		
B.		
C.		
D.		
E.		
F.		
G.		
H.		
I.		
J.		

Name of Bidder: _____

Signed by or on
 behalf of Bidder: _____

Official
 Capacity: _____

Date: _____

T2.2.3. PROPOSED SUBCONTRACTORS

We notify the Employer that it is our intention to employ the following Subcontractors for work in this contract.

If we are awarded a contract, we agree that this notification does not change the requirement for us to submit the names of proposed Subcontractors in accordance with requirements in the contract for such appointments. If there are no such requirements in the contract, then on official award of Contract by the Employer to us, this list duly signed below shall be binding between us.

The appointment of the proposed Subcontractors shall be subject to the approval of the Employer.

Please note it is compulsory to declare the percentage of work to be completed by the Subcontractor.

Name and Address of Proposed Subcontractor	Nature and Extent of Work	Previous Experience with Subcontractor	CIDB Grading
1)			
2)			
3)			
4)			
5)			

Name of Bidder: _____

Signed by or on behalf of Bidder: _____ Official Capacity: _____

Date: _____

T2.2.4. ALTERNATIVE BID

- T2.2.4.1. Alternative bids will be accepted on the conditions described in [T1.2 Bid Data](#) (CIDB Clause C.2.12)
- T2.2.4.2. Should the Bidder wish to submit an alternative bid he shall set out his proposals clearly hereunder or alternatively state them in a covering letter attached to his bid and referred to hereunder, failing which the bid will be deemed to be unqualified.
- T2.2.4.3. If no departures or modifications are described, the schedule shall be marked NIL and signed by the Bidder.

Page	Item	Proposed alternative	Price saving (if any) to the Employer if proposal is accepted

Name of Bidder: _____

Signed by or on behalf of Bidder: _____ Official Capacity: _____

Date: _____

T2.2.6. REQUIREMENTS WITH REGARD TO FLUCTUATIONS IN THE COST OF LABOUR AND MATERIALS

T2.2.6.1. The Bidder shall delete whichever of the following statements are not applicable to the bid. *Where the Bidder has not indicated the applicability of fluctuations, Rand Water shall regard the fluctuations as not applicable.*

FLUCTUATIONS IN - Wages and allowances: *TO APPLY/NOT TO APPLY
Price of materials: *TO APPLY/NOT TO APPLY

* Delete whichever is not applicable.

FORMULAE OR BASIS FOR THE ADJUSTMENT OF THE BID PRICE

If firm prices are not quoted the Bidder shall supply the following information:

T2.2.6.2. Formula by which the bid price is to be multiplied in order to arrive at the adjusted price:

.....
.....

T2.2.6.3. Definition of all symbols used in the above formula:

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

T2.2.6.4. Any special materials or equipment to be excluded from the application of the formula stating the method and basis of price variation to be applied to such materials or equipment:

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

RECORDING OF WEATHER AND ABNORMAL RAINFALL

If during the time for completion of the works or any extension thereof abnormal rainfall or wet conditions shall occur then an extension of time in accordance hereof shall be granted by the Employer calculated in accordance with the formula given below for each calendar month or part thereof.

$$V = (Nw - Nn) + ((Rw - Rn)/X)$$

V	Extension of time in calendar days in respect of the calendar month under consideration.
Nw	Actual number of days during the calendar month on which a rainfall of Y mm or more has been recorded.
Nn	Average number of days, as derived from existing rainfall records, on which a rainfall of Y mm or more has been recorded for the calendar month.
Rw	Actual rainfall in mm recorded for the calendar month under consideration.
Rn	Average rainfall in mm for the calendar month as derived from existing rainfall records.

For purposes of the contract Nn, Rn, X and Y shall have those values assigned to them in the Contract Data and/or the Specification. The total extension of time shall be the algebraic sum of all monthly totals for the period under consideration, but if the total is negative the time for completion shall not be reduced due to subnormal rainfall. Extensions of time for part of a month to be calculated using pro rata values of Nn and Rn. This formula does not take account of flood damage that could cause further or concurrent delays and will be treated separately as far as extension of time is concerned.

The factor (Nw-Nn) shall be considered to represent a fair allowance for variations from the average number of days during which rainfall exceeds Y mm. The factor (Rw-Rn)/X shall be considered to represent a fair allowance for variations from the average in the number of days during which the rainfall did not exceed Y mm but wet conditions prevented or disrupted work.

The Contractor shall be permitted to take his own rainfall measurements on site subject to the Engineer's approval, but access to the measuring gauge(s) shall be under the Engineer's control. The Contractor is to provide and install all the necessary equipment for accurately measuring the rainfall as well as to provide, erect and maintain a security fence plus gate, padlock and keys at each measuring station, all at his own cost.

Name of Bidder: _____

Signed by or on behalf of Bidder: _____ Official Capacity: _____

Date: _____

T2.2.7. F O B PRICES OF IMPORTED EQUIPMENT/MATERIALS FOR WHICH FOREIGN EXCHANGE WOULD BE REQUIRED AND IMPORTING CHARGES

- T2.2.7.1. The Bidder shall complete each schedule listing the F O B value of all items of equipment/materials for which foreign exchange would be required.
- T2.2.7.2. Bidders based on the supply of locally manufactured equipment and/or materials priced competitively, will be given preference by the Employer provided such equipment and/or materials, and the manufacture thereof, are of sufficiently high standard to meet the Employer's requirements.
- T2.2.7.3. If no items are to be imported or if firm prices are submitted the relevant section of the schedule shall be marked NIL. If the equipment contains imported equipment/materials then the Bidder shall complete the schedule listing the F O B value of all items of equipment/materials, which have been or are to be imported. Prices tendered for this imported equipment/material shall be quoted in **currency of origin**. It will therefore be the responsibility of the employer (Rand Water) to take out a Forward Cover for this imported equipment/material, when and if deemed prudent. All charges for the Employer's account referred to in the General Conditions of Contract and any changes in the rates of exchange will only be paid or allowed by the Employer in respect of items listed in this schedule. Bidder shall be expected to provide full documentation (i.e. Invoice, Bill of Lading, etc.) supporting foreign currency requirements for this imported equipment/material to support the Employer application to the SARB for the exchange control approval.
- T2.2.7.4. The Bidder shall sign each schedule.
- T2.2.7.5. For evaluation purposes, the prices of imported equipment/material sourced directly from outside South Africa quoted in currency of origin will be converted to Rand using the closing rate exchange rate published by SARB on the date, one week (7 day calendar days) prior to the closing date for the Bidder.

"Imported content" means that portion of the price represented by the cost of components, parts or materials which have been, or are still to be imported (whether by the Bidder or his suppliers or Subcontractors) and which cost includes the overseas cost plus direct importation costs, such as freight, all landing charges, dock dues, import duties and the like at the South African port of entry, as well as inward transportation and handling to the factory in the Republic where the equipment offered is produced, manufactured, processed, assembled, packed or otherwise prepared.

The Bidder shall state in the appropriate column the F O B values of equipment/materials, which have already been imported, and which still have to be imported.

Item	Description and country of origin	Rate of exchange	F O B value	
			Already imported	To be imported
			R	R
Total F O B values				

Table T2.2.7.1: F O B Prices

The exchange rate to be used for conversion of the foreign content to local content shall be the closing exchange rate published by South African Reserve Bank (SARB) on the date, one week (7 day calendar days) prior to the closing date of the Bid.

IMPORT PERMIT: The Bidder shall state what arrangements have been or are to be made to obtain the necessary import permit(s).

.....

Item	Rate	Total
PORT OF LANDING	R	R
Freight on tons at		
Insurance on R		
Customs duty on R		
Landing charges on tons at		
Wharfage on tons at		
Forwarding and agency on tons at		
Railage on kg at		
Sundry importing charges		
.....		
TOTAL:		

Table T2.2.7.2: F O B Prices

Guaranteed date of shipping

Guaranteed date of delivery to railway authority

Name of Bidder:

Signed by or on behalf of Bidder: _____ Official Capacity: _____

Date: _____

T2.2.8. RECORD OF PREVIOUS EXPERIENCE, QUALITY OF WORKMANSHIP AND SAFETY

The Bidder shall provide details of **completed** works (similar to the work set out in this bid). Individuals listed as references must be contactable and willing to provide information relating to the performance of the Bidder (in terms of safety and health, workmanship, documentation, timeous completion, etc.). In order to verify the quality of workmanship, an inspection of the works may also be undertaken should Rand Water deem it necessary.

