



CIDB 8ME OR HIGHER

CIDB REFERENCE NUMBER: _____

PROJECT NO: ERW2506/02

PUBLISH DATE: WEDNESDAY, 20 MAY 2026

DESCRIPTION: APPOINTMENT OF SERVICE PROVIDER/S FOR THE SUPPLY, DELIVERY AND INSTALLATION OF PUMPS AT ERWAT WASTEWATER CARE WORKS ON 'AS AND WHEN REQUIRED' BASIS FOR A PERIOD OF THIRTY-SIX (36) MONTHS

DEPARTMENT: INFRASTRUCTURE PLANNING AND PROJECTS

COMPULSORY VIRTUAL BRIEFING SESSION: *Tuesday, 9th June 2026 @ 10:30*

(Zoom Link : <https://events.teams.microsoft.com/event/e427d994-6724-45fe-86c1-1be42675160@1d9cdadc-ce7f-46d7-b303-e5c99a875dc22026> a)

Kindly connect from the ERWAT website to register and attend

CLOSING DATE: *Monday, 22nd June 2026 at 12h00 noon*

FULL NAME OF BIDDER:

(Bidding Entity: cc, (Pty) Ltd,
JV, Sole Proprietor, etc.)

: _____

CONTACT PERSON

: _____

TEL NUMBER

: _____

E-MAIL

: _____

CIDB REGISTRATION NO.

: CRS _____

CENTRAL SUPPLIER

DATABASE REG NO.

: M _____

BID AMOUNT (VAT INCLUSIVE) : RATE BASED TENDER:

ERWAT STAMP



PROJECT NO: ERW2506/02

APPOINTMENT OF SERVICE PROVIDER/S FOR THE SUPPLY, DELIVERY AND INSTALLATION OF PUMPS AT ERWAT WASTEWATER CARE WORKS ON 'AS AND WHEN REQUIRED' BASIS FOR A PERIOD OF THIRTY-SIX (36) MONTHS

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- T1.2 Tender Data

Part T2: Returnable Documents

- T2.1 List of returnable documents
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THE CONTRACT

Part C1: Agreements and Contract Data

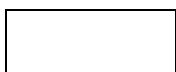
- C1.1 Form of Offer and Acceptance
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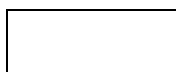
- C2.1 Pricing Instructions
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Part C3: Scope of Work

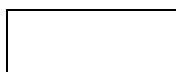
- C3 Scope of Works



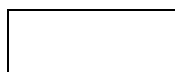
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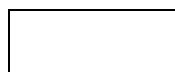
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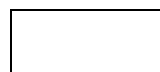
Witness 2



Employer



Witness 1



Witness 2



T1.1 REQUEST FOR PROPOSAL NOTICE AND INVITATION

TENDER NOTICE

Bidders are hereby invited to submit tender offers for the project listed below:

Project No.	Project Description	CIDB Grading	Contact	Compulsory Virtual Briefing Session Date	Closing Date
ERW2506/02	APPOINTMENT OF SERVICE PROVIDER/S TO SUPPLY, DELIVER & INSTALLATION OF PUMPS AT ERWAT WASTEWATER CARE WORKS ON 'AS & WHEN REQUIRED' BASIS FOR A PERIOD OF THIRTY-SIX (36) MONTHS	8 ME OR HIGHER	MR. J. MATHUNZI 011 929 7000	Tuesday, 09th June 2026 @ 10:30 Kindly register to attend the briefing session	Monday, 22nd June 2026 @ 12h00

Potential bidders may download the bid document from the ERWAT tender site free of charge. Bidders must however note that it remains their responsibility to print the full document, and any omissions submitted due to not printing the full tender document may result in your bid being null and void. Bidders may not alter the downloaded document in any form what so-ever.

A Compulsory clarification meeting with the representative of the employer will be held through a virtual briefing session. Link: <https://events.teams.microsoft.com/event/e427d994-6724-45fe-86c1-e1be42675160@1d9cdadc-ce7f-46d7-b303-e5c99a875dc22026> a. Kindly access the link through the ERWAT website to register and attend the briefing session

Please note this is a compulsory briefing session, and no bids will be accepted if the bidder has not attended this session and documents will only be accepted from contractors whose names appear on the attendance register. Kindly note that the company representative that attends this session will be accepted as a person with the relevant technical expertise applicable to this bid.

Completed Tenders in ink and clearly marked "**BID ERW2506/02: APPOINTMENT OF SERVICE PROVIDER/S FOR THE SUPPLY, DELIVERY AND INSTALLATION OF PUMPS AT ERWAT WASTEWATER CARE WORKS ON 'AS AND WHEN REQUIRED' BASIS FOR A PERIOD OF THIRTY-SIX (36) MONTHS**" must be placed in the Tender Box, ERWAT Head Office, Hartebeestfontein Office Park, R25 (Bapsfontein/ Bronkhorstspruit), Kempton Park, not later than **Monday, 22nd June 2026 @ 12:00** at which hour and date the Tenders will be opened in public at ERWAT Head Office. Tenders shall remain valid for a period of 120 days from closing date and no late, faxed, e-mailed or other form of Tender will be accepted.

All SCM Enquiries shall be addressed to chantel.kearns@erwat.co.za or Phumzile.mdlalose@erwat.co.za or Inkosinathi.nhlapo@erwat.co.za and All Technical Enquiries shall be addressed to Jeffrey Mathunzi at Jeffrey.mathunzi@erwat.co.za

Bids will be evaluated in terms of ERWAT' Supply Chain Management Policy, the MFMA ACT 56 of 2003 SCM Regulations, the Preferential Procurement Policy Framework Act 2000 and its Regulations, 2022, the General Conditions of Contract for construction (GCC) 2015 and, if applicable, any other special conditions of contract.

"The Special Conditions of Contract are supplementary to that of the General Conditions of Contract. In the event of any contradiction between the GCC or any other applicable contractual agreement, the Municipal Financial Management Act and its applicable regulations will take precedence."

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

NB: NO BIDS WILL BE CONSIDERED FROM PERSONS IN THE SERVICE OF THE STATE (as defined in Regulation 44 of the Local Government: Municipal Supply Chain Management Regulations).

ERWAT accepts no responsibility for bidders accessing the tender notices from other sites/sources other than the newspapers used, its website (www.erwat.co.za/procurement) and the National Treasury's e-tender portal (www.etenders.gov.za).

WEDNESDAY, 20TH MAY 2026 (date ad is available on the website and advertised)

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2



PROJECT NO: ERW2506/02

APPOINTMENT OF SERVICE PROVIDER/S FOR THE SUPPLY, DELIVERY AND INSTALLATION OF PUMPS AT ERWAT WASTEWATER CARE WORKS ON 'AS AND WHEN REQUIRED' BASIS FOR A PERIOD OF THIRTY-SIX (36) MONTHS

T1.2 TENDER DATA

General

The conditions of tender are the Standard Conditions of Tender as contained in Annex F of Board Notice 136 of 2015 in Government Gazette 38960 of 10 July 2015, Construction Industry Development Board (CIDB) Standard for Uniformity in Construction Procurement. See www.cidb.org.za which is reproduced without amendment or alteration for the convenience of Bidders as an Annex to this Tender Data.

The Standard Conditions of Tender make several references to the Tender Data for details that apply specifically to this tender. The Tender Data shall have precedence in the interpretation of any ambiguity or inconsistency between it and the standard Conditions of Tender. Each item of data given below is cross-referenced to the clause in the Standard Conditions of Tender to which it mainly applies.

The following Standard Conditions of Tender as set out in the Tender Data below shall apply to this tender.

Clause No.	TENDER DATA
F1.1	<p>The Employer is:</p> <p>Ekurhuleni Water Care Company (ERWAT) Hartebeestfontein Office Park R25 (Bapsfontein/Bronkhorstspuit Road) Kempton Park</p>
F.1.2	<p>The Tender document's contents is as follows:</p> <p><u>THE TENDER</u></p> <p>Part T1: Tender Procedures (Pink) T1.1 Tender notice and invitation to Tender T1.2 Tender Data</p> <p>Part T2: Returnable Documents (Pink) T2.1 List of returnable documents</p>

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

	<p>T2.2 Returnable schedules</p> <p><u>THE CONTRACT</u></p> <p>Part C1: Agreements and Contract Data (Yellow) C1.1 Form of Offer and Acceptance C1.2 Contract Data C1.3 Occupational Health and Safety C1.4 Corporate Governance Breach Clause</p> <p>Part C2: Pricing Data (Yellow) C2.1 Pricing Instructions C2.2 Bill of Quantities</p> <p>Part C3: Scope of Work (Blue) C3.1 Description of Works C3.2 Engineering C3.3 Construction C3.4 Management of Works C3.5 Health and Safety C3.6 Environmental Management During Construction</p>
<p>F1.3</p>	<p>Interpretation</p> <p>The Tender data and additional requirements contained in the Tender schedules that are included in the returnable documents are deemed to be part of these Tender conditions.</p>
<p>F.1.4</p>	<p>The Employer's Representatives are:</p> <p><u>CM:</u> Chantel Kearns/ Phumzile Mdlalose/ Inkosinathi Nhlapo - 011 929-7000</p> <p>E-mail Address: chantel.kearns@erwat.co.za or Phumzile.mdlalose@erwat.co.za or Inkosinathi.nhlapo@erwat.co.za</p> <p><u>Technical:</u> - 011 929 7000</p> <p>E-mail Address: Jeffrey.mathunzi@erwat.co.za</p> <p>Attention is drawn to the fact that verbal communication given by the Employer's representative prior to the close of Request for Proposals (Tender) will not be regarded as binding on the employer. Only information issued formally by the employer in writing to the bidders, under the signature of the Accounting Officer or his nominees, will be regarded as amending the Tender documents. Tender offer communicated on paper shall be submitted as an original.</p> <p>In the event that no correspondence or communication is received from ERWAT within one hundred and twenty (120) days after the stipulated closing date and time of the Tender, the Tender proposal will be deemed to be unsuccessful.</p>
<p>F.1.5</p>	<p>Reject or Accept</p> <p>The Employer may accept or reject any variation, deviation, Tender offer, or alternative Tender offer, and may cancel the Tender process and reject all Tender offers at any time before the formation of a contract. The employer shall not accept or incur any liability to a bidder for such a cancellation and rejection but will give written reasons for such action upon written request to do so.</p>



Contractor



Witness 1



Witness 2



Employer



Witness 1



Witness 2

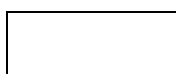
<p>F1.6:</p>	<p>Appointment of Multiple Bidders</p> <p>ERWAT reserves the right to award this contract to one or more bidders. The lowest bidder or any bid will not necessarily be accepted. The intention of ERWAT is to appoint a Minimum of One (1) bidder, and a Maximum of Three (3) Bidders for this Framework Contract.</p> <p>The decision to appoint multiple bidders will be based on the evaluation of bids received, the nature and scope of the work, and the Company's discretion to ensure optimal project delivery.</p>
<p>F.2.1</p>	<p>CIDB Requirements</p> <p>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 8 ME class of construction work, are eligible to have their tenders evaluated.</p> <p>Furthermore, the contractor grading designations (8 ME class) for construction works taking place over an agreed number of years (36 Months) shall be based on the entire contract value where such work is:</p> <ul style="list-style-type: none"> on an "as and when required" basis <p>Joint ventures are eligible to submit tenders provided that:</p> <ol style="list-style-type: none"> Every member of the joint venture is registered with the CIDB: The lead partner has a MINIMUM contractor grading designation in the 7 ME class of construction work; and The combined contractor grading designation calculated in accordance with the Construction Industry Development Regulations is equal to or higher than a contractor grading designation determined in accordance with the sum tendered for an 8 ME Class of construction work or a value determined in accordance with Regulation 25 (1B) or 25(7A) of the Construction Industry Development Regulations. The lead partner must be registered in a contractor grading designation not lower than one level below the required grading designation in the class of construction works under consideration. Please consult the CIDB website for the provisions for joint venture submission. The bulk of the work for this Contract is Mechanical, however it may also include civil, electrical and control & instrumentation aspects. Should these portions be sub-contracted, each Sub-Contractor shall have sufficient CIDB grading in their field to cover their portion of the Contract price. An indication of the portion of the total Contract price allocated to each Sub-Contractor as well as proof of each Sub-Contractors CIDB grading shall be included in the Bidders submissions.
<p>F.2.2</p>	<p>Cost of Bidding</p> <p>Accept that the Employer will not compensate the Bidders for any costs incurred in the preparation and submission of a tender offer, including the costs of any testing necessary to demonstrate that aspects of the offer satisfy requirements.</p>
<p>F.2.3</p>	<p>Check documents</p> <p>The Bidder shall satisfy himself that the set of tender documents is complete and in accordance with the index. If any page has been omitted or duplicated, or if the script or dimensions, or anything else in the tender document is indistinct, or if doubt exists as to the meaning of any description, or if the tender document contains any obvious errors, the Bidder shall immediately notify the Employer accordingly, in writing, so that such discrepancy or indistinctness can be clarified</p>



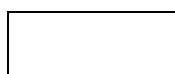
Contractor



Witness 1



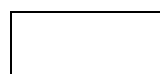
Witness 2



Employer



Witness 1



Witness 2

	and rectified, as ERWAT or the Agent will not accept any responsibility or consider any claim in connection with such discrepancy or indistinctness, which are not rectified during the tender period.	
F.2.4	Confidentiality and copyright of documents Treat as confidential all matters arising in connection with the Tender. Use and copy the documents issued by the employer only for the purpose of preparing and submitting a proposal offer in response to the invitation.	
F.2.5	Reference Documents Obtain, as necessary for submitting a tender offer, copies of the latest versions of standards, specifications, conditions of contract and other publications, which are not attached but which are incorporated into the tender documents by reference.	
F.2.6	Acknowledge Addenda Acknowledge receipt of addenda to the proposal documents, which the employer may issue, and if necessary, apply for an extension of the closing time stated in the Tender data, in order to take the addenda into account.	
F.2.7	The arrangements for a compulsory Virtual briefing/clarification meeting are:	
	<p>Date:</p> <p>Tuesday, 09th June 2026</p> <p>Time: 10:30</p>	<p>Online: Kindly register to attend the virtual compulsory briefing session at:</p> <p>Zoom Link:</p> <p>https://events.teams.microsoft.com/event/e427d994-6724-45fe-86c1-e1be42675160@1d9cdadc-ce7f-46d7-b303-e5c99a875dc22026 a</p>

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Attendance of ERWAT Briefing Sessions

Bidders must take note of the provisions for site/briefing sessions as advertised in the media, ERWAT website and or on the e-tender portal.

In the event that a compulsory briefing session will be conducted, bidders must attend the session either on site or via virtual platform as indicated in the bid document and advertisement. Bidders will be given a link on the advert and tender document to register prior to the briefing session. On the day of the briefing session, bidders must log onto the link to attend. The virtual platform keeps record of bidders registered and in attendance

Documents will only be accepted from bidders whose names appear on the attendance register. Failure to attend the compulsory briefing sessions and bidders whose names do not appear on the register, will render the bidder's submission invalid and will not be considered for evaluation.

Kindly note that the company representative that attends this session will be accepted as a person with the relevant technical expertise applicable to this bid. Please list a minimum of one representative that attended the briefing session below.

Kindly indicate the company representative/s e-mail address who **attended** the briefing session:

Name: _____ Name: _____

Email address: _____ Email address: _____

Contact number: _____ Contact number: _____

Kindly note that the above e-mail address/s will be utilised to verify your attendance at the compulsory briefing session conducted on Virtual platform or on-site. In the event that the indicated e-mail address/es cannot be traced on the physical attendance register; virtual platform registration and/or on-line attendance register, it will be taken that your company did not attend the briefing session and will result in your bid not being evaluated. It is the bidder's responsibility to provide correct e-mail address and/or contact details.

Joint Venture:

In the event that the bidding entity wishes to submit an offer as a joint venture, one or both company representatives must attend the briefing session.

Kindly indicate above one or both representatives e-mail address who attended the briefing session.

Bidders are encouraged to collect/access bidding documents before the briefing session to allow them sufficient time to peruse the scope so that any queries can be dealt with at the briefing session. Bidders may raise queries at least five (5) working days before the stipulated closing date and time of the Tender to direct further queries to the SCM department per e-mail. An addendum will be sent to the attending bidders with clarity on questions raised during this period (where applicable). A copy of the minutes will be attached thereto for ease reference.

No individual should represent more than one bidder at the compulsory briefing session.

At least one member of the JV be represented at the compulsory clarification meeting

F.2.8

Seek clarification

Questions or queries must be submitted to the Employer at least five (5) working days before the stipulated closing date and time of the Tender. However, ERWAT shall not be liable nor assume liability for failure of the bidder to receive response to any questions and / or queries raised by the bidder by the closing time.

Contractor

Witness 1

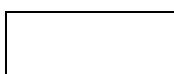
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Employer

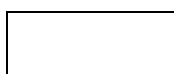
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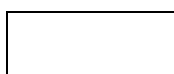
<p>F.2.9</p>	<p>Pricing the Tender</p> <p>State the rates and prices in South African Rand (ZAR).</p> <ul style="list-style-type: none"> Prices shall be FIXED and FIRM for the first 12 months of the Contract. Price increments will be based on MBD 3.2 pricing structure annually on the anniversary of this tender.
<p>F.2.10</p>	<p>Alterations to documents</p> <p>Bidder must not make any alterations or additions to the proposal documents, except to comply with instructions issued by the employer, or necessary to correct errors made by the bidder. All signatories to the Tender offer shall sign next to all such alterations. Erasures and the use of masking fluid are prohibited. Copies are not allowed; only original documents will be accepted.</p>
<p>F.2.11</p>	<p>Submitting a Tender offer</p> <p>No late, faxed, emailed or other form of Tender will be accepted. Completed Tenders with attached documents, if any, must be submitted in Black ink in sealed envelopes and clearly marked:</p> <p><u>“BID ERW2506/02: APPOINTMENT OF SERVICE PROVIDER/S FOR THE SUPPLY, DELIVERY AND INSTALLATION OF PUMPS AT ERWAT WASTEWATER CARE WORKS ON ‘AS AND WHEN REQUIRED’ BASIS FOR A PERIOD OF THIRTY-SIX (36) MONTHS”</u> and must be placed in Tender Box at ERWAT Head Office, Hartebeestfontein Office Park, R25 (Bapsfontein / Bronkhorstspuit), Kempton Park.</p> <p>Accept that the tender submitted to the employer cannot be withdrawn or substituted. No substitute tender offers will be considered.</p> <p>All Tenders received by ERWAT will remain in the Company’s possession.</p> <p>Special Request:</p> <p>All tender submissions must be provided in hardcopy format on the original bid document as supplied by ERWAT and deposited in the tender box.</p> <p>In addition to the hardcopy, bidders are requested to submit an identical electronic copy (in PDF format) and the BOQ in Microsoft Excel file of the complete tender document via email to TenderE-Submission@erwat.co.za. The email must clearly state the tender reference number and the bidder’s name in the subject line. The electronic submission must be made by the tender closing date and time.</p> <p>While submission to TenderE-Submission@erwat.co.za is not mandatory, bidders are encouraged to do so to assist with the efficient evaluation of bids. Bidders will not be disqualified for not submitting an electronic copy.</p> <p>Both the hardcopy and electronic versions must be identical in every detail, including all completed forms, signed declarations, schedules, and supporting documentation. In the event of any discrepancies between the hardcopy and the electronic copy, the hardcopy version will be considered the official and legally binding submission. Bidders are therefore responsible for ensuring that the contents of both formats are complete, consistent, and fully aligned.</p>
<p>F.2.12</p>	<p>Information and data to be completed in all respects</p> <p>To facilitate review of this Tender by ERWAT, it is requested that submissions conform to the following format:</p> <ol style="list-style-type: none"> Coversheet: List Tender Statement, the name of your firm, and the name, address and telephone number of a contact person for questions concerning the Tender submitted.



Contractor



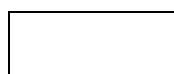
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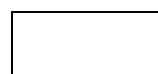
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Employer

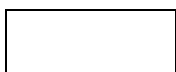


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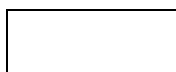


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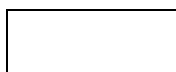
	<p>2. Executive Summary: Provide a brief overview of the project, description of the overall approach to the project, key features of the technologies offered, and an overview of the performance guaranteed.</p> <p>3. Relevant Experience and Reference Projects: Information of relevant projects completed by the Bidder (in South Africa and worldwide) using the specific technologies requested must be provided.</p> <p>4. Project Team: Provide a project team organogram showing the structure and composition of the proposed team. A CV highlighting the relevant project specific experience for each team member must be supplied.</p> <p>5. Project Schedule. Not Applicable</p> <p>6. Technical Specification & Datasheets: All information asked for regarding the technical equipment shall be included here.</p> <p>Accept that Tender offers, which do not provide all the data or information requested completely and, in the form, required, may be regarded by the employer as non-responsive. Responsive Tenders are ONLY those Tenders with all documents and pages, contained herein, that have been signed by the responsible person duly authorised to sign all documents indicated on the returnable document “FORM C Authority of Signatory”.</p> <p>The above is to be read in conjunction with F3.11 below as well as the Project Specifications detailed in Section C3: Scope of Works.</p>
<p>F.2.13</p>	<p>Tender Closing</p> <p>Closing Date: Monday, 22nd June 2026</p> <p>Closing Time: 12H00 Noon</p>
<p>F.2.14</p>	<p>Tender offer validity</p> <p>The Tender offer validity period is 120 Days.</p>
<p>F2.15</p>	<p>Provide other information</p> <p>The bidders are required to submit following documents and if requested to resubmit in case if it was not initially submitted:</p> <ul style="list-style-type: none"> (1) Proof of SARS Tax status (pin issued by the South African Revenue Services). (2) Completion of MBD 1,2, 3.2, 4, 5, 6.1, 8 and 9 forms (3) An updated record of payment of rates and taxes (not older than three months) and services to the relevant Municipality must be attached for the bidding company and all its directors. <i>Refer to FORM A.</i> The following cases will be reviewed and assessed where applicable: <ul style="list-style-type: none"> i. Where the bidder or any director/member leases premises and municipal accounts are not in their name, a valid lease agreement with a SAPS Affidavit must be submitted. ii. Bidders that are residing in Traditional lands must attach a recent letter from the Tribal Authority falling within the bid period together with the SAPS Affidavit clearly stating that the bidder does not pay rates and taxes. iii. If the company have directors that are spouses (with the same surname, address in the CK and CSD and the rates and taxes only specify one spouse the rates and taxes will be sufficient for both if submitted. If they are leasing refer to (i). (4) In case of Joint Venture – the Joint Venture Agreement and all supporting documents related to the JV.



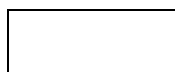
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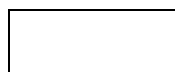
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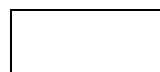
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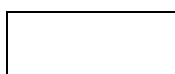


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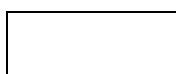
<p>F2.16</p>	<p>Certificates</p> <p>The successful Bidder is required to submit a letter of intent from an approved insurer undertaking to provide the Performance Guarantee to the format included in Part C1.3 of this Tender Document. This shall be submitted with at the time of concluding the Service Level Agreement.</p>
<p>F3.1</p>	<p>Opening of tender</p> <p>Tenders will be opened in public at the ERWAT Head Office, Hartebeestfontein Office Park, R25 (Bapsfontein / Bronkhorstspuit), Kempton Park.</p>
<p>F3.2</p>	<p>Two-envelope System</p> <p>A two-envelope procedure will NOT be followed.</p>
<p>F3.3</p>	<p>Non-disclosure</p> <p>After the opening of the Tender offers, no information relating to the clarification, determination of responsiveness, evaluation and comparison of Tender offers and recommendations concerning the award of the Tender shall be disclosed to any other Bidder or persons not concerned with such process until the award of the Tender has been announced by ERWAT.</p>
<p>F3.4</p>	<p>Arithmetical errors, omissions and discrepancies</p> <p>ERWAT is to check BID offers for arithmetical errors in the following manner:</p> <ol style="list-style-type: none"> a) Where there is a discrepancy between the amounts in words and amounts in figures, the amount in words shall govern. b) If bills of quantities or pricing schedules apply and there is an error in the line-item total resulting from the product of the unit rate and the quantity, the line-item total shall govern, and the rate shall be corrected. Where there is an obviously gross misplacement of the decimal point in the unit rate, the line-item total as quoted shall govern, and the unit rate shall be corrected. c) Where there is an error in the total of the prices either as a result of other corrections required by this checking process or in the Bidder's addition of prices, the total of the prices shall govern and the Bidder will be asked to revise selected item prices (and their rates if bills of quantities apply) to achieve the tendered total of the prices. <p>Consider the rejection of a tender offer if the Bidder does not correct or accept the correction of the arithmetical error in the manner described above.</p>
<p>F3.5</p>	<p>1. Evaluation of tender offers</p> <p>The Bidder's notice is drawn to the fact that the evaluation, adjudication and awarding of this Tender will be in terms of the Supply Chain Management Policy of ERWAT and the Preferential Procurement Regulations of 2022.</p> <p>If the submitted Tender does not comply with the Tender conditions, the Tender may be rejected. If specifications are not met, the Tender may also be rejected. With regard to the above, certain actions or errors are unacceptable, and warrant REJECTION OF THE TENDER, for example:</p> <ul style="list-style-type: none"> ▪ Proof of SARS Tax status (pin issued by the South African Revenue Services). ▪ Non submission of company registration certificates. ▪ Pages that were to be completed being removed from the Tender document and have therefore not been submitted. ▪ Failure to fully complete form of offer.



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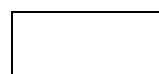
Witness 2



Employer



Witness 1



Witness 2

- Scratching out without initialing next to the amended rates or information.
- Writing over / painting out rates / the use of Tippex/correction fluid or any erasable ink.
- Failure to attend compulsory briefing meetings
- The Tender has not been properly signed by a party having the authority to do so, according to the **Form C – “Authority for Signatory”**.
- No authority for signatory submitted.
- Particulars required in respect of the proposal have not been provided: non-compliance of Tender requirements and/or specifications.
- The Bidder's attempts to influence or has in fact influenced the evaluation and/or awarding of the contract.
- The Proposal has been submitted after the relevant closing date and time.
- If any municipal rates and taxes or municipal service charges owed by that Bidder or any of its directors to the company, or to any other company or municipal entity, are in arrears for more than three months (90 days).
- If any Bidder who during the last five years has failed to perform satisfactorily on a previous contract with the company or any other organ of state after written notice was given to that Bidder that performance was unsatisfactory.

2. Good standing with SA Revenue Services

- Determine whether the bidders' tax matters are in order as provided for by SARS.
- The Bidder must complete the MBD 2 form in the returnable schedule and or attach their valid SARS Pin to verify their Tax matters to the designated page of the Tender document.

If the Tender does not meet the requirements contained in the ERWAT Supply Chain Policy, and the mentioned framework, it will be rejected and may not subsequently be made acceptable by correction or withdrawal of the non-conforming deviation or reservation.

3. Penalties

ERWAT will, if upon investigation it is found that a preference in terms of the Preferential Procurement Policy Framework Act, 2000 and these regulations has been obtained on a fraudulent basis, or any specified goals are not attained in the performance of the contract, one or more of the following penalties will be imposed:

- Cancel the contract and recover all losses or damages incurred or sustained from the Bidder.
- Impose a financial penalty of twice the theoretical financial preference associated with the claim, which was made in the Tender.
- Restrict the firm, its shareholders and directors on obtaining any business from ERWAT for a period of 5 years and blacklisted on the National Treasury database of restricted suppliers.

4. Evaluation Criteria

ERWAT will establish a Bid Evaluation Committee (BEC) whose responsibility is to make recommendations to the Bid Adjudication Committee (BAC). The Bid Evaluation Committee will shortlist and evaluate the bid document in accordance with the criteria below and make recommendations to the BAC.

- 1) Pre compliance evaluation to be done and pre-qualified bidders goes through for the functionality evaluation. Where some pre-compliance information is not provided, the ERWAT supply chain will contact the bidder responsible to submit within 5 working days and failure to do so will result in disqualification.
- 2) Score Bid evaluation points for price and specific goals points
- 3) Calculate total Bid evaluation points, to two decimal places
- 4) Rank Bid offers from the highest number of Bid evaluation points to the lowest
- 5) Recommend Bidders with the highest number of Bid evaluation points for the award of the contract, unless there are compelling and justifiable reasons not to do so.



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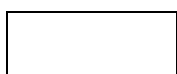


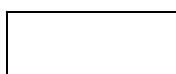
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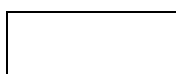


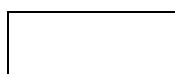
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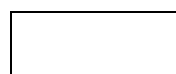
	<p>FUNCTIONALITY CRITERIA: -</p> <p>Note: The minimum required score for functionality is stipulated in the functionality table listed elsewhere in the document. Bidders scoring less than the stipulated threshold on functionality shall not proceed to the next stage of the evaluation.</p> <p>Functionality criteria maximum points in respect of each criterion shall be as set out at the bottom of this table.</p> <p>All Tender submission will be evaluated by at least three evaluators against the Table below. Bidders shall ensure that their tender submissions are sufficiently detailed and that all required information is included in their submissions. Information not provided will result in zero points awarded for the respective item.</p> <p>Tender evaluation points</p> <p>Tender evaluation points will be allocated as per the Supply Chain Management policy and the Preferential Procurement Policy Framework Act, 2000: Preferential Procurement Regulations, 2022 including the following:</p> <p>The points allocation for this Tender is:</p> <ul style="list-style-type: none"> a) Price: 90 b) Specific Goals: 10 <p>Regulations of disputes, objections, complaints and queries will be handled in accordance with the Supply Chain Management Policy of ERWAT.</p>
<p>F3.6</p>	<p>Contract Documents</p> <p>The Service Level Agreement (if applicable), Bid document and related attachments shall constitute the complete contract agreement.</p> <p>It should be noted that all ERWAT contracts are subject to the Municipal Financial Management Act (MFMA Act 56 of 2003), therefore in the event that there is any contradiction between the MFMA (Act 56 of 2003) and the GCC or any other applicable contractual agreement, the MFMA (Act 56 of 2003) and its applicable regulations shall take precedence.</p> <p>This is a CIDB Contract, and the CIDB Board has initiated a B.U.I.L.D Programme which focuses on social development goals, namely, Targeted Enterprise Development and Skills Development. This contract is subject to the CIDB B.U.I.L.D Programme, and the relevant standards shall form part of the contract. This standard requirement as well as any other regulatory or legislative requirements will be included during the Service Level Agreement (SLA) stage.</p>
<p>F3.7</p>	<p>Provide copies of the contracts</p> <p>The number of paper copies of the signed contract to be provided by the Employer is one.</p>
<p>Additional conditions</p>	<p>The additional conditions of the proposal are:</p> <ul style="list-style-type: none"> 1) ERWAT may also request that the Bidder provide written evidence that his financial, labour and resources are adequate for carrying out the project. 2) ERWAT reserves the right to appoint a firm of chartered accountants and auditors and / or execute any other financial investigations on the financial resources of any Bidder. The Bidders shall provide all reasonable assistance in such investigations

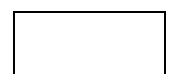

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	<p>3) ERWAT reserves the right to award this contract to one or more bidders. The lowest bidder or any bid will not necessarily be accepted. The intention of ERWAT is to appoint a Minimum of One (1) bidder, and a Maximum of Three (3) Bidders for this Framework Contract. The decision to appoint multiple bidders will be based on the evaluation of bids received, the nature and scope of the work, and the Company's discretion to ensure optimal project delivery.</p> <p>4) The number of bidders that will be appointed and the allocation of activities or items per bidder will be at ERWAT's discretion</p> <p>5) The lowest bidding price will not necessarily be accepted and ERWAT reserves the right to determine market related rate to be offered to the successful bidders.</p> <p>6) The rates of the highest-scoring bidder, subject to market evaluation (market related rate), will be offered to the subsequent qualifying bidders based on tender specification.</p> <p>7) If the tender is found to be unauthorised, fruitless and wasteful or irregular as informed through a formal investigation, internal and or external audit outcome, the Auditor General, Council, ERWAT Board of Directors or National Treasury, ERWAT reserves the right to cancel the tender with immediate effect and the bidder will have no claim to his effect whatsoever. The final terms of payment (where applicable) will be negotiated with the bidder at the time for final close out of the contract.</p>
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1.1 TECHNICAL / FUNCTIONALITY EVALUATION

Potential service providers will have to achieve the **minimum points out of 100** as stipulated under the functionality table for their technical proposals before their financial proposals and Specific Goals are evaluated. This is required so that there is a level of comfort that the potential service provider can deliver the project with the required professionalism and quality.

1.1.1 SCORING PROCESS

The Technical / Functional Evaluation Task Team will be established to determine the following:

- The bidders experience similar projects.
- The qualifications and experience of the key staff proposed.
- Bidders quality management system
- Bidder's Financial risk status

No alteration of technical / functionality proposals will be permitted after the deadline for receipt of bids. Questions may be asked for clarification needed to evaluate their proposals, but bidders would not be permitted to change the substance or price of their bids after bid opening. Requests for clarification and the bidder's responses would be made in writing. No interviews will be conducted in this regard.

NB: ERWAT reserves the right to verify all supporting documents including uncertified copies which will only be acceptable, where online verification can be done.

1.1.2 MANDATORY REQUIREMENTS

The following should be noted in relation to the mandatory requirements:

- a. Bidders will not be allowed to repeat the same personnel as representative for any of the other required key staff personnel.
- b. Copies of Qualifications (certified copies) and Professional registration must be attached as portfolio of evidence.
- c. All foreign qualifications must be SAQA (South African Qualifications Authority) accredited.
- d. All professional registrations must be in good standing during the period of tender closing.



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Witness 1



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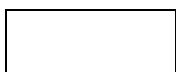
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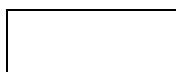
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e. Bidders shall ensure that all the requested supporting documents as per the mandatory requirements table below are attached to their Bid Document.

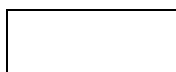
Scope Related Information and Documentation Required:		
Please ensure that the following supporting documents are attached to your Bid Document. Please note that bidders will not be evaluated further if they do not provide evidence confirming compliance with any of the specified mandatory requirements. ERWAT reserves the right to verify supporting documents.		
Item	Description	Provide Supporting documents for the following:
1.	CIDB Rating of 8ME Class or Higher Class	Bidders shall submit proof of Current Registration. (at the time of submission, the document should be in good standing and not expired). ERWAT reserves the right to verify the validity of the submitted proof of evidence.
2.	Construction Project Manager (Professional Registration SACPCMP)	Minimum supporting qualification NQF Level 7 (bachelor's degree or equivalent) in Mechanical Engineering or in Construction Management <ul style="list-style-type: none"> Valid Professional registration certificate with SACPCMP.
	Site Engineer/Agent	<ul style="list-style-type: none"> Minimum supporting qualification NQF Level 7 (bachelor's degree or equivalent) in Mechanical Engineering Valid Professional registration certificate with ECSA as a PrEng/PrTech.
	Construction Health and Safety Officer or Manager (Professional Registration SACPCMP)	<ul style="list-style-type: none"> Minimum supporting qualification NQF Level 6 (National Diploma or equivalent) in Safety Management or Environmental Studies Valid of Professional registration certificate with SACPCMP.
	Fitter	Trade Test certificate, with QCTO accreditation.
	Rigger	Trade Test certificate, with QCTO accreditation.
	Electrician	Trade Test certificate, with QCTO accreditation.



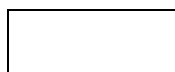
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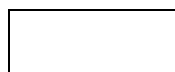
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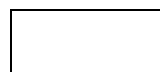
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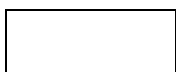


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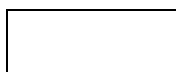
1.1.3 SCORING CRITERIA FOR CIDB CONTRACTS:

The score for the Technical / Functionality Evaluation will be calculated in accordance with the table below:

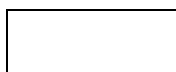
CRITERION	CRITERION DETAILS	POINTS
<p>Company Experience</p>	<p>Company experience in the installation or refurbishment of pumps in Water Treatment Works or Wastewater Treatment Works or such similar industrial application. Bidders to provide signed Appointment letters or Purchase Orders and signed completion certificates and/or reference letter for completed projects on client's letterhead:</p> <p>The reference letters or completion certificates must at minimum include:</p> <ol style="list-style-type: none"> Clear project description and project (contract) number Minimum project (contract) value of R5 million (Vat. Inclusive) per reference letter or per project. The required scope should be clearly indicated. Signed with contact person and contact details of contact person. Partial completions will not be accepted; each letter should represent the entire works completed not section or partially completed. Submission must be dated and not older than ten (10) years, from the date of completion. <p>Points shall be allocated as follows:</p> <ul style="list-style-type: none"> • 6 and more projects = 30 • 5 and More Projects = 25 • 4 Projects = 20 • 3 Projects = 15 • 2 Projects = 10 • 0 to 1 Project or no information submitted = 0 	<p>30</p>
<p>Expertise of key staff</p> <ol style="list-style-type: none"> Construction Project Manager Site Engineer/Agent Construction Health and Safety Officer or Manager Fitter Rigger Electrician 	<p>Bidders shall complete Pro-Forma CVs (Form N) and submit Curriculum Vitae (s) demonstrating years of experience in industrial mechanical engineering projects associated with installation or refurbishment or repairs of Pumps.</p> <p>The following should be noted:</p> <ol style="list-style-type: none"> Bidders will not be allowed to repeat the same personnel as representative for any of the other required key staff. Experience of key staff will be evaluated based on the years/ months post attainment of professional registration, where applicable, otherwise it will be evaluated post attainment of qualifications up to the date of tender closure. No points shall be allocated for submission of irrelevant experience that does not speak to the Scope of Works for this Contract. 	<p>35</p>



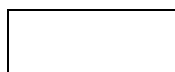
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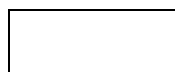
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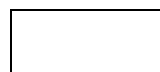
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	<p>d. Copies of Qualifications (Certified copies) and Professional registration must be attached as portfolio of evidence.</p> <p>e. All foreign qualifications must be SAQA (South African Qualifications Authority) accredited</p> <p>f. All professional registrations must be in good standing during the period of tender closing.</p> <p>Points shall be allocated as follows:</p> <p><u>Project Manager: (8) points</u></p> <ul style="list-style-type: none"> • No submission/No Experience = 0 • 24 – 48 Months' Experience = 4 • 49 – 72 Months' Experience = 6 • 73 and More Months' Experience = 8 <p><u>Site Engineer/Agent: (7) points</u></p> <ul style="list-style-type: none"> • No submission/No Experience = 0 • 24 – 48 Months' Experience = 4 • 49 – 72 Months' Experience = 6 • 73 and More Months' Experience = 7 <p><u>Construction Health and Safety Officer or Manager (5) points</u></p> <ul style="list-style-type: none"> • No submission/No Experience = 0 • 24 – 48 Months' Experience = 1 • 49 – 72 Months' Experience = 3 • 73 and More Months' Experience = 5 <p><u>Fitter (5) points</u></p> <ul style="list-style-type: none"> • No submission/No Experience = 0 • 24 – 48 Months' Experience = 1 • 49 – 72 Months' Experience = 3 • 73 and More Months' Experience = 5 <p><u>Rigger (5) points</u></p> <ul style="list-style-type: none"> • No submission/No Experience = 0 • 24 – 48 Months' Experience = 1 • 49 – 72 Months' Experience = 3 • 73 and More Months' Experience = 5 <p><u>Electrician (5) points</u></p> <ul style="list-style-type: none"> • No submission/No Experience = 0 • 24 – 48 Months' Experience = 1 • 49 – 72 Months' Experience = 3 • 73 and More Months' Experience = 5 	
<p>ISO9001 Accreditation for the bidding entity</p>	<p>Provide Certified Copy of ISO9001 Certificate, Certificate must be for ISO versions not earlier than 2015 and must be valid at the time of tender closing.</p>	<p>25</p>



Contractor



Witness 1



Witness 2



Employer



Witness 1



Witness 2

<p>Financial Capacity of Service Provider</p>	<p>The bidder shall provide a letter with bank codes (A-I) as Proof of financial capacity/support from institution accredited by Financial Sector Conduct Authority (FSCA) and/or National Credit Regulator (NCR) as proof of financial capacity. The letter shall be addressed to the bidder on the letter head of the financial institution.</p> <p>Points shall be allocated according to the following breakdown.</p> <ul style="list-style-type: none"> • Bank Rating A = 10 • Bank Rating B = 8 • Bank Rating C = 6 • Bank Rating D = 4 • Bank Rating E or lower = 0 <p>Failure to produce a bank document explicitly stating the Bank rating code will result in 0 points being awarded in this category = 0</p>	<p>10</p>
<p>TOTAL</p>	<p>Bidder must score a minimum of 80 points to be considered for further evaluation</p>	<p>100</p>

Notes:

- **All professional registrations must be valid at the time of tender closing, and copies of qualifications (Certified copies) and professional registrations shall be attached as portfolio of evidence. Bidders must also complete and sign FORM N.**
- **ERWAT reserves the right to verify all supporting documents including uncertified copies which will only be acceptable, where online verification can be done.**

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Witness 1

Witness 2

Employer

Witness 1

Witness 2



PROJECT NO: ERW2506/02

APPOINTMENT OF SERVICE PROVIDER/S FOR THE SUPPLY, DELIVERY AND INSTALLATION OF PUMPS AT ERWAT WASTEWATER CARE WORKS ON 'AS AND WHEN REQUIRED' BASIS FOR A PERIOD OF THIRTY-SIX (36) MONTHS

T 2.1 LIST OF RETURNABLE DOCUMENTS

1. Failure to fully complete and sign the relevant returnable documents shall render such a tender offer unresponsive.
2. Bidders shall note that their signatures appended to each returnable form represents a declaration that they vouch for the accuracy and correctness of the information provided, including the information provided by candidates proposed for the specified key positions.
3. Notwithstanding any check or audit conducted by or on behalf of the Employer, the information provided in the returnable documents is accepted in good faith and as justification for entering into a contract with a Bidder. If subsequently any information is found to be incorrect such discovery shall be taken as wilful misrepresentation by that Bidder to induce the contract. In such event the Employer has the discretionary right to terminate the contract.