The Bidder must take into cognisance the functionality criteria in providing the record of previous experience. Information must be provided in the following format:

Description of Works	
Project Title :	
High level project description:	
Client :	
Contract No. :	
Contract Value (excl. VAT) :	
Role ^(Note 1) :	
Award Date :	
Completion Date :	
Location of Works :	
Project Manager :	
Construction Manager :	
Contact Details of Reference at Client Company	
Name :	
Position Held :	
Tel :	Cell :
Fax :	email :
<small>Note 1 – Role refers to the Contractor’s responsibility w.r.t. the claimed experience. For example Single Contractor, Main Contractor but with electrical sub – contractor, Sub – contractor for civil construction etc.</small>	

Name of Bidder: _____

Signed by or on behalf of Bidder: _____ Official Capacity: _____

Date: _____

T2.2.8.1 RECORD OF PREVIOUS EXPERIENCE, QUALITY OF WORKMANSHIP AND SAFETY

The Bidder shall provide details of **completed** works (similar to the work set out in this bid). Individuals listed as references must be contactable and willing to provide information relating to the performance of the Bidder (in terms of safety and health, workmanship, documentation, timeous completion, etc.). In order to verify the quality of workmanship, an inspection of the works may also be undertaken should Rand Water deem it necessary.

The Bidder must take into cognisance the functionality criteria in providing the record of previous experience. Information must be provided in the following format:

Description of Works	
Project Title :	
High level project description:	
Client :	
Contract No. :	
Contract Value (excl. VAT) :	
Role ^(Note 1) :	
Award Date :	
Completion Date :	
Location of Works :	
Project Manager :	
Construction Manager :	
Contact Details of Reference at Client Company	
Name :	
Position Held :	
Tel :	Cell :
Fax :	email :
<small>Note 1 – Role refers to the Contractor’s responsibility w.r.t. the claimed experience. For example Single Contractor, Main Contractor but with electrical sub – contractor, Sub – contractor for civil construction etc.</small>	

Name of Bidder:

Signed by or on behalf of Bidder: _____ Official Capacity: _____

Date: _____

T2.2.8.2 RECORD OF PREVIOUS EXPERIENCE, QUALITY OF WORKMANSHIP AND SAFETY

The Bidder shall provide details of **completed** works (similar to the work set out in this bid). Individuals listed as references must be contactable and willing to provide information relating to the performance of the Bidder (in terms of safety and health, workmanship, documentation, timeous completion, etc.). In order to verify the quality of workmanship, an inspection of the works may also be undertaken should Rand Water deem it necessary.

The Bidder must take into cognisance the functionality criteria in providing the record of previous experience. Information must be provided in the following format:

Description of Works	
Project Title :	
High level project description:	
Client :	
Contract No. :	
Contract Value (excl. VAT) :	
Role ^(Note 1) :	
Award Date :	
Completion Date :	
Location of Works :	
Project Manager :	
Construction Manager :	
Contact Details of Reference at Client Company	
Name :	
Position Held :	
Tel :	Cell :
Fax :	email :
<small>Note 1 – Role refers to the Contractor’s responsibility w.r.t. the claimed experience. For example Single Contractor, Main Contractor but with electrical sub – contractor, Sub – contractor for civil construction etc.</small>	

Name of Bidder:

Signed by or on behalf of Bidder: _____ Official Capacity: _____

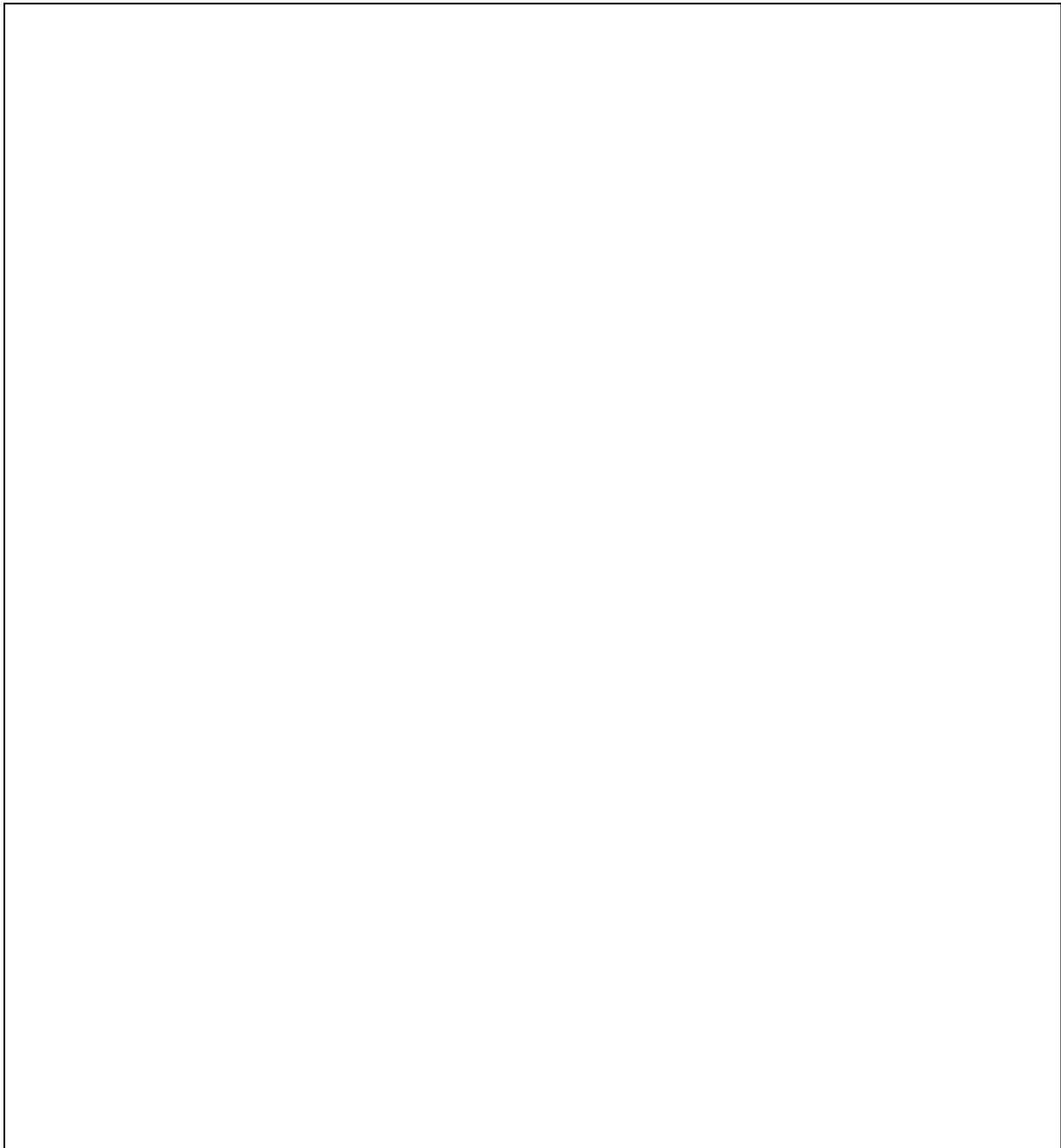
Date: _____

T2.2.9. HUMAN RESOURCE CAPACITY SCHEDULE

The aspects covered by T2.2.11.1, T2.2.12.2 and T2.2.12.3 will be viewed in conjunction with each other to establish an overall picture of the Bidder's capacity and ability to undertake the work specified in this document.

T2.2.9.1. Project Team Organogram vs. Company Organogram

The Bidder shall detail in the block below their company organogram and the Resources dedicated to this contract must be clearly indicated. In addition, sub-contractor and Joint-Venture arrangements must be clearly indicated:



cont.