Contractor

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Witness 2

Employer

Witness 1

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THE BIDDER MUST COMPLETE AND SIGN THE FOLLOWING RETURNABLE SCHEDULES:

RETURNABLE SCHEDULES REQUIRED FOR TENDER EVALUATION PURPOSES

MBD 1	INVITATION TO BID
MBD 2	TAX CLEARANCE REQUIREMENTS
MBD 3.2	PRICING STRUCTURE: NON-FIRM PRICES
MBD 4	DECLARATION OF INTEREST
MBD 5	DECLARATION FOR PROCUREMENT ABOVE R10 MILLION (ALL APPLICABLE TAXES INCLUDED)
MBD 6.1	PREFERENCE POINTS CLAIM FORM
MBD 7.1	CONTRACT FORM: PURCHASE OF GOODS/SERVICES
	PART 1: TO BE COMPLETED BY THE BIDDER
	PART 2: TO BE COMPLETED BY ERWAT
MBD 8	DECLARATION OF BIDDER'S PAST SUPPLY CHAIN MANAGEMENT PRACTICES
MBD 9	CERTIFICATE OF INDEPENDENT BID DETERMINATION
FORM A	<p>MUNICIPAL SERVICES, RATES AND TAXES OR RENTAL AGREEMENT WITH LANDLORD:</p> <p>An updated record of payment of rates and taxes (not older than three months) and services to the relevant Municipality must be attached for the bidding company and all its directors. The following cases will be reviewed and assessed where applicable:</p> <ul style="list-style-type: none"> i. Where the bidder or any director/member leases premises and municipal accounts are not in their name, a valid lease agreement with a SAPS Affidavit must be submitted. ii. Bidders that are residing in Traditional lands must attach a recent letter from the Tribal Authority falling within the bid period together with the SAPS Affidavit clearly stating that the bidder does not pay rates and taxes. iii. If the company have directors that are spouses (with the same surname, address in the CK and CSD and the rates and taxes only specify one spouse the rates and taxes will be sufficient for both if submitted. If they are leasing refer to (i). <p>Rates and taxes must not be in arrears for longer than 90 (ninety) days of date of closing of bid.</p>
FORM B	NATIONAL TREASURY CENTRALISED SUPPLIER DATABASE
FORM C	AUTHORITY OF SIGNATORY
FORM D	FINANCIAL REFERENCES /BIDDER'S CREDIT RATING AND BANK DETAILS
FORM E	RECORD OF ADDENDA TO TENDER DOCUMENTS
FORM F	CERTIFICATE OF AUTHORITY FOR SIGNATORY TO AGREEMENT IN TERMS OF OCCUPATIONAL HEALTH AND SAFETY ACT, 1993 (ACT NO 85
FORM G	OCCUPATIONAL HEALTH AND SAFETY AGREEMENT
FORM H	CERTIFIED COPY OF ID DOCUMENT/S OF OWNERS/MEMBERS/SHAREHOLDERS
FORM I	CURRENT CERTIFICATE OF GOOD STANDING FROM COMPENSATION COMMISSIONER
FORM J	COPY OF COMPANY REGISTRATION DOCUMENTS

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

FORM K	PROOF OF RELEVANT REGULATORY CERTIFICATION OR OTHER REQUIREMENTS IN TERMS OF THE REQUIRED REGULATORY AUTHORITY AS SET OUT IN THE SCOPE OF WORKS
FORM L	LETTER OF INTENT TO SUBMIT THIRD PARTY LIABILITY INSURANCE AND ALL RISK CONTRACTORS' INSURANCE TO COVER THIS CONTRACT (REQUIRED AT SLA STAGE)
FORM M	BACKGROUND AND WORK EXPERIENCE
FORM N	EXPERTISE OF THE KEY PERSONNEL
FORM O	POPIA CONSENT FORM

Returnable Documents that will be incorporated into the contract

C1.1	OFFER PORTION OF FORM OF OFFER AND ACCEPTANCE
C1.2	CONTRACT DATA (PART 2)

T2.1.1 IMPORTANT: Required Returnable Documentation:

Please ensure that the following supporting documents are attached to your Bid Document. Evaluation of these submissions will be done based on the MFMA requirements.

Item	Description of Document/Proof Sought	To be completed by the Bidder on submission of documents: Please fill in "Yes" or "No"	For Office Use Only Verified by SCM Official: Please fill in "Yes" or "No"
1	A valid Tax Clearance Certificate/SARS issued pin		
2	Copy of ID documents of owners/ members/ shareholders (see Bidders Information Section).		
3	Copy of Municipal Statement not older than 3 months OR Letter from landlord stating that you are renting from his/her property OR Copy of Lease agreement and Contact details (Statement and arrears should not be older than 3 months) <i>Refer to FORM A</i>		
4	Current Certificate of Good Standing from Compensation Commissioner		

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

T2.1.2 Other Returnable Documents required for the evaluation.

Item	Description of Document/Proof Sought	To be completed by the Bidder on submission of documents: Please fill in "Yes" or "No"	For Office Use Only Verified by SCM Official: Please fill in "Yes" or "No"
1	Copy of Company/ Registration Documents (see Bidders Information Section).		
2	Copy of B-BBEE Verification certificate from an accredited Verification Agency or BBEE Affidavit signed by Commissioner of Oaths, as provisioned in the B-BBEE Act and its Regulations.		
3	Proof of CSD registration (Supplier number and unique reference ID).		
4.	Proof of CIDB		

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2



PROJECT NO: ERW2506/02

APPOINTMENT OF SERVICE PROVIDER/S FOR THE SUPPLY, DELIVERY AND INSTALLATION OF PUMPS AT ERWAT WASTEWATER CARE WORKS ON 'AS AND WHEN REQUIRED' BASIS FOR A PERIOD OF THIRTY-SIX (36) MONTHS

T2.2 RETURNABLE SCHEDULES

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

MBD 1

**PART A
INVITATION TO BID**

You are hereby invited to bid for requirements of ERWAT	
Bid Number	ERW2407/10
Compulsory Briefing session date and time. <i>Kindly refer to Clause F.2.7 of the bidding document relating to the Clarification Meeting (provisions for attending briefing sessions)</i>	<p>TUESDAY, 09TH JUNE 2026 AT 10H30 - REGISTRATION REQUIRED.</p> <p>Briefing Session Virtual Link: https://events.teams.microsoft.com/event/e427d994-6724-45fe-86c1-e1be42675160@1d9cdadc-ce7f-46d7-b303-e5c99a875dc22026 a</p> <p>Kindly access the link through the ERWAT website to register and attend.</p>
Closing date	MONDAY, 22ND JUNE 2026
Closing time and venue	12h00 noon at ERWAT Head Office, R25 Bapsfontein Road, Norkem Park
Submission of bid documents	<p>All tender submissions must be provided in hardcopy format on the original bid document as supplied by ERWAT and deposited in the tender box.</p> <p>In addition to the hardcopy, bidders are requested to submit an identical electronic copy (in PDF format) of the complete tender document via email to TenderE-Submission@erwat.co.za.</p> <p>The email must clearly state the tender reference number and the bidder's name in the subject line. The electronic submission must be made by the tender closing date and time. While submission to TenderE-Submission@erwat.co.za is not mandatory, bidders are encouraged to do so to assist with the efficient evaluation of bids. Bidders will not be disqualified for not submitting an electronic copy.</p> <p>Both the hardcopy and electronic versions must be identical in every detail, including all completed forms, signed declarations, schedules, and supporting documentation. In the event of any discrepancies between the hardcopy and the electronic copy, the hardcopy version will be considered the official and legally binding submission. Bidders are therefore responsible for ensuring that the contents of both formats are complete, consistent, and fully aligned.</p>
The successful bidder will be required to fill in and sign a written contract form (MBD7).	

Bidder Information	
Name of Bidding Company	
Company physical address	
Company postal address	
Contact details	Company Representative (Name):
	Telephone:
	Cell phone:
	E-mail address:

Contractor

Witness 1

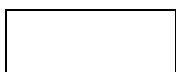
Witness 2

Employer

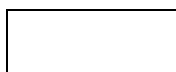
Witness 1

Witness 2

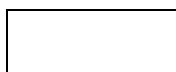
National Treasury Central Supplier Database number: (Compulsory)	MAAA
CIDB Grading CRS number	
Vat registration number	
Tax Compliance status	TCS Pin:
Are you the accredited representative in South Africa for the goods/ services/ works offered? If yes, attach proof from the agency your company is accredited to represent	
Total number of items offered	N/A
Total price (including VAT)	R <u>All Tendered Rates</u>
SCM related enquiries:	<p>Chantel Kearns/ Phumzile Mdlalose/ Inkosinathi Nhlapo</p> <p>E-mail Address: chantel.kearns@erwat.co.za or Phumzile.mdlalose@erwat.co.za or Inkosinathi.nhlapo@erwat.co.za Tel: 011 929 7000</p>
Technical enquiries	<p>Ms. Unathi Klassie</p> <p>E-mail: jeffrey.mathunzi@erwat.co.za Tel: 011 929 7000</p>



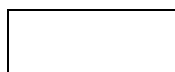
Contractor



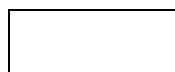
Witness 1



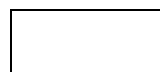
Witness 2



Employer



Witness 1



Witness 2

**PART B
TERMS AND CONDITIONS FOR BIDDING**

1. BID SUBMISSION:

- 1.1. BIDS MUST BE DELIVERED BY THE STIPULATED TIME TO THE CORRECT ADDRESS. LATE BIDS WILL NOT BE ACCEPTED FOR CONSIDERATION.
- 1.2. **ALL BIDS MUST BE SUBMITTED ON THE OFFICIAL FORMS PROVIDED– (NOT TO BE RE-TYPED) OR ONLINE.**
- 1.3. THIS BID IS SUBJECT TO THE PREFERENTIAL PROCUREMENT POLICY FRAMEWORK ACT AND THE PREFERENTIAL PROCUREMENT REGULATIONS, 2022, THE GENERAL CONDITIONS OF CONTRACT FOR CONSTRUCTION WORKS (GCC 2015, THIRD EDITION) AND, IF APPLICABLE, ANY OTHER SPECIAL CONDITIONS OF CONTRACT.

2. TAX COMPLIANCE REQUIREMENTS

- 2.1 BIDDERS MUST ENSURE COMPLIANCE WITH THEIR TAX OBLIGATIONS.
- 2.2 BIDDERS ARE REQUIRED TO SUBMIT THEIR UNIQUE PERSONAL IDENTIFICATION NUMBER (PIN) ISSUED BY SARS TO ENABLE THE ORGAN OF STATE TO VIEW THE TAXPAYER'S PROFILE AND TAX STATUS.
- 2.3 APPLICATION FOR THE TAX COMPLIANCE STATUS (TCS) CERTIFICATE OR PIN MAY ALSO BE MADE VIA E-FILING. IN ORDER TO USE THIS PROVISION, TAXPAYERS WILL NEED TO REGISTER WITH SARS AS E-FILERS THROUGH THE WEBSITE WWW.SARS.GOV.ZA.
- 2.4 FOREIGN SUPPLIERS MUST COMPLETE THE PRE-AWARD QUESTIONNAIRE IN PART B:3.
- 2.5 BIDDERS MAY ALSO SUBMIT A PRINTED TCS CERTIFICATE TOGETHER WITH THE BID.
- 2.6 IN BIDS WHERE CONSORTIA / JOINT VENTURES / SUB-CONTRACTORS ARE INVOLVED, EACH PARTY MUST SUBMIT A SEPARATE TCS CERTIFICATE / PIN / CSD NUMBER.
- 2.7 WHERE NO TCS IS AVAILABLE BUT THE BIDDER IS REGISTERED ON THE CENTRAL SUPPLIER DATABASE (CSD), A CSD NUMBER MUST BE PROVIDED.

3. QUESTIONNAIRE TO BIDDING FOREIGN SUPPLIERS

- 3.1. IS THE ENTITY A RESIDENT OF THE REPUBLIC OF SOUTH AFRICA (RSA)? YES NO
- 3.2. DOES THE ENTITY HAVE A BRANCH IN THE RSA? YES NO
- 3.3. DOES THE ENTITY HAVE A PERMANENT ESTABLISHMENT IN THE RSA? YES NO
- 3.4. DOES THE ENTITY HAVE ANY SOURCE OF INCOME IN THE RSA? YES NO
- 3.5. IS THE ENTITY LIABLE IN THE RSA FOR ANY FORM OF TAXATION? YES NO

IF THE ANSWER IS "NO" TO ALL OF THE ABOVE, THEN IT IS NOT A REQUIREMENT TO REGISTER FOR A TAX COMPLIANCE STATUS SYSTEM PIN CODE FROM THE SOUTH AFRICAN REVENUE SERVICE (SARS) AND IF NOT REGISTER AS PER 2.3 ABOVE.

NB: Failure to provide any of the above particulars may result in your bid being disqualified.

Name & Surname of Representative: _____

Signature Of Bidder: _____

Capacity Under Which This Bid Is Signed: _____

Date: _____

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

MBD 2

TAX CLEARANCE CERTIFICATE REQUIREMENT

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

NEED A TAX CLEARANCE? GO ONLINE

- Electronically request your Tax Compliance Status which will include a unique PIN which you can provide to any third party (if requested) to enable them to verify your tax compliance status online via e-Filing.
- Request a TCC via e-filing which will give you the option to print the TCC.
- Or request a TCC at a SARS branch where a SARS agent will be able to print or e-mail the TCC to you.
- To register for e-filing go to: www.sarsefiling.co.za

A tax compliant status is a holistic view of your tax compliance level across all your registered tax types.

Is your tax compliance status green?

- Ensure all tax returns are submitted
- No outstanding debt owed to SARS
- SARS has been notified of any change of residential or business address
- Your business is registered for all required tax types e.g. PAYE, VAT, income tax.

Check your tax compliance status by logging onto your e-filing profile and viewing your “my compliance Profile” and rectify any non-compliance.

THIRD PARTY AUTHORISATION TO VIEW BIDDER TCS:

To assist with the evaluation process of your bid we require your consent to check your SARS tax compliance via e-filing. Kindly complete the table below authorising MLM to check TCC for tender purposes only.

TCS Details	
Tax payer name	
Trading Name	
Purpose of request	TENDER
Request Reference number	
PIN	
PIN EXPIRY DATE	

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Note: Bidders may attach their Tax compliance status printout to the bidding document.

I, _____ in my capacity as _____ duly appointed as authorised signatory holder, hereby grant **ERWAT** permission to check the TCC status of _____ and it is duly understood that the search is for tender purposes only.

NAME AND SURNAME

DESIGNATION

DATE

SIGNATURE

**FOR ERWAT OFFICE USE ONLY:
VERIFIED YES / NO**

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

MBD 3.2

PRICE ADJUSTMENTS

A NON-FIRM PRICES SUBJECT TO ESCALATION

1. IN CASES OF PERIOD CONTRACTS, NON-FIRM PRICES WILL BE ADJUSTED (LOADED) WITH THE ASSESSED CONTRACT PRICE ADJUSTMENTS IMPLICIT IN NON-FIRM PRICES WHEN CALCULATING THE COMPARATIVE PRICES
2. IN THIS CATEGORY PRICE ESCALATIONS WILL ONLY BE CONSIDERED IN TERMS OF THE FOLLOWING FORMULA:

$$Pa = (1 - V)Pt \left(D1 \frac{R1t}{R1o} + D2 \frac{R2t}{R2o} + D3 \frac{R3t}{R3o} + D4 \frac{R4t}{R4o} \right) + VPt$$

Where:

- Pa = The new escalated price to be calculated.
- (1-V) Pt = 85% of the original bid price. **Note that Pt must always be the original bid price and not an escalated price.**
- D1, D2.. = Each factor of the bid price e.g. Labour, transport, clothing, footwear, etc. The total of the various factors D1, D2...etc. must add up to 100%.
- R1t, R2t..... = Index figure obtained from new index (depends on the number of factors used).
- R1o, R2o = Index figure at time of bidding.
- VPt = 15% of the original bid price. This portion of the bid price remains firm i.e. it is not subject to any price escalations.

The following index/indices must be used to calculate your bid price:

Index..... Dated..... Index..... Dated..... Index..... Dated.....
 Index..... Dated..... Index..... Dated..... Index..... Dated.....

FURNISH A BREAKDOWN OF YOUR PRICE IN TERMS OF ABOVE-MENTIONED FORMULA. THE TOTAL OF THE VARIOUS FACTORS MUST ADD UP TO 100%.

FACTOR (D1, D2 etc. eg. Labour, transport etc.)	PERCENTAGE OF BID PRICE

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

MBD 3.2

PRICES SUBJECT TO RATE OF EXCHANGE VARIATIONS

Please furnish full particulars of your financial institution, state the currencies used in the conversion of the prices of the items to South African currency, which portion of the price is subject to rate of exchange variations and the amounts remitted abroad.

PARTICULARS OF FINANCIAL INSTITUTION	ITEM NO	PRICE	CURRENCY	RATE	PORTION OF PRICE SUBJECT TO ROE	AMOUNT IN FOREIGN CURRENCY REMITTED ABROAD
				ZAR=		
				ZAR=		
				ZAR=		
				ZAR=		
				ZAR=		
				ZAR=		

Adjustments for rate of exchange variations during the contract period will be calculated by using the average monthly exchange rates as issued by your commercial bank for the periods indicated hereunder: (Proof from bank required)

AVERAGE MONTHLY EXCHANGE RATES FOR THE PERIOD:	DATE DOCUMENTATION MUST BE SUBMITTED TO THIS OFFICE	DATE FROM WHICH NEW CALCULATED PRICES WILL BECOME EFFECTIVE	DATE UNTIL WHICH NEW CALCULATED PRICE WILL BE EFFECTIVE

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

MBD 4

DECLARATION OF INTEREST

1. No bid will be accepted from persons in the service of the state.
2. Any person, having a kinship with persons in the service of the state, including a blood relationship, may make an offer or offers in terms of this invitation to bid. In view of possible allegations of favouritism, should the resulting bid, or part thereof, be awarded to persons connected with or related to persons in service of the state, it is required that the bidder or their authorised representative declare their position in relation to the evaluating/adjudicating authority.
3. A Person who is an advisor or consultant contracted with the municipality.
4. In order to give effect to the above, the following questionnaire must be completed and submitted with the bid.

4.1 Full Name of bidder or his or her representative:

4.2 Identity Number:

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

4.3 Position occupied in the Company (director, trustee, shareholder²):

4.4 Company Registration Number: _____

4.5 Tax Reference Number: _____

4.6 VAT Registration Number: _____

4.7 The names of all directors / trustees / shareholders members, their individual identity numbers and state employee numbers must be indicated in paragraph 5 below.

4.8 Are you presently in the service of the state? **YES / NO**
If so, furnish particulars.

4.9 Have you been in the service of the state for the past twelve months? **YES / NO**
If so, furnish particulars.

4.10 Do you have any relationship (family, friend, other) with persons in the service of the state and who may be involved with the evaluation and or adjudication of this bid?

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

YES / NO

If so, furnish particulars.

4.11 Are you, aware of any relationship (family, friend, other) between any other bidder and any persons in the service of the state who may be involved with the evaluation and or adjudication of this bid?

YES / NO

If so, furnish particulars.

4.12 Are any of the company's directors, trustees, managers, principle shareholders or stakeholders in service of the state?

YES / NO

If so, furnish particulars.

4.13 Are any spouse, child or parent of the company's directors, trustees, managers, principle shareholders or stakeholders in service of the state?

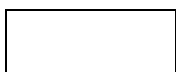
YES / NO

If so, furnish particulars.

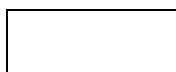
4.14 Do you or any of the directors, trustees, managers, principle shareholders, or stakeholders of this company have any interest in any other related companies or business whether or not they are bidding for this contract? *(This refers to all companies involved in, regardless of the commodity – please refer to the last page of the bidding companies CSD report that will show the MAAA numbers of the other active companies the directors are involved in).*

YES / NO

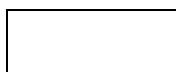
If so, furnish particulars.



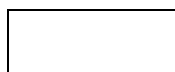
Contractor



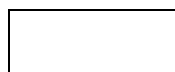
Witness 1



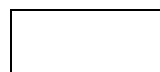
Witness 2



Employer



Witness 1



Witness 2

5. Full details of directors / trustees / members / shareholders **in the service of the state.** * (refer to the section below the table for the definition of “in the service of the state”).

FULL NAME	IDENTITY NUMBER	STATE EMPLOYEE NUMBER

*1 MSCM Regulations: “in the service of the state” means to be –

- (a) A member of –
 - any municipal council/entity;
 - any provincial legislature; or
 - the national Assembly or the national Council of provinces;
- (b) a member of the board of directors of any municipal entity;
- (c) an official of any municipality or municipal entity;
- (d) an employee of any national or provincial department, national or provincial public entity or constitutional institution within the meaning of the public Finance Management Act, 1999 (Act No 1 of 1999);
- (e) a member of the accounting authority of any national or provincial public entity; or
- (f) an employee of Parliament or a provincial legislature.

² Shareholder” means a person who owns shares in the company and is actively involved in the management of the company or business and exercises control over the company.

CERTIFICATION

I, THE UNDERSIGNED (NAME) _____
 CERTIFY THAT THE INFORMATION FURNISHED ON THIS DECLARATION FORM IS CORRECT.

I ACCEPT THAT THE STATE MAY ACT AGAINST ME SHOULD THIS DECLARATION PROVE TO BE FALSE.

SIGNATURE

DATE

POSITION

NAME OF BIDDER

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

MBD 5

DECLARATION FOR PROCUREMENT ABOVE R10 MILLION (ALL APPLICABLE TAXES INCLUDED)

For all procurement expected to exceed R10 million (all applicable taxes included), bidders must complete the following questionnaire.

Bidders are required to submit **audited** financial statements (AFS) for the **past three years** for bids where the threshold exceeds R10 million **if they are required to prepare annual financial statements for auditing by law.**

If your company is not required by law to submit audited financial statements; unaudited/reviewed financial statements will be accepted.

1 Are you by law required to prepare annual financial statements for auditing? *YES/NO

1.1 If yes, submit **audited** annual financial statements for the **past three years** or since the date of establishment if established during the past three years. *All audited AFS are signed off by a registered Chartered Accountant who is also a Registered Auditor (e.g. registered with IRBA).*

2 Do you have any outstanding undisputed commitments for municipal services towards any municipality for more than three months or any other service provider in respect of which payment is overdue for more than 30 days? *YES/NO

2.1 If no, this serves to certify that the bidder has no undisputed commitments for municipal services towards any municipality for more than three months or other service provider in respect of which payment is overdue for more than 30 days.

2.2 If yes, provide particulars.

3 Has any contract been awarded to you by an organ of state during the past five years, including particulars of any material non-compliance or dispute concerning the execution of such contract? *YES/ NO

3.1 If yes, furnish particulars

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

4 Will any portion of goods or services be sourced from outside the Republic, and, if so, what portion and whether any portion of payment from the municipality / municipal entity is expected to be transferred out of the Republic?

***YES / NO**

4.1 If yes, furnish particulars

** Delete if not applicable*

CERTIFICATION

I, THE UNDERSIGNED (NAME) _____

CERTIFY THAT THE INFORMATION FURNISHED ON THIS DECLARATION FORM IS CORRECT.

I ACCEPT THAT THE STATE MAY ACT AGAINST ME SHOULD THIS DECLARATION PROVE TO BE FALSE.

SIGNATURE

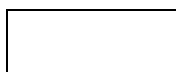
DATE

POSITION

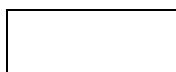
NAME OF BIDDER



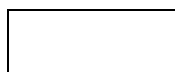
Contractor



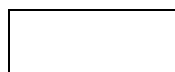
Witness 1



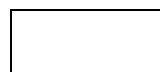
Witness 2



Employer



Witness 1



Witness 2

MBD 6.1

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

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

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

1. GENERAL CONDITIONS

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

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

The applicable preference point system for this tender is the **90/10** preference point system. The lowest/highest acceptable tender will be used to determine the accurate system once tenders are received.

1.2 Points for this tender shall be awarded for:

- (a) Price; and
- (b) Specific Goals.

The maximum points for this tender are allocated as follows:

	POINTS
PRICE	90
SPECIFIC GOALS	10
TOTAL POINTS FOR PRICE AND SPECIFIC GOALS	100

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

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

2. FORMULAE FOR PROCUREMENT OF GOODS AND SERVICES

2.1 POINTS AWARDED FOR PRICE

2.1.1 THE 90/10 PREFERENCE POINT SYSTEMS

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

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

90/10

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

Where:

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

3. POINTS AWARDED FOR SPECIFIC GOALS

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

Table 1: Specific goals for the tender and points claimed are indicated per the table below.

Note to tenderers: The tenderer must indicate how they claim points for each preference point system.)

The specific goals allocated points in terms of this tender	Number of points allocated (90/10 system)	Number of points Claimed by the bidder (90/10 system)
EME or QSE 51% owned by women	2	
EME or QSE 51% owned by youth	2	
EME or QSE 51% owned by people with disabilities	2	
EME or QSE 51% owned by military veterans	2	
EME or QSE within the boundaries of Ekurhuleni Municipality	2	

The above information will be verified in accordance with the bidders B-BBEE certificate, and or a certificate from the companies and intellectual property commission (CIPC), the department of Military Veterans and or other supporting documents. All supporting evidence must be submitted in order to claim the preferential procurement points claimed. ERWAT reserves the right to verify the information submitted.

In the case of multi-parties (Joint ventures, consortiums, partnerships, etc.), allocation of points will be calculated by adding the individual parties in the JV, etc. ownership % together; divide the total by the number of parties in the respective joint ventures, consortiums, partnerships, etc. The average % will thus be the indicating factor for the number of points to be scored limited to the maximum available points.

EXAMPLE

Joint venture:

- Party 1 = 51% EME/QSE owned by women
- Party 2 = 100% EME/QSE owned by women
- = **151%** / 2 parties in the JV = 75% and will score = 2 points

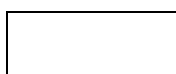
The above principle will apply to points 1, 2, 3 & 4 indicated in Table 1 above.



Contractor



Witness 1



Witness 2



Employer



Witness 1



Witness 2

For point 5: The collective JV agreement's address, or the Lead JV partners' domicile Address will be utilized for scoring of points.

DECLARATION WITH REGARD TO COMPANY/FIRM

3.2. Name of company/firm.....

3.3. Company registration number:

3.4. TYPE OF COMPANY/ FIRM

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

[TICK APPLICABLE BOX]

3.5. I, the undersigned, who is duly authorised to do so on behalf of the company/firm, certify that the points claimed, based on the specific goals as advised in the tender, qualifies the company/ firm for the preference(s) shown and I acknowledge that:

- i) The information furnished is true and correct;
- ii) The preference points claimed are in accordance with the General Conditions as indicated in paragraph 1 of this form;
- iii) In the event of a contract being awarded as a result of points claimed as shown in paragraphs 1.4 and 4.2, the contractor may be required to furnish documentary proof to the satisfaction of the organ of state that the claims are correct;
- iv) If the specific goals have been claimed or obtained on a fraudulent basis or any of the conditions of contract have not been fulfilled, the organ of state may, in addition to any other remedy it may have –
 - (a) disqualify the person from the tendering process;
 - (b) recover costs, losses or damages it has incurred or suffered as a result of that person's conduct;
 - (c) cancel the contract and claim any damages which it has suffered as a result of having to make less favourable arrangements due to such cancellation;
 - (d) recommend that the tenderer or contractor, its shareholders and directors, or only the shareholders and directors who acted on a fraudulent basis, be restricted from obtaining business from any organ of state for a period not exceeding 10 years, after the *audi alteram partem* (hear the other side) rule has been applied; and



Contractor



Witness 1



Witness 2



Employer



Witness 1



Witness 2

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

.....

SIGNATURE(S) OF TENDERER(S)

SURNAME AND NAME:

DATE:

ADDRESS:

.....

.....

.....



Contractor



Witness 1



Witness 2



Employer



Witness 1



Witness 2

CONTRACT FORM - PURCHASE OF GOODS/WORKS

THIS FORM MUST BE FILLED IN DUPLICATE BY BOTH THE SUCCESSFUL BIDDER (PART 1) AND THE PURCHASER (PART 2). BOTH FORMS MUST BE SIGNED IN THE ORIGINAL SO THAT THE SUCCESSFUL BIDDER AND THE PURCHASER WOULD BE IN POSSESSION OF ORIGINALLY SIGNED CONTRACTS FOR THEIR RESPECTIVE RECORDS.

PART 1 (TO BE FILLED IN BY THE BIDDER)

1. I hereby undertake to supply all or any of the goods and/or works described in the attached bidding documents to (name of institution) in accordance with the requirements and specifications stipulated in bid number **ERW2506/02** at the price/s quoted. My offer/s remain binding upon me and open for acceptance by the purchaser during the validity period indicated and calculated from the closing time of bid.
2. The following documents shall be deemed to form and be read and construed as part of this agreement:
 - (i) Bidding documents, viz
 - Invitation to bid;
 - Tax clearance certificate;
 - Pricing schedule(s);
 - Technical Specification(s);
 - Specific Goals (refer to MBD 6.1)
 - Declaration of interest;
 - Declaration of bidder's past SCM practices;
 - Certificate of Independent Bid Determination;
 - Special Conditions of Contract;
 - (ii) General Conditions of Contract; and
 - (iii) Other (specify)
3. I confirm that I have satisfied myself as to the correctness and validity of my bid; that the price(s) and rate(s) quoted cover all the goods and/or works specified in the bidding documents; that the price(s) and rate(s) cover all my obligations and I accept that any mistakes regarding price(s) and rate(s) and calculations will be at my own risk.
4. It is noted that this is rates based tender. The contract is limited to Purchase orders issued within the available budget allocated for such on an as and when required basis.
5. I accept full responsibility for the proper execution and fulfilment of all obligations and conditions devolving on me under this agreement as the principal liable for the due fulfilment of this contract.
6. I declare that I have no participation in any collusive practices with any bidder or any other person regarding this or any other bid.
7. I confirm that I am duly authorised to sign this contract.

NAME (PRINT) _____

CAPACITY _____

SIGNATURE _____

NAME OF FIRM _____

DATE _____

WITNESSES	
1	_____
2	_____
DATE: _____	



Contractor



Witness 1



Witness 2



Employer



Witness 1



Witness 2

MBD 7.1

CONTRACT FORM - PURCHASE OF GOODS/WORKS

PART 2 (TO BE FILLED IN BY THE PURCHASER)

1. I _____ in my capacity as _____ accept your bid under reference number:

ERW2506/02 dated _____ for the supply of goods/works indicated hereunder and/or further specified in the annexure(s).

2. An official order indicating delivery instructions is forthcoming.

3. I undertake to make payment for the goods/works delivered in accordance with the terms and conditions of the contract, within 30 (thirty) days after receipt of an invoice accompanied by the delivery note.

ITEM NO.	PRICE (ALL APPLICABLE TAXES INCLUDED)	BRAND	DELIVERY PERIOD	B-BBEE STATUS LEVEL OF CONTRIBUTION	MINIMUM THRESHOLD FOR LOCAL PRODUCTION AND CONTENT (if applicable)
	<i>Kindly refer to the pricing schedule/BOQ*</i>	<i>Refer to pricing schedule and or scope</i>	<i>To be determined as signing of SLA</i>	<i>Refer to MBD 6.1</i>	<i>Refer to MBD 6.1</i>

** It is noted that this is rate-based tender. The contract is limited to Purchase orders issued within the available budget allocated for such on an as and when required basis.*

4. I confirm that I am duly authorized to sign this contract.

NAME (PRINT) _____

CAPACITY _____

SIGNATURE _____

NAME OF FIRM _____

DATE _____

WITNESSES	
1.	_____
2.	_____
DATE:	_____



Contractor



Witness 1



Witness 2



Employer



Witness 1



Witness 2

MBD 8

DECLARATION OF BIDDER'S PAST SUPPLY CHAIN MANAGEMENT PRACTICES

- 1 This Municipal Bidding Document must form part of all bids invited.
- 2 It serves as a declaration to be used by municipalities and municipal entities in ensuring that when goods and services are being procured, all reasonable steps are taken to combat the abuse of the supply chain management system.
- 3 The bid of any bidder may be rejected if that bidder, or any of its directors have:
 - a. abused the company's / municipal entity's supply chain management system or committed any improper conduct in relation to such system;
 - b. been convicted for fraud or corruption during the past five years;
 - c. wilfully neglected, reneged on or failed to comply with any government, municipal or other public sector contract during the past five years; or
 - d. Been listed in the Register for Tender Defaulters in terms of section 29 of the Prevention and Combating of Corrupt Activities Act (No 12 of 2004).
- 4 **In order to give effect to the above, the following questionnaire must be completed and submitted with the bid.**

Item	Question	Yes	No
4.1	<p>Is the bidder or any of its directors listed on the National Treasury's Database of Restricted Suppliers as companies or persons prohibited from doing business with the public sector?</p> <p>(Companies or persons who are listed on this Database were informed in writing of this restriction by the Accounting Officer/Authority of the institution that imposed the restriction after the <i>audi alteram partem</i> rule was applied).</p> <p>The Database of Restricted Suppliers now resides on the National Treasury's website (www.treasury.gov.za) and can be accessed by clicking on its link at the bottom of the home page.</p>	Yes <input type="checkbox"/>	No <input type="checkbox"/>
4.1.1	If so, furnish particulars:		
4.2	<p>Is the bidder or any of its directors listed on the Register for Tender Defaulters in terms of section 29 of the Prevention and Combating of Corrupt Activities Act (No 12 of 2004)?</p> <p>The Register for Tender Defaulters can be accessed on the National Treasury's website (www.treasury.gov.za) by clicking on its link at the bottom of the home page.</p>	Yes <input type="checkbox"/>	No <input type="checkbox"/>

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

4.2.1	If so, furnish particulars:		
4.3	Was the bidder or any of its directors convicted by a court of law (including a court of law outside the Republic of South Africa) for fraud or corruption during the past five years?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
4.3.1	If so, furnish particulars:		
4.4	Does the bidder or any of its directors owe any municipal rates and taxes or municipal charges to the company / municipal entity, or to any other municipality / municipal entity, that is in arrears for more than three months?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
4.4.1	If so, furnish particulars:		
4.5	Was any contract between the bidder and the municipality / municipal entity or any other organ of state terminated during the past five years on account of failure to perform on or comply with the contract?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
4.7.1	If so, furnish particulars:		

CERTIFICATION

I, THE UNDERSIGNED (FULL NAME _____)

CERTIFY THAT THE INFORMATION FURNISHED ON THIS DECLARATION FORM IS TRUE AND CORRECT.

I ACCEPT THAT, IN ADDITION TO CANCELLATION OF A CONTRACT, ACTION MAY BE TAKEN AGAINST ME SHOULD THIS DECLARATION PROVE TO BE FALSE.

SIGNATURE ON BEHALF OF BIDDER

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

MBD 9

CERTIFICATE OF INDEPENDENT BID DETERMINATION

1. This Municipal Bidding Document (MBD) must form part of all bids¹ invited.
2. Section 4 (1) (b) (iii) of the Competition Act No. 89 of 1998, as amended, prohibits an agreement between, or concerted practice by, firms, or a decision by an association of firms, if it is between parties in a horizontal relationship and if it involves collusive bidding (or bid rigging).² Collusive bidding is a *pe se* prohibition meaning that it cannot be justified under any grounds.
3. Municipal Supply Regulation 38 (1) prescribes that a supply chain management policy must provide measures for the combating of abuse of the supply chain management system, and must enable the accounting officer, among others, to:
 - a. take all reasonable steps to prevent such abuse;
 - b. reject the bid of any bidder if that bidder or any of its directors has abused the supply chain management system of the municipality or municipal entity or has committed any improper conduct in relation to such system; and
 - c. cancel a contract awarded to a person if the person committed any corrupt or fraudulent act during the bidding process or the execution of the contract.
4. This MBD serves as a certificate of declaration that would be used by institutions to ensure that, when bids are considered, reasonable steps are taken to prevent any form of bid-rigging.
5. In order to give effect to the above, the attached Certificate of Bid Determination (MBD 9) must be completed and submitted with the bid:

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

CERTIFICATE OF INDEPENDENT BID DETERMINATION

I, the undersigned, in submitting the accompanying bid:

BID ERW2506/02: APPOINTMENT OF SERVICE PROVIDER/S FOR THE SUPPLY, DELIVERY AND INSTALLATION OF PUMPS AT ERWAT WASTEWATER CARE WORKS ON 'AS AND WHEN REQUIRED' BASIS FOR A PERIOD OF THIRTY-SIX (36) MONTHS

in response to the invitation for the bid made by:

EKURHULENI WATER CARE COMPANY (ERWAT)

(Name of Municipality/Entity)

do hereby make the following statements that I certify to be true and complete in every respect:

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

1. I have read and I understand the contents of this Certificate;
2. I understand that the accompanying bid will be disqualified if this Certificate is found not to be true and complete in every respect;
3. I am authorized by the bidder to sign this Certificate, and to submit the accompanying bid, on behalf of the bidder;
4. Each person whose signature appears on the accompanying bid has been authorized by the bidder to determine the terms of, and to sign, the bid, on behalf of the bidder;
5. For the purposes of this Certificate and the accompanying bid, I understand that the word "competitor" shall include any individual or organization, other than the bidder, whether or not affiliated with the bidder, who:
 - (a) has been requested to submit a bid in response to this bid invitation;
 - (b) could potentially submit a bid in response to this bid invitation, based on their qualifications, abilities or experience; and
 - (c) provides the same goods and services as the bidder and/or is in the same line of business as the bidder
6. 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 consortium³ will not be construed as collusive bidding.
7. In particular, without limiting the generality of paragraphs 6 above, there has been no consultation, communication, agreement or arrangement with any competitor regarding:
 - (a) prices;
 - (b) geographical area where product or service will be rendered (market allocation)
 - (c) methods, factors or formulas used to calculate prices;
 - (d) the intention or decision to submit or not to submit, a bid;
 - (e) the submission of a bid which does not meet the specifications and conditions of the bid; or
 - (f) bidding with the intention not to win the bid.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

8. In addition, there have been no consultations, communications, agreements or arrangements with any competitor regarding the quality, quantity, specifications and conditions or delivery particulars of the products or services to which this bid invitation relates.
9. 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.
10. 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.

SIGNATURE

DATE

POSITION

NAME OF BID

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

FORM A

MUNICIPAL SERVICES, RATES AND TAXES CLEARANCE CERTIFICATE FOR SUPPLY CHAIN MANAGEMENT PURPOSE

The purpose of this form is to obtain prove that municipal services, rates and taxes of the service provider are **not more than three months in arrears** with the relevant municipality / landlord in the municipal area where the service provider conduct his / her business. Kindly attach the latest municipal rates and taxes account not older than 3 months from date of advertising of bid.