T2.2.9.3. List of Current Contracts (Work Load)

Contract or Work Title	Client	Contract Value (excl. VAT)	Role ^{NOTE 1}	Progress
				Award Date: Completion Date: % Complete: Stage ^{NOTE2} :
				Award Date: Completion Date: % Complete: Stage ^{NOTE2} :
				Award Date: Completion Date: % Complete: Stage ^{NOTE2} :
				Award Date: Completion Date: % Complete: Stage ^{NOTE2} :
				Award Date: Completion Date: % Complete: Stage ^{NOTE2} :

NOTES

1. Role refers to the Contractor's responsibility w.r.t. the claimed experience for example Single Contractor, Main Contractor but with Electrical subcontractor, Sub-contractor for civil construction etc.
2. Stage refers to the current stage of the work (example design, procurement, construction, installation, commissioning, handed over, in Defects Liability Period etc.)
3. Attach additional signed copies of this schedule if insufficient space is available.

Name of Bidder: _____

Signed by or on behalf of Bidder: _____

Official Capacity: _____

Date: _____

SECTION B: CONTRACT

PART C1: AGREEMENT AND CONTRACT DATA

C1.1. FORM OF OFFER AND ACCEPTANCE

C1.1.1. LETTER OF BID

LETTER OF BID

DESCRIPTION: **ENGINEER-PROCURE-CONSTRUCT (EPC) OF POWER GENERATION USING HYDROPOWER SYSTEM TO POWER THE CATHODIC PROTECTION RECTIFIER UNITS AT RAND WATER**

BID NO: **10406494/23**

TO: **JABULILE MOLEMA**

We have examined the Conditions of Contract, Specifications, Drawings, Schedules, the attached Appendix and Addenda No.'s for the execution of the above named Works. We offer to execute and complete the Works and remedy any defects therein in conformity with this Bid which includes all said documents, for the total sum of in South **African Rand (ZAR** _____)

(_____)

Amount in Words inclusive of all taxes) or such other sum as may be determined in accordance with the Conditions of Contract.

The total ZAR value quoted above, to include the sum of imported equipment/material sourced directly from outside South Africa. The applicable currency of origin/s must be converted to South African Rand (ZAR) using the closing rate of exchange as published by SARB on the date, one week (7-day calendar days) prior to the closing date for the Bid.

The Bidder shall further complete the offer/letter and stipulate the sum in the currency of origin (i.e. Euro, USD, GBP or any other currency) as noted below.

for the sum of in **Euro (€** _____)
(_____ **Amount in Words inclusive of all taxes*)**

or such other sum as may be determined in accordance with the Conditions of Contract.

for the sum of in **USD (\$** _____)
(_____ **Amount in Words inclusive of all taxes*)**

or such other sum as may be determined in accordance with the Conditions of Contract.

for the sum of in **GBP (£** _____)
 (_____ **Amount in Words inclusive of all taxes** *)

or such other sum as may be determined in accordance with the Conditions of Contract.

for the sum of in **any other currency** _____
 (_____ **Amount in Words inclusive of all taxes ***)
 or such other sum as may be determined in accordance with the Conditions of Contract.

***Applies to international suppliers that are registered for all taxes in South Africa**

We accept your suggestions for the appointment of the DAB, as set out in the Appendix to Bid.

We agree to abide by this Bid for a period of 90 days from the Submission Date and Time for Bids and it shall remain binding upon us and may be accepted at any time before that date. We acknowledge that the Appendix forms part of this Letter of Bid.

If this offer is accepted, we will provide the specified Performance Security, commence the Works as soon as is reasonably practicable after the Commencement Date, and complete the Works in accordance with the above-named documents within the Time for Completion.

Unless and until a formal Agreement is prepared and executed this Letter of Bid, together with your written acceptance thereof, shall constitute a binding contract between us.

We understand that you are not bound to accept the lowest or any bid you may receive.

Signature..... in the capacity of.....

duly authorized to sign bids for and on behalf of.....

Address:

Date:.....

Signature of Witness: _____

Signature of Witness: _____

Name of Witness: _____

Name of Witness: _____

Date: _____

Date : _____

C1.1.2. CONTRACT AGREEMENT

This Agreement made on the _____ day of (month) _____ (year) _____
between

RAND WATER

(hereinafter called "the Employer")

And

(hereinafter called "the Contractor").

Whereas the Employer desires that the Works known as **ENGINEER-PROCURE-CONSTRUCT (EPC) OF POWER GENERATION USING HYDROPOWER SYSTEM TO POWER THE CATHODIC PROTECTION RECTIFIER UNITS AT RAND WATER** should be executed by the Contractor, and has accepted a bid by the Contractor for the execution and completion of these Works and the remedying of any defects therein,

The Employer and the Contractor agree as follows:

- (a) In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract.
2. The following documents shall be deemed to form and be read and construed as part of this Agreement:
- a. The Letter of Award
 - b. The Letter of Bid (incorporating the Appendix to Tender)
 - c. The Conditions of Contract
 - d. The Employer's Requirements
 - e. The Returnable Schedules
 - f. The Contractor's Proposal
 - g. The Bid Addenda (where applicable)
 - h. Additional Information Provided by Contractor (where applicable)

1. In consideration of the payments to be made by the Employer to the Contractor as hereinafter mentioned, the Contractor hereby covenants with the Employer to execute and complete the Works and remedy any defects therein, in conformity with the provisions of the Contract.

2. The Employer hereby covenants to pay the Contractor, in consideration of the execution and completion of the Works and the remedying of defects therein, the Contract Price at the times and in the manner prescribed by the Contract.

Authorised signature of Employer

Authorised signature of Contractor

for and on behalf of the Employer

for and on behalf of the Contractor

Name: **Jabulile Molema**

Designation: _____

Date: _____

Name: _____

Designation: _____

Date: _____

In the presence of the undersigned witnesses:

Name: _____

Signature: _____

Date: _____

Name: _____

Signature: _____

Date: _____

C1.2. CONTRACT DATA

C1.2.1. GENERAL CONDITIONS

The General Conditions of Contract applicable to this Contract are the:
“General Conditions” which form part of the “Conditions of Contract for **SHORT FORM OF CONTRACT**.”

First Edition 1999

As published by the Federation Internationale des Ingenieurs-Conseils (FIDIC)

C1.2.2. PARTICULAR CONDITIONS

The General Conditions shall be amended by the Particular Conditions of Contract as detailed herein.

The following clauses – of the Conditions of Contract for **SHORT FORM OF CONTRACT**, First Edition 1999, published by the Federation Internationale des Ingenieurs-Conseils (FIDIC) shall be amended as stated below:

a. GENERAL PROVISIONS

2.7 Definitions

The Contract

1.1.1 Delete this definition and replace with the following:
“**Contract**” means the Contract Agreement, the Letter of Acceptance, the Letter of Tender, these Conditions, the Specifications, the Drawings, the Schedules, and the further documents (if any) listed in the Contract Agreement or in the Letter of Acceptance.

1.1.2 Delete this definition and replace with the following:
“**Specification**” means the document entitled Specification, as included in the Contract, including Employer’s requirements in respect of design to be carried out by the Contractor, if any, and any Variation to such document.

1.1.3 Delete this definition and replace with the following:
“**Drawings**” means the Employer’s drawings of the Works, as included in the Contract, and any Variation to such drawings.

Persons 1.1.4 Delete this definition and replace with the following:
“**Employer**” means Rand Water which is a body corporate established in terms of Section 83 of the Water Services Act 107 of 1997.

Dates, Times and Periods 1.1.7 Delete this definition and replace with the following:

“**Commencement Date**” means the date recorded in the Letter of Acceptance unless otherwise defined in the Contract Agreement.

Other Definitions 1.1.12 Delete this definition and replace with the following:

“**Country**” means the Republic of South Africa.

1.1.17 Delete this definition and replace with the following:
“**Site**” means the places where the permanent Works are to be executed and to which Plant and Materials are to be delivered.