Where bidders are not owners of a property and cannot submit a copy of the municipal account, the following must be completed together with a Rental/lease agreement:

(TO BE COMPLETED BY THE LANDLORD)		
Name of the Landlord:		
Property Physical Address:		
Please tick below		Yes
Rental:	in arrears for more than 3 months	<input type="checkbox"/>
Municipal services:	in arrears for more than 3 months	<input type="checkbox"/>
Landlord Signature:		
Date: _____		
Landlord's business stamp here (where applicable)		

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

FORM B

CONFIRMATION OF REGISTRATION ON NATIONAL TREASURY CENTRALISED SUPPLIER DATABASE

CONFIRMATION OF CSD VENDOR INFORMATION		
1	VENDOR NAME	
2	CSD APPROVED NUMBER	M _____
3	COMPANY REG NUMBER	
4	COMPANY TAX NUMBER	
5	COMPANY VAT NUMBER	
6	CONTACT PERSON	
7	OFFICE TEL. NUMBER	
8	OFFICE FAX NUMBER	
9	E-MAIL ADDRESS	
10	CELL NUMBER	

I, _____ in my capacity as _____ being the authorized signatory, hereby declare that the above information is true and correct.

AUTHORISED SIGNATORY DESIGNATION

NAME AND SURNAME

RESOLUTION DATE: AUTHORISED SIGNATORY APPOINTMENT

SIGNATURE

DATE

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

FORM C

AUTHORITY OF SIGNATORY TO SIGN BIDS

The bid shall be signed by a person duly authorized thereto and the following is applicable:

Company: A resolution by its board of directors authorizing a director or other official of the company to sign the documents on behalf of the company or in the case of Sole Directorship a letter signed by the Director.

Close Corporation: A resolution by its members authorizing a member or other official of the corporation to sign the documents on each member/s behalf.

Partnership: All the partners shall sign the documents unless one partner or a group of partners has been authorized to sign on behalf of each partner, in which case proof of such authorization shall be included in the bid.

Joint Venture: Should two or more firms jointly submit a bid, the bid shall be accompanied by the document of establishment of the joint venture, duly registered and authenticated by a notary public or other official deputed to witness sworn statements, which defines the conditions under which the joint venture will function, the period of duration, the persons authorized to represent the Joint Venture and who are obligated thereby, the participation of the several firms forming the joint venture, and well as any other information necessary to permit a full appraisal of its functioning.

One-person business/sole propriety: This shall be clearly stated, and all documents shall be signed accordingly.

DECLARATION WITH REGARD TO COMPANY/FIRM

Name of company/firm.....

Company registration number/ ID number:

TYPE OF COMPANY/ FIRM

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

[TICK APPLICABLE BOX]

Details of person responsible for Bid Document process:

Name: _____

Contact number: _____

Office address: _____

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Signatories for close corporations and companies shall **confirm their authority by attaching to this form a duly signed and dated original or certified copy on the Company Letterhead of the relevant resolution as prescribed by the Company's Act and/or other applicable legislations.**

Please note that ERWAT reserves the right to contact the bidder for clarification on submissions related to the authorisations related to the bidding entity.



Contractor



Witness 1



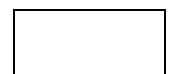
Witness 2



Employer



Witness 1



Witness 2

PRO-FORMA FOR COMPANIES AND CLOSE CORPORATIONS:

"By resolution of the board of directors passed on *(date)* _____

Prof./Dr/Mr/Ms _____

has been duly authorized to sign all documents in connection with the Bid Document for Contract Number _____ and any Contract which may arise there from on behalf

of _____

(BLOCK CAPITALS)

SIGNED ON BEHALF OF THE COMPANY _____

IN HIS CAPACITY AS _____

DATE _____

FULL NAMES OF SIGNATORY _____

AS WITNESSES: 1. _____

2. _____

Please note that ERWAT reserves the right to contact the bidder for clarification on submissions related to the authorisations related to the bidding entity.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

**PRO-FORMA FOR JOINT VENTURES:
Certificate of Authority for Joint Ventures**

We, the undersigned, are submitting this Bid Document offer in Joint Venture and hereby authorise Mr/Ms _____, authorised signatory of the company _____, acting in the capacity of lead partner, to sign all documents in connection with the Bid Document offer an any contract resulting from it on our behalf.

Bidders are required to submit a valid fully signed Joint Venture agreement including the roles and responsibilities they will be performing throughout the contract period and indicate the lead partner.

NAME OF FIRM	ADDRESS	DULY AUTHORISED SIGNATORY
		Signature: Name: Designation:
		Signature: Name: Designation:
		Signature: Name: Designation:
		Signature: Name: Designation:

N.B.: THE DULY SIGNED AND DATED ORIGINAL OR CERTIFIED COPY OF AUTHORITY OF SIGNATORY ON COMPANY LETTERHEAD SHOULD BE INCLUDED IN THE RETURNABLE DOCUMENTS PACK.

Please note that ERWAT reserves the right to contact the bidder for clarification on submissions related to the authorisations related to the bidding entity.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

FORM D

FINANCIAL REFERENCES/ BIDDERS'S CREDIT RATING AND DETAILS OF BIDDERS BANKING INFORMATION

Notes to Bidder:

- 1. The Bidder shall attach to this form a letter from the bank confirming the bank account and details. A BANK RATING LETTER IS ACCEPTABLE. Failure to provide the required letter with the Bid Document submission shall render the Bidder's offer unresponsive.**
2. The Bidder's banking details as they appear below shall be completed.
3. In the event that the Bidder is a joint venture enterprise, details of all the members of the joint venture shall be similarly provided and attached to this form.

BANK NAME:										
ACCOUNT NAME: (e.g. ABC Civil Construction cc)										
ACCOUNT TYPE: (e.g. Savings, Cheque etc)										
ACCOUNT NO:										
ADDRESS OF BANK:										
CONTACT PERSON:										
TEL. NO. OF BANK / CONTACT:										
How long has this account been in existence:	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="padding: 2px;">0-6 months</td> <td style="width: 30px; text-align: center;"><input type="checkbox"/></td> </tr> <tr> <td style="padding: 2px;">7-12 months</td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> <tr> <td style="padding: 2px;">13-24 months</td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> <tr> <td style="padding: 2px;">More than 24 months</td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> </table>	0-6 months	<input type="checkbox"/>	7-12 months	<input type="checkbox"/>	13-24 months	<input type="checkbox"/>	More than 24 months	<input type="checkbox"/>	(Tick which is appropriate)
0-6 months	<input type="checkbox"/>									
7-12 months	<input type="checkbox"/>									
13-24 months	<input type="checkbox"/>									
More than 24 months	<input type="checkbox"/>									

Signature on behalf of Bidder

N.B.: ORIGINAL LETTER FROM BANK OR BANK STATEMENT (NOT OLDER THAN THREE MONTHS) SHOULD BE INCLUDED IN THE RETURNABLE DOCUMENTS PACK.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

FORM E

RECORD OF ADDENDA TO BID DOCUMENTS

N.B: Please note that where applicable, bidders are required to complete the table below acknowledging receipt of Addendum/s. All pages in relation to the Addendum must be strike through with a note “**REPLACED by ADDENDUM/S**”. The revised pages in relation to the Addendum/s must be **attached** as an Annexure to the bid document. The initial documents must remain in the bid document and **MUST NOT BE REMOVED** as this will lead to a disqualification.

Kindly note that where addendums are issued, such are communicated to bidders who attended the briefing session at the e-mail address that is supplied by the bidder/s recorded on the attendance register.

The e-mail address supplied by bidders on the attendance register for physical briefings will be utilised as the official communication address. Where virtual briefings are held, the e-mail address submitted by the suppliers on the registration attendance register will be utilised as the official communication address.

It remains the responsibility of the bidder to ensure that the correct valid e-mail address is captured. ERWAT accepts no responsibility for returned messages reflecting to be undeliverable or due to invalid/non-existing details.

The addendum/s are uploaded onto the ERWAT website under the respective tender number and bidders should visit the website before the closing date and time to ensure that all communication has been accessed and taken into account with the submission of this bid.

I/We confirm that the following Addendum/s listed below have been received and added to this document as an Addendum. Please note you may not modify or remove any part of the original Bid document except for the strikethrough requirement.

Date	Addendum/s No

SIGNATURE ON BEHALF OF BIDDER

DATE

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

FORM F

CERTIFICATE OF AUTHORITY FOR SIGNATORY TO AGREEMENT IN TERMS OF THE OCCUPATIONAL HEALTH AND SAFETY ACT, 1993 (ACT NO 85 OF 1993)

The signatory for the company that is the Contractor in terms of the above-mentioned Contract and the Mandatory in terms of the above-mentioned Act shall confirm his or her authority thereto by attaching to this page a duly signed and dated copy of the relevant resolution of the board of directors.

EXAMPLE OF CONTENT OF THE LETTER

By resolution of the board of directors passed at a meeting held on _____ 20 _____,

Mr//Ms _____ whose signature

appears below, has been duly authorised to sign the AGREEMENT IN TERMS OF THE

OCCUPATIONAL HEALTH AND SAFETY ACT, 1993 (ACT 85 OF 1993) on behalf of

SIGNED ON BEHALF OF THE COMPANY : _____

IN HIS/HER CAPACITY AS : _____

DATE : _____

SIGNATURE OF SIGNATORY : _____

WITNESS: _____ **WITNESS:** _____

NAME (in capitals): _____ **NAME:** _____

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

FORM G

OCCUPATIONAL HEALTH AND SAFETY AGREEMENT /PLAN (WHERE APPLICABLE)



Contractor



Witness 1



Witness 2



Employer



Witness 1



Witness 2

FORM H

CERTIFIED COPY OF ID DOCUMENT/S OF MOWNERS/MEMBERS/SHAREHOLDERS CURRENT



Contractor



Witness 1



Witness 2



Employer



Witness 1



Witness 2

FORM I

CURRENT CERTIFICATE OF GOOD STANDING FROM COMPENSATION COMMISSIONER



Contractor



Witness 1



Witness 2



Employer



Witness 1



Witness 2

COPY OF COMPANY REGISTRATION DOCUMENTS

INCLUDE THE FOLLOWING DOCUMENTS IN THE SUPPORTING DOCUMENTS FILE TO BE SUBMITTED WITH THE ORIGINAL BIDDING DOCUMENT

1. **FOR CLOSED CORPORATIONS**

CK1 or CK2 as applicable (Founding Statement).

2. **FOR COMPANIES**

- A copy of the Certificate of Incorporation
- Certified Copies of the ID's of the Directors and
- The shareholders' register.

3. **JOINT VENTURES, TRUSTS OR CONSORTIUM**

- Copy of the Joint Venture Agreement between all the parties,
- As well as the documents in (1) or (2) and (5) of each Joint Venture member.

A trust, consortium or joint venture, will be able to claim for points for their specific goals provided that the entity submits a valid signed agreement.

Bidders must submit concrete proof of the existence of joint ventures and/or consortium arrangements. National Treasury will accept signed agreements as acceptable proof of the existence of a joint venture and/or consortium arrangement.

The joint venture and/or consortium agreements must clearly set out the roles and responsibilities of the Lead Partner and the joint venture and/or consortium party. The agreement must also clearly identify the Lead Partner, with the power of attorney to bind the other party/parties in respect of matters pertaining to the joint venture and/or consortium arrangement.

4. **FOR PARTNERSHIP**

- Certified Copies of the ID's of the partners

5. **ONE-PERSON BUSINESS / SOLE TRADER/SOLE PROPRIETOR**

- Certified Copy of ID



Contractor



Witness 1



Witness 2



Employer



Witness 1



Witness 2

FORM K

PROOF OF RELEVANT REGULATORY CERTIFICATION OR OTHER REQUIREMENTS IN TERMS OF THE REQUIRED REGULATORY AUTHORITY AS SET OUT IN THE SCOPE OF WORKS

BIDDERS MUST HAVE A MINIMUM CIDB GRADING OF **8 ME** TO QUALIFY FOR EVALUATION.



Contractor



Witness 1



Witness 2



Employer



Witness 1




Witness 2


FORM L

LETTER OF INTENT TO SUBMIT THIRD PARTY LIABILITY INSURANCE AND ALL RISK CONTRACTORS' INSURANCE TO COVER THIS CONTRACT


Bidders are required to ensure the safekeeping and insurance of items in place until such time that the works/goods or services are handed over to ERWAT and ERWAT has signed off thereon. The successful bidder shall submit this letter at the time of concluding the Service Level Agreement.




Contractor



Witness 1




Witness 2



Employer



Witness 1



Witness 2

FORM M

BACKGROUND AND WORK EXPERIENCE

Briefly summarize the Company's experience regarding installations or refurbishment of pumps for industrial applications/ and/ or municipal water/wastewater treatment plants. Select up to five projects completed in South Africa that are similar in scope and magnitude to this project. For each project **COMPLETED**, attach an appointment letter/purchase order and Certificate of Completion and/ or Reference Letter.

	EMPLOYER	EMPLOYER'S REPRESENTATIVE (NAME, TEL, E-MAIL)	PROJECT TITLE AND DESCRIPTION OF WORK Inc. CAPACITY OF THE WORKS	VALUE OF WORK (R-Rand)	COMPLETION DATE
PROJECT 1					
PROJECT 2					
PROJECT 3					
PROJECT 4					
PROJECT 5					

SIGNED ON BEHALF OF THE COMPANY _____

FULL NAMES OF SIGNATORY _____

IN HIS CAPACITY AS _____

DATE _____

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

FORM N

EXPERTISE OF THE KEY PERSONNEL

1. **Personnel / Individual adequacy:** Portfolio of evidence (CV) should be provided. Indicating similar projects / jobs completed or undertaken by the personnel stated below.
2. **Qualifications:** Portfolio of evidence should be provided for the key staff with supporting Qualifications (SAQA, QCTO etc. accredited) and detailed organogram.
3. All foreign qualifications must be SAQA (South African Qualifications Authority) accredited.
4. All professional registrations must be in good standing during the period of tender evaluation.
5. **Pro-Forma CV:** A pro-forma curriculum vitae shall be filled in full on the below given forms.

KEY STAFF EXPERIENCE				
Position on this Contract	Full Name	ID No.	Qualifications	No. of Years of Experience
Construction Project Manager				
Site Engineer/Agent				
Construction Health and Safety Officer or Manager				
Fitter				
Rigger				
Electrician				

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

This declaration must be completed as part of the mandatory requirements of this document

DECLARATION:

I, _____, duly authorized to sign this declaration, hereby confirm/declare that the information submitted as portfolio of evidence in relation to key staff experience, Curriculum vitae (CV) and qualifications is a true reflection of the submission.

SIGNATURE: _____

DATE: _____

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

PRO-FORMA CURRICULUM VITAE OF KEY PERSONNEL/STAFF

This form should be completed for each key person listed in the functionality criterion

Responsibility or role on the project (as per list in form k)	CONSTRUCTION PROJECT MANAGER
Name:	Date of Birth:
Profession:	Nationality:
Qualifications (Attach Proof of Qualification):	
Professional Membership (If any):	
Name of Employer (Firm):	
Current Position:	Years with firm:
Employment record: (List of chronological order starting with earliest work experience)	
Experience records pertinent to required service:	
<p>Certification:</p> <p>I, the undersigned, certify that to the best of my knowledge and belief, this data correctly describes me, my qualification and my experience and that I will be available to execute the work for which I have been nominated.</p>	
<p>_____</p> <p>(Signature of Person named in Schedule) Date</p>	

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

This form should be completed for each key person listed in the functionality criterion

Responsibility or role on the project (as per list in form k)	SITE ENGINEER/AGENT
Name:	Date of Birth:
Profession:	Nationality:
Qualifications (Attach Proof of Qualification):	
Professional Membership (If any):	
Name of Employer (Firm):	
Current Position:	Years with firm:
Employment record: (List of chronological order starting with earliest work experience)	
Experience records pertinent to required service:	
Certification:	
<p>I, the undersigned, certify that to the best of my knowledge and belief, this data correctly describes me, my qualification and my experience and that I will be available to execute the work for which I have been nominated.</p>	
<p>_____</p> <p>(Signature of Person named in Schedule) Date</p>	

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

This form should be completed for each key person listed in the functionality criterion

Responsibility or role on the project (as per list in form k)	CONSTRUCTION HEALTH AND SAFETY OFFICER OR MANAGER
Name:	Date of Birth:
Profession:	Nationality:
Qualifications (Attach Proof of Qualification):	
Professional Membership (If any):	
Name of Employer (Firm):	
Current Position:	Years with firm:
Employment record: (List of chronological order starting with earliest work experience)	
Experience records pertinent to required service:	

Contractor

Witness 1

Witness 2

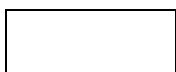
Employer

Witness 1

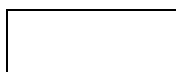
Witness 2

This form should be completed for each key person listed in the functionality criterion

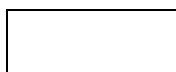
Responsibility or role on the project (as per list in form k)	FITTER
Name:	Date of Birth:
Profession:	Nationality:
Qualifications (Attach Proof of Qualification):	
Professional Membership (If any):	
Name of Employer (Firm):	
Current Position:	Years with firm:
Employment record: (List of chronological order starting with earliest work experience)	
Experience records pertinent to required service:	
<p>Certification:</p> <p>I, the undersigned, certify that to the best of my knowledge and belief, this data correctly describes me, my qualification and my experience and that I will be available to execute the work for which I have been nominated.</p>	
<p>_____</p> <p>(Signature of Person named in Schedule) Date</p>	



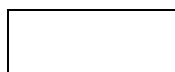
Contractor



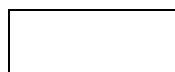
Witness 1



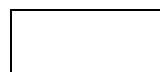
Witness 2



Employer



Witness 1



Witness 2

This form should be completed for each key person listed in the functionality criterion

Responsibility or role on the project (as per list in form k)		RIGGER
Name:		Date of Birth:
Profession:		Nationality:
Qualifications (Attach Proof of Qualification):		
Professional Membership (If any):		
Name of Employer (Firm):		
Current Position:		Years with firm:
Employment record: (List of chronological order starting with earliest work experience)		
Experience records pertinent to required service:		
Certification:		
<p>I, the undersigned, certify that to the best of my knowledge and belief, this data correctly describes me, my qualification and my experience and that I will be available to execute the work for which I have been nominated.</p>		

(Signature of Person named in Schedule) Date		

Contractor

Witness 1

Witness 2

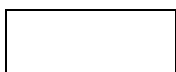
Employer

Witness 1

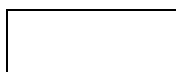
Witness 2

This form should be completed for each key person listed in the functionality criterion

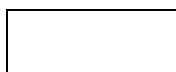
Responsibility or role on the project (as per list in form k)	ELECTRICIAN
Name:	Date of Birth:
Profession:	Nationality:
Qualifications (Attach Proof of Qualification):	
Professional Membership (If any):	
Name of Employer (Firm):	
Current Position:	Years with firm:
Employment record: (List of chronological order starting with earliest work experience)	
Experience records pertinent to required service:	
<p>Certification:</p> <p>I, the undersigned, certify that to the best of my knowledge and belief, this data correctly describes me, my qualification and my experience and that I will be available to execute the work for which I have been nominated.</p>	
<p>_____</p> <p>(Signature of Person named in Schedule) Date</p>	



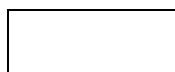
Contractor



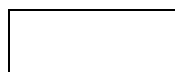
Witness 1



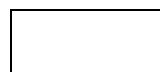
Witness 2



Employer



Witness 1



Witness 2

POPIA CONSENT FORM

PROTECTION OF PERSONAL INFORMATION ACT, 4 OF 2013

The Service Provider and ERWAT shall comply with the requirements of Protection of Personal Information Act of 2013 ("POPIA") and both parties are to ensure that appropriate measures are implemented to protect all personal information processed by both parties for the duration of the contract and beyond the contract expiry. Any breach where personal information is compromised, this must be reported to the affected party within 24 hours after the discovery of the breach.

The Service Provider shall maintain the confidentiality of all Personal Information, ensure that its personnel, joint venture parties, subcontractors are also bound to process and safeguard any personal information that they are entrusted with.

By signing this referral form:

- a) I/we hereby grant my/our voluntary consent that my/our personal information may be processed, collected, used and disclosed in compliance with the Protection of Personal Information Act, 4 of 2013.
- b) I/we furthermore agree that my/our personal information may be used for the lawful and reasonable purposes in as far as the ERWAT (responsible party) must use my/our information in the performance of its public legal duty.
- c) I/we understand that my/our personal information may be disclosed to a third party in as far as the ERWAT must fulfil its public legal duty.
- d) I/we furthermore understand that there are instances in terms of abovementioned Act where my express consent is not necessary to permit the processing of personal information, which may be related to litigation or when the information is publicly available. Further details are available on the ERWAT website.

Company name: _____

Company address: _____

Name & Surname of Company Representative: _____

Signature Of Bidder: _____

Designation: _____

Date: _____

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Name & Surname of ERWAT Information Officer:

Signature:

Designation:

Date:

Name & Surname of ERWAT Deputy Information Officer:

Signature:

Designation:

Date:

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2



PROJECT NO: ERW2506/02

APPOINTMENT OF SERVICE PROVIDER/S FOR THE SUPPLY, DELIVERY AND INSTALLATION OF PUMPS AT ERWAT WASTEWATER CARE WORKS ON 'AS AND WHEN REQUIRED' BASIS FOR A PERIOD OF THIRTY-SIX (36) MONTHS

C1 AGREEMENTS AND CONTRACT DATA

Part C1: Agreements and Contract Data

- C1.1 Form of Offer and Acceptance
- C1.2 Contract Data
- C1.4 Occupational Health and Safety
- C1.5 Corporate Governance Breach Clause

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

C1.1 FORM OF OFFER AND ACCEPTANCE

OFFER

The Employer, identified in the Acceptance signature block, has solicited offers to enter in contract in respect of the following works: **BID ERW2506/02: APPOINTMENT OF SERVICE PROVIDER/S FOR THE SUPPLY, DELIVERY AND INSTALLATION OF PUMPS AT ERWAT WASTEWATER CARE WORKS ON 'AS AND WHEN REQUIRED' BASIS FOR A PERIOD OF THIRTY-SIX (36) MONTHS**

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

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

THE OFFERED RATES FOR THE GOODS, AS SET OUT IN THE PRICING SCHEDULE/BILL OF QUANTITIES (THE PRICES INCLUSIVE OF VALUE ADDED TAX), IS HEREBY CONFIRMED FOR THE PERIOD OF THE CONTRACT PERIOD INCLUDING THE PROVISIONS FOR THE ANNUAL ESCALATIONS (WHERE APPLICABLE)

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

Signature(s)

Name(s)

Capacity

For the Bidder
(Name and address of organisation)

Name & Signature
Of Witness
Name Date


Contractor


Witness 1


Witness 2


Employer


Witness 1


Witness 2

ACCEPTANCE

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

The terms of the contract are contained in:

- Agreements and Contract Data (which includes this Agreement)
- Pricing Data
- Scope of Work
- Site information

And drawings and documents or parts thereof, which may be incorporated by reference into above stated terms.

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

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

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

Signature(s)

Name(s)

Capacity

For the Employer
(Name and address of organisation)

Name & Signature

Of Witness
Name Date

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

SCHEDULE OF DEVIATIONS

Notes:

1. The extent of deviations from the tender documents issued by the Employer prior to the tender closing date is limited to those permitted in terms of the Conditions of Tender.
2. A Bidder's covering letter shall not be included in the final contract document. Should any matter in such letter, which constitutes a deviation as aforesaid becomes the subject of agreements reached during the process of Offer and Acceptance; the outcome of such agreement shall be recorded here.
3. Any other matter arising from the process of offer and acceptance either as a confirmation, clarification or change to the Tender documents and which it is agreed by the Parties becomes an obligation of the contract, shall also be recorded here.
4. Any change or addition to the tender documents arising from the above agreements and recorded here shall also be incorporated into the final draft of the Contract.

1 Subject

Details.....

.....

2 Subject

Details.....

.....

3 Subject

Details.....

.....

4 Subject

Details.....

.....

5 Subject

Details.....

.....

By the duly authorised representatives signing this Schedule of Deviations, the Employer and the Bidder agree to and accept the foregoing Schedule of Deviations as the only deviations from and amendments to the documents listed in the Tender Data and addenda thereto as listed in the Tender Schedules, as well as any confirmation, clarification or change to the terms of the Offer agreed by the Bidder and the Employer during this process of Offer and Acceptance.



Contractor



Witness 1



Witness 2



Employer



Witness 1



Witness 2

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

FOR THE BIDDER:

Signature(s)

Name(s)

Capacity

For the Bidder
(Name and address of organisation)

Name & Signature

Of Witness
Name Date

FOR THE EMPLOYER

Signature(s)

Name(s)

Capacity

For the Employer
(Name and address of organisation)

Name & Signature

Of Witness
Name Date



Contractor



Witness 1



Witness 2



Employer



Witness 1



Witness 2

C1.2 CONTRACT DATA

GENERAL CONDITIONS OF CONTRACT

This Contract will be based on the "General Conditions of Contract for Construction Works *General Conditions of Contract 2015 (GCC 2015, Third Edition)*"

Documents can be ordered from SAICE who can be contacted through their website www.saice.org.za. Physical address: SAICE House, Block 9, Thornhill Office Park, Bekker Street, Midrand, Johannesburg. Telephone number: (011) 805 5947.

It is agreed that the only variations from the General Conditions of Contract 2015 are those set out hereafter under "Special Conditions of Contract".

SPECIAL CONDITIONS OF CONTRACT

These Special Conditions of Contract (SCC) form an integral part of the Contract. The Special Conditions of Contract shall amplify, modify or supersede, as the case may be, the General Conditions of Contract 2015 to the extent specified below, and shall take precedence and shall govern.

The clauses of the Special Conditions hereafter are numbered "SCC" followed in each case by the number of the applicable clause or subclause in the General Conditions of Contract 2015, and the applicable heading, or (where a new special condition that has no relation to the existing clauses is introduced) by a number that follows after the last clause number in the General Conditions, and an appropriate heading.

"The Special Conditions of Contract are supplementary to that of the General Conditions of Contract. In the event of any contradiction between the GCC or any other applicable contractual agreement, the Municipal Financial Management Act and its applicable regulations will take precedence."

The contract will commence on the last signature date of the Service Level Agreement.

If the tender is found to be unauthorised, fruitless and wasteful or irregular as informed through a formal investigation, internal and or external audit outcome, the Auditor General, Council, ERWAT Board of Directors or National Treasury, ERWAT reserves the right to cancel the tender with immediate effect and the bidder will have no claim to his affect. The final terms of payment (where applicable) will be negotiated with the bidder at the time for final close out of the contract.

Contractor

Witness 1

Witness 2

Employer

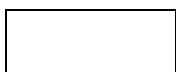
Witness 1

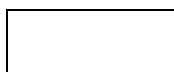
Witness 2

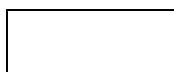
AMENDMENTS TO THE GENERAL CONDITIONS OF CONTRACT

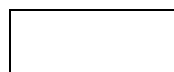
DATA PROVIDED BY THE EMPLOYER

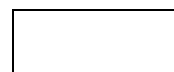
Clause	Data
SCC1.3.2	<p>Add to clause: Applicable legislation</p> <p>It should be noted that all ERWAT contracts are subject to the Municipal Financial Management Act (MFMA Act 56 of 2003), therefore in the event that there is any contradiction between the MFMA (Act 56 of 2003) and the GCC 2015 or any other applicable contractual agreement, the MFMA (Act 56 of 2003) and its applicable regulations shall take precedence.</p>
	<p>Definitions</p> <p>The definitions contained in Clause 1.1 are hereby amended and/or supplemented as follows:</p>
SCC1.1.1.7	<p>Add to Clause:</p> <p>The Framework Agreement is subject to the best practices published in terms of the B.U.I.L.D Programme. (Government gazette 28 April 2023)</p> <p>It will be the condition of contract that:</p> <ul style="list-style-type: none"> i. The contractor shall achieve in the performance of the contract the Contract Skills Development Goal (CSDG) established in the CIDB Standard for Developing Skills through Infrastructure Contracts as published in Gazette Notice No.48491 of 28 April 2023. ii. The contractor shall achieve in the performance of the <i>contract the Contract Participation Goals (CPG)</i> relating to the engagement of targeted enterprises as established in the CIDB Standard for Indirect Targeting for Enterprise Development through Construction works Contracts, published in Gazette Notice No.36190 of 25 February 2013
SCC 1.1.1.13	<p>The Defects Liability Period is 12 months from the date of the Certificate of Completion.</p> <p>The Defects Liability Period is 12 months from the date of the Certificate of Completion per installation.</p>
SCC 1.1.1.14	<p>The Works shall be completed within 36 months from the commencement date on an “as and when required basis”.</p> <p>The Purchase Orders of the Works shall be placed within 36 months from the commencement date on an “as and when required basis”.</p>
SCC 1.1.1.15 1.2.1.2	<p>The Name of the Employer is ERWAT</p> <p>The address of the Employer is: The Managing Director Hartebeestfontein Office Park R25 (Bapsfontein/Bronkhorstspuit) Kempton Park</p> <p>Telephone: 011 929 7000</p>

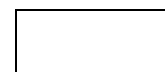

Contractor


Witness 1

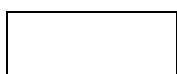

Witness 2


Employer

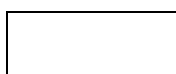

Witness 1


Witness 2

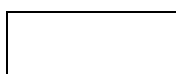
Clause	Data
<p>SCC 3.2.3</p>	<p>Add the following:</p> <p>Approval of the Employer is required for:</p> <p>i). Cessions – issuing of cessions by the Contractor is expressly prohibited except if and when prior written approval of the Employer under the signature of the Accounting Officer for the issue of the cession has been requested and obtained</p> <p>ii). Use of contingencies – for all items for which rates have not been approved in terms the contract.</p> <p>iii). Extension of Time – extension of time can only be granted by the Employer.</p>
<p>SCC 4.1.2</p>	<p>Add the following:</p> <p>“When completed, the parts of the works designed by the Contractor, to the extent specified in the Contract, shall be fit for the purposes for which the Works are intended”</p>
<p>SCC 4.4.1</p>	<p>Add the following:</p> <p>The Contractor is to submit to the Employer in writing a request for appointment of a particular sub-contractor. Accompanying this request is to be the full detail of the sub-contractor, including:</p> <ul style="list-style-type: none"> ▪ Previous experience ▪ Work which will be sub-contracted to him/her ▪ Approximate value of the work to be sub-contracted <p>Before the Employer in terms of Clause 6.10 hereof issues any certificate that includes any payment in respect of work done or goods supplied by any sub-contractor appointed in accordance with the provisions of Clause 4.4 of the General Conditions of Contract for Construction works (2015, Third Edition), he shall be entitled to call upon the Contractor to furnish reasonable proof that all payments (less retention moneys) included in previous certificates in respect of the work or goods of such sub-contractors have been made or discharged by the Contractor, in default of which, unless the Contractor:</p> <ul style="list-style-type: none"> ▪ Informs the Employer in writing that he has reasonable cause for withholding or refusing such payment; and ▪ Submits to the Employer reasonable proof that he has so informed such sub-contractor in writing
<p>SCC 4.9.1</p>	<p>Add the following:</p> <p>“All equipment on site shall be in a good working order and is to be in such a condition that it can achieve production rates which are typical of the industry standards.</p> <p>Should any equipment, in the opinion of the Employer, be substandard or breaks down frequently to such an extent that it affects the progress on the project, the Employer may instruct the Contractor to replace such equipment.”</p>



Contractor



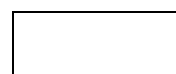
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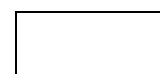
Witness 2



Employer

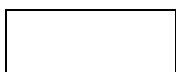


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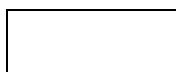


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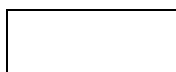
Clause	Data
<p>SCC 5.3.1</p>	<p>Add the following to 5.3.1:</p> <p>The documentation required before Commencement of the Works are:</p> <ul style="list-style-type: none"> • Health & Safety Plan (Refer to Cl. 4.3 of GCC 3rd Ed 2015) • Initial Programme (Refer to Cl. 5.6 of GCC 3rd Ed 2015) • Security (Deed of Guarantee) (refer to Cl. 6.2 of GCC 3rd Ed 2015) • Insurances (Refer to Cl. 8.6 of GCC 3rd Ed 2015)
<p>SCC 5.3.3</p>	<p>Add the following:</p> <p>The time to the documentation required before Commencement of the Works execution is 28 days</p>
<p>SCC 5.4.1</p>	<p>Add the following:</p> <p>The Commencement Date shall be the date the contractor is given possession of site.</p>
<p>SCC 5.8.1</p>	<p>Add the following:</p> <p>The special non-working days are the official builder's holiday plus all statutory public holidays.</p>
<p>SCC 5.12</p>	<p>Add the following:</p> <p>A delay caused by inclement weather conditions will be regarded as a delay only if, in the opinion of the Employer, all progress on an item or items of work on the critical path of the working programme of the contractor has been brought to a halt.</p> <p>Delays on working days only (based on a five-day working week) will be taken into account for the extension of time, but the Contractor shall make provision in his programme of work for an expected delay of "n" working days caused by normal rainy weather, for which he will not receive any extension of time, where "n" equals 5 days.</p> <p>Extension of time during working days will be granted to the degree to which actual delays, as defined above, exceed the number of "n" workings days.</p>
<p>SCC 5.12.2.1</p>	<p>Add the following:</p> <p>Extensions of time in respect of clause 5.12 in respect of abnormal rainfall shall be calculated using the following formula for each calendar month or part thereof:</p> $V = (Nw - Nn) + \frac{(Rw - Rn)}{X}$ <p>Where:</p> <p>V = Extension of time in calendar days in respect of the calendar month under consideration.</p> <p>Nw = Actual number of days during the calendar month on which a rainfall of 10 mm or more has been recorded.</p> <p>Nn = Average number of days in the relevant calendar month, as derived from existing rainfall records, on which a rainfall of 20mm or more has been recorded for the calendar month.</p>



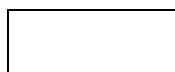
Contractor



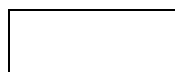
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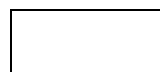
Witness 2



Employer



Witness 1



Witness 2

Clause	Data
	<p>Rw = Actual average rainfall in mm recorded for the calendar month under consideration.</p> <p>Rn = Average rainfall in mm for the calendar month as derived from existing rainfall records as stated in the Site Information.</p> <p>For purposes of the Contract Nn, Rn, X and Y shall have those values assigned to them in the South African Weather Service's rainfall records of the nearest station to the site.</p> <p>If V is negative and its absolute value exceeds Nn, then V shall be taken as equal to minus Nn.</p> <p>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 shall be calculated using pro rata values of Nn and Rn.</p> <p>This formula does not take account flood damage which could cause further or concurrent delays and will be treated separately as far as extension of time is concerned.</p> <p>The factor (Nw – Nn) shall be considered to represent a fair allowance for variations from the average in the number of days during which rainfall exceeds 10 mm. The factor (Rw-Rn) 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 10 mm, but wet conditions prevented or disrupted work.</p> <p>For the purpose of applying the formula, accurate rain gauging shall be taken at a suitable point on the Site and the Contractor shall at his own expense, take all necessary precautions to ensure that rain gauges cannot be interfered with by unauthorized persons.</p>
<p>SCC 5.13.1</p>	<p>Add the following:</p> <p>The penalty for failing to complete the works is shall be calculated as follows; Purchase Order value multiply 0.04% per day</p>
<p>SCC 6.2.1</p>	<p>Add the following:</p> <p>The Security to be provided by the Contractor shall be the Performance guarantee liability of 10 % of the Purchase Order. This guarantee shall be delivered within 21 days of the Commencement Date</p>
<p>SCC 6.2.2</p>	<p>Add the following:</p> <p>The Form of Guarantee is to contain the wording of the pro-forma document included in the General Conditions of Contract (Pro-forma included in section C1.3 to this document).</p> <p>Form of Guarantee: construction guarantee: the successful bidder will be required to submit a construction guarantee that is equal to 10% of the total contract value all-inclusive and must be submitted to the SCM office within 10 working days from date of appointment. Only original guarantees issued by an accredited and registered financial institution will be accepted and will only be released on final completion of works. “</p>
<p>SCC 6.9.1</p>	<p>All materials shall comply with the requirements of the South African Bureau of Standards and shall bear the official standardization mark. Where SABS standard does not exist for a certain material, or a material does not bear the official standardization mark, the Client's Representatives approval of such material must be gained before use thereof.</p>



Contractor



Witness 1



Witness 2



Employer

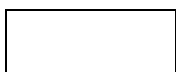


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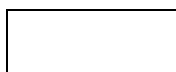


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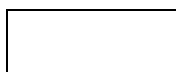
Clause	Data
<p>SCC 6.10.1.5</p>	<p>Add the following:</p> <p>The percentage advance on materials not yet built into the Permanent Works but received on site is 80 %.</p>
<p>SCC 6.10.3</p>	<p>Add the following:</p> <p>The 5% retention of the purchase order value will be released upon completion of the works and the remaining 5% retention amount shall be released at the end of 12 months defects liability period.</p>
<p>SCC 6.10.4</p>	<p>Add the following:</p> <p>The limit of retention money is 10 % of the purchase order value.</p>
<p>SCC 7.2.1</p>	<p>Add the following:</p> <p>All materials shall comply with the requirements of the South African Bureau of Standards and shall bear the official standardization mark. Where SABS/SANS/ISO standard does not exist for a certain material, or a material does not bear the official standardization mark, the Employers approval of such material must be gained before use thereof.</p>
<p>SCC 8.6.1.1.2</p>	<p>Add the following:</p> <p>The value of the materials supplied by the Employer to be included in the insurance sum is nil.</p>
<p>SCC 8.6.1.1.3</p>	<p>Add the following:</p> <p>The required insured amount to cover professional fees for repairing damaged infrastructure and equipment and loss of time on the construction schedule is to be 15% of the Purchase Order value.</p>
<p>SCC 8.6.1.3</p>	<p>Add the following:</p> <p>The limit of indemnity for liability insurance is 10 % of Purchase Order value. This will be finalized at Service Level Agreement (SLA)stage</p>
<p>SCC 1.1.1.8</p>	<p>Add the following: Add New Clause, Clause 1.1.1.8A: Terms for Issuing of Work Orders/Instruction to Perform Work (IPW):</p> <p>The Service Provider acknowledges that it is the objective of the Employer to create a Framework agreement for this tender for the Contract Period of Performance to ensure that as-and-when the Employer requires services scoped as per this contract; the Service Provider is in position, without delay, to render such services. Thus, to this end:</p> <p>a) The Employer does not guarantee a minimum or maximum expected quantum of work/services or fee value of work/services other than that which may be formally issued and accepted by the Services Provider during the term of the framework agreement. Emphasis is made on CIDB Practice None 15 (Synopsis and Introduction)), that the CIDB grading should not be understood as a commitment to a minimum quantum of work equal to the lower limit of the CIDB grade applicable to this contract. The issuing of orders will be subject to</p>



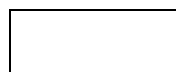
Contractor



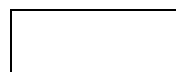
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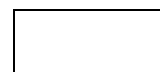
Witness 2



Employer



Witness 1



Witness 2

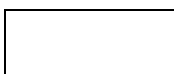
Clause	Data
	<p>budget availability and other factors that may influence prioritisation of services to the client during the term of the agreement.</p> <p>b) The Framework agreement may not bind the Employer to only make use of the agreement to meet the needs of the organisation.</p> <p>c) The Employer shall reserve the right to allocate purchase orders to more than one service provider depending on the nature of the assignment.</p> <p>d) When the framework agreement is concluded, it has a zero value or specified volumes of works/services, and the Employer shall have no obligation to pay the Service Provider appointed to the framework agreement.</p>
<p>SCC 1.1.1.8</p>	<p>Add New Clause 1.1.1.8B, Selection of Service Providers for Work Orders/Instruction to Perform Work (IPW):</p> <p>Work Orders from a framework agreement with a number of Service Providers covering the same scope of work may be made with and without requiring competition amongst the framework Service Providers. Therefore, as is the case of this framework agreement, non-competition and competition shall follow the following terms:</p> <p>1.Non-Competition: for the scope of work where the prices, fees and expenses have been adequately provided, the selection of service providers shall be conducted without competition and based on the following terms:</p> <p>a) For all works that are considered to be associated with low to moderate inherent risks in the opinion of the employer, selection of service providers from the panel shall be mainly conducted on a rotational basis. And service providers shall be placed in the panel from the bidder who scores the highest preferential points to the bidder who scores the lowest preferential points.</p> <p>b) For works that significantly warrant risk concerns, the employer shall reserve the right to invite the Service Provider(s) who in their opinion is most suitable to provide the work in the best interest of the Employer. Factors such as largely identical previous experience in the works/service being instructed, specialist expertise, financial models, etc shall influence such decisions.</p> <p>c) The value of the batch, task or package order is less than the threshold for the quotation procedure.</p> <p>2.Competition: in the Framework contract shall be opened, and contractors invited to submit quotations to provide work/services in terms of the Works Order in the cases where:</p> <p>a) The terms of the framework contract require modification, or</p> <p>b) The terms in the framework agreement are insufficiently precise or complete to cover the requirements of the Works Order (e.g., Time based Fees, uncertainty of scope, etc); or</p> <p>c) The competitive process will provide a better quality of service and good value for money.</p> <p>d) There is no advantage or justifiable reason for issuing a Works Oder to a particular Framework Service Provider.</p>



Contractor



Witness 1



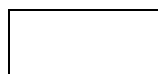
Witness 2



Employer



Witness 1



Witness 2

PART 2: DATA PROVIDED BY THE CONTRACTOR

Sub- Clause	Data
1.1.17	<p>The Contractor is:</p> <p>Name:</p> <p>The Address of the Contractor is:</p> <p>Address (physical):</p> <p>Address (postal):</p> <p>Telephone:</p> <p>Facsimile:</p> <p>E-mail:</p>
1.1.22	<p>Contractors Representative</p> <p>Name:</p> <p>Telephone:</p> <p>Facsimile:</p> <p>E-mail:</p>



Contractor



Witness 1



Witness 2



Employer



Witness 1



Witness 2

C1.3 FORM OF GUARANTEE

PROJECT NO: ERW2505/03

APPOINTMENT OF SERVICE PROVIDER/S FOR THE SUPPLY, DELIVERY AND INSTALLATION OF PUMPS AT ERWAT WASTEWATER CARE WORKS ON 'AS AND WHEN REQUIRED' BASIS FOR A PERIOD OF THIRTY-SIX (36) MONTHS

WHEREAS

at

(Hereinafter referred to as "the Employer")

Entered into, on the day of 20, at

a Contract with

at

(Hereinafter referred to as "the Contractor")

for the construction of

AND WHEREAS it is provided by such Contract that the Contractor shall provide the Employer with security by way of surety ship for the due and faithful fulfilment of such Contract by the Contractor;

AND WHEREAS

has/ have at the request of the Contractor, agreed to give such security;

NOW THEREFORE WE, hereby guarantee and bind ourselves jointly and severally as Sureties and Co-Principal Debtors to the Employer under renunciation of the benefits of division and excursion for the due and faithful performance by the Contractor of all the terms and conditions of the said Contract, subject to the following conditions.

1. The Employer shall, without reference and/or notice to us, have complete liberty of action to act in any manner authorised and/or contemplated by the terms of the said contract, and/or to agree to any modifications, variations, alterations, directions or extensions of the Due Completion Date of the Works under the said Contract, and that its rights under this guarantee shall in no way be prejudiced nor our liability hereunder be affected by reason of any steps which the Employer may take under such Contract, or of any modification, variation, alterations of the Due Completion Date which the Employer may make, give, concede or agree to under the said Contract.
2. The Employer shall be entitled, without reference to us, to release any securities held by it, and to give time to or compound or make any other arrangement with the Contractor.
3. This guarantee shall remain in full force and effect until the issue of the Certificate of Completion in terms of the Contract, unless we are advised in writing by the Employer before the issue of the said Certificate of his intention to institute claims, and the particulars thereof, in which event this guarantee shall remain in full force and effect until all such claims have been paid or liquidated.
4. Our total liability hereunder shall not exceed the sum of (R).

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

5. We hereby choose *domicilium citandi et executandi* for all purposes arising hereof at

IN WITNESS WHEREOF this guarantee has been executed by us at on this day of .. 20.....

As witnesses:

- 1. Signature
- 2. Signature

Duly authorised to sign on behalf of.....

Address

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



Contractor



Witness 1



Witness 2



Employer



Witness 1



Witness 2

C1.4 OCCUPATIONAL HEALTH AND SAFETY

AGREEMENT IN TERMS OF THE OCCUPATIONAL HEALTH AND SAFETY ACT, 1993 (ACT NO 85 OF 1993)

THIS AGREEMENT IS made at

on the day of in the year

Between EKURHULENI WATER CARE COMPANY (ERWAT) (hereinafter called "the Employer") of the one part, herein represented by

In his capacity as

and delegate of the Employer in terms of the Employer's standard powers of delegation pursuant to the provisions of Act No 7 of 1998,

and

(hereinafter called "the Mandatory") of the other part, herein represented by

.....

in his capacity as

and being duly authorized by virtue of a resolution appended hereto as Annexure A;

WHEREAS the Employer requires certain works be constructed, viz **SUPPLY, DELIVER & INSTALLATION OF PUMPS** and has accepted a Bid by the Mandatory for the construction, completion and maintenance of such Works and whereas the Employer and the Mandatory have agreed to certain arrangements and procedures to be followed in order to ensure compliance by the Mandatory with the provisions of the Occupational Health and Safety Act, 1993 (Act 85 of 1993).

NOW THEREFORE THIS AGREEMENT WITNESSED AS FOLLOWS:

1. The Mandatory shall execute the work in accordance with the Contract Documents pertaining to this Contract.
2. This Agreement shall hold good from its Commencement Date, which shall be the date of a written notice from the Employer or engineer requiring him to commence the execution of the Works, to either –
 - (a) the date of the Final Approval Certificate issued in terms of Clause 5.16 of the General Conditions of Contract 2010 (hereinafter referred to as "the GCC"), as contained in the Contract Documents pertaining to this Contract, or
 - (b) The date of termination of the Contract in terms of Clauses 9.1, 9.2, 9.3 of the GCC.
3. The Mandatory declares himself to be conversant with the following:
 - (a) All the requirements, regulations and standards of the Occupational Health and Safety Act (Act 85 of 1993), hereinafter referred to as "The Act", together with its amendments and with special reference to the following Sections of the Act:

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

- (i) Section 8: General duties of Employers to their employees
 - (ii) Section 9: General duties of Employers and self-employed persons to persons other than employees
 - (iii) Section 37: Acts or omissions by employees or mandatories
 - (iv) Sub-section 37(2) relating to the purpose and meaning of this Agreement.
- (b) The procedures and safety rules of the Employer as pertaining to the Mandatory and to all his subcontractors.
4. In addition to the requirements of Clause 8.4 of the GCC (as amended by Special Condition of Contract) and all relevant requirements of the above-mentioned Volume, the Mandatory agrees to execute all the Works forming part of this Contract and to operate and utilize all machinery, Plant and equipment in accordance with the Act.
 5. The Mandatory is responsible for the compliance with the Act; the safety procedures and rules of the employer by all his subcontractors, whether or not selected and/or approved by the Employer.
 6. The Mandatory warrants that all his and his subcontractors' workmen are covered in terms of the Compensation for Occupational Injuries and Diseases Act, 1993 (Act No 130 of 1993), which cover, shall remain in force whilst any such workmen are present on site. A letter of good standing from the Compensation Commissioner to this effect must be produced to the Employer upon signature of the agreement.
 7. The Mandatory undertakes to ensure that he and/or subcontractors and/or their respective employers will at all times comply with the following conditions:
 - a) The Mandatory shall assume the responsibility in terms of Section 16.1 of the Act. The Mandatory shall not delegate any duty in terms of Section 16.2 of this Act without the prior written approval of the Employer. If the Mandatory obtains such approval and delegates any duty in terms of section 16.2 a copy of such written delegation shall immediately be forwarded to the Employer.
 - b) All incidents referred to in the Act shall be reported by the Mandatory to the Department of Labour as well as to the Employer. The Employer will further be provided with copies of all written documentation relating to any incident.
 - c) The Employer hereby obtains an interest in the issue of any formal enquiry conducted in terms of section 32 of the Act into any incident involving the Mandatory and/or his employees and/or his subcontractors.

In witness hereof the parties are to set their signatures hereon in the presence of the subscribing witnesses:

SIGNED FOR AND ON BEHALF OF THE EMPLOYER :

Witness

Witness

(Name)
(Print)

(Name)
(Print)

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

SIGNED FOR AND ON BEHALF OF THE MANDATORY..... :

Witness

Witness

(Name)
(Print)

(Name)
(Print)

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

ANNEXURE A

CERTIFICATE OF AUTHORITY FOR SIGNATORY TO AGREEMENT IN TERMS OF OCCUPATIONAL HEALTH AND SAFETY ACT, 1993 (ACT NO 85 OF 1993)

The signatory for the company that is the Contractor in terms of the above-mentioned Contract and the Mandatory in terms of the above-mentioned Act shall confirm his or her authority thereto by attaching to this page a duly signed and dated copy of the relevant resolution of the board of directors.

By resolution of the board of directors passed at a meeting held on 20.....,

Mr//Ms whose signature

appears below, has been duly authorised to sign the AGREEMENT IN TERMS OF THE

OCCUPATIONAL HEALTH AND SAFETY ACT, 1993 (ACT 85 OF 1993) on behalf of

.....

SIGNED ON BEHALF OF THE COMPANY :

IN HIS/HER CAPACITY AS :

DATE :

SIGNATURE OF SIGNATORY :

WITNESS : WITNESS :

NAME (in capitals):

NAME..... :



Contractor



Witness 1



Witness 2



Employer



Witness 1



Witness 2

C1.5 CORPORATE GOVERNANCE BREACH CLAUSE

1. Ekurhuleni Water Care Company (“ERWAT”) requires [insert name of company] (“the Company”) to comply, mutatis mutandis with the Code contained in the King III Report and Code of Good Corporate Governance (below “the Code”) for the term of this Agreement and any extension thereof.
2. The Company irrevocably undertakes and agrees that it will, mutatis mutandis, comply with the Code for the term of this Agreement and any extensions thereof.
3. The Company acknowledges and agrees that:
 - 3.1 It is essential that the Company complies with the Code, in order to discharge all of its obligations under and in terms of the Agreement in a proper, efficient and professional manner, and
 - 3.2 ERWAT will be prejudiced and may suffer damages in the event of the Company failing to comply with the Code.
4. The Company shall be required, within seven (7) days of the end of each calendar month during the term of this Agreement (and any extensions thereof), to furnish ERWAT with a written certificate, signed by the directors of the Company [alternatively members of the Close Corporation], certifying that the Company has complied with the provisions of the Code during the preceding months.
5. ERWAT shall have the right, without assigning any reason therefore and at any time, to appoint either the Institute of Directors of South Africa or a firm of chartered accountants or attorneys, to conduct an audit of the business and affairs of the Company in order to ascertain whether the Company is indeed complying with the terms of the Code.

To this end, the Company irrevocably undertakes and agrees to co-operate fully with the party conducting such investigation for and on behalf of ERWAT and to make available to such party all such documentation and all such information as the investigation party may require to fully discharge its obligations under and in terms hereof and to report fully to ERWAT.

In the event of it being found that the Company is not complying with the Code, then ERWAT shall be entitled to (a) regard this as a breach of the agreement and (b) recover the costs of the investigation, on an attorney and client basis, from the Company. In the event of it being found that the Company is, in fact, discharging its obligations under and in terms of the Code, then ERWAT shall bear the costs incurred in such investigation. In either of the foregoing events, the Company shall be entitled to receive a copy of the written report once same has been concluded by the investigating party.

6. In the event of the Code being replaced with another Code (or similar document), then such replacement document shall replace the Code and a reference to the Code shall be deemed to be a reference to such replacement document. The reference to the Code shall be deemed to include any statutory codification of directors’ obligations and duties which may be enacted in the Republic of South Africa at any time in the future.
7. In entering into this Agreement, the Company represents and warrants to ERWAT that it is familiar with the Code, that it fully understands and appreciates the rights, obligations and recommendations therein contained and agrees to be bound thereby as herein recorded.

Initial: _____

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2



PROJECT NO: ERW2506/02

APPOINTMENT OF SERVICE PROVIDER/S FOR THE SUPPLY, DELIVERY AND INSTALLATION OF PUMPS AT ERWAT WASTEWATER CARE WORKS ON 'AS AND WHEN REQUIRED' BASIS FOR A PERIOD OF THIRTY-SIX (36) MONTHS

C2 PRICING DATA

C2.1 Pricing Instructions

C2.2 Bill of Quantities

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2



PROJECT NO: ERW2506/02

APPOINTMENT OF SERVICE PROVIDER/S FOR THE SUPPLY, DELIVERY AND INSTALLATION OF PUMPS AT ERWAT WASTEWATER CARE WORKS ON 'AS & WHEN REQUIRED' BASIS FOR A PERIOD OF THIRTY- SIX (36) MONTHS

C2.1 PRICING INSTRUCTIONS

1. This Contract is a Framework Agreement and shall be solely used to provide services on as-instructed basis, the Service Provider shall only tender rates against each item given in the Schedule of Rates so that as-and when the employer requires services scoped as per this contract; the Service Provider is in position, without delay, to render such services.
2. The Service Provider shall tender his rates considering that the employer does not commit itself to offer the Service Provider any minimum or maximum volume and or value of work during the term of the Framework Agreement. Emphasis is made on CIDB Practice None 15 (Synopsis and Introduction), that the CIDB grading should not be understood as a commitment to a minimum quantum of work equal to the lower limit of the CIDB grade applicable to this contract. The issuing of orders will be subject to budget availability and other factors that may influence prioritisation of services to the client during the term of the agreement.
3. The Schedule of Rates shall be read together with the scope of works including all technical specifications, and the service providers shall be expected to provide rates that are specific to the requirements of the scope of works and technical specifications contained in the bid.
4. The Service Provider shall ensure that a rate/amount is entered against each item in the Schedule of Rates. An item against which no rate or amount is entered shall be deemed grounds for a partially completed bid document and will lead to disqualification.
5. The rates/amounts tendered in the Schedule of Rates shall be the full inclusive rates/amounts to the Employer for the work described under the several items. Such rates/amounts shall cover all the direct and indirect costs and expenses that may be fully required in and for the construction of the work described, and shall cover the costs of all general risks, profits, overhead charges, taxes (including value-added tax), liabilities and obligations set forth or implied in the documents on which the Tender is based. The Service Provider shall ensure that all inserted rates are reasonable as these shall be used during bid evaluation and shall become the basis for payment of all work that will be carried out during the Term of the Framework Agreement.
6. The applicable Conditions of Contract, the Contract Data, the Specifications (including the Project Specifications) and the Drawings (where attached) shall be read in conjunction with the Schedule of Rates.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

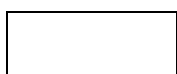
- 7. Descriptions in the Schedule of Rates are abbreviated and may differ from those in the Standardized and Project Specifications. No consideration will be given to any claim by the Contractor submitted on such a basis.
- 8. Unless stated to the contrary, items are measured net in accordance with the Drawings without any allowance having been made for waste.
- 9. For the purposes of this Schedule of Rates, the following words shall have the meanings hereby assigned to them:

Unit	:	The unit of measurement for each item of work as defined in the Standardized, Project or Particular Specifications
Quantity	:	The number of units of work for each item
Rate	:	The payment per unit of work at which the Bidder Tenders to do the work
Amount	:	The quantity of an item multiplied by the tendered rate of the (same) item
Sum	:	An amount tendered for an item, the extent of which is described in the Schedule of Rates, the Specifications or elsewhere, but of which the quantity of work is not measured in units

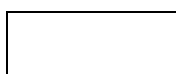
- 10. The units of measurement indicated in the Schedule of Rates are metric units. The following abbreviations may appear in the Schedule of Rates:

mm	=	millimetre
m	=	metre
km	=	kilometre
km-pass	=	kilometre-pass
m ²	=	square metre
m ² -pass	=	square metre-pass
ha	=	hectare
m ³	=	cubic metre
m ³ -km	=	cubic metre-kilometre
kW	=	kilowatt
kN	=	kilo Newton
kg	=	kilogram
t	=	ton (1 000 kg)
%	=	per cent
MN	=	mega Newton
MN-m	=	mega Newton-metre
PC Sum	=	Prime Cost Sum
Prov Sum	=	Provisional Sum

- 11. Payment for items which are designated to be constructed labour-intensively (either in this schedule or in the Scope of Works) will not be made unless they are constructed using labour-intensive methods. Any unauthorised use of plant to carry out work which was to be done labour-intensively will not be condoned and any works so constructed will not be certified for payment.
- 12. Mistakes made by the Bidder in completion of the Schedule of Rates shall not be erased or covered with correcting fluid. A line shall be drawn through the incorrect entry, and the correct entry shall be written above the deletion and initialled by the Bidder. Failure to observe this Condition will lead to the Tender being disqualified.



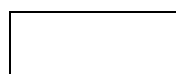
Contractor



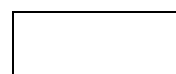
Witness 1



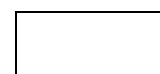
Witness 2



Employer



Witness 1



Witness 2

13. **This is a Rates based contract developed under an indicative scope of work and therefore there are no quantities or Totals set out in the pricing schedule, Work Orders will only be generated on “as and when” required basis according to the rates offered and accepted at the negotiation and award stage.**
14. Work Orders generated on “as and when” basis shall contain estimate quantities for the proposed Works. The actual quantities of work/services rendered as finally measured and accepted and certified for payment in accordance with the applicable Conditions of Contract, and not the estimate quantities set out in the Bill of Quantities for the Works Order, will be used to determine payments to the Contractor. The validity of the Contract shall in no way be affected by differences between the quantities in the Bill of Quantities for the generated Works Order and the quantities certified for payment.
15. The successful bidder will be required to submit a quote for the works required prior to being issued an official order and will be limited to the rates as set out herein.
16. Evaluation for price scoring will be done by calculating the line items in the table below to an indicative sum to determine the highest scoring bidder as provided for in the PPPFA Regulation 2022.
17. The effect of changes in prices or law on the amounts due shall be adjusted on the following basis:
- a) No price adjustment over the first 12-month period of the Contract.
 - b) On the 12-month anniversary date of the signing of the agreement, the rates shall be adjusted by a twelve-month year on year CPI index (as published in the monthly bulletin PO141.1 of statistics South Africa) ruling on the 12-month anniversary date of the signing of the contract.
 - c) Where CPI is not practically implementable, CPA will be considered based on the indices referred to in the MBD 3.2 form. ERWAT reserve the right to request additional information from the bidder to substantiate the bidders' request above CPI.
18. It is the Main Contractor's responsibility to make sure their offered Rates are market-related such that they can in turn pay market-related Rates to subcontractors. Should there be a deficit between the Main Contractor's rates and the Subcontractor's tendered or negotiated Rates, the main Contractor will have to cover for such difference.
19. The Contractor's monthly invoice shall be accompanied by confirmation from the Engineer or his duly authorised representative that items listed for payment have been successfully executed and/or delivered as required. Failure to obtain such confirmation from the Engineer or his duly authorised representative shall result in non-payment of the Contractor's invoice until the default has been corrected, or the deemed incomplete items are excluded from the invoice.
20. The Contractor shall note that payment shall only be made for Works activities successfully (delivering the end result) executed, complying with the quality requirements and provided to the Engineer or his duly authorised representative.
21. The Provisional Sums and Tendered amounts/prices shall be applicable per Works Order or IPW issued and should not be deemed to represent the maximum available budget for the entire Framework Contract.
- 22. Provisional Sum and Allowable for Contingencies**
- 22.1. The Contractor must obtain a minimum of three quotations (where possible) to be approved in writing by the relevant ERWAT Chief Financial Officer before proceeding with the Works.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

- 22.2. The Provisional Sums and Contingencies shall be applicable to the maximum amount in each case where a Works Order is released and shall be considered to be available to the maximum amount for any Works Order generated until the contract expires. It shall be noted that these sums shall not be understood to be the total Provisional Sums and Contingencies applied once off to the entire contract.
23. Mark Up on items not covered under the pricing schedule shall be negotiated to a maximum of 10% on the actual price of the item, not on the pricing schedule and not on profit:
- The service provider is to be aware that ERWAT reserves the right to obtain quotes to check if the contractor is not overcharging with respect to such item/s. **The mark-up percentage will be limited to a maximum of 10% and will be considered on a case-by-case basis and limited to the scope.**
24. A maximum allowable of 10% shall be included on each and every order that will be issued upon award to cater for contingencies.
25. The Preliminary and General rates and amounts shall be applicable to the maximum in each case each Works Order at a time and shall in no wise be understood as the maximum allowable amounts for the entire duration of the contract.
26. The Preliminary and General rates and amounts shall be applicable to the maximum amount in each case where a Works Order is released and shall be considered to be available to the maximum amount for any Works Order generated until the contract expires. It shall be noted that these amounts and rates shall not be understood to be the total Preliminary and Generals applied once off to the entire contract.
27. As per the CIDB Practice Notes, the procurement strategy followed in this contract shall follow the method of applying a maximum CIDB grade for each Financial Year, the CIDB grading of 8 ME shall be applied as the maximum CIDB grade for each Financial Year for the term of the Framework Agreement, and shall not be considered to be the once off CIDB grading for the entire term of the contract.
28. ERWAT reserves the right to negotiate with bidders, the tendered rates will be subject to negotiation, and the employer will satisfy itself that prices are not too low to warrant risks with service delivery failure or too high to warrant risks with cost overruns.

(The price should be inclusive of all direct and indirect costs (including transport, labour and other applicable fees).

The following will be accepted to be a fully completed pricing schedule:

Bidders to indicate accurately:

A price is written/typed in Ink. No pencil or tippex will be accepted. Please note that where bidders opt to type in the prices, the original bid document will be accepted by ERWAT. The document is not to be retyped and no additional pricing schedule in the bidder's format will be accepted. In the event that there are two pricing schedules submitted by the bidder, the original issued document from ERWAT will prevail.

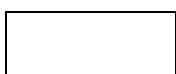
Bidders are not allowed to STRIKE THROUGH the BOQ and only the abbreviations as stated below, will be accepted:

No charge = N/C

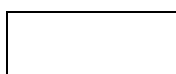
Included = Incl

R0 will be accepted as no charge.

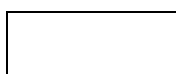
If pricing is left blank, or the bidder indicated N/A, it will be accepted to be incomplete and non-responsive bid.



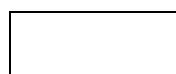
Contractor



Witness 1



Witness 2



Employer



Witness 1



Witness 2



PROJECT NO: ERW2506/02

**APPOINTMENT OF SERVICE PROVIDER/S FOR THE SUPPLY, DELIVERY AND
INSTALLATION OF PUMPS AT ERWAT WASTEWATER CARE WORKS ON 'AS
AND WHEN REQUIRED' BASIS FOR A PERIOD OF THIRTY-SIX (36 NO.)
MONTHS**

C2.2 SCHEDULE OF RATES

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

1. SECTION A: PRELIMINARY AND GENERAL

PRELIMINARY AND GENERAL			
ITEM	DESCRIPTION	UOM	RATE (VAT Incl.)
1.	Occupational Health and Safety Requirements		
1.1.	Development of Health & Safety File	Each	
1.2.	Safety Signage: Information Boards and Signs including danger tapes as well as barricades, Measurement Verification (During Execution).	Each	-
2.	Planning, Execution and Quality Requirements		
2.1.	Factory Testing of all equipment covered by this contract including quality control.	Each	
2.2.	Electrical Compliance Certificate (COC)	Each	
2.3.	Programme of Works, Cash Flow Projections, Bi-Weekly Progress Reports for the duration of the Contract and 4x Close-Out Report with O & M Manual, SOPs (Soft and Hard -Copies) including Drawings (in both .pdf and .dwg formats)	Each	
2.4.	Commissioning and Hand Over Activities (including Commissioning Report)	Each	
2.5.	40 Hours Training for Pumps: Design, Operations, and Maintenance for Plant Personnel recognised within the SAQA National Qualification Framework	Each	
3.	Key Staff personnel		
3.1.	Mechanical Engineer (Pr Eng)	Hr	
3.2.	Structural Engineer (Pr Eng)	Hr	
3.3.	Electrical Engineer (Pr Eng)	Hr	
3.4.	Fitter (with Trade test)	Hr	
3.5.	Rigger (with Trade test)	Hr	
3.6.	Electrician (with Trade test)	Hr	
3.7.	Semi-Skilled Labour	Hr	
3.8.	General Labour	Hr	
4.	Equipment Hire (Wet Rate)		
4.1.	LDV	Per Day	
4.2.	Truck, with 4 Ton Capacity Crane	Per Day	
4.3.	6m ³ Tipper Truck	Per Day	

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

4.4.	10m ³ Tipper Truck	Per Day	
4.5.	Bobcat	Per Day	
4.6.	Standard Size TLB	Per Day	
4.7.	Excavator (0.1kW per tined width of bucket)	Per Day	
4.8.	Compactor (Vibrating Plate)	Per Day	
4.9.	2" Trash Pump	Per Day	
4.10.	2 1/2" Trash Pump	Per Day	
4.11.	3" Trash Pump	Per Day	
4.12.	4" Trash Pump	Per Day	
4.13.	3.7kw Submersible Pump	Per Day	
4.14.	4kw Submersible Pump	Per Day	
4.15.	4.7kw Submersible Pump	Per Day	
4.16.	5.5kw Submersible Pump	Per Day	
4.17.	7.5kw Submersible Pump	Per Day	
4.18.	9.2kw Submersible Pump	Per Day	
4.19.	11kw Submersible Pump	Per Day	
4.20.	15kw Submersible Pump	Per Day	
4.21.	18.5kw Submersible Pump	Per Day	
4.22.	22kw Submersible Pump	Per Day	
4.23.	37kw Submersible Pump	Per Day	
4.24.	47kw Submersible Pump	Per Day	
4.25.	55kw Submersible Pump	Per Day	
4.26.	2" Mobile Diesel Pump & Auxiliaries (Including Layflats)	Per Day	
4.27.	4" Mobile Diesel Pump & Auxiliaries (Including Layflats)	Per Day	

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

4.28.	6" Mobile Diesel Pump & Auxiliaries (Including Layflats)	Per Day	
4.29.	8" Mobile Diesel Pump & Auxiliaries (Including Layflats)	Per Day	
4.30.	10" Mobile Diesel Pump & Auxiliaries (Including Layflats)	Per Day	
4.31.	Combination Super Sucker Truck (with High Pressure Jetting Capabilities)	Per Day	
4.32.	Lifting Equipment (4 Ton Crane) & Accessories	Per Day	
4.33.	Lifting Equipment (8 Ton Crane) & Accessories	Per Day	
4.34.	Lifting Equipment (12 Ton Crane) & Accessories	Per Day	
4.35.	Lifting Equipment (22 Ton Crane) & Accessories	Per Day	
4.36.	Lifting Equipment (25 Ton Crane) & Accessories	Per Day	
4.37.	Lifting Equipment (35 Ton Crane) & Accessories	Per Day	
4.38.	Lifting Equipment (55 Ton Crane) & Accessories	Per Day	
4.39.	Lifting Equipment (90 Ton Crane) & Accessories	Per Day	
4.40.	Lifting Equipment (110 Ton Crane) & Accessories	Per Day	
4.41.	Lifting Equipment (220 Ton Crane) & Accessories	Per Day	
4.42.	Lifting Equipment (275 Ton Crane) & Accessories	Per Day	
4.43.	18m Working Height Cherry Picker (230kg SWL)	Per Day	
4.44.	28m Working Height Cherry Picker (230kg SWL)	Per Day	
4.45.	43m Working Height Cherry Picker (272kg SWL)	Per Day	
4.46.	Industrial Mobile Camera	Per Day	
4.47.	Artisan Fitter's Toolbox	Per Day	
4.48.	Electrician's Toolbox	Per Day	
4.49.	Standard Welding Equipment (Complete Set)	Per Day	
4.50.	Standard Cutting Torch (Complete Set)	Per Day	
4.51.	Standard Grinder	Per Day	

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

2. SECTION B: PUMPS

2.1. SELF PRIMING PUMPS

CATEGORY A: SELF-PRIMING PUMPS			
ITEM	DESCRIPTION	UOM	RATE (VAT Incl.)
	SUPPLY and DELIVERY - including double handling if stored, pre- installation activities, quality assurance, modifications and providing required certification as per this contract.		
Type 1: Self-Priming Pumps			
1.	Test (as per scope of works, item C3.1.4, 2 (a))	each	
2.	2 Inch Self-Priming Pump	each	
3.	Baseplate	each	
4.	Guard	each	
5.	Belts, Pulleys and Bushes	each	
6.	Air Release Valve	each	
7.	Flap Valve	each	
8.	3 Inch Self-Priming Pump	each	
9.	Baseplate	each	
10.	Guard	each	
11.	Belts, Pulleys and Bushes	each	
12.	Air Release Valve	each	
13.	Flap Valve	each	
14.	4 Inch Self-Priming Pump	each	
15.	Baseplate	each	
16.	Guard	each	
17.	Belts, Pulleys and Bushes	each	
18.	Air Release Valve	each	
19.	Flap Valve	each	

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

20.	6 Inch Self-Priming	each	
21.	Baseplate	each	
22.	Guard	each	
23.	Belts, Pulleys and Bushes	each	
24.	Air Release Valve	each	
25.	Flap Valve	each	
26.	8 Inch Self-Priming Pump	each	
27.	Baseplate	each	
28.	Guard	each	
29.	Belts, Pulleys and Bushes	each	
30.	Air Release Valve	each	
31.	Flap Valve	each	
32.	10 Inch Self-Priming Pump	each	
33.	Baseplate	each	
34.	Guard	each	
35.	Belts, Pulleys and Bushes	each	
36.	Air Release Valve	each	
37.	Flap Valve	each	
38.	Gooseneck	each	
39.	Straight Connector Discharge Pipe	each	

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

2.2. SUBMERSIBLE PUMPS (WET-WELL INSTALLATION)

CATEGORY B: SUBMERSIBLE PUMPS			
ITEM	DESCRIPTION	UOM	RATE (VAT Incl.)
	SUPPLY and DELIVERY - including double handling if stored, pre- installation activities, quality assurance, modifications and providing required certification as per this contract.		
1.	Type 1: Submersible Pumps		
1.1.	Test (as per scope of works, item C3.1.4, 2 (a))	each	
1.2.	1.1 kW, 220V Electric Motor Pump with Float Switch and Electrical Cord with a 3 – Pin Plug	each	
1.3.	1.1 kW, 400V Electric Motor Pump with Float Switch and 20m Electrical Cable	each	
1.4.	2 kW, 400V Electric Motor Pump with 20m Electrical Cable	each	
1.5.	2,4 kW, 400V Electric Motor Pump with 20m Electrical Cable	each	
1.6.	3.1 kW, 400V Electric Motor Pump with 20m Electrical Cable	each	
1.7.	4 kW, 400V Electric Motor Pump with 20m Electrical Cable	each	
1.8.	4.2 kW, 400V Electric Motor Pump with 20m Electrical Cable	each	
1.9.	4.7 kW, 400V Electric Motor Pump with 20m Electrical Cable	each	
1.10.	5.5 kW, 400V Electric Motor Pump with 20m Electrical Cable	each	
1.11.	5.9 kW, 400V Electric Motor Pump with 20m Electrical Cable	each	
1.12.	7.4 kW, 400V Electric Motor Pump with 20m Electrical Cable	each	
1.13.	9 kW, 400V Electric Motor Pump with 20m Electrical Cable	each	
1.14.	11 kw, 400v Electric Motor Pump with 20m Electrical Cable	each	
1.15.	13.5 kW, 400V Electric Motor Pump with 20m Electrical Cable	each	
1.16.	15 kW, 400V Electric Motor Pump with 20m Electrical Cable	each	
1.17.	18.5 kW, 400V Electric Motor Pump with 20m Electrical Cable	each	
1.18.	22 kW, 400V Electric Motor Pump with 20m Electrical Cable	each	
1.19.	30 kW, 400V Electric Motor Pump with 20m Electrical Cable	each	
1.20.	37 kW, 400V Electric Motor Pump with 20m Electrical Cable	each	
1.21.	45 kW, 400V Electric Motor Pump with 20m Electrical Cable	each	

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

1.22.	47 kW, 400V Electric Motor Pump with 20m Electrical Cable	each	
1.23.	55 kW, 400V Electric Motor Pump with 20m Electrical Cable	each	
1.24.	85 kw, 400v Electric Motor Pump with 20m Electrical Cable	each	
1.25.	90 kW, 400V Electric Motor Pump with 20m Electrical Cable	each	
1.26.	105 kW, 400V Electric Motor Pump with 20m Electrical Cable	each	
2.	Type 2: Submersible Pumps		
2.1.	Test (as per scope of works, item C3.1.4, 2 (a))	each	
2.2.	1.8 kW, 400V Electric Motor Pump with Float Switch and 20m Electrical Cable	each	
2.3.	2.6 kW, 400V Electric Motor Pump with 20m Electrical Cable	each	
2.4.	3 kW, 400V Electric Motor Pump with 20m Electrical Cable	each	
2.5.	3.5 kW, 400V Electric Motor Pump with 20m Electrical Cable	each	
2.6.	3.6 kW, 400V Electric Motor Pump with 20m Electrical Cable	each	
2.7.	4.8 kW, 400V Electric Motor Pump with 20m Electrical Cable	each	
2.8.	5.5 kW, 400V Electric Motor Pump with 20m Electrical Cable	each	
2.9.	7.5 kW, 400V Electric Motor Pump with 20m Electrical Cable	each	
2.10.	11 kW, 400V Electric Motor Pump with 20m Electrical Cable	each	
2.11.	13.5 kW, 400V Electric Motor Pump with 20m Electrical Cable	each	
2.12.	15 kW, 400V Electric Motor Pump with 20m Electrical Cable	each	
2.13.	18.5 kW, 400V Electric Motor Pump with 20m Electrical Cable	each	
2.14.	22 kW, 400V Electric Motor Pump with 20m Electrical Cable	each	
2.15.	30 kW, 400V Electric Motor Pump with 20m Electrical Cable	each	
2.16.	37 kW, 400V Electric Motor Pump with 20m Electrical Cable	each	
2.17.	45 kW, 400V Electric Motor Pump with 20m Electrical Cable	each	
2.18.	47 kW, 400V Electric Motor Pump with 20m Electrical Cable	each	
2.19.	50 kW, 400V Electric Motor Pump with 20m Electrical Cable	each	

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

2.20.	55 kW, 400V Electric Motor Pump with 20m Electrical Cable	each	
2.21.	60 kW, 400V Electric Motor Pump with 20m Electrical Cable	each	
2.22.	70 kW, 400V Electric Motor Pump with 20m Electrical Cable	each	
2.23.	85 kW, 400V Electric Motor Pump with 20m Electrical Cable	each	
2.24.	90 kW, 400V Electric Motor Pump with 20m Electrical Cable	each	
2.25.	105 kW, 400V Electric Motor Pump with 20m Electrical Cable	each	
2.26.	110 kW, 400V Electric Motor Pump with 20m Electrical Cable	each	

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

2.3. IMMERSIBLE PUMPS (DRY INSTALLATION)

CATEGORY C: IMMERSIBLE PUMPS			
ITEM	DESCRIPTION	UOM	RATE (VAT Incl.)
	SUPPLY and DELIVERY - including double handling if stored, pre- installation activities, quality assurance, modifications and providing required certification as per this contract.		
Type 1: Immersible Pumps			
1.	Test (as per scope of works, item C3.1.4, 2 (a))	each	
2.	1.1 kW, 220V Electric Motor Pump with Float Switch and Electrical Cord with a 3 – Pin Plug	each	
3.	1.1 kW, 400V Electric Motor Pump with Float Switch and 20m Electrical Cable	each	
4.	2 kW, 400V Electric Motor Pump with 20m Electrical Cable	each	
5.	2,4 kW, 400V Electric Motor Pump with 20m Electrical Cable	each	
6.	3.1 kW, 400V Electric Motor Pump with 20m Electrical Cable	each	
7.	4 kW, 400V Electric Motor Pump with 20m Electrical Cable	each	
8.	4.2 kW, 400V Electric Motor Pump with 20m Electrical Cable	each	
9.	4.7 kW, 400V Electric Motor Pump with 20m Electrical Cable	each	
10.	5.5 kW, 400V Electric Motor Pump with 20m Electrical Cable	each	
11.	5.9 kW, 400V Electric Motor Pump with 20m Electrical Cable	each	
12.	7.4 kW, 400V Electric Motor Pump with 20m Electrical Cable	each	
13.	9 kW, 400V Electric Motor Pump with 20m Electrical Cable	each	
14.	11 kw, 400v Electric Motor Pump with 20m Electrical Cable	each	
15.	13.5 kW, 400V Electric Motor Pump with 20m Electrical Cable	each	
16.	15 kW, 400V Electric Motor Pump with 20m Electrical Cable	each	
17.	18.5 kW, 400V Electric Motor Pump with 20m Electrical Cable	each	
18.	22 kW, 400V Electric Motor Pump with 20m Electrical Cable	each	
19.	30 kW, 400V Electric Motor Pump with 20m Electrical Cable	each	

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

20.	37 kW, 400V Electric Motor Pump with 20m Electrical Cable	each	
21.	45 kW, 400V Electric Motor Pump with 20m Electrical Cable	each	
22.	47 kW, 400V Electric Motor Pump with 20m Electrical Cable	each	
23.	55 kW, 400V Electric Motor Pump with 20m Electrical Cable	each	
24.	85 kw, 400v Electric Motor Pump with 20m Electrical Cable	each	
25.	90 kW, 400V Electric Motor Pump with 20m Electrical Cable	each	
26.	105 kW, 400V Electric Motor Pump with 20m Electrical Cable	each	

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

2.4. PROGRESSIVE CAVITY PUMPS

CATEGORY D: PROGRESSIVE CAVITY PUMPS			
ITEM	DESCRIPTION	UOM	RATE (VAT Incl.)
	SUPPLY and DELIVERY - including double handling if stored, pre- installation activities, quality assurance, modifications and providing required certification as per this contract.		
1.	Progressive Cavity Pumps (Differential Pressure 4 BAR)		
1.1.	Test (as per scope of works, item C3.1.4, 2 (a))	each	
1.2.	Differential Pressure 4 BAR and Capacity of 0-37 m ³ /h	each	
1.3.	Differential Pressure 4 BAR and Capacity of 38-57 m ³ /h	each	
1.4.	Differential Pressure 4 BAR and Capacity of 58-79 m ³ /h	each	
1.5.	Differential Pressure 4 BAR and Capacity of 80- 97 m ³ /h	each	
1.6.	Differential Pressure 4 BAR and Capacity of 98 – 165 m ³ /h	each	
1.7.	Differential Pressure 4 BAR and Capacity of 166-225 m ³ /h	each	
1.8.	Differential Pressure 4 BAR and Capacity of 226- 440 m ³ /h	each	
2.	Progressive Cavity Pumps (Differential Pressure 6 BAR)		
2.1.	Test (as per scope of works, item C3.1.4, 2 (a))	each	
2.2.	Differential Pressure 6 BAR and Capacity of 0-4 m ³ /h	each	
2.3.	Differential Pressure 6 BAR and Capacity of 5-6 m ³ /h	each	
2.4.	Differential Pressure 6 BAR and Capacity of 7-11 m ³ /h	each	
2.5.	Differential Pressure 6 BAR and Capacity of 12-15 m ³ /h	each	
2.6.	Differential Pressure 6 BAR and Capacity of 16-26 m ³ /h	each	
2.7.	Differential Pressure 6 BAR and Capacity of 27-36 m ³ /h	each	
2.8.	Differential Pressure 6 BAR and Capacity of 37-50 m ³ /h	each	
2.9.	Differential Pressure 6 BAR and Capacity of 51-58 m ³ /h	each	
2.10.	Differential Pressure 6 BAR and Capacity of 59-72 m ³ /h	each	

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

2.11.	Differential Pressure 6 BAR and Capacity of 73-94 m ³ /h	each	
2.12.	Differential Pressure 6 BAR and Capacity of 95-140 m ³ /h	each	
2.13.	Differential Pressure 6 BAR and Capacity of 141-210 m ³ /h	each	
2.14.	Differential Pressure 6 BAR and Capacity of 211-290 m ³ /h	each	
3.	Progressive Cavity Pumps (Differential Pressure 12 BAR)		
3.1.	Test (as per scope of works, item C3.1.4, 2 (a))	each	
3.2.	Differential Pressure 12 BAR and Capacity of 0-2 m ³ /h	each	
3.3.	Differential Pressure 12 BAR and Capacity of 3-4 m ³ /h	each	
3.4.	Differential Pressure 12 BAR and Capacity of 5-6 m ³ /h	each	
3.5.	Differential Pressure 12 BAR and Capacity of 7-12 m ³ /h	each	
3.6.	Differential Pressure 12 BAR and Capacity of 12-15 m ³ /h	each	
3.7.	Differential Pressure 12 BAR and Capacity of 16-26 m ³ /h	each	
3.8.	Differential Pressure 12 BAR and Capacity of 27-36 m ³ /h	each	
3.9.	Differential Pressure 12 BAR and Capacity of 37-50 m ³ /h	each	
3.10.	Differential Pressure 12 BAR and Capacity of 51-58 m ³ /h	each	
3.11.	Differential Pressure 12 BAR and Capacity of 59-72 m ³ /h	each	
3.12.	Differential Pressure 12 BAR and Capacity of 73- 94 m ³ /h	each	
3.13.	Differential Pressure 12 BAR and Capacity of 95-140 m ³ /h	each	
3.14.	Differential Pressure 12 BAR and Capacity of 141-210 m ³ /h	each	
4.	Progressive Cavity Pumps (Differential Pressure 24 BAR)		
4.1.	Test (as per scope of works, item C3.1.4, 2 (a))	each	
4.2.	Differential Pressure 24 BAR and Capacity of 0-2 m ³ /h	each	
4.3.	Differential Pressure 24 BAR and Capacity of 3-4 m ³ /h	each	
4.4.	Differential Pressure 24 BAR and Capacity of 5-6 m ³ /h	each	