The following definition is added after Sub-Clause 1.1.19:

1.1.20 “**Accepted Contract Amount**” means the amount accepted in the Letter of Acceptance, or the amount recorded in the Contract Agreement if there is no Letter of Acceptance, for the execution and completion of the Works and the remedying of any defects.

1.1.21 “**Contract Agreement**” means the contract agreement referred to in Sub-Clause 1.7 [Contract Agreement].

1.3

Priority of Documents Delete this Sub-Clause and replace with the following:

The documents forming the Contract are to be taken as being mutually explanatory of one another. If any ambiguity or discrepancy is found in the documents, the Employer shall issue any instructions to the Contractor, and the priority of the documents shall be in accordance with the following sequence:

- (a) The Contract Agreement;
- (b) The Letter of Acceptance;
- (c) The Letter of Tender (incorporating the Appendix);
- (d) The Particular Conditions;
- (e) The General Conditions;
- (f) The Specification;
- (g) The Drawings;
- (h) The Schedules;
- (i) The Addenda and any other documents forming part of the Contract.

1.6

Statutory Obligations

Delete this Sub-Clause and replace with the following:

“The Contractor shall at all times conform in all respects with the provisions of any Act of Parliament, Regulations, Bye-law of any Local or any other Statutory Authority or other Enactment having the force of law which may be applicable to the performance of its obligations under the Contract and shall indemnify, and keep indemnified the Employer, against damages that it may suffer as a result of any breach by the Contractor, its agents or employees, including any hired labour, of any such Act, Regulation, Bye-law or other Enactment and including all legal costs on the attorney and client scale which may be payable as a result of any claims or proceedings in respect of the Contract.”

The following Sub-Clauses are added at the end of Clause 1:
1.7

Contract Agreement

"The Contractor shall within a reasonable time after having been called upon to do so, enter into and execute a Contract Agreement."

b. THE EMPLOYER

As per FIDIC

c. EMPLOYER'S REPRESENTATIVE

As per FIDIC

d. THE CONTRACTOR

4.2 Contractor's Representative

The following is added at the end of this Sub-Clause:

"Without derogating from the generality of the foregoing, the Contractor's Representative shall, at the Contractor's cost, implement forthwith any additional safety precautions which the Engineer may consider necessary for the proper protection of the Contractor's employees engaged in the Works. Work to which such additional precautions will apply shall be suspended pending the implementation of such precautions."

4.4 Performance Security

The following is added at the end of this Sub-Clause:

"Should the Contractor fail to provide the said security within the specified time the Employer, in his sole discretion, may either:-

- (a) Withhold payment from the Contractor until the amount withheld is equal in value to one tenth (10%) of Accepted Contract Amount, or
- (b) Proceed to issue notice in terms of Clause 12.1 [Default by Contractor]."

The following Sub-Clauses are added at the end of Clause 4:

4.5 Safety Procedures

The following is added at the end of this Sub-Clause:

"The Contractor shall:-

- (a) comply strictly with the Employer's site SHE Specifications/Rules, applicable legislation, other requirements and regulations from time to time in force, a copy of which is incorporated into and shall be read as part of the Agreement;
- (b) be responsible for the safety and welfare of all its employees and shall comply with all relevant SHE requirements;
- (c) familiarize himself with all the Employer's internal SHEQ systems, regulations, policies and procedures and all legislative or statutory requirements with regard to the health and safety of the Contractor's employees;
- (d) ensure that all his personnel are fully briefed with regards to all relevant policies and safety procedures and that all personnel have attended the requisite inductions;
- (e) ensure that all personnel sign their acceptance of these procedures and regulations – which signed documents are to be kept in a register which is to be made available at all times for inspection;
- (f) at its own cost provide all of its employees with all necessary safety equipment, namely, safety boots, hard hats, overalls etc. and will at all times adhere to the Employer's site rules and regulations, including his subcontractors and their employees, the South African safety regulations in particular, the Occupational Health and Safety Act (No. 85 of 1993) and relevant regulations and their latest revisions;
- (g) be responsible for the discipline of its employees and shall, at the Client's request remove from the site any incompetent or undesirable employees."

4.6 Quality Assurance

"The Contractor shall maintain an effective quality management system in accordance with the requirements of ISO 9001 (or equivalent), in order to ensure and demonstrate that the Works and services conform to the specified requirements. A copy of the ISO 9001 Certification Certificate (or equivalent) must be submitted on request.

The Employer will have the right to visit the manufacturing location for the purpose of audit, surveillance or inspection during the manufacturing of the Materials/Plant to verify the Contractor's quality management.

In the event of the Material/Plant being rejected due to non-compliance with the Specification, workmanship and/or other valid reasons, then the cost of rectification as well as re-inspection shall be for the account of the Contractor."

4.7 Sufficiency of the Accepted Contract Amount

"No claim by the Contractor for additional payment will be entertained which is consequent upon any misunderstanding or the allegation, or fact that it was supplied with incorrect information by any person, or its failure to obtain correct information as to any matter affecting its accepted tender or the execution of the Works to be provided, nor will any such misunderstanding, or the obtaining of incorrect information, or the failure to obtain correct information, relieve it from any risk or responsibility for the due fulfilment of its obligations in terms of the Contract."

4.8 Contractor's Equipment

"All Contractor's Equipment shall be subject to and comply with the operational and safety regulations of the Employer and, upon notice by the Engineer, may at all times be inspected by relevant members of the Employer's Personnel for the purposes of ensuring compliance with the aforesaid regulations."

4.9 Protection of the Environment

"The Contractor's attention is directed to Employer's SHEQ Policy a copy of which is incorporated into and shall be read as part of the Contract Agreement.

The Contractor shall comply with all requirements, stipulations and the like of any Environmental Impact Assessment undertaken and/or issued in respect of the Works."

4.10 Security of the Site

"The Contractor shall at all times remain responsible for the security of his own Equipment.

In addition, the Contractor shall fully acquaint himself and strictly comply with all the Employer's security regulations particularly with regard to personnel, Plant, Material and Equipment entering or leaving the Employer's property. All badging costs shall be borne by the Contractor."

4.11 Health and Safety

"The Contractor is responsible for the safety and welfare of its employees and subcontractors employed on the Works."

4.12 Key Personnel

"The Contractor shall furnish the Employer with a list of addresses and telephone numbers of key personnel in the Contractor's organisation who may be contacted in any emergency both during and outside normal working hours."

4.13 Labour Laws

"Without derogating from the generality of Sub-Clause 1.6 [Statutory Obligations] the Contractor shall comply with all the relevant labour Laws applicable to the Contractor's personnel, including Laws relating to their employment, health, safety, welfare, immigration and emigration, and shall allow them all their legal rights."

The Contractor shall require the Contractor's personnel to obey all applicable Laws, including those concerning safety at work, and shall indemnify the Employer for the consequences of any failure by the Contractor's personnel to obey all applicable Laws as aforesaid."

4.14 Waiver of Contractor's Lien

"The Contractor waives, in favour of the Employer, any lien or right of retention that is or may be held in respect of the Works to be executed on the Site. The Contractor shall ensure that it procures similar waivers from its subcontractors."

e. DESIGN BY CONTRACTOR

As per FIDIC

f. EMPLOYER'S LIABILITIES

As per FIDIC

g. TIME FOR COMPLETION

As per FIDIC

h. TAKING OVER

As per FIDIC

i. REMEDYING DEFECTS

As per FIDIC

j. VARIATIONS AND CLAIMS

10.3 Early Warning

The second paragraph of this Sub-Clause is deleted and replaced with the following:

"The Contractor shall notify the Employer in writing of any event, circumstance or factor which may adversely affect the Works or the progress thereof, delay the execution of the Works or increase the contract price ("notified event"). Such notice shall be given as soon as possible, but in any event within not more than 7 days after the event, circumstance or factor in question was known or should reasonably have been known to the Contractor. In such notice the Contractor shall provide:

- (a) detailed particulars of the notified event and the potential adverse effects; and
- (b) proposals for the steps to be taken by the Contractor to mitigate the potential adverse effects and meet the Time for Completion.