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

4.5.	Differential Pressure 24 BAR and Capacity of 7-11 m ³ /h	each	
4.6.	Differential Pressure 24 BAR and Capacity of 12-15 m ³ /h	each	
4.7.	Differential Pressure 24 BAR and Capacity of 16-26 m ³ /h	each	
4.8.	Differential Pressure 24 BAR and Capacity of 27-36 m ³ /h	each	
4.9.	Differential Pressure 24 BAR and Capacity of 37-51 m ³ /h	each	
4.10.	Differential Pressure 24 BAR and Capacity of 52-60 m ³ /h	each	

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

2.5. PROPELLER PUMPS (AXIAL FLOW TYPE)

CATEGORY E: PROPELLER PUMPS (AXIAL FLOW TYPE)			
ITEM	DESCRIPTION	UOM	RATE (VAT Incl.)
	SUPPLY and DELIVERY - including double handling if stored, pre- installation activities, quality assurance, modifications and providing required certification as per this contract.		
1.	Geared Motor-Driven Propeller Pump		
1.1.	Test (as per scope of works, item C3.1.4, 2 (a))	each	
1.2.	16 Inch Propeller Pump	each	
1.3.	24 Inch Propeller Pump	each	
1.4.	36 Inch Propeller Pump	each	
2.	Submersible Propeller Pump		
2.1.	Test (as per scope of works, item C3.1.4, 2 (a))	each	
2.2.	1.5 Kw Propeller Pump	each	
2.3.	2.5 kW Propeller Pump	each	
2.4.	3.7 kW Propeller Pump	each	
2.5.	5 kW Propeller Pump	each	
2.6.	5.5 kW Propeller Pump	each	
2.7.	7.5 kW Propeller Pump	each	
2.8.	10 kW Propeller Pump	each	
2.9.	13 kW Propeller Pump	each	
2.10.	18.5 kW Propeller Pump	each	
2.11.	25 kW Propeller Pump	each	

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

2.6. END SUCTION PUMPS

CATEGORY F: END SUCTION PUMPS			
ITEM	DESCRIPTION	UOM	RATE (VAT Incl.)
	SUPPLY and DELIVERY - including double handling if stored, pre- installation activities, quality assurance, modifications and providing required certification as per this contract.		
1.	Bearing Frame Pumps		
1.1.	Test (as per scope of works, item C3.1.4, 2 (a))	each	
1.2.	100mm Suction, 80mm Discharge PN16, Bearing Frame Pump	each	
1.3.	100mm Suction, 100mm Discharge PN16, Bearing Frame Pump	each	
1.4.	150mm Suction, 150mm Discharge PN16, Bearing Frame Pump	each	
1.5.	150mm Suction, 125mm Discharge PN16, Bearing Frame Pump	each	
1.6.	200mm Suction, 200mm Discharge PN10, Bearing Frame Pump	each	
1.7.	250mm Suction, 250mm Discharge PN10, Bearing Frame Pump	each	
1.8.	300mm Suction, 300mm Discharge PN10, Bearing Frame Pump	each	
1.9.	400mm Suction, 400mm Discharge PN10, Bearing Frame Pump	each	
2.	Dry-Installed Volute Casing Pumps		
2.1.	Test (as per scope of works, item C3.1.4, 2 (a))	each	
2.2.	65mm Suction, 50mm Discharge PN10, Dry-Installed Volute Casing Pump	each	
2.3.	80mm Suction, 50mm Discharge PN10, Dry-Installed Volute Casing Pump	each	
2.4.	80mm Suction, 65mm Discharge PN10, Dry-Installed Volute Casing Pump	each	
2.5.	100mm Suction, 80mm Discharge PN10, Dry-Installed Volute Casing Pump, Dry-Installed Volute Casing Pump	each	
2.6.	125mm Suction, 80mm Discharge PN10, Dry-Installed Volute Casing Pump, Dry-Installed Volute Casing Pump	each	
2.7.	125mm Suction, 100mm Discharge PN10, Dry-Installed Volute Casing Pump, Dry-Installed Volute Casing Pump	each	

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

2.8.	150mm Suction, 125mm Discharge PN10, Dry-Installed Volute Casing Pump, Dry-Installed Volute Casing Pump	each	
2.9.	150mm Suction, 100mm Discharge PN10, Dry-Installed Volute Casing Pump	each	
2.10.	150mm Suction, 150mm Discharge PN10, Dry-Installed Volute Casing Pump	each	
2.11.	200mm Suction, 200mm Discharge PN10, Dry-Installed Volute Casing Pump	each	
2.12.	250mm Suction, 250mm Discharge PN10, Dry-Installed Volute Casing Pump	each	
2.13.	300mm Suction, 300mm Discharge PN10, Dry-Installed Volute Casing Pump	each	
2.14.	350mm Suction, 350mm Discharge PN10, Dry-Installed Volute Casing Pump	each	
2.15.	400mm Suction, 350mm Discharge PN10, Dry-Installed Volute Casing Pump	each	
2.16.	400mm Suction, 400mm Discharge PN10, Dry-Installed Volute Casing Pump	each	
3.	Bare – Shaft Pumps		
3.1.	Test (as per scope of works, item C3.1.4, 2 (a))	each	
3.2.	65mm Suction, 50mm Discharge PN16, Bare – Shaft Pump	each	
3.3.	80mm Suction, 65mm Discharge PN16, Bare – Shaft Pump	each	
3.4.	100mm Suction, 80mm Discharge PN16, Bare – Shaft Pump	each	
3.5.	125mm Suction, 100mm Discharge PN16, Bare – Shaft Pump	each	
3.6.	150mm Suction, 125mm Discharge PN16, Bare – Shaft Pump	each	
3.7.	200mm Suction, 150mm Discharge PN16, Bare – Shaft Pump	each	
3.8.	250mm Suction, 200mm Discharge PN16, Bare – Shaft Pump	each	
3.9.	300mm Suction, 250mm Discharge PN16, Bare – Shaft Pump	each	



Contractor



Witness 1



Witness 2



Employer



Witness 1



Witness 2

2.7. SUBMERSIBLE MIXERS

CATEGORY G: SUBMERSIBLE MIXERS			
ITEM	DESCRIPTION	UOM	RATE (VAT Incl.)
	SUPPLY and DELIVERY - including double handling if stored, pre- installation activities, quality assurance, modifications and providing required certification as per this contract.		
	Type 1: Submersible Mixers		
1.	1.5 kW, 400V Electric Motor, Submersible Mixer with 20m Electrical Cable	each	
2.	2.5 kW, 400V Electric Motor, Submersible Mixer with 20m Electrical Cable	each	
3.	3.7 kW, 400V Electric Motor, Submersible Mixer with 20m Electrical Cable	each	
4.	5 kW, 400V Electric Motor, Submersible Mixer with 20m Electrical Cable	each	
5.	5.5 kW, 400V Electric Motor, Submersible Mixer with 20m Electrical Cable	each	
6.	7.5 kW, 400V Electric Motor ,Submersible Mixer with 20m Electrical Cable	each	
7.	10 kW, 400V Electric Motor, Submersible Mixer with 20m Electrical Cable	each	
8.	13 kW, 400V Electric Motor, Submersible Mixer with 20m Electrical Cable	each	
9.	18.5 kW, 400V Electric Motor, Submersible Mixer with 20m Electrical Cable	each	
10.	25 kW, 400V Electric Motor, Submersible Mixer with 20m Electrical Cable	each	

Contractor

Witness 1

Witness 2

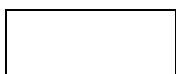
Employer

Witness 1

Witness 2

2.8. MOBILE DIESEL PUMPS

CATEGORY H: MOBILE DIESEL PUMPS			
ITEM	DESCRIPTION	UOM	RATE (VAT Incl.)
SUPPLY and DELIVERY			
1.	Type 1: Mobile Diesel Pumps		
1.1.	Complete Mobile Diesel (6" Self-Priming Pump, a 4 Cylinder 54 kW Engine with an integrated 160L Fuel Tank) with all auxiliaries including a 9kg fire extinguisher.	each	
1.2.	Highway Trailer Unit (Single Axle with Brake) with 15" Wheels and Rims with 2 x LED Spotlights for night work visibility, and orange Light Bar for night vision and warning, Centre Lifting Beam, Spare Wheel with a Lifting Yoke.	each	
1.3.	Trailer Roadworthy Tests, Licensing and Registration Plates	each	
1.4.	150mm Female Perrot Coupling Tail	each	
1.5.	150mm Male Perrot Coupling Tail	each	
1.6.	150mm HD Suction Hose (10m)	each	
1.7.	150mm Discharge Layflat Hose (100m)	each	
1.8.	150mm HD Hose Clamp	each	
1.9.	150mm HD Hose Clamp Bolt Type	each	
1.10.	150mm Strainer	each	
2.	Type 2: Mobile Diesel Pumps		
2.1.	Complete Mobile Diesel (Centrifugal Impeller Pump, a 4 Cylinder 55.4 kW Engine with an integrated 400L Fuel Tank) with all auxiliaries including a 9kg fire extinguisher	each	
2.2.	Trailer Unit (Double Axle with Brake) with 15" Wheels and Rims with 2x LED Spotlights for night work visibility, and orange Light Bar for night vision and warning, Centre Lifting Beam, Spare Wheel with a Lifting Yoke.	each	
2.3.	Trailer Roadworthy Tests, Licensing and Registration Plates	each	
2.4.	(150mm Discharge & 200mm Suction) Female Perrot Coupling Tails	each	
2.5.	(150mm Discharge & 200mm Suction) Male Perrot Coupling Tails	each	



Contractor



Witness 1



Witness 2



Employer



Witness 1



Witness 2

2.6.	200mm HD Suction Hose (10m)	each	
2.7.	150mm Discharge Layflat Hose (100m)	each	
2.8.	200mm HD Hose Clamp	each	
2.9.	200mm HD Hose Clamp Bolt Type	each	
2.10.	200mm Strainer	each	
3.	Type 3: Mobile Diesel Pumps		
3.1.	Complete Mobile Diesel (6" Dri-Prime Pump, a 4 Cylinder 54.7 kW Engine with an integrated 330L Fuel Tank) with all auxiliaries including a 9kg fire extinguisher	each	
3.2.	Highway Trailer Unit (Double Axle with Brake) with 15" Wheels and Rims with 2x LED Spotlights for night work visibility, and orange Light Bar for night vision and warning, Centre Lifting Beam, Spare Wheel with a Lifting Yoke.	each	
3.3.	Trailer Roadworthy Tests, Licensing and Registration Plates	each	
3.4.	150mm Female Perrot Coupling Tail	each	
3.5.	150mm Male Perrot Coupling Tail	each	
3.6.	150mm Green High Pressure Suction Hose (10m)	each	
3.7.	150mm Discharge Layflat Hose (100m)	each	
3.8.	150mm HD Hose Clamp	each	
3.9.	150mm HD Hose Clamp Bolt Type	each	
3.10.	150mm Strainer	each	

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

2.9. SUPPLY OF ACCESORIES

ITEM	DESCRIPTION	UOM	RATE (VAT Incl.)
1.	Lifting Accessories		
1.1.	Discharge Con. 80mm	each	
1.2.	Discharge Con. 100mm	each	
1.3.	Discharge Con. 150mm	each	
1.4.	Discharge Con. 200mm	each	
1.5.	Z-Standard Unt 50mm	each	
1.6.	Z-Standard Unt 150mm	each	
1.7.	Z-Standard Unt 200mm	each	
1.8.	Guide Bracket Unit 50mm Galv	each	
1.9.	Guide Bracket Unit 50mm Stainless	each	
1.10.	Guide Bracket Unit 80mm Galv	each	
1.11.	Guide Bracket Unit 80mm Stainless	each	
1.12.	Guide Bracket Unit 100mm Galv	each	
1.13.	Guide Bracket Unit 100mm Stainless	each	
1.14.	Guide Rail Set (2x6m) 50mm Galv	each	
1.15.	Guide Rail Set (2x6m) 50mm Stainless	each	
1.16.	Guide Rail Set (2x6m) 80mm Galv	each	
1.17.	Guide Rail Set (2x6m) 80mm Stainless	each	
1.18.	Guide Rail Set (2x6m) 100mm Galv	each	
1.19.	Guide Rail Set (2x6m) 100mm Stainless	each	
2.	Mixer Accessories		
2.1.	SS304 Guide Bar (50mm x 50mm,6m)	each	

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

2.2.	50mm Support Unit	each	
2.3.	50mm Upper Guide Bracket	each	
2.4.	50mm Lower Guide Bracket	each	
2.5.	SS304 Guide Bar (100mm x 100mm,6m)	each	
2.6.	100mm Support Unit	each	
2.7.	100mm Upper Guide Bracket	each	
2.8.	100mm Lower Guide Bracket	each	
3.	Immersible Accessories		
3.1.	Discharge Con. 80mm	each	
3.2.	Discharge Con. 100mm	each	
3.3.	Discharge Con. 150mm	each	
3.4.	Discharge Con. 200mm	each	
3.5.	Z-Standard Unt 50mm	each	
3.6.	Z-Standard Unt 150mm	each	
3.7.	Z-Standard Unt 200mm	each	
3.8.	Guide Bracket Unit 50mm Galv	each	
3.9.	Guide Bracket Unit 50mm Stainless	each	
3.10.	Guide Bracket Unit 80mm Galv	each	
3.11.	Guide Bracket Unit 80mm Stainless	each	
3.12.	Guide Bracket Unit 100mm Galv	each	
3.13.	Guide Bracket Unit 100mm Stainless	each	
3.14.	Guide Rail Set (2x6m) 50mm Galv	each	
3.15.	Guide Rail Set (2x6m) 50mm Stainless	each	
3.16.	Guide Rail Set (2x6m) 80mm Galv	each	

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

3.17.	Guide Rail Set (2x6m) 80mm Stainless	each	
3.18.	Guide Rail Set (2x6m) 100mm Galv	each	
3.19.	Guide Rail Set (2x6m) 100mm Stainless	each	
4.	Baseplates		
4.1.	1m x 500mm Baseplate	each	
4.2.	2m x 500mm Baseplate	each	
4.3.	3m x 500mm Baseplate	each	
4.4.	5m x 500mm Baseplate	each	
4.5.	6m x 500mm Baseplate	each	
4.6.	8m x 500mm Baseplate	each	
4.7.	10m x 500mm Baseplate	each	

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

3. MOTORS

3.1. SUPPLY OF THREE PHASE ELECTRIC MOTORS: 2 POLE - FOOT MOUNTED

ITEM	DESCRIPTION		UOM	RATE (VAT Incl.)
	Supply 2 Pole IE3 (Premium Efficiency) Motor (380 - 400V)			
	kW	Frame Size		
1.	3	100L	Each	
2.	4	112M	Each	
3.	5.5	132S	Each	
4.	7.5	132M	Each	
5.	9.2	132M	Each	
6.	11	160M	Each	
7.	15	160L	Each	
8.	18.5	180M	Each	
9.	22	180L	Each	
10.	30	200L	Each	
11.	37	225S/M	Each	
12.	45	225S/M	Each	
13.	55	250S/M	Each	
14.	75	250S/M	Each	
15.	90	280S/M	Each	
16.	110	280S/M	Each	

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

3.2. SUPPLY OF THREE PHASE ELECTRIC MOTORS: 2 POLE - FLANGE MOUNTED

ITEM	DESCRIPTION		UOM	RATE (VAT Incl.)
	Supply 2 Pole IE3 (Premium Efficiency) Motor (380 - 400V)			
	kW	Frame Size		
1.	3	100L	Each	
2.	4	112M	Each	
3.	5.5	132S	Each	
4.	7.5	132M	Each	
5.	9.2	132M	Each	
6.	11	160M	Each	
7.	15	160L	Each	
8.	18.5	180M	Each	
9.	22	180L	Each	
10.	30	200L	Each	
11.	37	225S/M	Each	
12.	45	225S/M	Each	
13.	55	250S/M	Each	
14.	75	250S/M	Each	
15.	90	280S/M	Each	
16.	110	280S/M	Each	

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

3.3. SUPPLY OF THREE PHASE ELECTRIC MOTORS: 4 POLE - FOOT MOUNTED

ITEM	DESCRIPTION		UOM	RATE (VAT Incl.)
	Supply 4 Pole IE3 (Premium Efficiency) Motor (380 - 400V)			
	kW	Frame Size		
1.	3	100L	Each	
2.	4	112M	Each	
3.	5.5	132S	Each	
4.	7.5	132M	Each	
5.	9.2	132M	Each	
6.	11	160M	Each	
7.	15	160L	Each	
8.	18.5	180M	Each	
9.	22	180L	Each	
10.	30	200L	Each	
11.	37	225S/M	Each	
12.	45	225S/M	Each	
13.	55	250S/M	Each	
14.	75	250S/M	Each	
15.	90	280S/M	Each	
16.	110	280S/M	Each	

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

3.4. SUPPLY OF THREE PHASE ELECTRIC MOTORS: 4 POLE - FLANGE MOUNTED

ITEM	DESCRIPTION		UOM	RATE (VAT Incl.)
	Supply 4 Pole IE3 (Premium Efficiency) Motor (380 - 400V)			
	kW	Frame Size		
1.	3	100L	Each	
2.	4	112M	Each	
3.	5.5	132S	Each	
4.	7.5	132M	Each	
5.	9.2	132M	Each	
6.	11	160M	Each	
7.	15	160L	Each	
8.	18.5	180M	Each	
9.	22	180L	Each	
10.	30	200L	Each	
11.	37	225S/M	Each	
12.	45	225S/M	Each	
13.	55	250S/M	Each	
14.	75	250S/M	Each	
15.	90	280S/M	Each	
16.	110	280S/M	Each	

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

3.5. SUPPLY OF THREE PHASE ELECTRIC MOTORS: 6 POLE - FOOT MOUNTED

ITEM	DESCRIPTION		UOM	RATE (VAT Incl.)
	Supply 6 Pole IE3 (Premium Efficiency) Motor (380 - 400V)			
	kW	Frame Size		
1.	3	100L	Each	
2.	4	112M	Each	
3.	5.5	132S	Each	
4.	7.5	132M	Each	
5.	9.2	132M	Each	
6.	11	160M	Each	
7.	15	160L	Each	
8.	18.5	180M	Each	
9.	22	180L	Each	
10.	30	200L	Each	
11.	37	225S/M	Each	
12.	45	225S/M	Each	
13.	55	250S/M	Each	
14.	75	250S/M	Each	
15.	90	280S/M	Each	
16.	110	280S/M	Each	

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

3.6. SUPPLY OF THREE PHASE ELECTRIC MOTORS: 6 POLE - FLANGE MOUNTED

ITEM	DESCRIPTION		UOM	RATE (VAT Incl.)
	Supply 6 Pole IE3 (Premium Efficiency) Motor (380 - 400V)			
	kW	Frame Size		
1.	3	100L	Each	
2.	4	112M	Each	
3.	5.5	132S	Each	
4.	7.5	132M	Each	
5.	9.2	132M	Each	
6.	11	160M	Each	
7.	15	160L	Each	
8.	18.5	180M	Each	
9.	22	180L	Each	
10.	30	200L	Each	
11.	37	225S/M	Each	
12.	45	225S/M	Each	
13.	55	250S/M	Each	
14.	75	250S/M	Each	
15.	90	280S/M	Each	
16.	110	280S/M	Each	

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

3.7. SUPPLY OF THREE PHASE ELECTRIC MOTORS: 8 POLE - FOOT MOUNTED

ITEM	DESCRIPTION		UOM	RATE (VAT Incl.)
	Supply 8 Pole IE3 (Premium Efficiency) Motor (380 - 400V)			
	kW	Frame Size		
1.	3	100L	Each	
2.	4	112M	Each	
3.	5.5	132S	Each	
4.	7.5	132M	Each	
5.	9.2	132M	Each	
6.	11	160M	Each	
7.	15	160L	Each	
8.	18.5	180M	Each	
9.	22	180L	Each	
10.	30	200L	Each	
11.	37	225S/M	Each	
12.	45	225S/M	Each	
13.	55	250S/M	Each	
14.	75	250S/M	Each	
15.	90	280S/M	Each	
16.	110	280S/M	Each	

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

3.8. SUPPLY OF THREE PHASE ELECTRIC MOTORS: 8 POLE - FLANGE MOUNTED

ITEM	DESCRIPTION		UOM	RATE (VAT Incl.)
	Supply 8 Pole IE3 (Premium Efficiency) Motor (380 - 400V)			
	kW	Frame Size		
1.	3	100L	Each	
2.	4	112M	Each	
3.	5.5	132S	Each	
4.	7.5	132M	Each	
5.	9.2	132M	Each	
6.	11	160M	Each	
7.	15	160L	Each	
8.	18.5	180M	Each	
9.	22	180L	Each	
10.	30	200L	Each	
11.	37	225S/M	Each	
12.	45	225S/M	Each	
13.	55	250S/M	Each	
14.	75	250S/M	Each	
15.	90	280S/M	Each	
16.	110	280S/M	Each	

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

3.9. SUPPLY OF VARIABLE SPEED DRIVES

ITEM	DESCRIPTION (kW Rating)	UOM	RATE (Vat.Incl)
	Variable Speed Drive (VSD's) for Only Pump Application		
1.	3	Each	
2.	4	Each	
3.	5.5	Each	
4.	7.5	Each	
5.	11	Each	
6.	15	Each	
7.	18.5	Each	
8.	22	Each	
9.	30	Each	
10.	37	Each	
11.	45	Each	
12.	55	Each	
13.	75	Each	
14.	90	Each	
15.	110	Each	

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

3.10. SUPPLY OF VARIABLE SPEED DRIVES PANEL

ITEM	DESCRIPTION (kW Rating)	UOM	RATE (Vat.Incl)
	Complete Variable Speed Drive Electrical Panel – SANS 10142 Pump Application		
1.	3	Each	
2.	4	Each	
3.	5.5	Each	
4.	7.5	Each	
5.	11	Each	
6.	15	Each	
7.	18.5	Each	
8.	22	Each	
9.	30	Each	
10.	37	Each	
11.	45	Each	
12.	55	Each	
13.	75	Each	
14.	90	Each	
15.	110	Each	

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

3.11. SUPPLY OF MOTOR SOFT STARTERS

ITEM	DESCRIPTION (kW Rating)	UOM	RATE (Vat.Incl)
	Soft Starters for Only Pump Application		
1.	3	Each	
2.	4	Each	
3.	5.5	Each	
4.	7.5	Each	
5.	11	Each	
6.	15	Each	
7.	18.5	Each	
8.	22	Each	
9.	30	Each	
10.	37	Each	
11.	45	Each	
12.	55	Each	
13.	75	Each	
14.	90	Each	
15.	110	Each	

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

3.12. SUPPLY OF MOTOR SOFT STARTER PANEL

ITEM	DESCRIPTION (kW Rating)	UOM	RATE (Vat.Incl)
	Complete Soft Starter Electrical Panel – SANS 10142 Pump Application		
1.	3	Each	
2.	4	Each	
3.	5.5	Each	
4.	7.5	Each	
5.	11	Each	
6.	15	Each	
7.	18.5	Each	
8.	22	Each	
9.	30	Each	
10.	37	Each	
11.	45	Each	
12.	55	Each	
13.	75	Each	
14.	90	Each	
15.	110	Each	

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

3.13. SUPPLY OF MOTOR STOP START STATIONS

ITEM	DESCRIPTION (kW Rating)	UOM	RATE (Vat.Incl)
	Supply of Motor Start Stations, SANS 10142 - Including Stand		
1.	3	Each	
2.	4	Each	
3.	5.5	Each	
4.	7.5	Each	
5.	11	Each	
6.	15	Each	
7.	18.5	Each	
8.	22	Each	
9.	30	Each	
10.	37	Each	
11.	45	Each	
12.	55	Each	
13.	75	Each	
14.	90	Each	
15.	110	Each	

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

4. MECHANICAL AUXILIARIES

4.1. PIPES AND VALVES

Category I (Part 1): Pipes and Valves			
Item	Description	UoM	RATE (VAT Incl.)
	SUPPLY and DELIVERY - including double handling if stored, pre- installation activities, quality assurance, modifications and providing required certification as per this contract.		
1.	Non-Rising Spindle Wedge Gate Valves		PN10
1.1.	50mm Diameter	each	
1.2.	80mm Diameter	each	
1.3.	100mm Diameter	each	
1.4.	150mm Diameter	each	
1.5.	200mm Diameter	each	
1.6.	250mm Diameter	each	
1.7.	300mmdiameter	each	
1.8.	350mm Diameter	each	
1.9.	400mm Diameter	each	
1.10.	500mm Diameter	each	
1.11.	600mm Diameter	each	
1.12.	900mm Diameter	each	
1.13.	1050mm Diameter	each	
1.14.	1200mm Diameter	each	
2.	Knife Gate Valves		PN10
2.1.	50mm Diameter	each	
2.2.	80mm Diameter	each	
2.3.	100mm Diameter	each	

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

2.4.	150mm Diameter	each	
2.5.	200mm Diameter	each	
2.6.	250mm Diameter	each	
2.7.	300mmdiameter	each	
2.8.	350mm Diameter	each	
2.9.	400mm Diameter	each	
2.10.	500mm Diameter	each	
2.11.	600mm Diameter	each	
2.12.	900mm Diameter	each	
2.13.	1050mm Diameter	each	
2.14.	1200mm Diameter	each	
3.	Ball Type Non-Return Valves		PN10
3.1.	50mm Diameter	each	
3.2.	80mm Diameter	each	
3.3.	100mm Diameter	each	
3.4.	150mm Diameter	each	
3.5.	200mm Diameter	each	
3.6.	250mm Diameter	each	
3.7.	300mmdiameter	each	
3.8.	350mm Diameter	each	
3.9.	400mm Diameter	each	
3.10.	500mm Diameter	each	
3.11.	600mm Diameter	each	
3.12.	900mm Diameter	Each	

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

3.13.	1050mm Diameter	Each	
3.14.	1200mm Diameter	Each	
4.	Flanged 45° Elbow Mild-Steel Epoxy Coated		PN10
4.1.	50mm Diameter	each	
4.2.	80mm Diameter	each	
4.3.	100mm Diameter	each	
4.4.	150mm Diameter	each	
4.5.	200mm Diameter	each	
4.6.	250mm Diameter	each	
4.7.	300mmdiameter	each	
4.8.	350mm Diameter	each	
4.9.	400mm Diameter	each	
4.10.	500mm Diameter	each	
4.11.	600mm Diameter	each	
5.	Flanged 90° Elbow Mild-Steel Epoxy Coated		PN10
5.1.	50mm Diameter	each	
5.2.	80mm Diameter	each	
5.3.	100mm Diameter	each	
5.4.	150mm Diameter	each	
5.5.	200mm Diameter	each	
5.6.	250mm Diameter	each	
5.7.	300mmdiameter	each	
5.8.	350mm Diameter	each	
5.9.	400mm Diameter	each	

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

5.10.	500mm Diameter	each	
5.11.	600mm Diameter	each	
6.	Flanged 45° Long Radius Elbow Mild-Steel Epoxy Coated		PN10
6.1.	50mm Diameter	each	
6.2.	80mm Diameter	each	
6.3.	100mm Diameter	each	
6.4.	150mm Diameter	each	
6.5.	200mm Diameter	each	
6.6.	250mm Diameter	each	
6.7.	300mmdiameter	each	
6.8.	350mm Diameter	each	
6.9.	400mm Diameter	each	
6.10.	500mm Diameter	each	
6.11.	600mm Diameter	each	
7.	Flanged 90° Long Radius Elbow Mild-Steel Epoxy Coated		PN10
7.1.	50mm Diameter	each	
7.2.	80mm Diameter	each	
7.3.	100mm Diameter	each	
7.4.	150mm Diameter	each	
7.5.	200mm Diameter	each	
7.6.	250mm Diameter	each	
7.7.	300mmdiameter	each	
7.8.	350mm Diameter	each	
7.9.	400mm Diameter	each	

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

7.10.	500mm Diameter	each	
7.11.	600mm Diameter	each	
8.	Flanged 45° Wyes Mild-Steel Epoxy Coated		PN10
8.1.	50mm Diameter	each	
8.2.	80mm Diameter	each	
8.3.	100mm Diameter	each	
8.4.	150mm Diameter	each	
8.5.	200mm Diameter	each	
8.6.	250mm Diameter	each	
8.7.	300mmdiameter	each	
8.8.	350mm Diameter	each	
8.9.	400mm Diameter	each	
8.10.	500mm Diameter	each	
8.11.	600mm Diameter	each	
9.	Flanged Equal Tees, (T) Mild-Steel Epoxy Coated		PN10
9.1.	50mm Diameter	each	
9.2.	80mm Diameter	each	
9.3.	100mm Diameter	each	
9.4.	150mm Diameter	each	
9.5.	200mm Diameter	each	
9.6.	250mm Diameter	each	
9.7.	300mmdiameter	each	
9.8.	350mm Diameter	each	
9.9.	400mm Diameter	each	

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

9.10.	500mm Diameter	each	
9.11.	600mm Diameter	each	
10.	Flanged Concentric Reducer, Mild-Steel Epoxy Coated		PN10
10.1.	50mm Diameter	each	
10.2.	80mm Diameter	each	
10.3.	100mm Diameter	each	
10.4.	150mm Diameter	each	
10.5.	200mm Diameter	each	
10.6.	250mm Diameter	each	
10.7.	300mmdiameter	each	
10.8.	350mm Diameter	each	
10.9.	400mm Diameter	each	
10.10.	500mm Diameter	each	
10.11.	600mm Diameter	each	
11.	Flange / Pipe Adaptors		PN10
11.1.	50mm Diameter	each	
11.2.	80mm Diameter	each	
11.3.	100mm Diameter	each	
11.4.	150mm Diameter	each	
11.5.	200mm Diameter	each	
11.6.	250mm Diameter	each	
11.7.	300mmdiameter	each	
11.8.	350mm Diameter	each	
11.9.	400mm Diameter	each	

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

11.10.	500mm Diameter	each	
11.11.	600mm Diameter	each	
11.12.	900mm Diameter	each	
11.13.	1050mm Diameter	each	
11.14.	1200mm Diameter	each	
12.	Double Flanged Mild-Steel Epoxy Coated Pipe (L = 200mm)		PN10
12.1.	50mm Diameter	each	
12.2.	80mm Diameter	each	
12.3.	100mm Diameter	each	
12.4.	150mm Diameter	each	
12.5.	200mm Diameter	each	
12.6.	250mm Diameter	each	
12.7.	300mmdiameter	each	
12.8.	350mm Diameter	each	
12.9.	400mm Diameter	each	
12.10.	500mm Diameter	each	
12.11.	600mm Diameter	each	
13.	Double Flanged Mild-Steel Epoxy Coated Pipe (L = 500mm)		PN10
13.1.	50mm Diameter	each	
13.2.	80mm Diameter	each	
13.3.	100mm Diameter	each	
13.4.	150mm Diameter	each	
13.5.	200mm Diameter	each	
13.6.	250mm Diameter	each	



Contractor



Witness 1



Witness 2



Employer

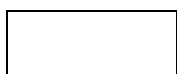


Witness 1

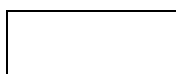


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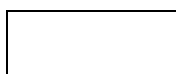
13.7.	300mmdiameter	each	
13.8.	350mm Diameter	each	
13.9.	400mm Diameter	each	
13.10.	500mm Diameter	each	
13.11.	600mm Diameter	each	
14.	Double Flanged Mild-Steel Epoxy Coated Pipe (L = 500mm)		PN10
14.1.	50mm Diameter	each	
14.2.	80mm Diameter	each	
14.3.	100mm Diameter	each	
14.4.	150mm Diameter	each	
14.5.	200mm Diameter	each	
14.6.	250mm Diameter	each	
14.7.	300mmdiameter	each	
14.8.	350mm Diameter	each	
14.9.	400mm Diameter	each	
14.10.	500mm Diameter	each	
14.11.	600mm Diameter	each	
15.	Double Flanged Mild-Steel Epoxy Coated Pipe (L = 1000mm)		PN10
15.1.	50mm Diameter	each	
15.2.	80mm Diameter	each	
15.3.	100mm Diameter	each	
15.4.	150mm Diameter	each	
15.5.	200mm Diameter	each	
15.6.	250mm Diameter	each	



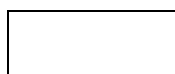
Contractor



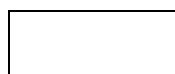
Witness 1



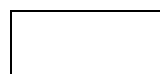
Witness 2



Employer



Witness 1



Witness 2

15.7.	300mmdiameter	each	
15.8.	350mm Diameter	each	
15.9.	400mm Diameter	each	
15.10.	500mm Diameter	each	
15.11.	600mm Diameter	each	
16.	Non-Rising Spindle Wedge Gate Valves		PN16
16.1.	50mm Diameter	each	
16.2.	80mm Diameter	each	
16.3.	100mm Diameter	each	
16.4.	150mm Diameter	each	
16.5.	200mm Diameter	each	
16.6.	250mm Diameter	each	
16.7.	300mmdiameter	each	
16.8.	350mm Diameter	each	
16.9.	400mm Diameter	each	
16.10.	500mm Diameter	each	
16.11.	600mm Diameter	each	
16.12.	900mm Diameter	each	
16.13.	1050mm Diameter	each	
16.14.	1200mm Diameter	each	
17.	Knife Gate Valves		PN16
17.1.	50mm Diameter	each	
17.2.	80mm Diameter	each	
17.3.	100mm Diameter	each	

Contractor

Witness 1

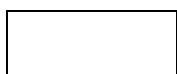
Witness 2

Employer

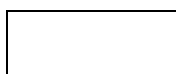
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Witness 2

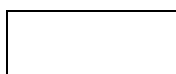
17.4.	150mm Diameter	each	
17.5.	200mm Diameter	each	
17.6.	250mm Diameter	each	
17.7.	300mmdiameter	each	
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17.9.	400mm Diameter	each	
17.10.	500mm Diameter	each	
17.11.	600mm Diameter	each	
17.12.	900mm Diameter	each	
17.13.	1050mm Diameter	each	
17.14.	1200mm Diameter	each	
18.	Ball Type Non-Return Valves		PN16
18.1.	50mm Diameter	each	
18.2.	80mm Diameter	each	
18.3.	100mm Diameter	each	
18.4.	150mm Diameter	each	
18.5.	200mm Diameter	each	
18.6.	250mm Diameter	each	
18.7.	300mmdiameter	each	
18.8.	350mm Diameter	each	
18.9.	400mm Diameter	each	
18.10.	500mm Diameter	each	
18.11.	600mm Diameter	each	
18.12.	900mm Diameter	Each	



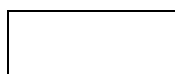
Contractor



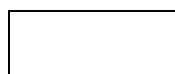
Witness 1



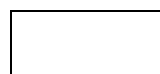
Witness 2



Employer



Witness 1



Witness 2

18.13.	1050mm Diameter	Each	
18.14.	1200mm Diameter	Each	
19.	Flanged 45° Elbow Mild-Steel Epoxy Coated		PN16
19.1.	50mm Diameter	each	
19.2.	80mm Diameter	each	
19.3.	100mm Diameter	each	
19.4.	150mm Diameter	each	
19.5.	200mm Diameter	each	
19.6.	250mm Diameter	each	
19.7.	300mmdiameter	each	
19.8.	350mm Diameter	each	
19.9.	400mm Diameter	each	
19.10.	500mm Diameter	each	
19.11.	600mm Diameter	each	
20.	Flanged 90° Elbow Mild-Steel Epoxy Coated		PN16
20.1.	50mm Diameter	each	
20.2.	80mm Diameter	each	
20.3.	100mm Diameter	each	
20.4.	150mm Diameter	each	
20.5.	200mm Diameter	each	
20.6.	250mm Diameter	each	
20.7.	300mmdiameter	each	
20.8.	350mm Diameter	each	
20.9.	400mm Diameter	each	

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

20.10.	500mm Diameter	each	
20.11.	600mm Diameter	each	
21.	Flanged 45° Long Radius Elbow Mild-Steel Epoxy Coated		PN16
21.1.	50mm Diameter	each	
21.2.	80mm Diameter	each	
21.3.	100mm Diameter	each	
21.4.	150mm Diameter	each	
21.5.	200mm Diameter	each	
21.6.	250mm Diameter	each	
21.7.	300mmdiameter	each	
21.8.	350mm Diameter	each	
21.9.	400mm Diameter	each	
21.10.	500mm Diameter	each	
21.11.	600mm Diameter	each	
22.	Flanged 90° Long Radius Elbow Mild-Steel Epoxy Coated		PN16
22.1.	50mm Diameter	each	
22.2.	80mm Diameter	each	
22.3.	100mm Diameter	each	
22.4.	150mm Diameter	each	
22.5.	200mm Diameter	each	
22.6.	250mm Diameter	each	
22.7.	300mmdiameter	each	
22.8.	350mm Diameter	each	
22.9.	400mm Diameter	each	

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

22.10.	500mm Diameter	each	
22.11.	600mm Diameter	each	
23.	Flanged 45° Wyes Mild-Steel Epoxy Coated		PN16
23.1.	50mm Diameter	each	
23.2.	80mm Diameter	each	
23.3.	100mm Diameter	each	
23.4.	150mm Diameter	each	
23.5.	200mm Diameter	each	
23.6.	250mm Diameter	each	
23.7.	300mmdiameter	each	
23.8.	350mm Diameter	each	
23.9.	400mm Diameter	each	
23.10.	500mm Diameter	each	
23.11.	600mm Diameter	each	
24.	Flanged Equal Tees, (T) Mild-Steel Epoxy Coated		PN16
24.1.	50mm Diameter	each	
24.2.	80mm Diameter	each	
24.3.	100mm Diameter	each	
24.4.	150mm Diameter	each	
24.5.	200mm Diameter	each	
24.6.	250mm Diameter	each	
24.7.	300mmdiameter	each	
24.8.	350mm Diameter	each	
24.9.	400mm Diameter	each	

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

24.10.	500mm Diameter	each	
24.11.	600mm Diameter	each	
25.	Flanged Concentric Reducer, Mild-Steel Epoxy Coated		PN16
25.1.	50mm Diameter	each	
25.2.	80mm Diameter	each	
25.3.	100mm Diameter	each	
25.4.	150mm Diameter	each	
25.5.	200mm Diameter	each	
25.6.	250mm Diameter	each	
25.7.	300mmdiameter	each	
25.8.	350mm Diameter	each	
25.9.	400mm Diameter	each	
25.10.	500mm Diameter	each	
25.11.	600mm Diameter	each	
26.	Flange / Pipe Adaptors		PN16
26.1.	50mm Diameter	each	
26.2.	80mm Diameter	each	
26.3.	100mm Diameter	each	
26.4.	150mm Diameter	each	
26.5.	200mm Diameter	each	
26.6.	250mm Diameter	each	
26.7.	300mmdiameter	each	
26.8.	350mm Diameter	each	
26.9.	400mm Diameter	each	

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

26.10.	500mm Diameter	each	
26.11.	600mm Diameter	each	
26.12.	900mm Diameter	each	
26.13.	1050mm Diameter	each	
26.14.	1200mm Diameter	each	
27.	Double Flanged Mild-Steel Epoxy Coated Pipe (L = 200mm)		PN16
27.1.	50mm Diameter	each	
27.2.	80mm Diameter	each	
27.3.	100mm Diameter	each	
27.4.	150mm Diameter	each	
27.5.	200mm Diameter	each	
27.6.	250mm Diameter	each	
27.7.	300mmdiameter	each	
27.8.	350mm Diameter	each	
27.9.	400mm Diameter	each	
27.10.	500mm Diameter	each	
27.11.	600mm Diameter	each	
28.	Double Flanged Mild-Steel Epoxy Coated Pipe (L = 500mm)		PN16
28.1.	50mm Diameter	each	
28.2.	80mm Diameter	each	
28.3.	100mm Diameter	each	
28.4.	150mm Diameter	each	
28.5.	200mm Diameter	each	
28.6.	250mm Diameter	each	



Contractor



Witness 1



Witness 2



Employer



Witness 1



Witness 2

28.7.	300mmdiameter	each	
28.8.	350mm Diameter	each	
28.9.	400mm Diameter	each	
28.10.	500mm Diameter	each	
28.11.	600mm Diameter	each	
29.	Double Flanged Mild-Steel Epoxy Coated Pipe (L = 500mm)		PN16
29.1.	50mm Diameter	each	
29.2.	80mm Diameter	each	
29.3.	100mm Diameter	each	
29.4.	150mm Diameter	each	
29.5.	200mm Diameter	each	
29.6.	250mm Diameter	each	
29.7.	300mmdiameter	each	
29.8.	350mm Diameter	each	
29.9.	400mm Diameter	each	
29.10.	500mm Diameter	each	
29.11.	600mm Diameter	each	
30.	Double Flanged Mild-Steel Epoxy Coated Pipe (L = 1000mm)		PN16
30.1.	50mm Diameter	each	
30.2.	80mm Diameter	each	
30.3.	100mm Diameter	each	
30.4.	150mm Diameter	each	
30.5.	200mm Diameter	each	
30.6.	250mm Diameter	each	

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

30.7.	300mmdiameter	each	
30.8.	350mm Diameter	each	
30.9.	400mm Diameter	each	
30.10.	500mm Diameter	each	
30.11.	600mm Diameter	each	
31.	Concrete Pipe (L = 1000mm)		
31.1.	50mm Diameter	each	
31.2.	80mm Diameter	each	
31.3.	100mm Diameter	each	
31.4.	150mm Diameter	each	
31.5.	200mm Diameter	each	
31.6.	250mm Diameter	each	
31.7.	300mmdiameter	each	
31.8.	350mm Diameter	each	
31.9.	400mm Diameter	each	
31.10.	500mm Diameter	each	
31.11.	600mm Diameter	each	
31.12.	1050mm Diameter	each	
31.13.	1200mm Diameter	each	
32.	Pipe Plugs		
32.1.	Pipe Plug DN80 (PN16)	each	
32.2.	Pipe Plug DN100 (PN16)	each	
32.3.	Pipe Plug DN150 (PN16)	each	
32.4.	Pipe Plug DN200 (PN16)	each	

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

32.5.	Pipe Plug DN250 (PN16)	each	
32.6.	Pipe Plug DN300 (PN16)	each	
32.7.	Pipe Plug DN350 (PN16)	each	
32.8.	Pipe Plug DN400 (PN16)	each	
32.9.	Pipe Plug DN450 (PN16)	each	
32.10.	Pipe Plug DN500 (PN16)	each	
32.11.	Pipe Plug DN600 (PN16)	each	
32.12.	Pipe Plug DN700 (PN16)	each	
32.13.	Pipe Plug DN800 (PN16)	each	
32.14.	Pipe Plug DN900 (PN16)	each	
32.15.	Pipe Plug DN1050 (PN16)	each	
32.16.	Pipe Plug DN1200 (PN16)	each	

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

4.2. GALVANIZED BOLTS

ITEM	DESCRIPTION	UOM	RATE (VAT Incl.)
	Galvanized Bolts		Bolts/Setscrews Hex Head (Galvanized)
1	M6 x 30	each	
2	M6 x 50	each	
3	M6 x 70	each	
4	M6 x 80	each	
5	M8 x 30	each	
6	M8 x 50	each	
7	M8 x 70	each	
8	M8 x 80	each	
9	M8 x 100	each	
10	M8 x 120	each	
11	M10 x 30	each	
12	M10 x 50	each	
13	M10 x 70	each	
14	M10 x 80	each	
15	M10 x 100	each	
16	M10 x 120	each	
17	M12 x 30	each	
18	M12 x 50	each	
19	M12 x 70	each	
20	M12 x 80	each	
21	M12 x 100	each	

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

22	M12 x 120	each	
23	M14 x 30	each	
24	M14 x 50	each	
25	M14 x 70	each	
26	M14 x 80	each	
27	M14 x 100	each	
28	M14 x 120	each	
29	M16 x 30	each	
30	M16 x 50	each	
31	M16 x 70	each	
32	M16 x 80	each	
33	M16 x 100	each	
34	M16 x 120	each	
35	M16 x 150	each	
36	M16 x 200	each	
37	M18 x 30	each	
38	M18 x 50	each	
39	M18 x 70	each	
40	M18 x 80	each	
41	M18 x 100	each	
42	M18 x 120	each	
43	M18 x 150	each	
44	M18 x 200	each	
45	M20 x 50	each	

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

46	M20 x 70	each	
47	M20 x 80	each	
48	M20 x 100	each	
49	M20 x 120	each	
50	M20 x 150	each	
51	M20 x 200	each	
52	M24 x 50	each	
53	M24 x 80	each	
54	M24 x 100	each	
55	M24 x 120	each	
56	M24 x 150	each	
57	M24 x 180	each	
58	M24 x 200	each	
59	M30 x 80	each	
60	M30 x 100	each	
61	M30 x 120	each	
62	M30 x 150	each	
63	M30 x 180	each	
64	M30 x 200	each	

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

4.3. GALVANIZED NUTS

ITEM	DESCRIPTION	UOM	RATE (VAT Incl.)
	Galvanized Nuts		Nuts (Galvanized)
1	M6 x 30	each	
2	M6 x 50	each	
3	M6 x 70	each	
4	M6 x 80	each	
5	M8 x 30	each	
6	M8 x 50	each	
7	M8 x 70	each	
8	M8 x 80	each	
9	M8 x 100	each	
10	M8 x 120	each	
11	M10 x 30	each	
12	M10 x 50	each	
13	M10 x 70	each	
14	M10 x 80	each	
15	M10 x 100	each	
16	M10 x 120	each	
17	M12 x 30	each	
18	M12 x 50	each	
19	M12 x 70	each	
20	M12 x 80	each	
21	M12 x 100	each	

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

22	M12 x 120	each	
23	M14 x 30	each	
24	M14 x 50	each	
25	M14 x 70	each	
26	M14 x 80	each	
27	M14 x 100	each	
28	M14 x 120	each	
29	M16 x 30	each	
30	M16 x 50	each	
31	M16 x 70	each	
32	M16 x 80	each	
33	M16 x 100	each	
34	M16 x 120	each	
35	M16 x 150	each	
36	M16 x 200	each	
37	M18 x 30	each	
38	M18 x 50	each	
39	M18 x 70	each	
40	M18 x 80	each	
41	M18 x 100	each	
42	M18 x 120	each	
43	M18 x 150	each	
44	M18 x 200	each	
45	M20 x 50	each	

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

46	M20 x 70	each	
47	M20 x 80	each	
48	M20 x 100	each	
49	M20 x 120	each	
50	M20 x 150	each	
51	M20 x 200	each	
52	M24 x 50	each	
53	M24 x 80	each	
54	M24 x 100	each	
55	M24 x 120	each	
56	M24 x 150	each	
57	M24 x 180	each	
58	M24 x 200	each	
59	M30 x 80	each	
60	M30 x 100	each	
61	M30 x 120	each	
62	M30 x 150	each	
63	M30 x 180	each	
64	M30 x 200	each	

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

4.4. GALVANIZED WASHERS

ITEM	DESCRIPTION	UOM	RATE (VAT Incl.)
	Galvanized Washers		Washers (Galvanized)
1	M6 x 30	each	
2	M6 x 50	each	
3	M6 x 70	each	
4	M6 x 80	each	
5	M8 x 30	each	
6	M8 x 50	each	
7	M8 x 70	each	
8	M8 x 80	each	
9	M8 x 100	each	
10	M8 x 120	each	
11	M10 x 30	each	
12	M10 x 50	each	
13	M10 x 70	each	
14	M10 x 80	each	
15	M10 x 100	each	
16	M10 x 120	each	
17	M12 x 30	each	
18	M12 x 50	each	
19	M12 x 70	each	
20	M12 x 80	each	
21	M12 x 100	each	

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

22	M12 x 120	each	
23	M14 x 30	each	
24	M14 x 50	each	
25	M14 x 70	each	
26	M14 x 80	each	
27	M14 x 100	each	
28	M14 x 120	each	
29	M16 x 30	each	
30	M16 x 50	each	
31	M16 x 70	each	
32	M16 x 80	each	
33	M16 x 100	each	
34	M16 x 120	each	
35	M16 x 150	each	
36	M16 x 200	each	
37	M18 x 30	each	
38	M18 x 50	each	
39	M18 x 70	each	
40	M18 x 80	each	
41	M18 x 100	each	
42	M18 x 120	each	
43	M18 x 150	each	
44	M18 x 200	each	
45	M20 x 50	each	

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

46	M20 x 70	each	
47	M20 x 80	each	
48	M20 x 100	each	
49	M20 x 120	each	
50	M20 x 150	each	
51	M20 x 200	each	
52	M24 x 50	each	
53	M24 x 80	each	
54	M24 x 100	each	
55	M24 x 120	each	
56	M24 x 150	each	
57	M24 x 180	each	
58	M24 x 200	each	
59	M30 x 80	each	
60	M30 x 100	each	
61	M30 x 120	each	
62	M30 x 150	each	
63	M30 x 180	each	
64	M30 x 200	each	

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

4.5. STAINLESS STEEL BOLTS

ITEM	DESCRIPTION	UOM	RATE (VAT Incl.)
	Stainless Steel Bolts		Bolts/Setscrews Hex Head (Stainless Steel)
1	M6 x 30	each	
2	M6 x 50	each	
3	M6 x 70	each	
4	M6 x 80	each	
5	M8 x 30	each	
6	M8 x 50	each	
7	M8 x 70	each	
8	M8 x 80	each	
9	M8 x 100	each	
10	M8 x 120	each	
11	M10 x 30	each	
12	M10 x 50	each	
13	M10 x 70	each	
14	M10 x 80	each	
15	M10 x 100	each	
16	M10 x 120	each	
17	M12 x 30	each	
18	M12 x 50	each	
19	M12 x 70	each	
20	M12 x 80	each	
21	M12 x 100	each	

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

22	M12 x 120	each	
23	M14 x 30	each	
24	M14 x 50	each	
25	M14 x 70	each	
26	M14 x 80	each	
27	M14 x 100	each	
28	M14 x 120	each	
29	M16 x 30	each	
30	M16 x 50	each	
31	M16 x 70	each	
32	M16 x 80	each	
33	M16 x 100	each	
34	M16 x 120	each	
35	M16 x 150	each	
36	M16 x 200	each	
37	M18 x 30	each	
38	M18 x 50	each	
39	M18 x 70	each	
40	M18 x 80	each	
41	M18 x 100	each	
42	M18 x 120	each	
43	M18 x 150	each	
44	M18 x 200	each	
45	M20 x 50	each	

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

46	M20 x 70	each	
47	M20 x 80	each	
48	M20 x 100	each	
49	M20 x 120	each	
50	M20 x 150	each	
51	M20 x 200	each	
52	M24 x 50	each	
53	M24 x 80	each	
54	M24 x 100	each	
55	M24 x 120	each	
56	M24 x 150	each	
57	M24 x 180	each	
58	M24 x 200	each	
59	M30 x 80	each	
60	M30 x 100	each	
61	M30 x 120	each	
62	M30 x 150	each	
63	M30 x 180	each	
64	M30 x 200	each	

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

4.6. STAINLESS STEEL NUTS

ITEM	DESCRIPTION	UOM	RATE (VAT Incl.)
	Stainless Steel Nuts		Nuts (Stainless Steel)
1	M6 x 30	each	
2	M6 x 50	each	
3	M6 x 70	each	
4	M6 x 80	each	
5	M8 x 30	each	
6	M8 x 50	each	
7	M8 x 70	each	
8	M8 x 80	each	
9	M8 x 100	each	
10	M8 x 120	each	
11	M10 x 30	each	
12	M10 x 50	each	
13	M10 x 70	each	
14	M10 x 80	each	
15	M10 x 100	each	
16	M10 x 120	each	
17	M12 x 30	each	
18	M12 x 50	each	
19	M12 x 70	each	
20	M12 x 80	each	
21	M12 x 100	each	

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

22	M12 x 120	each	
23	M14 x 30	each	
24	M14 x 50	each	
25	M14 x 70	each	
26	M14 x 80	each	
27	M14 x 100	each	
28	M14 x 120	each	
29	M16 x 30	each	
30	M16 x 50	each	
31	M16 x 70	each	
32	M16 x 80	each	
33	M16 x 100	each	
34	M16 x 120	each	
35	M16 x 150	each	
36	M16 x 200	each	
37	M18 x 30	each	
38	M18 x 50	each	
39	M18 x 70	each	
40	M18 x 80	each	
41	M18 x 100	each	
42	M18 x 120	each	
43	M18 x 150	each	
44	M18 x 200	each	
45	M20 x 50	each	

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

46	M20 x 70	each	
47	M20 x 80	each	
48	M20 x 100	each	
49	M20 x 120	each	
50	M20 x 150	each	
51	M20 x 200	each	
52	M24 x 50	each	
53	M24 x 80	each	
54	M24 x 100	each	
55	M24 x 120	each	
56	M24 x 150	each	
57	M24 x 180	each	
58	M24 x 200	each	
59	M30 x 80	each	
60	M30 x 100	each	
61	M30 x 120	each	
62	M30 x 150	each	
63	M30 x 180	each	
64	M30 x 200	each	

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

4.7. STAINLESS STEEL Washers

ITEM	DESCRIPTION	UOM	RATE (VAT Incl.)
	Stainless Steel Washers		Washers (Stainless Steel)
1	M6 x 30	each	
2	M6 x 50	each	
3	M6 x 70	each	
4	M6 x 80	each	
5	M8 x 30	each	
6	M8 x 50	each	
7	M8 x 70	each	
8	M8 x 80	each	
9	M8 x 100	each	
10	M8 x 120	each	
11	M10 x 30	each	
12	M10 x 50	each	
13	M10 x 70	each	
14	M10 x 80	each	
15	M10 x 100	each	
16	M10 x 120	each	
17	M12 x 30	each	
18	M12 x 50	each	
19	M12 x 70	each	
20	M12 x 80	each	
21	M12 x 100	each	

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

22	M12 x 120	each	
23	M14 x 30	each	
24	M14 x 50	each	
25	M14 x 70	each	
26	M14 x 80	each	
27	M14 x 100	each	
28	M14 x 120	each	
29	M16 x 30	each	
30	M16 x 50	each	
31	M16 x 70	each	
32	M16 x 80	each	
33	M16 x 100	each	
34	M16 x 120	each	
35	M16 x 150	each	
36	M16 x 200	each	
37	M18 x 30	each	
38	M18 x 50	each	
39	M18 x 70	each	
40	M18 x 80	each	
41	M18 x 100	each	
42	M18 x 120	each	
43	M18 x 150	each	
44	M18 x 200	each	
45	M20 x 50	each	

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

46	M20 x 70	each	
47	M20 x 80	each	
48	M20 x 100	each	
49	M20 x 120	each	
50	M20 x 150	each	
51	M20 x 200	each	
52	M24 x 50	each	
53	M24 x 80	each	
54	M24 x 100	each	
55	M24 x 120	each	
56	M24 x 150	each	
57	M24 x 180	each	
58	M24 x 200	each	
59	M30 x 80	each	
60	M30 x 100	each	
61	M30 x 120	each	
62	M30 x 150	each	
63	M30 x 180	each	
64	M30 x 200	each	

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

4.8. NITRILE RUBBER GASKET & FLANGES

ITEM	DESCRIPTION	UOM	RATE (VAT Incl.)
	NITRILE RUBBER GASKET & FLANGES SUPPLY: and DELIVERY - including double handling if stored, pre- installation activities, quality assurance, modifications and providing required certification as per this contract.		
1	1.5mm thick (1200mm Width)	Per Roll	
2	3mm thick (1200mm Width)	Per Roll	
3	4.5mm thick (1200mm Width)	Per Roll	
4	6mm thick (1200mm Width)	Per Roll	
5	8mm thick (1200mm Width)	Per Roll	
6	10mm thick (1200mm Width)	Per Roll	

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

4.9. MILD STEEL FLANGES TABLE D

ITEM	DESCRIPTION	UOM	RATE (VAT Incl.)
	MILD STEEL PIPE FLANGES (ELECTROPLATED) SUPPLY: and DELIVERY - including double handling if stored, pre- installation activities, quality assurance, modifications and providing required certification as per this contract.		Table D
1	50mm Diameter	each	
2	80mm Diameter	each	
3	100mm Diameter	each	
4	150mm Diameter	each	
5	200mm Diameter	each	
6	250mm Diameter	each	
7	300mmdiameter	each	
8	350mm Diameter	each	
9	400mm Diameter	each	
10	500mm Diameter	each	
11	600mm Diameter	each	

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

4.10. MILD STEEL FLANGES TABLE 1000/3

ITEM	DESCRIPTION	UOM	RATE (VAT Incl.)
	MILD STEEL PIPE FLANGES (ELECTROPLATED) SUPPLY: and DELIVERY - including double handling if stored, pre- installation activities, quality assurance, modifications and providing required certification as per this contract.		Table 1000/3
1	50mm Diameter	each	
2	80mm Diameter	each	
3	100mm Diameter	each	
4	150mm Diameter	each	
5	200mm Diameter	each	
6	250mm Diameter	each	
7	300mmdiameter	each	
8	350mm Diameter	each	
9	400mm Diameter	each	
10	500mm Diameter	each	
11	600mm Diameter	each	

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

4.11. MILD STEEL FLANGES TABLE 1600/3

ITEM	DESCRIPTION	UOM	RATE (VAT Incl.)
	MILD STEEL PIPE FLANGES (ELECTROPLATED) SUPPLY: and DELIVERY - including double handling if stored, pre- installation activities, quality assurance, modifications and providing required certification as per this contract.		Table 1600/3
1	50mm Diameter	each	
2	80mm Diameter	each	
3	100mm Diameter	each	
4	150mm Diameter	each	
5	200mm Diameter	each	
6	250mm Diameter	each	
7	300mmdiameter	each	
8	350mm Diameter	each	
9	400mm Diameter	each	
10	500mm Diameter	each	
11	600mm Diameter	each	

Contractor

Witness 1

Witness 2

Employer

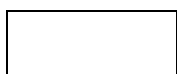
Witness 1

Witness 2

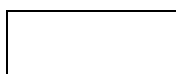
5. ELECTRICAL WORKS

5.1. ELECTRICAL CABLES

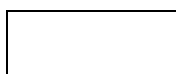
ITEM	DESCRIPTION	UOM	RATE (VAT Incl.)
	SUPPLY and DELIVERY - including double handling if stored, pre-installation activities, quality assurance, modifications and providing required certification as per this contract.		
1	1.5mm ² x 4 core SWA Cable including termination kits	Metre	
2	2.5mm ² x 4 core SWA Cable including termination kits	Metre	
3	4mm ² x 4 core SWA Cable including termination kits	Metre	
4	6mm ² x 4 core SWA Cable including termination kits	Metre	
5	10mm ² x 4 core SWA Cable including termination kits	Metre	
6	16mm ² x 4 core SWA Cable including termination kits	Metre	
7	25mm ² x 4 core SWA Cable including termination kits	Metre	
8	35mm ² x 4 core SWA Cable including termination kits	Metre	
9	50mm ² x 4 core SWA Cable including termination kits	Metre	
10	70mm ² x 4 core SWA Cable including termination kits	Metre	
11	95mm ² x 4 core SWA Cable including termination kits	Metre	
12	120mm ² x 4 core SWA Cable including termination kits	Metre	
13	185mm ² x 4 core SWA Cable including termination kits	Metre	
14	1.5mm ² x 7 core SWA Cable including termination kits	Metre	
15	2.5mm ² x 7 core SWA Cable including termination kits	Metre	
16	1.5mm ² x 4 core Trailing Cable including termination kits	Metre	
17	2.5mm ² x 4 core Trailing Cable including termination kits	Metre	
18	10mm ² x 4 core Trailing Cable including termination kits	Metre	
19	16mm ² x 4 core Trailing Cable including termination kits	Metre	



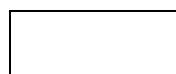
Contractor



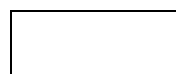
Witness 1



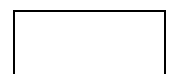
Witness 2



Employer



Witness 1



Witness 2

20	25mm ² x 4 core Trailing Cable including termination kits	Metre	
21	35mm ² x 4 core Trailing Cable including termination kits	Metre	
22	50mm ² x 4 core Trailing Cable including termination kits	Metre	
23	70mm ² x 4 core Trailing Cable including termination kits	Metre	
24	95mm ² x 4 core Trailing Cable including termination kits	Metre	
25	120mm ² x 4 core Trailing Cable including termination kits	Metre	
26	185mm ² x 4 core Trailing Cable including termination kits	Metre	
27	1mm ² x 2 pair twisted Screened SWA Cable including termination kits	Metre	
28	1mm ² x 4 pair twisted Screened SWA Cable including termination kits	Metre	
29	1mm ² x 12 pair twisted Screened SWA Cable including termination kits	Metre	
30	10mm ² x Bare Copper Earth Cable including termination kits	Metre	
31	16mm ² x Bare Copper Earth Cable including termination kits	Metre	
32	70mm ² x Bare Copper Earth Cable including termination kits	Metre	
33	95mm ² x Bare Copper Earth Cable including termination kits	Metre	
34	10mm ² x Insulated Earth Cable including termination kits	Metre	
35	16mm ² x Insulated Earth Cable including termination kits	Metre	
36	70mm ² x Insulated Earth Cable including termination kits	Metre	
37	95mm ² x Insulated Earth Cable including termination kits	Metre	
38	Fiber Optic Cable Four Pair Multimode Suitable For Underground Installation	Metre	

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

5.2. ELECTRICAL CONTROL PANELS

ITEM	DESCRIPTION	UOM	RATE (Vat.Incl)
	Each standard panel consists of provision for telemetry, isolation, monitoring and control.		
1.	2.4 Kw Electrical Panel	Each	
2.	5 Kw Electrical Panel	Each	
3.	7.5 Kw Electrical Panel	Each	
4.	9 Kw Electrical Panel	Each	
5.	11 Kw Electrical Panel	Each	
6.	13 Kw Electrical Panel	Each	
7.	15 Kw Electrical Panel	Each	
8.	18 Kw Electrical Panel	Each	
9.	22 Kw Electrical Panel	Each	
10.	30 Kw Electrical Panel	Each	
11.	32 Kw Electrical Panel	Each	
12.	37 Kw Electrical Panel	Each	
13.	45 Kw Electrical Panel	Each	
14.	55 Kw Electrical Panel	Each	



Contractor



Witness 1



Witness 2



Employer



Witness 1



Witness 2

6. PROVISIONAL SUM

Description	Amount (incl. VAT)
*Provisional Sum subject to approval	R15 000 000.00
Administrative fee	R500.00

- a. Provisional sum has been included in the pricing schedule and will only be applicable where related goods are required that are not catered for in the pricing schedule.
- b. Items will be on an as-and-when-required basis, subject to prior approval.
- c. ERWAT may request a quote from the appointed bidder/s (where applicable) for the items/services required.
- d. ERWAT reserves the right to verify market-related costs, which includes the sourcing of alternative quotation for the items/services in relation to actual cost verification.
- e. Payments for such items/services will be on actuals, plus the administrative fee as listed in the pricing schedule. Please note that the administrative fee will only be applicable to items not listed in the pricing schedule, limited to per order/ per job, which will be deducted from the provisional sum.
- f. The supporting documentation that must be supplied is the quotation from the appointed company or third-party supplier.
- g. The provisional sum value is valid for the total contract period.

NB. Warranty will take effect from the date of handover.

I, the undersigned, the authorised designated signatory, undertake to carry out the works in accordance with the conditions of contract, the specifications for the tender sum as indicated and within the time for completion as specified in the Contract.

BIDDER'S name: _____

BIDDER'S signature: _____ Date: _____

Name of Firm: _____

Address _____

Telephone number: _____

Fax Number: _____

Cellular number: _____

E Mail Address: _____

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

LIST OF IMPORTED ITEMS

Contractors to list all items which are not solely South African manufactured.

ITEM	DESCRIPTION	R VALUE	ROE
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2



**APPOINTMENT OF SERVICE PROVIDER/S FOR THE
SUPPLY, DELIVERY AND INSTALLATION OF PUMPS AT
ERWAT WASTEWATER CARE WORKS ON 'AS AND WHEN
REQUIRED' BASIS FOR A PERIOD OF THIRTY-SIX (36)
MONTHS**

C3 SCOPE OF WORK

DETAILED CONTENTS (VOLUME 3)

PART C3 SCOPE OF WORKS

C3.1 Description of works:

- C3.1.1 Background
- C3.1.2 General and Mandatory Requirements
- C3.1.3 Staff Complement
- C3.1.4 Extent of the Works
- C3.1.5 Datasheet

C3.2 Engineering

C3.3 Construction

C3.4 Management of the works

C3.4 Health and Safety

C3.6 Environmental Management during Construction

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

DESCRIPTION OF THE WORKS

C3.1.1 Background

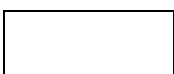
ERWAT (Ekurhuleni Water Care Company) various pump systems with various pumps installed to recirculate and transfer various flows. Each of these pump motors are connected to the motor control panel which is inside the pump system connected by means of electrical cables and other related auxiliaries. The mentioned pumping systems were designed based on the conditions which were prevalent two decades ago, thus, these systems prove to be inefficient in today's conditions which might be due to an increase in population in the surrounding areas both residentially and industrially, state of the equipment, and other changes in operational functions.

Thus, ERWAT is establishing a Framework Agreement for the refurbishment and replacement of the pumps, the Framework Agreement shall follow the standard definition and conditions of Framework Agreements as contained in the National Treasury documents for Infrastructure Procurement and Delivery Management (SIPDM) and CIDB Practice Note 15. The Employer does not bind itself to the Service Providers to issue a minimum or maximum quantum of work/services or fee value of work/services during the term of the Framework Agreement, therefore when the Framework Agreement is awarded or concluded it shall have a zero-contract price or zero-volume of specified works/services attached. Emphasis is made on CIDB Practice Note 15 (Synopsis and Introduction), that the CIDB grading should not be understood as a commitment to a minimum quantum of work equal to the lower limit of the CIDB grade applicable to this contract. The issue of orders will be subject to budget availability and other factors that may influence prioritisation of services to the client during the term of the agreement. The Service Provider shall note that the intention of the Employer is to set up a Framework Agreement for a specific contract term to ensure that as-and-when the Employer requires services scoped in this contract; the Service Provider is in position, without delay to render such services.

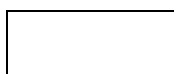
C3.1.2 General and Mandatory Requirements

C3.1.2.1 General Requirements

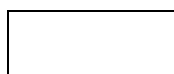
- a. Site induction training has to be completed before any work can be undertaken. (both general and site specific)
- b. The contractor must comply with the ERWAT Permit to Work and Safe operation procedures.
- c. All the relevant work permits, and authorization has to be obtained before any work can be undertaken.
- d. All work done and equipment supplied has to be in accordance with the applicable standards as listed in this document.
- e. An electrical certificate of compliance must be issued for all electrical work done.
- f. Proposal for any modification or upgrades requirements to electrical systems must be approved before any work can commence.
- g. Electrical general arrangement, schematic and single line diagram must be submitted for approval before the commencement of work on all VSD and soft starter panels. As well as the data sheets on all major components to be used.
- h. No work shall be undertaken without an official purchase order or written confirmation via e-mail in case of an emergency from the designated ERWAT representative.
- i. No equipment may be removed from site without written permission from the relevant plant manager.
- j. The installation of any equipment shall include the putting back into operation, testing, special testing (if required) and adjustments on the equipment.
- k. A project and quality control plan will be required for any installation of equipment.
- l. All the required tools, consumables, testing facilities, and other requirements to perform the work as



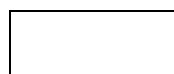
Contractor



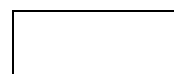
Witness 1



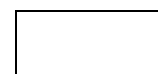
Witness 2



Employer



Witness 1








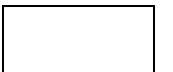
Witness 2

- per the Contract shall be provided by the contractor.
- m. ERWAT reserves the right to hold the contractor responsible for any equipment that will be damaged due to the contractor’s negligence or poor workmanship.
- n. The Contract is for a duration of **Thirty-Six 36 (No.) Calendar Months**.
- o. Prices shall be FIXED and FIRM for the first 12 months of the Contract. Price increments will be based on MBD 3.2 pricing structure annually on the anniversary of this tender.
- p. ALL new Equipment and newly supplied parts shall carry A MINIMUM twelve (12 No.) calendar months WARRANTY from date of acceptance by ERWAT representative.

C3.1.2.2 Mandatory Requirements

Scope Related Information and Documentation Required:		
Please ensure that the following supporting documents are attached to your Bid Document. Please note that bidders will not be evaluated further if they do not provide evidence confirming compliance with any of the specified mandatory requirements. ERWAT reserves the right to verify supporting documents.		
Item	Description	Provide Supporting documents for the following:
1.	CIDB Rating of 8ME Class or Higher Class	Bidders shall submit proof of Current Registration. (at the time of submission, the document should be in good standing and not expired). ERWAT reserves the right to verify the validity of the submitted proof of evidence.
2.	Construction Project Manager (Professional Registration SACPCMP)	<ul style="list-style-type: none"> • Minimum supporting qualification NQF Level 7 (bachelor’s degree or equivalent) in Mechanical Engineering or in Construction Management • Valid Professional registration certificate with SACPCMP.
	Site Engineer/Agent	<ul style="list-style-type: none"> • Minimum supporting qualification NQF Level 7 (bachelor’s degree or equivalent) in Mechanical Engineering • Valid Professional registration certificate with ECSA as a PrEng/PrTech.
	Construction Health and Safety Officer or Manager (Professional Registration SACPCMP)	<ul style="list-style-type: none"> • Minimum supporting qualification NQF Level 6 (National Diploma or equivalent) in Safety Management or Environmental Studies • Valid of Professional registration certificate with SACPCMP.
	Fitter	Trade Test certificate, with QCTO accreditation.
	Rigger	Trade Test certificate, with QCTO accreditation.
	Electrician	Trade Test certificate, with QCTO accreditation.

C3.1.3 Key Staff Complement

					
<i>Contractor</i>	<i>Witness 1</i>	<i>Witness 2</i>	<i>Employer</i>	<i>Witness 1</i>	<i>Witness 2</i>

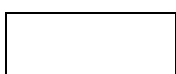
The Service Provider shall be required to have the following staff complement available for the duration of this contract and each project member shall have the relevant experience pertaining to the scope of the. All labor costs related to the execution of the work shall be deemed included in the rates for items in the pricing schedule. It shall be noted that this section is an integral part of the scope of work and shall be implemented at the Service Level Agreement (SLA) stage.

NO	Staff Member	Qualification and Professional Registration
1.	Construction Project Manager (Professional Registration SACPCMP)	<ul style="list-style-type: none"> • Minimum supporting qualification NQF Level 7 (Bachelor's Degree or equivalent) in Mechanical Engineering or in Construction Management • Valid Professional registration certificate with SACPCMP.
2.	Site Engineer /Agent(Professional Registration ECSA)	<ul style="list-style-type: none"> • Minimum supporting qualification NQF Level 7 (Bachelor's Degree or equivalent) in Mechanical Engineering • Valid Professional registration certificate with ECSA as a PrEng/PrTech.
3.	Construction Health and Safety Officer or Manager or Manager (Professional Registration SACPCMP)	<ul style="list-style-type: none"> • Minimum supporting qualification NQF Level 6 (National Diploma or equivalent) in Safety Management or Environmental Studies • Valid of Professional registration certificate with SACPCMP.
4.	Fitter	Trade Test certificate, with QCTO accreditation.
5.	Rigger	Trade Test certificate, with QCTO accreditation.
6.	Electrician	Trade Test certificate, with QCTO accreditation.

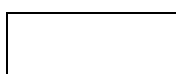
C3.1.4 Extent of the Works

This is a Framework contract for the supply, delivery and installation of various pumps together with related or complementary equipment or works necessary to successfully deliver work. The Scope of Work for this framework contract includes all the scope that is adequately defined in this contract as well as the scope that could not be sufficiently defined due to certain limitations such as old equipment that is outdated, augmented equipment, fabricated equipment, equipment with no as-built or available technical specification, equipment that is complimentary to the installations but not regularly required, etc.

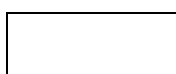
The Contractor will be required to perform (but not limited to:) the supply, delivery and installation work associated with this project, including the supply of selected equipment and items as detailed within the schedule of quantities/rates. The supply of all such equipment and or components must fully comply with the specification contained in this document or the specifications to be provided by ERWAT in the case of undefined scope of work; and must be approved by ERWAT. This scope of work shall include the furnishing of all labour, material and services for the Manufacturing, Factory Assessment Testing, Supply, Delivery, Installation, Works Inspection, Testing, Pre-commissioning, Commissioning Assistance and Rectification of Defects within the Warranty period of twelve (12 No.) months per section undertaken.



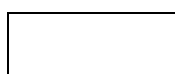
Contractor



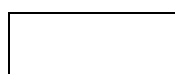
Witness 1



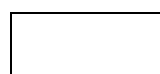
Witness 2



Employer



Witness 1



Witness 2

1. The Contractor's Proposal shall include the following components as a minimum requirement (once awarded):
 - a. Plans indicating the General Layout of the Works
 - b. Description and/or sketches/drawings of Mechanical and Electrical equipment
 - c. Quality Assurance system for all aspects of the work

2. The Works described include all works required for the manufacture, supply, installation and commissioning of new pumping equipment as and when required as follows:
 - a. Types of pumps shall include but not be limited to the following:
 - (i) Self-Priming Pumps
 - (ii) Submersible Pumps
 - (iii) Immersible Pumps
 - (iv) Progressive Cavity Pumps
 - (v) Propeller Pumps
 - (vi) End Suction Pumps
 - (vii) Submersible Mixers
 - (viii) Mobile Diesel Pumps
 - (ix) Auxiliaries

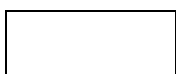
 - b. Site Test for each category of pumps
Site Test activity shall include labour, transportation or direct and indirect costs including the following, as a MINIMUM:
 - (i) Pump output pressure test.
 - (ii) Flow test using a suitable clap on flow meter.
 - (iii) Pump vibration test.
 - (iv) Pump running current test.

 - c. Isolate and remove the old pumps including;
 - (i) (The disconnection of electrical cables.
 - (ii) Isolation of valves, pipes and other related auxiliaries.

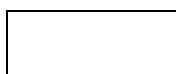
 - d. Measurements and sizing of the equipment. Upon appointment Contractor to confirm flow, pressure head, application and solids handling requirements per section allocated, before proceeding with the ordering of the new pump(s) as per the Bill of Quantities.

 - e. Procuring new equipment for the project as per the Bill of Quantities.

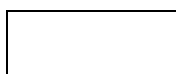
 - f. The Contractor shall be fully responsible for the complete pump installation including the alignment of the pumps/electric motors (even though the electric motors for Self-Priming and End-Suction Pumps will supplied by others). As such, the contractor shall also supply pulleys, belts, keys and couplings for both drive-ends.



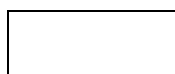
Contractor



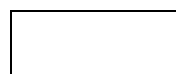
Witness 1



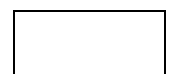
Witness 2



Employer



Witness 1



Witness 2

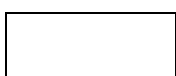
- g. The Contractor shall be fully responsible for connecting the electrical cables from the existing or new electric motors to the electrical panel (starters or variable speed drives).
- h. Production of the drawings prior and post the installation in the listed formats (PFDs, P&IDs, 3D isometric drawings, 2D third angle drawings etc.).
- i. The Pumps shall have a nameplate embedded on its casing body containing the following, which will also be reflected on Operations and Maintenance Manual;
 - o Manufacturer’s Name
 - o Serial/Model Numbers
 - o Pump Type
 - o Flow (l/s) & Head (m)
 - o Pump Rotational Speed (rpm)
 - o Material
 - o Temperature (°C)
- j. And any other additional information
- k. Draft an operating philosophy of the newly installed pump. (Tailor-Made)
- l. Draft a maintenance philosophy for the newly installed pump. (Tailor-Made)
- m. Store as per instruction of the ERWAT Representative(s). NB: All disassemble equipment to be transport to Waterval Water Care Works storage facility.

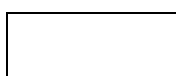
C3.1.4.1 Interpretations

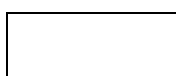
A. Standards and Abbreviations

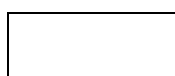
In this Specification, the following abbreviations will apply: These specifications will be applicable to equipment delivered and will not form part of the evaluation process.

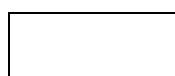
ASTM A304 - 16	Standard Specification for Carbon and Alloy Steel Bars Subject to End-Quench Hardenability Requirements
HRC	Rockwell Hardness measured on the C scale.
EN 1.4057 or AISI 431	Grades for stainless steel
SANS 1091: 2004	National colour standards for paint
SANS 1186-1: 2008	Symbolic Safety Signs Part I: Standards signs and general requirements
SANS 1123:2015	South African pipe flanges standard.
SANS 10103: 2003	The measurement and rating of environmental noise with respect to annoyance and speech communication.
SANS 10140 – 1: 2008	Identification colour marking
SABS 763	General coating thickness
SANS 62	Standard for Medium Duty for mild steel process pipe
SANS 1062: 1985	Pressure gauges
SANS 664/SANS 665	Standards for resilient seal gate valves
SANS 10142 – 1 – 2003	The wiring of premises Part1: Low voltage
SANS 455: 2004	Covered electrodes for the manual arc welding of carbon and carbon manganese steels.
SANS 10044 – 1: 2004	Welding Part I to IV
SANS 10238: 2005	Welding and thermal cutting processes – Health and Safety

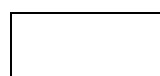

Contractor


Witness 1


Witness 2


Employer


Witness 1


Witness 2

SANS 32 1997/EN 10240: 1997	Internal and/ or external protective coatings for steel tubes – specification for hot-dip galvanized coatings applied in automatic plants
SANS 121: 2000/ISO 1461: 1999	Hot-dip galvanized coatings on fabricated iron and steel articles – Specification and test methods.
SANS 3575: 2008/ISO 3575: 2005	Continuous hot-dip zinc-coated carbon steel sheet of commercial, lock forming and drawings.
SABS 0214	The design, fabrication and inspection of articles for hot-dip galvanising
ISO 9906:2012	Standards for hydraulic performance tests for customers' acceptance of rotodynamic pumps (centrifugal, mixed flow and axial pumps)
EN GJL-250 or ASTMNo35B	Grades for Grey Cast Iron
ISO 3506-1:2009	Mechanical properties of corrosion-resistant stainless-steel fasteners - Part 1: bolts, screws and studs
SANS 1973-8 & SANS 60439-1	Standards low-voltage switchgear and control gear assemblies

C3.1.4.2 Technical Specification

A. Category A: Self-Priming Pumps.

I. Pump Casing:

Self-Priming pump casing shall be cast iron with integral volute scroll. Mounting feet sized to prevent tipping or binding when pump is completely disassembled for maintenance. Fill port cover plate shall be opened after loosening a hand nut/clamp bar assembly. In consideration for safety, hand nut threads must provide slow release of pressure, and the clamp bar shall be retained by detente lugs. A Teflon gasket shall prevent adhesion of the fill port cover to the casing. Casing drain plug to insure complete and rapid draining.

II. Impeller.

Impeller shall be ductile iron, two-vane, semi-open, non-clog, with integral pump out vanes on the back shroud. Impeller shall thread onto the pump shaft and be secured with a lock screw and conical washer. The solid management system should be designed for the management of sanitary wipes, plastic bags, feathers, hair, sludge, and all other types of stringy solids. This is shall be in form of a cutting ring with sharp edges fixed in the impeller chamber opposite the impeller.

III. Mechanical Seal.

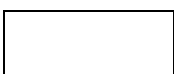
Shaft seal shall be cartridge oil lubricated mechanical type. The stationary and rotating seal faces shall be tungsten titanium carbide alloy. The stationary seal seat shall be double floating by virtue of a dual O-ring design; an external O-ring secures the stationary seat to the seal plate, and an internal O-ring holds the faces in alignment during periods of mechanical or hydraulic shock. Elastomers shall be a synthetic rubber and fluoropolymer; cage and spring to be stainless steel. Seal shall be oil lubricated from a dedicated reservoir.

IV. Shaft.

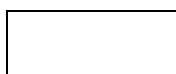
The Self-Priming pump shafts shall be manufactured from alloy steel or its equivalent due to its properties like strength, toughness, corrosion resistance and fatigue strength.