The Employer may also require the Contractor to submit a proposal under Sub-Clause 10.5 [Variation and Claims Procedure] in respect of any notified event. A notification in terms of this Sub-Clause 10.3 shall not constitute a notification of a claim for extension of time or additional cost pursuant to Sub-Clause 7.3 [Extension of Time] or Sub-Clause 10.5 [Variation and Claim Procedure], or otherwise under the Contract. In the event of the Contractor making a claim for an extension of time or additional cost under Sub-Clause 7.3 and/or 10.5 the event relied upon shall be assessed as if the Contractor had complied with the 7 day notice period referred to above."

k. CONTRACT PRICE AND PAYMENT

11.3 Monthly Statements

Delete the last paragraph of this clause and replace with the following: "The Contractor shall by the 25th day of each month submit to the Employer a statement showing the amounts to which he considers himself entitled.

In the event that the Contractor fails to submit a statement by the 25th day of the month any late submission will only be evaluated in the next month."

The following Sub-Clause is added at the end of Clause 11:

11.9 Tax Invoices

The Contractor shall issue an invoice to the Employer for all amounts to be paid to the Contractor under the Contract. Each invoice shall be issued to the Employer at least 28 days prior to the date on which the amount is payable.

If VAT is payable on any amount certified by the Employer for payment under the Contract, the Contractor shall ensure that the invoice complies with the requirements of a Tax Invoice under the Value Added Tax Act no. 89 of 1991 (as amended). No payment shall be made by the Employer on invoices not meeting this requirement and the Employer shall not be liable for interest for such non-payment.

l. DEFAULT

As per FIDIC

m. RISK AND RESPONSIBILITY

As per FIDIC

n. INSURANCE

14.1 Extent of Cover

Delete this Sub-Clause and replace with the following:

"The Employer shall, prior to commencement of the Works, effect and thereafter maintain insurances in the joint names of the Parties:-

- (a) for loss and damage to the Works, Materials and Plant, and
- (b) for liability of both Parties for loss, damage, death or injury to third parties or their property arising out of the Contractor's performance of the Contract, including the Contractor's liability for damage to the Employer's property other than the Works.

This insurance shall be effected and maintained by the Employer in accordance with and to the extent provided in the Employer's construction risks insurance policy."

Notwithstanding anything to the contrary in this Clause 14 [Insurance] (and notwithstanding the definitions and other terms of the Contract), the scope and extent of insurance cover provided by the Employer as the insuring Party, and the Employer's obligations as the insuring Party under this Sub-Clause, are subject to the terms of the said policies.

The Contractor shall, prior to commencement of the Works, effect and thereafter maintain all additional and other insurances in the joint names of the Parties:-

- (a) for loss and damage to the Contractor's Equipment,
- (b) for Plant and Materials during manufacture or fabrication to the extent not covered by the policies procured by the Employer as the Insuring Party,
- (c) for liability of both Parties and of any Employer's representative for death or injury to the Contractor's personnel except to the extent that liability arises from the negligence of the Employer, any Employer's representative or their employees, and
- (d) to the extent that the Contractor considers it necessary, for other insurances for risks carried by the Contractor under the Contract (including for the Works, Plant, Materials and/or Contractor's Documents for risks which are not covered, or not sufficiently covered, as the case may be, by the Employer's policy(s))."

o. RESOLUTION OF DISPUTES

Clause 15 deleted in its entirety and replaced with the following:

15.1 Adjudication

"If a dispute (of any kind whatsoever) arises between the Parties in connection with, or arising out of, the Contract, including the validity of the Contract, or the execution of the Works, including any dispute as to any certificate, determination, instruction, opinion or valuation of the Employer, either Party may, within 28 days after such dispute arising, refer the dispute to adjudication in accordance with the Rules for Adjudication all as appended to the FIDIC Short Form of Contract (First Edition 1999) ("the Rules"). The adjudicator shall be any person agreed by the Parties. In the event of disagreement and notwithstanding

anything else provided in the Rules the adjudicator shall be appointed by the Chairman of the Association of Arbitrators of Southern Africa. Neither Party shall be entitled to be represented by a practicing and/or admitted lawyer (including but not limited to attorneys, advocates or judges) in any proceedings before the adjudicator. The proceedings shall be conducted on the papers unless both parties agree that a hearing should be held, or the adjudicator otherwise directs. Each Party shall bear its own costs in regard to any matter referred to the adjudicator."

15.2 Notice of Dissatisfaction

"If a Party is dissatisfied with the decision of the adjudicator or if no decision is given within the time set out in the Rules, either Party may give notice of dissatisfaction referring to this Sub-Clause within 28 days of receipt of the decision or the expiry of the time for the decision. If no notice of dissatisfaction is given within the specified time, the decision shall be final and binding on the Parties who shall give effect to it without delay. Where a notice of dissatisfaction is given within the specified 28 day period the decision shall nevertheless remain binding unless and until the decision of the adjudicator is revised by an arbitrator."

15.3 Amicable Settlement

"Where notice of dissatisfaction has been given under Sub-Clause 15.2 [Notice of Dissatisfaction] above, both Parties shall attempt to settle the dispute amicably before the commencement of arbitration. However, unless both Parties agree otherwise, arbitration may be commenced on or after the twenty-eighth day after the day on which notice of dissatisfaction was given, even if no attempt at amicable settlement has been made."

15.4 Arbitration

"Unless settled amicably, any dispute in respect of which the adjudicator's decision (if any) has not become final and binding shall be finally settled by arbitration. Unless otherwise agree by both Parties:

(a) the dispute shall be finally settled under the Rules For The Conduct of Arbitrations as published by the Association of Arbitrators (Southern Africa) in force at the time of commencement of the arbitration,

(a) the dispute shall be settled by one arbitrator to be appointed by the Chairman of the Association of Arbitrators (Southern Africa),

(b) the arbitration shall be held in Johannesburg, and

(e) the arbitration shall be conducted in the language for communications defined in Sub-Clause 1.5 [Communications].

For the purpose hereof the term "dispute" shall be interpreted in the widest sense and shall include any dispute or difference in connection with or in respect of the conclusion or existence of the Contract, the carrying into effect of the Contract, the interpretation or application or the provisions of the Contract, the Parties respective rights and/or obligations in terms of and/or arising out of the Contract and/or the validity, enforceability, rectification, termination or cancellation, whether in whole or in part, of the Contract.

The arbitration shall not be construed as a review or appeal of any adjudicator's decision. Resolution of the dispute shall commence anew, as if no adjudication had taken place. The claimant in the adjudication shall be the claimant in the arbitration. The adjudicator's decision, or reasons, shall not be admissible in the arbitration.

Neither Party shall be limited in the proceedings before the arbitrator to the evidence or arguments previously put before the adjudicator to obtain his decision, or to the reasons for dissatisfaction given in its Notice of Dissatisfaction.

The adjudicator shall not be eligible for subsequent appointment as the arbitrator nor shall any party have the right to call on the adjudicator as a witness in the arbitration.

This Sub-Clause shall exist independently of this agreement to the extent necessary to resolve disputes that may arise out of or concerning this agreement, its validity or termination"

C1.2.3. EMPLOYER'S INSURANCE MANUAL

PRINCIPAL CONTROLLED INSURANCE CLAUSES - FOR USE WITH THE EMPLOYER'S CONTRACTS

PARTICULAR CONDITION 18

18.1 Insurance Effected by the Employer.

18.1.1 Notwithstanding anything elsewhere contained in this Contract and without limiting the obligations liabilities or responsibilities of the Contractor in any way whatsoever (including but not limited to any requirement for the provision by the Contractor of any other insurances) the **Employer** shall effect and maintain as appropriate in the joint names of the **Employer** the Contractor and where relevant subcontractors the following insurances which are subject to the terms limits exceptions and conditions of the Policy:

(a) **CONTRACT WORKS**

Insurance - which will provide cover against accidental physical loss of or damage to the Works including temporary works, Plant and Materials intended to form part of the Permanent Works

(b) **SASRIA SPECIAL RISKS**

Insurance - in respect of riot and associated risks of damage to the Works, including temporary works, Plant and Materials intended to form part of the Permanent Works.

(c) **PUBLIC LIABILITY** Insurance

- which will provide indemnity against the insured parties legal liability in the event of accidental death of or injury to third party persons and/or accidental loss of or damage to third party property arising directly from the execution of the contract on or about the Site and occurring during the period of insurance with a limit of indemnity of R250,000,000 in respect of all claims arising from any one occurrence or series of occurrences consequent on or attributable to one source or original cause.

- The **Employer** shall pay any premium due in connection with the insurance effected by the **Employer**. All of the aforementioned policies

are renewed on an annual basis and are thus applicable for the year they are placed, that is, a 12-month period commencing 01 July and ending 30 June of the ensuing year. In terms of all details contained hereunder, they are thus applicable until 30 June. Policy terms, conditions and deductibles may change on the 01 July depending on the outcome of the renewal. This will thus be the case for every ensuing year of insurance.

- The Contractor shall not include any premium charges for this insurance except to the extent that he may deem necessary in his own interests to effect supplementary insurance to the insurance effected by the **Employer**. The **Employer** reserves the right to call for full information regarding insurance costs included by the Contractor.

- Any further clarification of the scope of cover provided by the Policies arranged by the **Employer** should be obtained from the **Employer**:

Mr. Bafana Gamede
Tel: 011 682 0362
Fax: 011 682 0765
Email: bgamede@randwater.co.za

OR
Ms. Lerato Mosweu

Tel: 011 682 0709
Fax: 011 682 0765
Email: mmosweu@randwater.co.za

18.1.5 In the event of any occurrence which is likely to or could give rise to a claim under the insurances arranged by the **Employer** the Contractor shall:

a) In addition to any statutory requirement or other requirements contained in the Contract immediately notify the **Employer** by telephone and or e-mail giving the circumstances nature and an estimate of the loss or damage or liability.

b) Complete a Claims Advice Form available from the **Employer** to whom the form must be returned without delay.

c) Negotiate the settlement of claims with the Insurers through the **Employer's** Insurance Brokers and

shall when required to do so obtain the **Employers** approval of such settlement.

The **Employer** and Insurers shall have the right to make all and any enquiries on the site of the Works or elsewhere as to the cause and results of any such occurrence and the Contractor shall co-operate in the carrying out of such enquiries.

- ii) 10% of the claim with a minimum R10,000 and a maximum of R 500,000
- iii) Maintenance:
- iv) 10% of the claim with a minimum R10,000 and a maximum R500,000
- v) Other contracts:
- vi) 10% of the claim with a minimum of R10,000 and maximum of R250,000

i. The Contractor will be liable for the amount of the Deductible (First Amount Payable) in respect of any claim made by or against the Contractor or Subcontractors under the insurances effected by the **Employer**.

b) Under the **Sasria** (Special Risks) Insurance: 0.10% of the Contract Value in respect of loss by theft following an insured peril subject to a minimum of R2,500 and a maximum of R25,000

c) Under the Public Liability Insurance in respect of loss of or damage to property R 25,000

(d) Under any other insurances shall be as specified in such insurance policy.

ii. The Contractor will be liable for the amount of the Deductible (First Amount Payable) in respect of any claim made by or against the Contractor or Subcontractors under the insurances effected by the **Employer**.

1.1.1 Any amount which becomes payable to the Contractor or any of his Subcontractors as a result of a claim under the Contract Works Insurance shall if required by the **Employer** be paid net of the Deductible to the **Employer** who shall pay the Contractor from the proceeds of such payment upon rectification repair or reinstatement of the loss or damage but this provision shall not in any way affect the Contractor's obligations liabilities or responsibilities in terms of the Contract.

Insured Contracts

All contracts undertaken by the Insured involving Design, Construction, Testing, Commission in respect of new works, capital expenditure, Upgrade, modification, retrofitting, or alteration and/or additions to existing facilities undertaken by the Insured or other Insured Parties acting on their behalf but excluding.

In respect of any amount which becomes payable as a result of a claim under any Public Liability Insurances the Contractor or his Subcontractors shall be required to pay the amount of the Deductible to the Insurer to facilitate settlement of such claim.

- (a) Projects with an estimated period exceeding 36 months (excluding Defects Liability period)
- (b) Projects exceeding R500 million at inception
- (c) Contracts involving Tunnelling

18.2 Insurance Effected by the Contractor.

18.2.1 Without in any way detracting from any requirements contained elsewhere in this contract the Contractor and Subcontractors shall where applicable provide as a minimum the following:

All Sums Insured inclusive of VAT.

- 1 Insurance of Contractors Equipment (including tools offices and other temporary structures and contents) and other things (except those intended for incorporation into the Works) brought onto the Site for a sum sufficient to provide for their replacement.
- 2 Insurance in terms of the provisions of the Social Security Act as may be amended or in terms of any similar Workers Compensation and Unemployment Insurance enactment's in the Contractors' or Sub Contractor's operational, manufacturing or assembly locations.
- 3 Motor Vehicle Liability Insurance comprising (as a minimum) "Balance of Third Party" Risks including Passenger Liability indemnity.

Where more than one Contractor is involved in the same claim the Deductible will be borne in pro-rata amounts by each Contractor in proportion to the extent of each Contractor's admitted claim.

The Deductibles (First Amount Payable) for which the Contractors are responsible and which are applicable in respect of each and every occurrence or series of occurrences attributable to one source or original cause giving rise to loss or damage or liability indemnifiable are as follows:

- (a) Under the **Contract Works Insurance** in respect of loss or damage
 - i) Wet Risks:

4 Where the Contract involves manufacturing and/or fabrication of the Works or parts thereof at premises other than at the Site the Contractor shall satisfy the **Employer** that all Plant and Materials 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 relevant Policies of Insurance.

Special Condition

5 **Only applicable if contracts works involves elements of design**

PROFESSIONAL INDEMNITY Insurance – of not less than R 1 000 000 for a period of insurance commencing on the date of award of the Contract. The Insurance shall include Retroactive cover to the date of Conceptual Design commencement and should be in effect for a period of 12 months after completion of the works.

Notwithstanding the required limit as set out above, “Professional Indemnity” the contractor will be liable for the full amount of the claim arising out of their errors and omission.

- The insurances to be provided by the Contractor and his Sub-contractor shall

2 Be effected with Insurers and on terms approved by the **Employer** – these terms shall be consistent with any terms agreed by both Parties before the date of the Letter of Acceptance. This agreement of terms shall take precedence over the provisions of this Clause

3 Be maintained in force for whatever period the perils to be insured by the Contractor are at risk (including any Defects Notification Period during which the Contractor is responsible for the care of the Works)

4 Within the respective periods stated in the Appendix to Bid submit to the **Employer** the relevant Policy or Policies of Insurance or evidence acceptable to the Employer that such insurances have been effected.

18.2.3 In the event that the Contractor or his Subcontractor receives any notice of cancellation or restrictive modification to the insurance provided to them they shall immediately notify the **Employer** in writing of such cancellation or restriction and shall advise what action the Contractor or his Sub-contractor will take to remedy such action.

If the Contractor fails to effect and keep in force the insurances referred to then the **Employer** may effect and keep in force any such insurances and pay such premium or premiums as may be necessary for that purpose and from time to time deduct the amount paid by the **Employer** from any monies due or which may become due to the Contractor or recover same as a debt from the Contractor.

18.3 **Subcontractors.**

The Contractor shall:

- a) Ensure that all potential and appointed Subcontractors are aware of the whole contents of this clause, and
- b) Enforce the compliance by Subcontractors with this clause where applicable.