V. Pump Rotating Assembly.

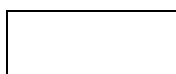
Rotating assembly, which includes impeller, shaft, mechanical shaft seal, lip seals, bearings, seal plate and bearing housing, must be removable as a single unit without disturbing the pump casing or piping. Seal plate and bearing housing shall be cast iron. Separate oil filled cavities, vented to atmosphere,



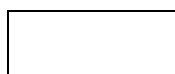
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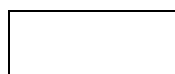
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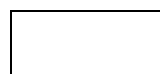
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shall be provided for shaft seal and bearings. Cavities must be cooled by the liquid pumped. Three lip seals will prevent leakage of oil. Seal plate and bearing housing shall be cast iron. Separate oil filled cavities, vented to atmosphere, shall be provided for shaft seal and bearings. Cavities must be cooled by the liquid pumped. Three lip seals will prevent leakage of oil. The bearing cavity shall have an oil level sight gauge and fill plug check valve. The clear sight gauge shall provide easy monitoring of the bearing cavity oil level and condition of oil without removal of the fill plug check valve. The check valve shall vent the cavity but prevent introduction of moist air to the bearings. The seal cavity shall have an oil level sight gauge and fill/vent plug. The clear sight gauge shall provide easy monitoring of the seal cavity oil level and condition of oil without removal of the fill/vent plug. Double lip seal shall provide an atmospheric path providing positive protection of bearings, with capability for external drainage monitoring.

VI. Base Plate.

The base plate shall be manufactured from stainless 304L and its dimensions must suit the currently platform where the new pump will be mounted.

VII. Bearing.

The Bearings shall be anti-friction ball type of proper size and design to withstand all radial and thrust loads expected during normal operation. Bearings shall be oil lubricated from a dedicated reservoir. Pump designs which use the same oil to lubricate the bearings and shaft seal shall not be acceptable.

B. Category B: Submersible Pumps (Wet Installations):

I. Pump Construction.

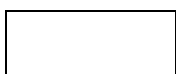
Major pump components shall be of cast iron with smooth surfaces devoid of blow holes or other casting irregularities. All exposed nuts or bolts shall be made of stainless steel A2 according to ISO 3506-1 or ASTM 304 or better. The outer surfaces of the pump shall be protected by suitable painting system including a two-component high-solid top coating. Sealing design shall incorporate metal-to-metal contact between machined surfaces. Pump/Motor unit mating surfaces where watertight sealing is required shall be machined and fitted with Nitrile or Viton rubber O-rings. Rectangular cross section rubber, paper or synthetic gaskets that require specific torque limits to achieve compression shall not be considered as adequate or equal. No secondary sealing compounds, elliptical O-rings, grease or other better devices shall be used.

II. Impeller.

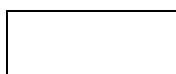
The impeller(s) shall be of semi open multi vane, back-swept leading edge, non-clog design and dynamically balanced. The leading edges shall be horizontal and due to the backswept form, transport any debris to the perimeter of the inlet. The impeller vanes shall be self-cleaned upon each rotation as they pass across a sharp relief groove and shall keep the vane clear of debris, maintaining an unobstructed pumping. The impeller shall have heavily back swept leading edges with a specific angle distribution enabling the capability of handling solids, fibrous materials, heavy sludge and other matter found in wastewater. The clearance between the insert ring and the impeller shall be adjustable.

III. Mechanical Seal.

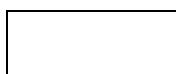
Each pump shall be provided with a positively driven dual, tandem mechanical shaft seal system consisting of two seals, each having an independent spring system. The seal material shall consist of corrosion resistant wolfram carbide (Corrosion resistant tungsten carbide). The seals shall require neither maintenance nor adjustment and shall be capable of operating in either clockwise or counter clockwise direction of rotation without damage or loss of seal function. Should both seals fail and allow fluid to enter the stator housing, an alarm shall stop the pump before the fluid come into contact with the lower bearings, or the stator. The outer primary seal, located between the pump and seal chamber,



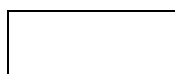
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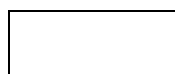
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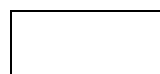
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shall contain one stationary and one positively driven rotating corrosion resistant tungsten-carbide ring. The inner secondary seal, located between the seal chamber and the seal inspection chamber shall be an active seal. The inner seal shall contain one stationary and one positively driven rotating corrosion resistant tungsten-carbide seal ring. The rotating inner seal ring shall have small back-swept grooves laser inscribed upon its face to act as a micro pump as it rotates, returning any fluid that should enter the dry motor chamber back into the lubricant chamber. All seal rings shall be individual solid sintered rings. Each seal interface shall be held in place by its own spring system. The seals shall not depend upon direction of rotation for sealing. Mounting of the lower seal on the impeller hub is not acceptable. Shaft seals without positively driven rotating members or conventional double mechanical seals containing either a common single or double spring acting between the upper and lower seal faces are not acceptable. The seal springs shall be isolated from the pumped media to prevent materials from packing around them, limiting their performance.

Each pump shall be provided with a lubricant chamber for the shaft sealing system. The lubricant chamber shall be designed to prevent overfilling and shall provide capacity for lubricant expansion. The seal lubricant chamber shall have one drain and one inspection plug that are accessible from the exterior of the motor unit. The seal system shall not rely upon the pumped media for lubrication.

In the case of a seal cavity, the area about the exterior of the lower mechanical seal in the cast iron housing shall have cast in an integral concentric spiral groove. This groove shall protect the seals by causing abrasive particulate entering the seal cavity to be forced out away from the seal due to centrifugal action.

The following seal types shall not be considered acceptable or equal to the dual independent seal specified: shaft seals without positively driven rotating members, or conventional double mechanical seals containing either a common single or double spring acting between the upper and lower seal faces. No system requiring a pressure differential to offset pressure and to affect sealing shall be used.

IV. Shaft.

The Pump and motor shaft shall be a solid continuous shaft. The pump shaft is an extension of the motor shaft. Couplings shall not be acceptable. The Shaft shall be manufactured from suitable 316L stainless steel (EN 1.4057 or AISI 431) due to its properties like strength, toughness, corrosion resistance and fatigue strength. Shafts shall be manufactured from alloy steel or its equivalent due to its properties like strength, toughness, corrosion resistance and fatigue strength.

V. Pump Volute.

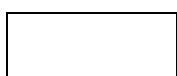
Rotating assembly Pump volute shall be single-piece non-concentric design with smooth passages large enough to pass any solids that may enter the impeller. The insert ring (suction cover) shall be replaceable. Pump volute shall be of cast iron.

VI. Bearing.

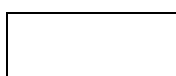
The shaft shall rotate on grease lubricated bearings. The support bearing, provided for radial forces, shall be a rolling bearing. The main bearings shall consist of a double row angular contact ball bearing.

VII. Cable Entry Seal.

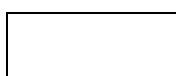
The cable entry seal design shall not require specific torque requirements to ensure a watertight and submersible seal. The cable entry shall consist of dual cylindrical elastomer sleeves, flanked by washers, all having a close tolerance fit against the cable and the cable entry. The sleeves shall be compressed by the cable entry unit, thus providing a strain relief function. The assembly shall permit easy changing of the cable. Epoxies, silicones, or other secondary sealing systems shall not be considered acceptable.



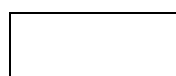
Contractor



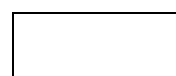
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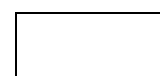
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VIII. Cable Junction Box.

The cable entry junction chamber and motor shall be separated by a feed through type terminal board of non-hygroscopic material, which shall isolate the stator housing from foreign material gaining access through the pump top.

IX. Guide Bars and Guide Chains:

- Stainless steel upper guide bar bracket
- Stainless steel guide bar set (316L)
- Stainless steel lifting chain (316L)

C. Category C: Immersible Pumps (Dry Installation)

I. Pump Construction.

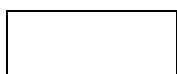
Major pump components shall be of cast iron with smooth surfaces devoid of blow holes or other casting irregularities. All exposed nuts or bolts shall be made of stainless steel A2 according to ISO 3506-1 or ASTM 304 or better. The outer surfaces of the pump shall be protected by suitable painting system including a two-component high-solid top coating. Sealing design shall incorporate metal-to-metal contact between machined surfaces. Pump/Motor unit mating surfaces where watertight sealing is required shall be machined and fitted with Nitrile or Viton rubber O-rings. Rectangular cross section rubber, paper or synthetic gaskets that require specific torque limits to achieve compression shall not be considered as adequate or equal. No secondary sealing compounds, elliptical O-rings, grease or other better devices shall be used.

II. Impeller.

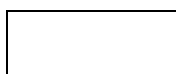
The impeller(s) shall be of semi open multi vane, back-swept leading edge, non-clog design and dynamically balanced. The leading edges shall be horizontal and due to the backswept form, transport any debris to the perimeter of the inlet. The impeller vanes shall be self-cleaned upon each rotation as they pass across a sharp relief groove and shall keep the vane clear of debris, maintaining an unobstructed pumping. The impeller shall have heavily back swept leading edges with a specific angle distribution enabling the capability of handling solids, fibrous materials, heavy sludge and other matter found in wastewater. The clearance between the insert ring and the impeller shall be adjustable.

III. Mechanical Seal.

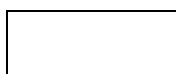
Each pump shall be provided with a positively driven dual, tandem mechanical shaft seal system consisting of two seals, each having an independent spring system. The seal material shall consist of corrosion resistant wolfram carbide (Corrosion resistant tungsten carbide). The seals shall require neither maintenance nor adjustment and shall be capable of operating in either clockwise or counter clockwise direction of rotation without damage or loss of seal function. Should both seals fail and allow fluid to enter the stator housing, an alarm shall stop the pump before the fluid come into contact with the lower bearings, or the stator. The outer primary seal, located between the pump and seal chamber, shall contain one stationary and one positively driven rotating corrosion resistant tungsten-carbide ring. The inner secondary seal, located between the seal chamber and the seal inspection chamber shall be an active seal. The inner seal shall contain one stationary and one positively driven rotating corrosion resistant tungsten-carbide seal ring. The rotating inner seal ring shall have small back-swept grooves laser inscribed upon its face to act as a micro pump as it rotates, returning any fluid that should enter the dry motor chamber back into the lubricant chamber. All seal rings shall be individual solid sintered rings. Each seal interface shall be held in place by its own spring system. The seals shall not depend upon direction of rotation for sealing. Mounting of the lower seal on the impeller hub is not acceptable. Shaft seals without positively driven rotating members or conventional double mechanical seals containing either a common single or double spring acting between the upper and lower seal faces are



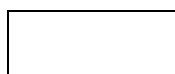
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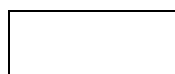
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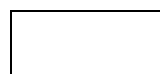
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not acceptable. The seal springs shall be isolated from the pumped media to prevent materials from packing around them, limiting their performance.

Each pump shall be provided with a lubricant chamber for the shaft sealing system. The lubricant chamber shall be designed to prevent overfilling and shall provide capacity for lubricant expansion. The seal lubricant chamber shall have one drain and one inspection plug that are accessible from the exterior of the motor unit. The seal system shall not rely upon the pumped media for lubrication.

In the case of a seal cavity, the area about the exterior of the lower mechanical seal in the cast iron housing shall have cast in an integral concentric spiral groove. This groove shall protect the seals by causing abrasive particulate entering the seal cavity to be forced out away from the seal due to centrifugal action.

The following seal types shall not be considered acceptable or equal to the dual independent seal specified: shaft seals without positively driven rotating members, or conventional double mechanical seals containing either a common single or double spring acting between the upper and lower seal faces. No system requiring a pressure differential to offset pressure and to affect sealing shall be used.

IV. Shaft.

The Pump and motor shaft shall be a solid continuous shaft. The pump shaft is an extension of the motor shaft. Couplings shall not be acceptable. The Shaft shall be manufactured from suitable 316L stainless steel (EN 1.4057 or AISI 431) due to its properties like strength, toughness, corrosion resistance and fatigue strength. Shafts shall be manufactured from AISI 4140 alloy steel or its equivalent due to its properties like strength, toughness, corrosion resistance and fatigue strength.

V. Pump Volute.

Rotating assembly Pump volute shall be single-piece non-concentric design with smooth passages large enough to pass any solids that may enter the impeller. The insert ring (suction cover) shall be replaceable. Pump volute shall be of cast iron.

VI. Bearing.

The shaft shall rotate on grease lubricated bearings. The support bearing, provided for radial forces, shall be a rolling bearing. The main bearings shall consist of a double row angular contact ball bearing.

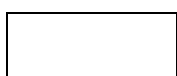
VII. Cable Entry Seal.

The cable entry seal design shall not require specific torque requirements to ensure a watertight and submersible seal. The cable entry shall consist of dual cylindrical elastomer sleeves, flanked by washers, all having a close tolerance fit against the cable and the cable entry. The sleeves shall be compressed by the cable entry unit, thus providing a strain relief function. The assembly shall permit easy changing of the cable. Epoxies, silicones, or other secondary sealing systems shall not be considered acceptable.

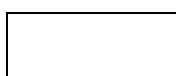
VIII. Cable Junction Box.

The cable entry junction chamber and motor shall be separated by a feed through type terminal board of non-hygroscopic material, which shall isolate the stator housing from foreign material gaining access through the pump top.

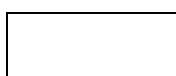
- Stainless steel upper guide bar bracket
- Stainless steel guide bar set (316L)
- Stainless steel lifting chain (316L)



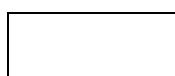
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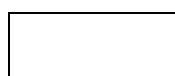
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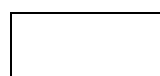
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D. Category D: Progressive Cavity Pumps.

I. Pump Casing.

Major Suction and discharge housings are to be manufactured from GG25 cast or approved material suitable for the pumped liquid.

Casings shall be designed for not less than the following working pressures or 1.5 times the actual working total discharge pressure, whichever is the greater.

All casings shall be provided with the following tapings as a minimum requirement: -

- One suction pressure gauge tapping
- One discharge pressure gauge tapping
- One bleeder cock tapping
- One filling point tapping.
- Suitable tapping or, where possible, internal drilling to provide water for the glands

Unless otherwise stated the dimensions and drilling of the suction and discharge flanges shall be SANS 1123 to the design pressures as specified but with a minimum of 16 Bar. The pressure rating of the flanges shall at least be equal to the maximum static pressure plus the pump shutoff pressure.

II. Drive Shaft.

The drive shaft shall be manufactured from high quality steel compatible with the pumped liquid. The shafts shall be hard chromed-plated in the gland area to ensure excellent wear resistance.

III. Stuffing Box.

The stuffing box shall be designed for heavy duties. The gland shall be packed with a braided packing of appropriate material to suit the pumped liquid and operating pressure. around them, limiting their performance.

IV. Mechanical Seal.

Seal housing shall be manufactured as separate castings from 316 stainless steel or appropriate contact material and shall fit in place of the stuffing box. The seal housing shall have large clearance for the internal rotary seal to prevent clogging. The seals shall be double where appropriate. The mechanical seal is to be so situated in the suction housing to ensure the best possible flushing of the seal by the product. Additionally, the mechanical seal housing is to have a flushing connection. Seal faces are to be silicon carbide or tungsten carbide. Full details of the seals and glands indicating the materials, finishes, clearances etc. shall be submitted with the Tender.

V. Castings.

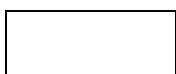
Suction and discharge housings are to be manufactured from GG25 cast.

VI. Bearing.

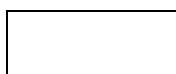
Shall be high thrust, taper-roller or ball bearings is adequate proportions designed to last for at least 40 000 working hours under the working conditions.

VII. Flex-Shaft Drive.

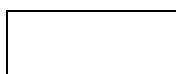
The drive between the main shaft and the rotor shall be by means of a flexible drive shaft adequately proportioned for torque and thrust for either direction of rotation. Morse tapers shall be fitted on both ends of the flexible shaft.



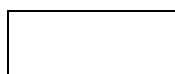
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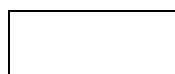
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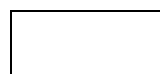
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VIII. Coupling Rods.

Shall be proportioned to handle the rotor load and eccentricity.

IX. Rotors.

Shall be hardened and hard chrome plated where appropriate. The rotors shall be manufactured E-8, 316 stainless steel or special alloy, as appropriate for the pumped liquid.

X. Stator Housing

Shall be manufactured from an approved thick-walled seamless steel tube.

XI. Stators

Shall be bonded to the stator housing. The stator material shall be either nitrile, EPDM or other approved material to be compatible with the pumped liquid. Temperature sensors shall be provided on the stator to prevent dry running. The stator design shall include a moulded conical entry on the suction side to increase chamber filling efficiency.

XII. Lubrication.

In the case where oil lubrication is required, adequate provision shall be made for the cooling of the oil. The bearings shall be required to operate at temperatures no higher than 60°C.

Oil reservoirs of sufficient capacity shall be fitted with easily accessible oil level indicators, which are to be clearly marked in order to indicate the oil standing and running levels.

XIII. Vent Cocks.

Vent cocks shall be fitted at all high points to the pump casing. These cocks shall be adequately sized in order to allow the trapped air to be released freely.

An automatic air vent shall be fitted to each pump casing if specified. This device shall be suitable for the remote operation of an indicator to show the open and closed positions of the air vent.

XIV. Base Plates.

The base plate of the pump and motor shall be rigid. The pump and motor shall be situated on the upper face of each base plate, which shall be machined flat and smooth to ensure that the pump and motor are bedded properly without the use of spacers.

The pump/motor base plate shall be completely aligned prior to grouting and provision shall be made to grout within the base plate itself to facilitate vibration-free operation.

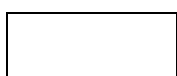
Base plates which have a mass greater than 200 kg shall have two jacking bolts at right angles with a lock nut at every corner of the unit.

XV. Drive Motor

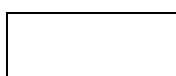
The pump shall be driven by a fixed electric speed motor.

XVI. Motor/Gearbox/Pump Coupling.

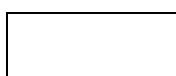
The motor/gearbox / pump coupling shall be fully rated to transmit the motor full load power and tested to prove the above features together with static and dynamic balance. The motor shall be coupled to the gearbox input shaft with either a V-belt or a flexible coupling. V-belts and couplings are to be provided with protective cover guards.



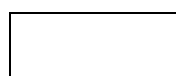
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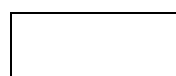
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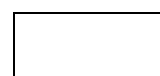
Witness 2



Employer



Witness 1



Witness 2

XVII. Monitoring Devices.

Full detail of all monitoring devices offered must be submitted with the Tender however the minimum protection required is as follows:

Pressure Gauges

Pressure gauges shall be fitted with an isolating cock, shall be vibration and shock resistant and shall be calibrated to read with an accuracy of $\pm 1\%$ of the indicated pressure. Three 20mm minimum diameter ball valves shall be employed to zero the gauge, to isolate it and to vent to atmosphere. A chemical seal shall be used to insulate the gauge from the media being measured.

The faceplate diameters of the pressure gauges shall be at least 100 mm. The gauges shall indicate the water pressure in kilopascal and shall have a range of a maximum of 50% higher than the normal maximum working pressure. All gauge glass must conform to internationally recognized standards. These standards include DIN 7081, BS 3463 and JIS B 8211. A calibration certificate is to be provided with each pressure gauge.

Temperature Detectors

If required oil lubricated bearings and glands offered shall be fitted with temperature detectors. The temperature detectors shall be PT100 – RTD's. If grease lubricated bearings are offered, the Bidder will indicate in his Tender if temperature detectors can in fact be used. If temperature detectors are not feasible, an alternative means of monitoring bearings must be offered.

No-flow Protection

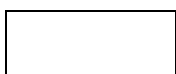
Each pump shall be protected against no flow by a flow meter installed in the discharge line from the pump.

Indicator on Automatic Air Vent

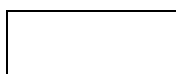
If an automatic air vent is required for the pump casing, it shall be fitted with an indicator to indicate the open and closed positions of the air vent. The air vent shall be suitable for remote operation and air vent control shall be mounted on the control panel inside the pump station.

Gland Leakage

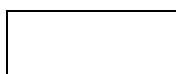
If a gland leakage device is required in order to monitor the gland leakage it shall be supplied and fitted with adjustable alarm contacts designed to close when gland leakage rises to a pre-set value.



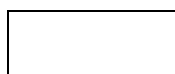
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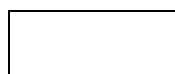
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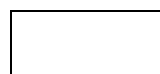
Witness 2



Employer



Witness 1



Witness 2

E. Category E: Propeller Pumps (Axial Flow Type).

I. Pump Casing.

The pump body shall be fabricated from Grade 300 W galvanised mild steel in accordance with SANS 1431: 2003 or made of cast iron and shall be designed to house the upper and lower bearing assemblies.

II. Propeller Shaft.

The propeller shaft shall be manufactured from 304 L stainless steel suitable designed to transmit the imposed torque loads induced by the propeller and withstand all cantilevered loads imposed under undue conditions during operation.

III. Propeller Blades.

The propeller blade shall be of a well proven swept back design selected to achieve the required head and flow characteristics and must be manufactured from 304 L cast stainless steel. The propeller blade shall be locked to the lower end of the shaft.

IV. Balancing.

The blade assembly shall be subjected to static and dynamic balancing before final onsite installation. Vibrations in operation shall be kept to a minimum and it will be the Contractors responsibility to check this torsional vibration for each pump set assembly, in-situ.

The propeller shall have a maximum vibration velocity of 2.5 mm/s at specified conditions. Static balancing alone is not acceptable as there is no qualitative measurement of the remaining amount of unbalance left in the assembly and does not confront the basic definition of checking unbalance against a known standard.

V. Throat Tube.

A suitable designed throat tube constructed from 304 L stainless steel shall be provided. This item shall be grouted into the exiting civil structure.

The clearance between the propeller and throat tube must ensure that a minimum of liquid slip takes place thus maintaining maximum efficiency. Bell mouthed inlet and outlet openings must be incorporated to ensure smooth entry and exit flow conditions.

VI. Corrosion Protection.

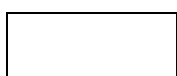
All mild steel members shall be prepared and coated in accordance with acceptable Corrosion Protection standards for wastewater applications.

The corrosion protection of Stainless-steel welds shall entail pickling and passivating in accordance with acceptable Corrosion Protection standards for wastewater applications.

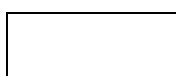
VII. Bearings.

All bearings shall be designed for a life of at least 100 000 hours at an (L 10) rating. Bearings for the output shaft shall be designed to withstand bending, up thrust, down pull and radial loads imposed by the pump impellor. Bidder's shall indicate what these forces are and how these shall be accommodated.

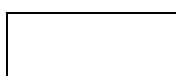
Calculations shall be submitted with the Tender. The bearings shall carry all axial and radial loads and



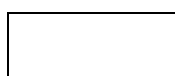
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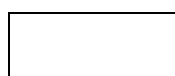
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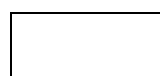
Witness 2



Employer



Witness 1



Witness 2

accommodate any thermal expansion. Bearings should be sealed against the ingress of liquid and must be selected for a L10 life in excess of 100 000 hours.

For ease of lubrication all bearing grease pipes must be piped to grease nipples on the outer cover of the pump support frame.

VIII. Fasteners.

All submerged and concrete securing fasteners shall be 316 SS. All mating flanges shall be sealed against the ingress of any crevice corrosion by means of a sealant suitable for underwater conditions and approved by the Engineer.

IX. Motor and Drive.

The upper end of the drive assembly must be fitted with an adjustable tensioning bracket for mounting the drive motor. This arrangement shall make provision for adjustment of “v” belt tension and allow for changing pulleys without difficulty. All rotating elements shall be provided with adequate guarding to cater for all probable pulley sizes.

The guards must be domed to avoid water ponding and contamination of the “v” belts and upper bearing, whilst allowing adequate air cooling for belts.

A suitably rated motor must be provided and the motor power transmitted to the shaft by adequately rated “v” belts. Should one belt break, the remaining belt / belts must be capable of transmitting the required power without overload.

The electric motor must be rated at least 20% above the maximum absorbed power and must be weatherproofed for unprotected conditions.

X. Flap Gates

Each pump chamber delivery port shall be fitted with a 304 L stainless steel non-return flap to prevent the flow from the duty pump flowing back through the standby unit delivery port.

The gates shall be mounted in a suitable 304 L stainless steel frame correctly sized to suite the delivery port detailed. The flap gate shall be bolted over the opening onto the concrete wall surface. The frame shall be sealed against the concrete with a durable and approved material.

A gate with robust hinges along the upper edge must be suspended from the frame and swing closed under no flow conditions with minimal pressure differential. The hinge design must allow the gate to seat squarely on the seat in the frame. Adequately sized Stainless Steel mounting bolts shall be used to fix the frame in position.

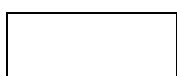
XI. Operation

Provision must be made to vary the blade pitch and the rotational speed, the latter by changing a pulley on the V-belt drive.

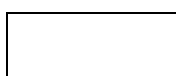
XII. Installation

The pump shall be placed on a mounted base which shall be suitable for bolting to the concrete plate form floor above the pump chamber. Levelling spacer with a minimum thickness of 20mm shall be grouted by means of a non-shrink grout between the base plate and the concrete surface.

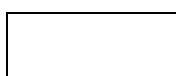
Category G: End Suction Pump.



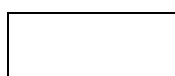
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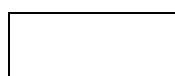
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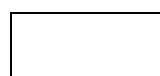
Witness 2



Employer



Witness 1



Witness 2

I. Pump Casing;

The pump casings shall be manufactured from cast iron or cast steel depending on the stresses corresponding to the required test pressures. Unless otherwise stated the dimensions and drilling of the suction and discharge flanges shall be SANS 1123 to the design pressures as specified but with a minimum of 10 Bar. The pressure rating of the flanges shall at least be equal to the maximum static pressure plus the pump shut-off pressure.

II. Impeller;

Each impeller after machining and dressing shall be independently statically balanced and the complete rotating assembly with coupling shall be dynamically balanced. All impellers shall be of a non over loading design. Impellers shall be securely keyed and fixed to the shaft by means of suitable shaft nuts and locking sleeves. All bolting devices must be securely locked so that they cannot accidentally come loose. Bolting devices shall be made of corrosion resistant materials.

III. Mechanical Seal;

Shaft seal shall be cartridge oil lubricated mechanical type. The stationary and rotating seal faces shall be tungsten titanium carbide alloy. The stationary seal seat shall be double floating by virtue of a dual O-ring design; an external O-ring secures the stationary seat to the seal plate, and an internal O-ring holds the faces in alignment during periods of mechanical or hydraulic shock. Elastomers shall be a synthetic rubber and fluoropolymer; cage and spring to be stainless steel. Seal shall be oil lubricated from a dedicated reservoir.

IV. Shaft;

The pump shafts shall be manufactured from stainless steel alloys or its equivalent due to its properties like strength, toughness, corrosion resistance and fatigue strength.

V. No-Flow Protection;

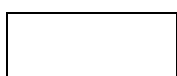
Each pump shall be protected against no flow by a flow meter installed in the discharge line from the pump.

VI. Base Plate;

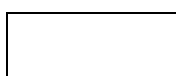
The base plate shall be manufactured from stainless 304L and its dimensions must suit the currently platform where the new pump will be mounted. The base plate of the pump and motor shall be rigid. Base plates which have a mass greater than 200 kg shall have two jacking bolts at right angles with a lock nut at every corner of the unit.

VII. Bearing;

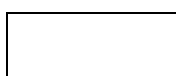
The Bearings shall be anti-friction ball type of proper size and design to withstand all radial and thrust loads expected during normal operation. Bearings shall be oil lubricated from a dedicated reservoir. Pump designs which use the same oil to lubricate the bearings and shaft seal shall not be acceptable.



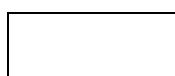
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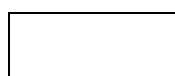
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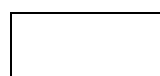
Witness 2



Employer



Witness 1



Witness 2

F. Category G: Submersible Mixers.

I. Design

- Fully floodable submersible mixer
- Vertical/Horizontal installation

II. Propeller

- Self-cleaning propeller

III. Drive

- Three-phase asynchronous squirrel-cage motor
- Motors integrated in explosion-proof submersible mixers.

IV. Shaft seal

- Two bi-directional mechanical seals in tandem arrangement, with liquid reservoir.

V. Bearings

- Grease-packed rolling element bearings sealed for life

G. Category H: Mobile Diesel Pumps.

I. Pump Design

Pumps shall be horizontal, self-priming centrifugal type, designed specifically for handling raw, unscreened, domestic sanitary sewage.

The impeller shall be of semi open multi vane, back-swept and non-clog design.

II. Self-Cleaning Wear Plate

A replaceable wear plate secured to the back cover plate by studs and nuts. Wear plate shall be self-cleaning design ensuring that debris is cleared away and does not collect on the impeller vanes. Rotating assembly, which includes impeller, shaft, mechanical shaft seal, lip seals, bearings, seal plate and bearing housing, must be removable as a single unit without disturbing the pump casing or piping. Seal plate and bearing housing shall be cast iron.

III. Electrical Panel

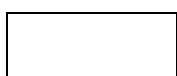
- Enclosure material should be of polyester/plastic non-conductive material.
- Enclosure should have a minimum IP rating of 65 to eliminate moisture ingress.

IV. Trailer Unit Specification

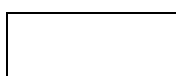
Pump and Engine will be mounted on a custom fabricated roadworthy single axle trailer complete with integrated fuel tank, spare wheel lifting beam and control box.

The following shall also be included:

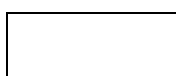
- a. Integrated fuel tank with a diesel holding capacity of at least 200 Litres
 - Diesel Anti-siphon device to be installed



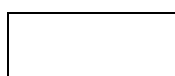
Contractor



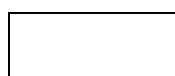
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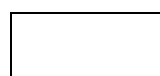
Witness 2



Employer



Witness 1



Witness 2

- b. Centre Lifting beam
- c. Single axle fitted with rims and tyres
- d. Fitted with spare wheel
- e. Drop legs on each corner
- f. LED Brake and indicator lights
- g. Two revolving strobe lights fitted on trailer for nighttime visibility with a work light at the back for night time operation.
- h. Fire extinguisher (Dry Chemical Powder) 9kg with heavy duty metal bracket
- i. Roadworthy

Gaskets.

The gaskets to be utilized between the joined flanges of the valves, pumps, and pipework shall be manufactured from Nitrile Rubber (NBR – Acrylonitrile Butadiene).

Fasteners.

Bolt and nuts to join the flanges of pipes, pumps and valves together shall be manufactured from stainless steel (316L).

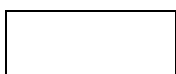
Installation

The Bidder must include for the complete installation and with the auxiliaries of the plant in running order, including the connection of existing cables from the MCC panel to the electric motor (which will be existing or new supplied by others). This will also include ensuring the concrete plinth and baseplates are compatible and in a very good condition for mounting. Detailed drawings of the complete installations have to be submitted for approval to the engineer.

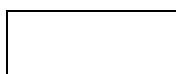
Testing:

The following tests are to be carried out:

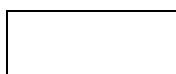
- i. At the supplier’s premises, before the complete set of the Pump can be delivered to site, ERWAT Representatives must be present during the test to satisfy them that the complete set of the Pump comply with the specification and delivers the specified output. ERWAT must be timeously advised of the date for the test.
- ii. The test shall include a simulated test run at the supplier’s premises to establish the mechanical integrity of the assembled equipment, site performance tests to demonstrate efficiency, electric motor insulation test, pressure tests and rotation direction check.
- iii. The Contractor shall provide all instruments and equipment required for testing and any water, power and fuel required for the commissioning and testing.
- iv. Test report/certificate of the tests as specified under (ii) is to be submitted to ERWAT.
- v. Visual inspections shall also form part of this contract; ERWAT Representatives must also be part of this process to witness and signed off the activity pre-assembly and/or post assembly to verify the quality of material used and the required dimensions.
- vi. The Bidder upon being awarded the contract must submit Product Quality Plan or Quality Control



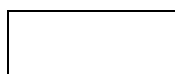
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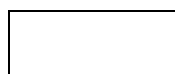
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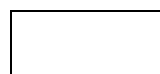
Witness 2



Employer



Witness 1



Witness 2

Plan which outlines the stages that requires intervention from ERWAT's Representative I.e. Visual Inspection, Simulation Test Run, Installation and Commissioning Stages.

- vii. Duty points shall be guaranteed either by ISO 9906 or Hydraulic institute.

H. SUPPLY OF MOTOR STOP START STATIONS

- i. The motor stop start station must comply to the latest SANS 10142 part 1 regulations.
- ii. The stop start station must mounted on a stand that has a minimum height of 1.2 metre.
- iii. Control cabling to stop start station must be 1.5 mm² seven (7) core steel wired armoured cable.
- iv. The stop start station must consist of the following minimum components:
 - Powder coated steel enclosure.
 - Red mushroom type lockable emergency stop button.
 - Green start button.
 - Three phase lockable isolator.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

C3.1.4.3 Location of the Works.

ERWAT WCW	Stand/ Farm Positioned	Street Name	Co-ordinates
Drainage District 3			
Esther Park	Park 753, Ester Park, Extension	R25	S 26°05'58" E28°11'02"
Hartebeestfontein	Portion 20 & Remaining of Portion 4 of farm Hartebeestfontein 17	Bapsfontein Road, Norkem Park, Kempton Park	S 26°01'11" E 28°17'1"
Olifantsfontein	Olifantsfontein 402 IR	Ceramic Road, Olifantsfontein	S 26°56'26" E 28°12'56"
Rynfield	Portion 75 of Vlakfontein 161	Sarel Cilliers, Rynfield	S 26°09'37" E 28°21'30"
Benoni	Remaining Portion 6 of Rietfontein	Lancaster Road, Benoni	S 26°12'30" E 28°19'01"
Drainage District 4			
Ancor	Remaining Extension of Portion 151 farm Daggafontein 125	Ermelo Road, Springs	S 26°16'11" E 28°28'56"
Daveyton	Daveyton	Holfontein Road, Etwatwa	S 26°12'30" E 28°19'01"
Jan Smuts	Portion 73 of farm Weltevreden 118	Wanderers Street Extension, Brakpan	S 25°57'43" E 28°12'49"
JP Marais	Portion 70 of farm Modderfontein 76	Cnr N12 / Kingsway Road	S 25°57'43" E 28°12'49"
Welgedacht	Portion 81 & 82 of farm Welgedacht	1 Carnation Road Welgedacht AH, Springs	S 26°12'30" E 28°19'01"
Drainage District 5			
Carl Grundling	Portion 58 of farm Varkenfontein 169	Vorsterkroon, Nigel	S 26°12'30" E 28°19'01"
Herbert Bickley	Portion 13 of farm Maraisdrift 190	Heidelberg Road, Marais drift, Nigel	S 26°12'30" E 28°19'01"
Heidelberg	Portion 28 of farm Boschhoek 385	Vaaldam Road, Heidelberg	S 25°57'43" E 28°12'49"
Ratanda	Nooitegedacht 390	Vaaldam Road, Ratanda	S 26°12'30" E 28°19'01"
Tsakani	Portion 22 of farm Vlakfontein 161	Cnr. Modjadji and Khama Streets	S 26°12'30" E 28°19'01"
Drainage District 6			

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Dekema	Portion 10 of Katilehong 151	Brickfield Road, Motsamai Section	S 26°12'30" E 28°19'01"
Rondebult	Remaining Portion 27 Rondebeult 136	Cnr Kalk/ Van dyk Road, Rondebult	S 26°12'30" E 28°19'01"
Vlakplaats	Portion 191 farm of Vlakplaats 138	Cnr. Brickfield / Bierman Street, Vosloorus	S 26°12'30" E 28°19'01"
Waterval	Portion 50,62,12 and 1 of farm Waterval 150 and Remaining portion 3 of the farm Witkop	Waterfal Farm, Meadow Road, kliprivier	S 26°12'30" E 28°19'01"

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

C3.1.5 Datasheet: These minimum requirements will be applicable during the implementation of the scope of work throughout the term of the contract.
 Please note these datasheets are not to be completed.

PUMPS DATA SHEET

CATEGORY A: SELF-PRIMING PUMPS

Item No.	Item Description	Specified: Engineer
----------	------------------	---------------------

TYPE 1 SELF PRIMING PUMP

1	Pump Type	Self-Priming
2	Manufacturer	.....
3	Supplier	.....
5	Suction diameter – (mm)	50 (2”) – 250 (10”)
6	Discharge diameter – (mm)	50 (2”) – 250 (10”)
7	Type of seal	(Mechanical Seal) Tungsten Titanium Carbide or equivalent
8	Impeller	Hard Iron
9	Casing	Cast Iron
10	Shaft	Steel Alloy AISI/SAE 4150 or Equivalent
11	Shaft Sleeve	Steel Alloy AISI/SAE 4130 or Equivalent
12	Impeller Type	Semi-Open Type, Two Vanes

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

CATEGORY B: SUBMERSIBLE PUMPS (Wet-Well Installation)

Item No.	Item Description	Specified: Engineer
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TYPE 1: SUBMERSIBLE PUMP

1	Pump Type	Submersible
2	Manufacturer (OEM)
3	Supplier
4	Ingress Protection Rating	IP68
5	Pump Casing	Cast Iron
6	Impeller	Grey Cast Iron

1.1 kW, 220V (1ph), 2 - Pole Electric Motor Pump with Float Switch and Electrical Cord incl. a 3 – Pin Plug

1	Model/Serial Number	.....
2	Duty Point	5l/s, 10m

2 kW, 400V (3ph), 4 - Pole Electric Motor Pump

1	Model/Serial Number	.....
2	Duty Point	21l/s, 6m

2.4 kW, 400V (3ph), 2- Pole Electric Motor Pump

1	Model/Serial Number	.....
2	Duty Point	11l/s, 12m

3.1 kW, 400V (3ph), 4- Pole Electric Motor Pump

1	Model/Serial Number	.....
2	Duty Point	26l/s, 8m

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

4 kW, 400V (3ph), 4- Pole Electric Motor Pump

1	Model/Serial Number	.....
2	Duty Point	13l/s, 7m

4.2 kW, 400V (3ph), 2- Pole Electric Motor Pump

1	Model/Serial Number	.....
2	Duty Point	16 l/s, 15m

4.7 kW, 400V (3ph), 2- Pole Electric Motor Pump

1	Model/Serial Number	.....
2	Duty Point	26l/s, 9m

5.5 kW, 400V (3ph), 4- Pole Electric Motor Pump

1	Model/Serial Number	.....
2	Duty Point	8l/s, 18m

5.9 kW, 400V (3ph), 4- Pole Electric Motor Pump

1	Model/Serial Number	.....
2	Duty Point	34l/s, 15m

7.4 kW, 400V (3ph), 2- Pole Electric Motor Pump

1	Model/Serial Number	.....
2	Duty Point	21l/s, 24m

9 kW, 400V (3ph), 4- Pole Electric Motor Pump

1	Model/Serial Number	.....
2	Duty Point	36 l/s, 15m

13.5 kW, 400V (3ph), 4- Pole Electric Motor Pump

1	Model/Serial Number
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Contractor



Witness 1



Witness 2



Employer

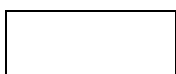


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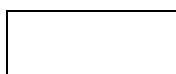


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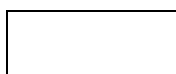
2	Duty Point	62 l/s, 14m
15 kW, 400V (3ph), 2- Pole Electric Motor Pump		
1	Model/Serial Number
2	Duty Point	26l/s, 31m
22 kW, 400V (3ph), 4- Pole Electric Motor Pump		
1	Model/Serial Number	.....
2	Duty Point	82l/s, 18m
37 kW, 400V (3ph), 6- Pole Electric Motor Pump		
1	Model/Serial Number	.....
2	Duty Point	250 l/s, 12m
45 kW, 400V (3ph), 4- Pole Electric Motor Pump		
1	Model/Serial Number	.....
2	Duty Point	135 l/s, 23m
47 kW, 400V (3ph), 2- Pole Electric Motor Pump		
1	Model/Serial Number	.....
2	Duty Point	49 l/s, 58m
55 kW, 400V (3ph), 6- Pole Electric Motor Pump		
1	Model/Serial Number	.....
2	Duty Point	310 l/s, 14m
90 kW, 400V (3ph), 6- Pole Electric Motor Pump		
1	Model/Serial Number	.....
2	Duty Point	238 l/s, 30m
105 kW, 400V (3ph), 4- Pole Electric Motor Pump		



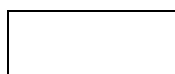
Contractor



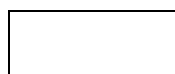
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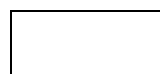
Witness 2



Employer

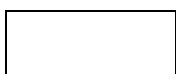


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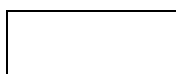


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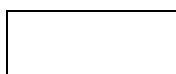
1	Model/Serial Number
2	Duty Point	115 l/s, 61m
TYPE 2: SUBMERSIBLE PUMP		
1	Pump Type	Submersible
2	Manufacturer	.....
3	Supplier	.....
4	Ingress Protection Rating	IP68
5	Pump Casing	Cast Iron EN-GJL-250
6	Impeller	Ductile Iron GGG60
1.8 kW, 400V (3ph), 6- Pole Electric Motor Pump		
1	Model/Serial Number	.....
2	Duty Point	9l/s, 10m
2.6 kW, 400V (3ph), 6- Pole Electric Motor Pump		
1	Model/Serial Number	.....
2	Duty Point	17l/s, 8m
3 kW, 400V (3ph), 6- Pole Electric Motor Pump		
1	Model/Serial Number	.....
2	Duty Point	18l/s, 13m
3.5 kW, 400V (3ph), 6- Pole Electric Motor Pump		
1	Model/Serial Number	.....
2	Duty Point	15l/s, 13m
3.6 kW, 400V (3ph), 4- Pole Electric Motor Pump		
1	Model/Serial Number	.....