PART C2: PRICING DATA

C2.1. PRICING ASSUMPTIONS

- 2 These Bills of Quantities (C2.2) shall be used to assist both parties in administering and agreeing any changes/variations, which may arise during the course of the Contract.
- 3 These Bills of Quantities shall be used to calculate the value of work completed in the evaluation of interim/final payments.
- 4 The Bidder is deemed to have allowed opposite each item contained in these Bills of Quantities whatever costs and charges it may consider necessary for the carrying out, complying with and due observance of the provisions, conditions and requirements set out in the Contract.
- 5 No claim whatsoever will be entertained in respect of errors or omissions in pricing due to the brevity of a description of any item contained in these Bills of Quantities which items are fully described or can reasonably be inferred when read in conjunction with the relevant clauses provided for in the Conditions of Contract, Specifications, Drawings or other relevant documentation.
- 6 Any item left un-priced will be deemed to be provided for elsewhere and no claim for any extras arising out of the Bidder's omission to price any item will be entertained.

C2.2. PRICING SCHEDULES / BILLS OF QUANTITIES (BoQ)

The Bidder must refer to **Annexure C2.2: Pricing Schedule / Bill of Quantities (BoQ)** provided with this bid document.

The Bidder is required to submit the following:

- 2 **Printed format and signed version of the completed pricing schedule or BoQ.**

PART C3: SCOPE OF WORK

C3.1. DATES FOR DELIVERY AND COMPLETION

- (i) It is estimated that the Contract will be placed on or before 15 January 2024 access to undertake work will only become available after the issue of the Site Access Certificate.
- (ii) The Bidder shall state the proposed start and completion dates based on the above approximate date, these dates shall comply with the dates mentioned below in T2.2.1.4
- (iii) The Bidder shall simultaneously fill in the period required to complete the work in days or weeks from the date of acceptance of the offer by the Employer. This shall be used to adjust dates should the Contract placement date vary.
- (iv) All equipment and plant shall be handed over by 28 June 2024 and the Bidder's programme shall comply with this requirement by the Employer.

Item	Start Date	Completion Date	Working Period
PHASE 1:			
PHASE 2:			
PHASE 3:			
PHASE 4:			
PHASE 5:			

Table C3.1: Dates for delivery and completion

NOTE THAT A DETAILED PROJECT PROGRAMME MUST BE INCLUDED WITH THE BID SUBMISSION

Name of Bidder: _____

Signed by or on behalf of Bidder: _____

Official Capacity: _____

Date: _____

C3.2. SCOPE OF WORK

INTRODUCTION

Cathodic protection installations are located at precisely determined points to ensure that the steel pipelines are optimally protected from corrosion. Some of these points are in remote areas where there are challenges of securing a reliable power supply from municipalities or Eskom to power the units.

OBJECTIVES OF THE REQUIRED WORK

The main purpose of the scope is to source a Service Provider to investigate the feasibility to generate electrical power using turbine. The generated electricity will power a Cathodic Protection rectifier supplied by three phase, 400V AC, with a transformer rating of 25KVA. The output of the scope is to get a maximum DC output of 150A/100V that will be used to energize the pipeline for Cathodic Protection purpose.

As seen table 1 below, Rand Water has identified 3 locations to be used to investigate, design, supply, install and commission the water turbines to generate power for cathodic protection rectifiers along the Rand Water pipeline network.

Table 1: Identified locations for hydropower generation (*provisional, can be changed*)

LOCATION	PIPE CODE	UNIT NAME	LONGITUDE	LATITUDE	CHAMBER DIMENSIONS (estimated)	ESTIMATED DISTANCE TO DURASAFE
1	G23, G29 & G34	Golden Highway	26°16'24.81"S	27°57'1.89"E	2.0m x 2.0m x 1.5*m height	400m
2	B11, B19	Maccavlei 1	26°40'42.00"S	27°56'46.48"E	2.0m x 2.0m x 1.5*m height	150m
3	O2	Alberton Golf course	26°15'36.96"S	28° 6'40.20"E	7.0m x 6.4m x 5.0*m height	200m

*Estimated height measured from the top surface of the pipe to the soffit of the cover slab (chamber).

Aerial photograph for position 1



Aerial photograph for position 2



Aerial photograph for position 3



ORIGINAL HYDRAULIC PARAMETERS (ALL THREE PROVISIONAL LOCATIONS)

The pipeline hydraulic operating parameters in line with the *provisional* locations as displayed in table 1 are as follows: -

Recommended Location (1):

- All three (G23, G29 & G34) pipelines are primarily gravity mains supplied from Meredale reservoirs with a top water levels (TWL) of 1794.3m and 1780.6m. However, the pipelines are operated as an integrated system therefore the same pipelines can interchangeably be made rising mains.
- G23 pipeline is welded steel X42 with internal diameter of 921mm, 9.5mm wall thickness, coated and lined with bitumen. G29 pipeline is also welded steel SS10 with internal diameter of 1302mm, 9.5mm wall thickness, coated and lined with bitumen and G34 pipeline is welded steel grade A with internal diameter of 1500mm, 12mm wall thickness, coated and lined with copon.
- The maximum operating pressure along the pipeline is around 18.2 bar at this specified vicinity with a maximum design velocity of 2 m/s.
- The flowrate on G23 and G29 pipeline is 448 Ml/d and the flowrate on G34 is 597 Ml/d.

Alternative Location (2):

- All two (B11 & B19) pipelines are primarily rising mains supplying raw water from Lethabo Raw Water Pumpstation to Vereeniging High Lift Pumpstation with a maximum operating pressure of 8.1 bar at designed velocity of 2.5 m/s. The maximum flowrate on B11 and B19 pipeline is 1698 M³/d
- Both (B11 & B19) pipelines are welded steel X42 with internal diameter of 2500mm, 12mm wall thickness, B11 coated and lined with bitumen and B19 lined with epoxy and coated with 3LPE.

Alternative Location (3):

- O2 pipeline is primarily a rising main supplying potable water from Palmiet booster pumpstation to Klipfontein reservoirs. The maximum operating pressure is 16.0 bar at designed velocity of 2.5 m/s. The maximum flowrate on O2 pipeline is 439 M³/d.
- O2 pipeline is a combination of welded steel X42, and rubber O ring connected prestressed concrete pipe with internal diameter of 1800mm, 200mm wall thickness, the steel section is coated and lined with bitumen, the wall thickness of the steel shell is 16mm.

Note:

As seen in figures (1 to 6) below, the in-line isolating valves on pipelines are normally equipped with bypass valves and the associated pipe fittings either on one side or both sides of the pipe's horizontal direction, their sizes normally range between 100mm and 300mm in diameter. The bypass valves are designed to be constantly kept on close position and get to be used only for pressure balance purpose, thus in general minimising a possibility of water hammer when operating the main valve. While the in-line air valves are normally installed at high points on the pipeline profile on top of the 600mm diameter stub with an isolator valve just before the air valve's cap. The scour valves are typically installed at low points on the pipeline profile, off-line with pipe fittings including the scour valve sizes ranging between 100mm and 300mm.

The selected locations are already equipped with cathodic protection's general infrastructure including either a transformer rectifier unit (TRU), natural drain unit (NDU) or forced drain unit (FDU) were previously powered using solar panels.

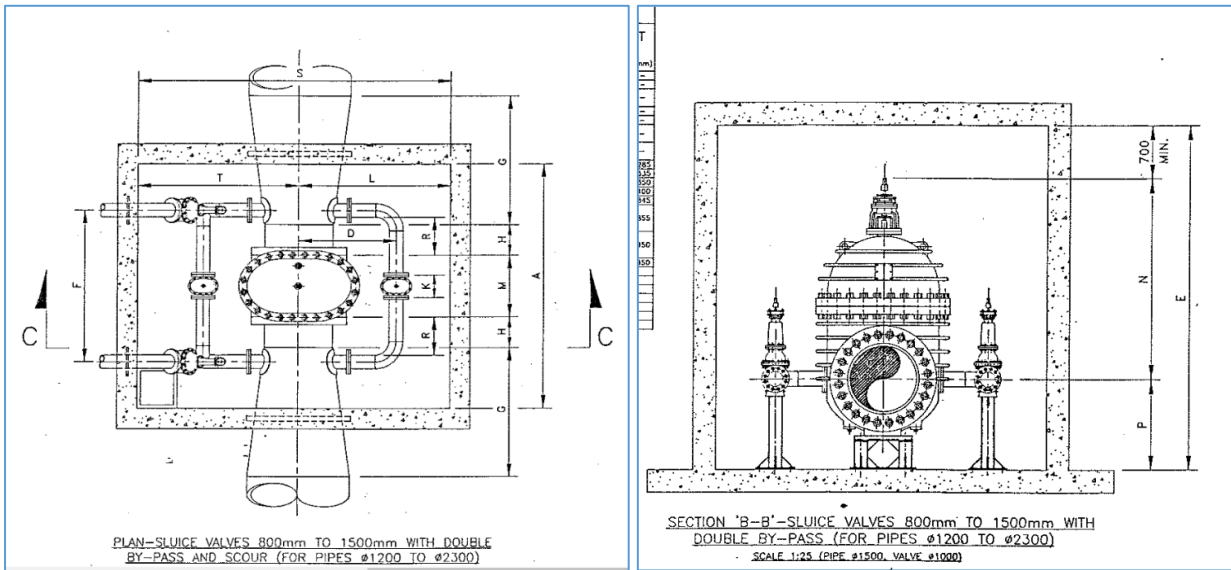


Figure 1 and 2: Typical in-line isolating valve chamber with by-pass valves and the associated pipe fittings (design guidelines)

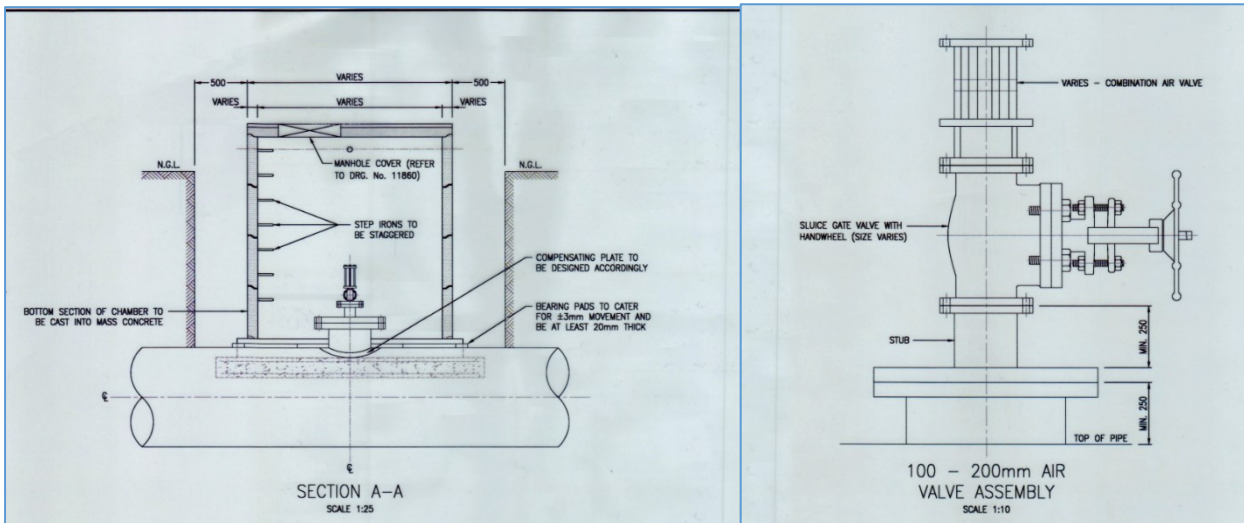


Figure 3 and 4: Typical in-line air valve chamber with isolator valve and the associated pipe fittings (design guidelines)

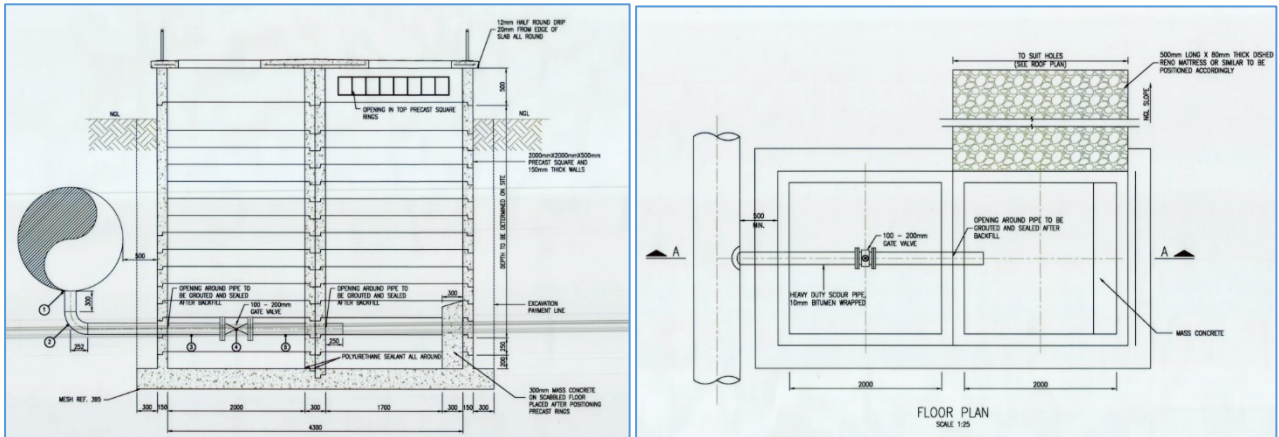


Figure 5 and 6: Typical scour valve chamber and the associated pipe fittings (design guidelines)

SCOPE OF WORK

Taking into consideration the objectives and the existing hydraulic parameters as outlined above, the scope of work shall generally cover the necessary infrastructure, such as the turbine, stator blades, generator, gear system, rpm sensor, AI control system, and associated electrical, civil and mechanical components. It should further include but not limited to the following activities:

- Investigate the feasibility of generating electric power using turbines system to power up the rectifier unit of output rating of 150A/100V.
- The service provider to undertake a detailed hydraulics modelling (dynamic analysis) and clearly demonstrate the hydraulic impact that the introduction of turbine will have both downstream and upstream of where the turbine is located. Apart from the design flow and head provided above, the current measurement (flow & pressure) should be also conducted, the investigation should ascertain that the installation of turbine will not in any way negatively influence the reliability of water supply in the system.
- The service provider must present their concept through a detailed schematic diagram clearly demonstrating the associated connection details (interface) from and to the main pipeline together with the methodology outlining how the actual implementation/construction maybe practically undertaken.
- The service provider must outline the impact that the installation of turbine will have on civil engineering related works including potential modification of the chamber structure and the other associated earthworks. Refer table 1 for the estimated distance from possible location of the turbine to the point of connection (durasafe)

- The service provider to design, supply and install the water turbine and the general required accessories, also Refer table 1 for the estimated distance from possible location of the turbine to the point of connection (durasafe), the design must also cover all the associated pipe fittings including the isolating valves that maybe required for effective flow control measures.
- The pipework should be designed to have minimum sharp bends and Rand Water standard design requirements for pipeline should be applied.
- The Service Provider must ensure that the turbine is capable of supplying or generating an output of 400V/36A (capacity of 25KVA) to power the rectifier, or
- The Service Provider to generate a DC output of 150A/100V (rectifier's output) to be used to power the ground bed and the pipe for cathodic protection purpose.
- The design shall include vandal proof system or measures to prevent theft and vandalism.
- The Service Provider shall visit and install water turbines as per the approved design on potentially all 3 identified sites as shown on table 1 above.
- Whatever the fitting will be used for installation of turbines, it should in compliance with Rand Water's Standard Specification and Design Guidelines as well as the Rand Water Standard Flange Drilling Tables where flanges are used for joints.
- Coating and lining for should be as per Rand Water's Standard Specification and Design Guidelines with proposed lining and coating material compactible to the existing.
- The service provider will be required to comply to Rand Water Occupational Health and Safety (OHS) requirements and as such shall submit OHS file for approval prior to any physical work of site.
- Compilation of a operation and maintenance manual and maintenance of the works during the defects liability period |

PART C4: SITE INFORMATION

C4. SITE INFORMATION

The Bidder must refer to the Scope of work section in this bid document.