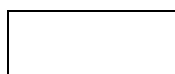
Contractor



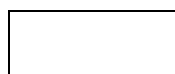
Witness 1



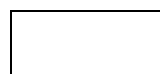
Witness 2



Employer



Witness 1



Witness 2

2	Duty Point	30l/s, 8m
4.8 kW, 400V (3ph), 6- Pole Electric Motor Pump		
1	Model/Serial Number	.....
2	Duty Point	22l/s, 15m
5.5 kW, 400V (3ph), 6- Pole Electric Motor Pump		
1	Model/Serial Number	.....
2	Duty Point	20l/s, 16m
7.5 kW, 400V (3ph), 6- Pole Electric Motor Pump		
1	Model/Serial Number	.....
2	Duty Point	23l/s, 20m
11 kW, 400V (3ph), 6- Pole Electric Motor Pump		
1	Model/Serial Number	.....
2	Duty Point	44l/s, 23m
15 kW, 400V (3ph), 6- Pole Electric Motor Pump		
1	Model/Serial Number	.....
2	Duty Point	43l/s, 23m
18.5 kW, 400V (3ph), 6- Pole Electric Motor Pump		
1	Model/Serial Number	.....
2	Duty Point	45l/s, 29m
22 kW, 400V (3ph), 6- Pole Electric Motor Pump		
1	Model/Serial Number	.....
2	Duty Point	l/s, m
30 kW, 400V (3ph), 6- Pole Electric Motor Pump		

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

1	Model/Serial Number	.....
2	Duty Point	55l/s, 35m
37 kW, 400V (3ph), 6- Pole Electric Motor Pump		
1	Model/Serial Number	.....
2	Duty Point	60l/s, 41m
50 kW, 400V (3ph), 6- Pole Electric Motor Pump		
1	Model/Serial Number	.....
2	Duty Point	60l/s, 43m
60 kW, 400V (3ph), 6- Pole Electric Motor Pump		
1	Model/Serial Number	.....
2	Duty Point	95l/s, 44m
70 kW, 400V (3ph), 6- Pole Electric Motor Pump		
1	Model/Serial Number	.....
2	Duty Point	75l/s, 50m
90 kW, 400V (3ph), 6- Pole Electric Motor Pump		
1	Model/Serial Number	.....
2	Duty Point	110l/s, 65m
110 kW, 400V (3ph), 6- Pole Electric Motor Pump		
1	Model/Serial Number	.....
2	Duty Point	125l/s, 70m
CATEGORY C: IMMERSIBLE PUMPS (Dry Installation)		
Item No.	Item Description	Specified: Engineer
TYPE 1: IMMERSIBLE PUMP		

Contractor

Witness 1

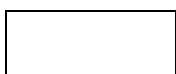
Witness 2

Employer

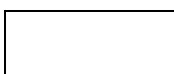
Witness 1

Witness 2

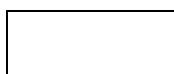
1	Pump Type	Immersible
2	Manufacturer	.....
3	Supplier	.....
4	Ingress Protection Rating	IP68
5	Pump Casing	Cast Iron
6	Impeller	Grey Cast Iron
1.1 kW, 220V (1ph), 2 - Pole Electric Motor Pump with Float Switch and Electrical Cord incl. a 3 – Pin Plug		
1	Model/Serial Number	.....
2	Duty Point	5l/s, 10m
2 kW, 400V (3ph), 4 - Pole Electric Motor Pump		
1	Model/Serial Number	.....
2	Duty Point	21 l/s, 6m
2.4 kW, 400V (3ph), 2- Pole Electric Motor Pump		
1	Model/Serial Number	.....
2	Duty Point	11 l/s, 12m
3.1 kW, 400V (3ph), 4- Pole Electric Motor Pump		
1	Model/Serial Number	.....
2	Duty Point	26 l/s, 8m
4 kW, 400V (3ph), 4- Pole Electric Motor Pump		
1	Model/Serial Number	.....
2	Duty Point	13 l/s, 7m
1	Model/Serial Number	.....



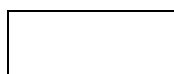
Contractor



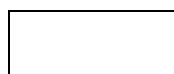
Witness 1



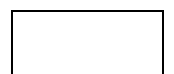
Witness 2



Employer



Witness 1



Witness 2

2	Duty Point	16 l/s, 15m
4.7 kW, 400V (3ph), 2- Pole Electric Motor Pump		
1	Model/Serial Number	.....
2	Duty Point	26 l/s, 9m
5.5 kW, 400V (3ph), 4- Pole Electric Motor Pump		
1	Model/Serial Number	.....
2	Duty Point	8.8 l/s, 18m
1	Model/Serial Number	.....
2	Duty Point	34 l/s, 15m
1	Model/Serial Number	.....
2	Duty Point	21 l/s, 24m
9 kW, 400V (3ph), 4- Pole Electric Motor Pump		
1	Model/Serial Number	.....
2	Duty Point	36 l/s, 15m
13.5 kW, 400V (3ph), 4- Pole Electric Motor Pump		
1	Model/Serial Number	.....
2	Duty Point	62 l/s, 14m
15 kW, 400V (3ph), 2- Pole Electric Motor Pump		
1	Model/Serial Number	.....
2	Duty Point	26 l/s, 31m
22 kW, 400V (3ph), 4- Pole Electric Motor Pump		
1	Model/Serial Number	.....
2	Duty Point	82 l/s, 18m

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

37 kW, 400V (3ph), 6- Pole Electric Motor Pump		
1	Model/Serial Number	.....
2	Duty Point	250 l/s, 12m
45 kW, 400V (3ph), 4- Pole Electric Motor Pump		
1	Model/Serial Number	.....
2	Duty Point	135 l/s, 23m
47 kW, 400V (3ph), 2- Pole Electric Motor Pump		
1	Model/Serial Number	.....
2	Duty Point	49 l/s, 58m
55 kW, 400V (3ph), 6- Pole Electric Motor Pump		
1	Model/Serial Number	.....
2	Duty Point	310 l/s, 14m
90 kW, 400V (3ph), 6- Pole Electric Motor Pump		
1	Model/Serial Number	.....
2	Duty Point	238 l/s, 30m
105 kW, 400V (3ph), 4- Pole Electric Motor Pump		
1	Model/Serial Number	.....
2	Duty Point	115 l/s, 61m



Contractor



Witness 1



Witness 2



Employer



Witness 1



Witness 2

CATEGORY D: PROGRESSIVE CAVITY PUMPS

Item No.	Item Description	Specified: Engineer
PROGRESSIVE CAVITY PUMPS		
1	Pump Type	Progressive Cavity Pump
2	Manufacturer	.....
3	Supplier	.....
5	Casing(s)	Cast Iron
6	Main Shaft	Stainless Steel
7	Flex Shaft	Stainless Steel
8	Stator	Nitrile
9	Stator Housing	Thick-Walled Steel Tubing
10	Rotor	Carbon Steel
11	Type of seal	Mechanical Seal
12	Bearings	High Thrust Taper-Roller

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

CATEGORY E: PROPELLER PUMPS (AXIAL FLOW TYPE)

Item No.	Item Description	Specified: Engineer
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TYPE 1: GEARED MOTOR DRIVEN PROPELLER PUMPS

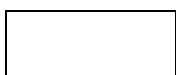
1	Pump Type	Propeller Pump
2	Manufacturer
3	Supplier	.....
4	Size Range	16 Inch, 24 Inch & 36 Inch
5	Type of seal	Gland Packing
6	Propeller	Cast Iron
7	Casing	Cast Iron
8	Shaft	Steel Alloy
9	Propeller Type	Opened or Closed

FLOW CHARACTERISTICS

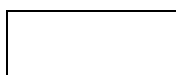
10	16 Inch Axial Flow Pump	N = 1475rpm, $Q_{BEP} = 296,7$ l/s $H_{BEP} = 26.9$ m
11	24 Inch Axial Flow Pump	N = 977rpm, $Q_{BEP} = 826.3$ l/s $H_{BEP} = 28.2$ m
12	36 Inch Axial Flow Pump	N = 586rpm, $Q_{BEP} = 1755$ l/s $H_{BEP} = 21.3$ m

TYPE 1: SUBMERSIBLE PROPELLER PUMP

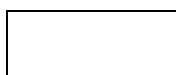
1	Pump Type	Submersible Propeller Pump
2	Manufacturer	.....



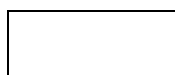
Contractor



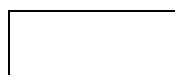
Witness 1



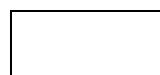
Witness 2



Employer



Witness 1



Witness 2

3	Supplier	.....
4	Type of seal	Mechanical Seal (Corrosion Resistant Tungsten Carbide)
5	Propeller	Stainless Steel
6	Casing	Cast Iron
7	Shaft	Stainless Steel (EN 1.4057 or AISI 431)
8	Propeller Type	Semi Open Multi Vane, Backswept, Non-Clogging
9	Ingress Protection Rating	IP68

1.5 kW Submersible Propeller Pump

1	Model/Serial Number	.....
2	Duty Point	@1.5kW 8P 600 m ³ /h, 0.48m

2.5 kW Submersible Propeller Pump

1	Model/Serial Number	.....
2	Duty Point	@2.5kW 8P 860 m ³ /h, 0.64m

3.1 kW Submersible Propeller Pump

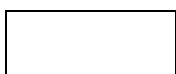
1	Model/Serial Number	.....
2	Duty Point	@3.1kw 4P 135m ³ /h, 4m

3.5 kW Submersible Propeller Pump

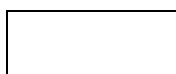
1	Model/Serial Number	.....
2	Duty Point	@3.5kw 4P 135m ³ /h, 4.2m

5 kW Submersible Propeller Pump

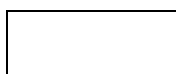
1	Model/Serial Number
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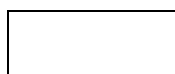
Contractor



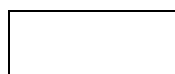
Witness 1



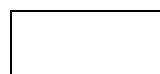
Witness 2



Employer



Witness 1



Witness 2

2	Duty Point	@5kW 4P 161m ³ /h, 4.3m
5.5 kW Submersible Propeller Pump		
1	Model/Serial Number	.....
2	Duty Point	@5.5kW 12P 2000m ³ /h, 0.72m
7.5 kW Submersible Propeller Pump		
1	Model/Serial Number	.....
2	Duty Point	@7.5kw 4P 215m ³ /h, 6.4m
10 kW Submersible Propeller Pump		
1	Model/Serial Number	.....
2	Duty Point	@10kW 12P 2600m ³ /h, 0.96m
13 kW Submersible Propeller Pump		
1	Model/Serial Number	.....
2	Duty Point	@13kW 16P 3700m ³ /h, 0.78m
18.5 kW Submersible Propeller Pump		
1	Model/Serial Number	.....
2	Duty Point	@18.5kW 16P 4200m ³ /h, 0.90m

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

CATEGORY F: END-SUCTION PUMPS		
Item No.	Item Description	Specified: Engineer
TYPE 1: BEARING FRAME PUMP		
1	Pump Type	Direct and/ or Long Coupled
2	Manufacturer	.....
3	Supplier	.....
4	Pump Casing	Cast Iron EN-GJL-250
5	Impeller	Ductile Iron GGG60
100mm Suction, 80mm Discharge		
1	Model/Serial Number	.....
2	Duty Point	@2.2kW 16l/s, 5.5m
100mm Suction, 100mm Discharge		
1	Model/Serial Number	.....
2	Duty Point	@3kW 22l/s, 7m
150mm Suction, 150mm Discharge		
1	Model/Serial Number	.....
2	Duty Point	@9kW 55l/s, 10m
150mm Suction, 125mm Discharge		
1	Model/Serial Number	.....

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

2	Duty Point	@9kW 50l/s, 10m
200mm Suction, 200mm Discharge		
1	Model/Serial Number	.....
2	Duty Point	@9kW 82l/s, 6m
250mm Suction, 250mm Discharge		
1	Model/Serial Number	.....
2	Duty Point	@15kW 118l/s, 6m
300mm Suction, 300mm Discharge		
1	Model/Serial Number	.....
2	Duty Point	@45kW 270l/s, 11m
400mm Suction, 400mm Discharge		
1	Model/Serial Number	.....
2	Duty Point	@90kW 530l/s, 12m
TYPE 2: DRY-INSTALLED VOLUTE CASING PUMP		
1	Pump Type	Volute Casing
2	Manufacturer	.....
3	Supplier	.....
4	Pump Casing	ERN Wear-Resistant Nickel Alloyed Cast Iron
5	Impeller	ERN Wear-Resistant Nickel Alloyed Cast Iron
65mm Suction, 50mm Discharge PN10, Dry-Installed Volute Casing Pump		
1	Model/Serial Number	.....
2	Duty Point	@3kW 2P 7.3l/s, 13.6m

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

80mm Suction, 50mm Discharge PN10, Dry-Installed Volute Casing Pump		
1	Model/Serial Number	.....
2	Duty Point	@15kW 2P 16.5/s, 35.5m
80mm Suction, 65mm Discharge PN10, Dry-Installed Volute Casing Pump		
1	Model/Serial Number	.....
2	Duty Point	@15kW 2P 21.2l/s, 26.5m
100mm Suction, 80mm Discharge PN10, Dry-Installed Volute Casing Pump		
1	Model/Serial Number	.....
2	Duty Point	@9kW 2P 13.6l/s, 26.4m
125mm Suction, 80mm Discharge PN10, Dry-Installed Volute Casing Pump		
1	Model/Serial Number	.....
2	Duty Point	@22kW 2P 32l/s, 35m
125mm Suction, 100mm Discharge PN10, Dry-Installed Volute Casing Pump		
1	Model/Serial Number	.....
2	Duty Point	@5.5kW 4P 17l/s, 7m
150mm Suction, 125mm Discharge PN10, Dry-Installed Volute Casing Pump		
1	Model/Serial Number	.....
2	Duty Point	@132kW 4P 100l/s, 42m
150mm Suction, 100mm Discharge PN10, Dry-Installed Volute Casing Pump		
1	Model/Serial Number	.....

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

2	Duty Point	@45kW 4P 28l/s, 45m
150mm Suction, 150mm Discharge PN10, Dry-Installed Volute Casing Pump		
1	Model/Serial Number	.....
2	Duty Point	@30kW 6P 90l/s, 9m
200mm Suction, 200mm Discharge PN10, Dry-Installed Volute Casing Pump		
1	Model/Serial Number	.....
2	Duty Point	@90kW 4P 190l/s, 29m
250mm Suction, 250mm Discharge PN10, Dry-Installed Volute Casing Pump		
1	Model/Serial Number	.....
2	Duty Point	@150kW 4P 280l/s, 38m
300mm Suction, 300mm Discharge PN10, Dry-Installed Volute Casing Pump		
1	Model/Serial Number	.....
2	Duty Point	@132kW 4P 390l/s, 26m
350mm Suction, 350mm Discharge PN10, Dry-Installed Volute Casing Pump		
1	Model/Serial Number	.....
2	Duty Point	@175kW 6P 610l/s, 22m
400mm Suction, 350mm Discharge PN10, Dry-Installed Volute Casing Pump		
1	Model/Serial Number	.....
2	Duty Point	@132kW 6P 430l/s, 20m

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

1	Model/Serial Number	.....
2	Duty Point	@175kW 6P 780l/s, 18m

TYPE 3: BARE-SHAFT PUMP

1	Pump Type	Bare Shaft
2	Manufacturer	.....
3	Supplier	.....
4	Pump Casing	Cast Iron EN-GJL-250
5	Impeller	Cast Iron EN-GJL-200

65mm Suction, 50mm Discharge PN16, Bare – Shaft Pump

1	Model/Serial Number	.....
2	Duty Point	@11kW 4P 13.89l/s, 36m

80mm Suction, 65mm Discharge PN16, Bare – Shaft Pump

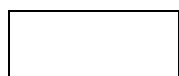
1	Model/Serial Number	.....
2	Duty Point	@110kW 6P 53.4l/s, 123.3m

100mm Suction, 80mm Discharge PN16, Bare – Shaft Pump

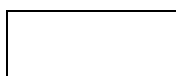
1	Model/Serial Number	.....
2	Duty Point	@45kW 4P 47.9l/s, 56.8m

125mm Suction, 100mm Discharge PN16, Bare – Shaft Pump

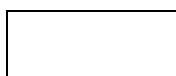
1	Model/Serial Number	.....
2	Duty Point	@45kW 4P 57.4l/s, 48m



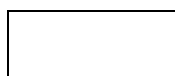
Contractor



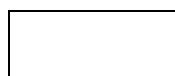
Witness 1



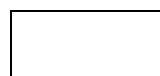
Witness 2



Employer



Witness 1



Witness 2

150mm Suction, 125mm Discharge PN16, Bare – Shaft Pump

1	Model/Serial Number	.....
2	Duty Point	@160kW 4P 92.7l/s, 90.5m

200mm Suction, 150mm Discharge PN10, Bare – Shaft Pump

1	Model/Serial Number	.....
2	Duty Point	@200kW 4P 141.7l/s, 88.9m

250mm Suction, 200mm Discharge PN10, Bare – Shaft Pump

1	Model/Serial Number	.....
2	Duty Point	@75kW 4P 123.9l/s, 41.3m

300mm Suction, 250mm Discharge PN10, Bare – Shaft Pump

1	Model/Serial Number	.....
2	Duty Point	@250kW 4P 253.6l/s, 66.3m



Contractor



Witness 1



Witness 2



Employer



Witness 1



Witness 2

CATEGORY G: SUBMERSIBLE MIXERS

Item No.	Item Description	Specified: Engineer
SUBMERSIBLE MIXERS		
1	Mixer Type	Submersible (Horizontal)
2	Manufacturer	.....
3	Supplier	.....
4	Type of seal	Silicon Carbide (RSiC)
5	Mixer Propeller	High Chromium Cast Iron
6	Casing	Cast Iron
7	Shaft	Stainless Steel (EN 1.4057 or AISI 431)
8	Propeller Type	Double-Curved Propeller
9	Ingress Protection Rating	IP68

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

CATEGORY H: MOBILE DIESEL PUMPS

Item No.	Item Description:	Specified: Engineer
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TYPE 1: Mobile Diesel Pump

1.	Name, Model number and ID as per product data sheet / brochure
2.	Pump must be 150mm ported prime and re-prime (vacuum assisted) vortex pump capable of large solids handling and dry running	<ul style="list-style-type: none"> • Suction and discharge 150 mm • Vacuum assisted Self-Priming
3.	Solids handling	50 - 100 mm
4.	Capacity discharge	295 - 350 m ³ /h
5.	Discharge head	20 - 30 m
6.	Pump speed	1500 - 1600 rpm

Diesel Engine

7.	Type of drive	Direct drive
8.	Cylinders	4 Cylinders
9.	Engine	54kW @ 2500 rpm
10.	Fuel capacity	Min 160 litre tank.

TYPE 2: Mobile Diesel Pump

11.	Name, Model number and ID as per product data sheet/brochure	.....
12.	Pump must be high quality centrifugal screw impeller pump capable of large solids handling and dry running	<ul style="list-style-type: none"> • Suction PN10 DN250 and discharge PN10 DN150 • Vacuum assisted self-Priming
13.	Solids handling	75 mm
14.	Capacity discharge	295 - 457 m ³ /h
15.	Discharge head	26 - 62 m
16.	Pump speed	1200 - 1850 rpm

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Diesel Engine

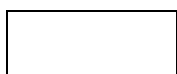
17.	Type of drive	Direct drive
18.	Cylinders	4 Cylinders
19.	Engine	55.4kW @ 1850 rpm
20.	Fuel capacity	Min 400 litre tank.

TYPE 3: Mobile Diesel Pump

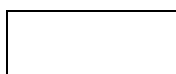
21.	Name, Model number and ID as per product data sheet/brochure	.....
22.	Pump must be high quality DriPrime pump capable of large solids handling and dry running	<ul style="list-style-type: none"> • Suction and discharge • 150 mm • Vacuum assisted self-Priming
23.	Solids handling	115 mm
24.	Capacity discharge	403 m ³ /h
25.	Discharge head	58 m
26.	Pump speed	2000 rpm

Diesel Engine

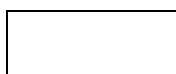
27.	Type of drive	Direct drive
28.	Cylinders	4 Cylinders
29.	Engine	54.7kW @ 2000 rpm
30.	Fuel capacity	Min 330 litre tank.



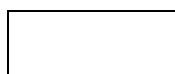
Contractor



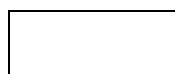
Witness 1



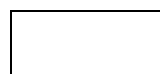
Witness 2



Employer



Witness 1



Witness 2

C3.2 ENGINEERING

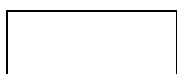
This Section presents specifications and descriptions of the complete designs, supplies, services, engineering and construction of the completed works which are to be provided under this Contract. Other requirements and constraints relating to the manner in which the Contract work is to be performed are also provided, where limited the requirements will be implemented as part of the service level agreement (SLA). This shall include the following provisions by the contractor and not limited to:

VENDOR INFORMATION AND DOCUMENT REQUIREMENT LIST	
DESCRIPTION	WHEN REQUIRED
Project Programme	Order + 1 Week
Design calculations calculation of the cable conductor size	Tender document and data book
Equipment brochures	Tender document and data book
Design calculations for the equipment	Order + 3 weeks and data book
GA drawings	Order + 3 weeks and data book
Schematic diagrams	Order + 3 weeks and data book
Foundation/Concrete Plinth details	Order + 3 weeks and data book
Manufacturing program	Order + 3 weeks
Manufacturing quality control plan	Order + 3 weeks and data book
Installation quality control plan	Order + 6 weeks and data book
Installation risk assessment and method statement including safe work procedure.	Order + 6 weeks and data book
Performance test certificate	data book
Electrical test certificate (including COC)	data book
Vendors cert. of conformance if any	data book
Operating / maintenance manual	data book
Progress Reports	Bi-Weekly

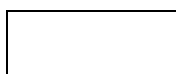
Note 1:

The Programme shall identify all major activities, principal items of plant and equipment and their components. The following activities and their duration shall, in addition to the requirements of the Conditions of Contract, form the minimum basis for the preparation of the Programme:-

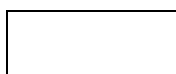
- Insurance Bond and general obligations
- Design
- Plant equipment and arrangement drawings
- Project Quality Plan
- Schedules
- HAZOPS
- Procurement
- Inspection and works testing
- Delivery
- Installation
- Adjustment



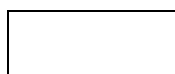
Contractor



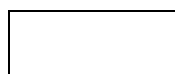
Witness 1



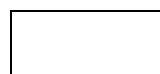
Witness 2



Employer



Witness 1



Witness 2

- Testing
- Commissioning
- Defects Notification Period

Note 2:

The Contractor shall provide a monthly progress report to the Engineer. The report shall cover at least the following aspects:

- progress of various activities in comparison to original program
- attainment of key milestones
- list of purchase orders placed
- names and positions of key personnel working on the project
- staffing levels on site (when site work commences)
- identification of any aspects needing to be addressed by the Employer or the Engineer

The Contractor shall be deemed to have scrutinised, prior to the Base Date, the Employer's Requirements (including design criteria and calculations, if any). The design, the Contractors Documents, the execution and the completed works shall comply with the country's technical standards, building, construction and Environmental Laws

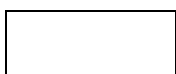
The contractor appointed to carry out the work shall produce a comprehensive set of detailed design drawings suitable for issue for construction as well as detailed shop drawings, prior to manufacture of equipment. They shall also be responsible for As-Built drawings and operating and maintenance manuals on completion.

The following electrical drawings shall be provided:

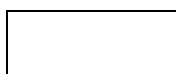
- Generator GA Drawing
- Detailed cable layout routes
- Wiring and Termination schedules as required for construction
- Equipment schedules
- Equipment Data Sheets

NOTE: Reference and legal requirements listed below will be implemented as part of the Service Level Agreement (SLA) and will be applicable to all the equipment to be supplied.

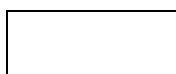
- The basis for the High Mast and Street Lights installation at the ERWAT sites shall be SANS / IEC standard and the requirements of the OHSA Act 85 of 1993 of the Republic of South Africa: The Occupational Health & Safety Act.
- The Electrical and Mechanical installation must comply with the relevant acceptable South African and International Engineering Standards, e.g. ECSA, SANAS and IEC accreditation certificate.
- Bidder will be required to prove local (in South Africa) after sales technical and functional support.
- Local distributor, as well as functional and technical support certificate or letter.
- Localized parts or spare bin at local agent or partner
- Clear listing of localized spares or parts within South Africa.
- Standardised Particular Specification are issued, however should there be any specific client requirements be superseded by SANS requirements will be applicable.
- The Civil Works require for all installations in this Contract is subject to ECSA requirements and all other applicable legislations and regulations.
- All Civil, Structural or any Other Designs must be signed off by a Professional registered in relation to the applicable ECSA requirement.



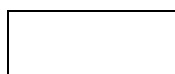
Contractor



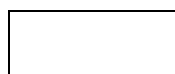
Witness 1



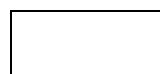
Witness 2



Employer



Witness 1



Witness 2

C3.3 CONSTRUCTION

C3.3.1 REFERENCE AND LEGAL REQUIREMENTS

It shall be the responsibility of the Contractor to obtain, at his own expense, the most recent copies of the relevant editions of the documents referred to.

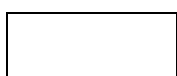
The Contractor shall keep copies of the Standard Specifications, copies which are available from the South African Bureau of Standards.

For the purpose of this Contract the following Standard Specifications shall apply to all items supplied and does not form part of the evaluation process.

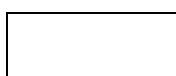
In general, work and materials shall be in accordance with the latest practice and in particular in accordance with the latest revision of the following specifications, and any amendments thereto, the SANS specification taking precedence:

The following minimum Legislative Requirements and Codes of Practice will be applicable to this project, but not limited to, this is not the exhaustive list.

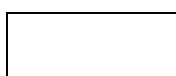
LEGISLATION, STANDARDS AND CODES OF PRACTICE – ELECTRICAL RELATED	
NUMBER	TITLE
SANS 10389 -1	Artificial lighting of exterior areas for work and safety.
SANS 121	Hot dip Hot dip galvanized coatings on fabricated iron and steel articles - Specifications and test methods
SANS 475	Luminaires for Interior lighting, Street lighting and Floodlighting performance requirements.
SANS 10144	Detailing of steel reinforcement for concrete.
SANS 10100 – 2	The Structure use of concrete Part 2: Materials and execution of work.
SANS 10142-1	The wiring of premises Part 1: Low-voltage installations
SANS 10144	Detailing of steel reinforcement for concrete
SANS 10225	The design and construction of lighting masts
SANS 10313	Protection against lightning – Physical damage to structures and life hazard
SANS 1091	National Colour Standard
SANS 475	Luminaires: Performance requirements
SANS 10142	Certificate of compliance.
OHSA	Occupation Health & Safety Act (act 85 of 1993), with Regulations included
IEC/TR 62271-303	High-voltage switchgear and control gear – Part 303: Use and handling of sulphur hexafluoride (SF6).
SANS 1012	Electric light dimmers
SANS 10142-1	The wiring of premises. Part 1: Low-voltage installations
SANS 10142-2	The wiring of premises. Part 2 Medium Voltage Installations above 1kV not exceeding 22kV
SANS 1019	Standard voltages, currents and insulation levels for electricity supply



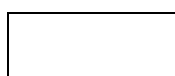
Contractor



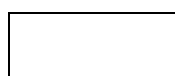
Witness 1



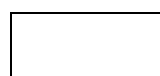
Witness 2



Employer

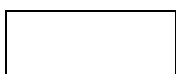


Witness 1

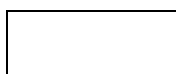


Witness 2

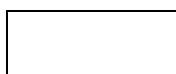
LEGISLATION, STANDARDS AND CODES OF PRACTICE – ELECTRICAL RELATED	
NUMBER	TITLE
SANS 10198-1-14	The selection, handling and installation of electric power cables of rating not exceeding 33 kV. Parts 1 to 13
SANS 10199	The design and installation of earth electrodes
SANS 1029	Miniature substations
SANS 10292 (SABS 0292)	Earthing of low-voltage (LV) distribution systems.
SANS 10313	The protection of structures against lightning
SANS 1239	Plugs, socket-outlets and couplers for industrial purposes
SANS 1665	Metal-clad switchgear for rated AC. voltages above 1 kV and up to and including 36 kV – General requirements and methods of test
SANS 1765	Low-voltage switchgear and control gear assemblies (distribution boards) with a rated short-circuit withstand strength up to and including 10 kA
SANS 1777	Photoelectric control units for lighting (PECUs)
SANS 1799	Watt-hour meters – AC electronic meters for active energy
SANS 1885/NRS 003	Metal-clad switchgear for rated a.c. voltages above 1 kV and up to and including 36 kV – General requirements and methods of test
SANS 1973-1	Part 1 Type tested Assemblies with Stated deviations and a rated short circuit withstand strength over 10kA
SANS 1973-3	Low-voltage switchgear and control gear ASSEMBLIES – Part 3: Safety of ASSEMBLIES with a rated prospective short-circuit current of up to and including 10 kA
SANS 1973-8	Low-voltage switchgear and control gear ASSEMBLIES – Part 8: Safety of minimally tested ASSEMBLIES (MTA) with a rated short-circuit current above 10 kA and a rated busbar current of up to and including 1 600 A a.c. and d.c
SANS 556-1	Low-voltage switchgear – Part 1: Circuit-breakers
SANS 60044-1/IEC 60044-1 to 5	Instrument transformers – Part 1 to 5
SANS 60309-1/IEC 60309-1	Plugs, socket-outlets and couplers for industrial purposes – Part 1: General requirements
SANS 60439-1 /IEC 60439-1 to 5	Low-voltage switchgear and control gear Assemblies Parts 1 to 5
SANS 60502-4/IEC 60502-4	Power cables with extruded insulation and their accessories for rated voltages from 1 kV (Um = 1,2 kV) up to 30 kV (Um = 36 kV) – Part 4: Test requirements on accessories for cables with rated voltages from 6 kV (Um = 7,2 kV) up to 30 kV (Um = 36 kV).
SANS 60529/IEC 60529	Degrees of protection provided by enclosures (IP Code).
SANS 60669-1/IEC 60669-1	Switches for household and similar fixed electrical installations – Part 1: General requirements.
SANS 60669-2-1/IEC 60669-2-1,	Switches for household and similar fixed electrical installations – Part 2-1: Requirements – Electronic switches.



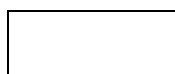
Contractor



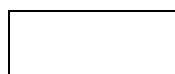
Witness 1



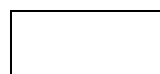
Witness 2



Employer

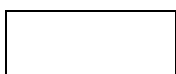


Witness 1

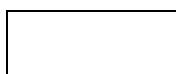


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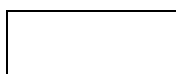
LEGISLATION, STANDARDS AND CODES OF PRACTICE – ELECTRICAL RELATED	
NUMBER	TITLE
SANS 60947-2/IEC 60947-2	Low-voltage switchgear and control gear – Part 2: Circuit-breakers
SANS 60947-3/IEC 60947-3	Low-voltage switchgear and control gear – Part 3: Switches, disconnectors, switch-disconnectors and fuse combination units.
SANS 60947-4-1/IEC 60947-4-1	Low-voltage switchgear and control gear – Part 4-1: Contactors and motor-starters – Electromechanical contactors and motor-starters
SANS 60947-4-2/IEC 60947-4-2,	Low-voltage switchgear and control gear – Part 4-2: Contactors and motor-starters – AC semiconductor motor controllers and starters.
SANS 61084-1/IEC 61084-1	Cable trunking and ducting systems for electrical installations – Part 1: General requirements.
SANS 61238-1/IEC 61238-1	Compression and mechanical connectors for power cables for rated voltages up to 30 kV (Um = 36 kV) – Part 1: Test methods and requirements
SANS 61312-3/IEC/TS 61312-3	Protection against lightning electromagnetic impulse – Part 3: Requirements of surge protective devices (SPDs).
SANS 61386-1/IEC 61386-1	Conduit systems for cable management – Part 1: General requirements.
SANS 61386-21/IEC 61386-21	Conduit systems for cable management – Part 21: Particular requirements – Rigid conduit systems
SANS 61386-22/IEC 61386-22	Conduit systems for cable management – Part 22: Particular requirements – Pliable conduit systems.
SANS 61386-23/IEC 61386-23	Conduit systems for cable management – Part 23: Particular requirements – Flexible conduit systems
SANS 61643-1/IEC 61643-1	Low-voltage surge protective devices – Part 1: Surge protective devices connected to low-voltage power distribution systems – Requirements and tests.
SANS 61643-12/IEC 61643-12	Low-voltage surge protective devices – Part 12: Surge protective devices connected to low-voltage power distribution systems – Selection and application principles
SANS 62053-11/IEC 62053-11	Electricity metering equipment (a.c.) – Particular requirements – Part 11: Electromechanical meters for active energy (classes 0,5, 1 and 2).
SANS 62053-21/IEC 62053-21,	Electricity metering equipment (a.c.) – Particular requirements – Part 21: Static meters for active energy (classes 1 and 2).
SANS 62271/IEC 62271 All Parts	High-voltage switchgear and control gear
SANS 62305-1	Protection of structures against lightning Part 1: General principles
SANS 62305-1/IEC 62305-1	Protection against lightning – Part 1: General principles.
SANS 62305-2/IEC 62305-2	Protection against lightning – Part 2: Risk management.
SANS 62305-3/IEC 62305-3	Protection against lightning – Part 3: Physical damage to structures and life hazard



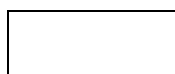
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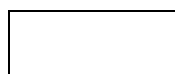
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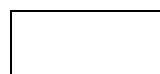
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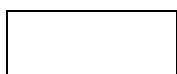
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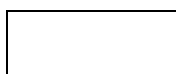
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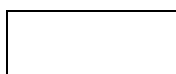
NUMBER	TITLE
SANS 62305-4/IEC 62305-4	Protection against lightning – Part 4: Electrical and electronic systems within structures
SANS 767-1	Earth leakage protection units – Part 1: Fixed earth leakage protection circuit-breakers.
SANS 780	Distribution transformers
SANS 950	Unplasticized polyvinyl chloride rigid conduit and fittings for use in electrical installations
SANS IEC 60044-1	Instrument Transformers Part 1: Current Transformers
SANS IEC 60044-2	Instrument Transformers Part 2: Inductive voltage Transformers
SANS IEC 60265-1	High-voltage switches Part 1: Switches for rated voltages above 1 kV and less than 52 kV
SANS IEC 60296	A.C. metal-enclosed switchgear and control gear for rated voltages above 1 kV and up to and including 52 kV
SANS IEC 60439-1	Low-voltage switchgear and control gear assemblies Part 1: Type tested and partially type-tested assemblies
SANS IEC 60529	Degrees of protection provided by enclosures (IP code)
SANS IEC 60947-1	Low-voltage switchgear and control gear Part 1: General rules
SANS IEC 60947-2	Low-voltage switchgear and control gear Part 2: Circuit-breakers
SANS IEC 60947-4	Low-voltage switchgear and control gear Part 4: Contactors and motor-starters
SANS IEC 60947-5	Low-voltage switchgear and control gear Part 5: Control circuit devices and switching elements
SANS IEC 60947-6	Low-voltage switchgear and control gear Part 6: Multiple function equipment
SANS IEC 61439-1	LV Control-Gear and assemblies
SANS IEC 60076 1-21	Power Transformers
SANS 10086-1	The Installation, maintenance and inspection of equipment used in explosive atmospheres
SANS 10108	The Classification of hazardous locations and selection of electrical apparatus for use in such locations
SANS 10119	Reduction of Explosion Hazards presented by electrical equipment
SANS 10123	Control of static electricity



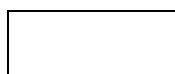
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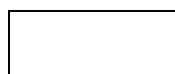
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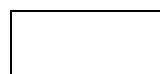
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C3.4 MANAGEMENT OF THE WORKS

C3.4.1 Planning and Programming

The programme referred to in the General Conditions of Contract shall be a network-based programme in accordance with the precedence method; a detailed cash flow graph indicating projected monthly invoice amounts shall also be provided. The critical path of the programme of work shall be clearly indicated and the programme monitored continually and updated monthly by the Contractor in accordance with his progress.

- (1) In compiling the programme of work, the Contractor shall incorporate the following important specific requirements and constraints:
 - (a) The identification and marking of affected services prior to commencing construction works.
 - (b) The requirements of the Environmental Management Plan (EMP) as specified in the relevant sections of the Particular Specifications and the requirements in respect of inspections and community liaison.
 - (c) The requirements of the Occupational Health Safety (OHS) Act of 1993 and the Construction Regulations, 2003.
 - (d) The relocation of services.
 - (e) An allowance to accommodate "normal" rain days.

- (2) The programme submitted shall include at least the following details:
 - (a) A work breakdown structure identifying the major activity groups.
 - (b) The critical path shall be indicated and floats on non-critical activities shall be shown.
 - (c) The working hours per day, week and month allowed for in the programme with details of resource allocations per activity.
 - (d) Production rates for key activities, e.g. engineering, fabrication, delivery, installation, commissioning, etc.

- (3) In addition, the Contractor shall submit to the Engineer at monthly intervals a progress report indicating the following details:
 - (a) Work completed in previous month and total progress to date, per activity.
 - (b) Activities behind programme, for which the Contractor shall detail all reasons for such delays as well as the measures to be implemented to make up delays.
 - (c) A GANTT chart showing the original programme, the latest approved version of the programme, actual progress achieved and revised completion dates, if and when applicable.
 - Failure to comply with all of the foregoing requirements shall entitle the Engineer to use a programme based on his own assumptions to evaluate claims for extension of time for completion of the works, or for additional compensation.

C3.4.2 Site establishment

C3.4.2.1 Services and Facilities provided by the Employer.

1. Electricity Supply

The Site is provided with ESKOM/Municipality power. One or more 380 V 50 Hz power supply points can be made available to the Contractor. The contractor shall be responsible for providing an installation which complies in all respects with the standing regulations of the supply authority. Failure on the part of the Contractor to observe these requirements or maintain his installations in terms therefore will result in the termination of electrical power supplies until such time as any shortcomings in this regard are rectified.

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No warranty is offered or given by the Employer that the existing available electricity supply will be adequate for the Contractor's purposes nor that such supply is in any way guaranteed.

2. Telephone Services

To be provided by Contractor

3. Area for Contractor's Site Establishment

The proposed site of the Contractor's offices, workshops, stores and plant yard will be indicated on site if requested where applicable.

C3.4.2.2 Facilities provided by the Contractor.

The Contractor is required to provide a construction camp including offices, workshop, materials, store, sanitary facilities, offices and equipment for his own use as required.

C3.4.2.3 Site Usage.

The Contractor; his personnel; and his subcontractors; and suppliers; shall confine their activities to the demarcated site of the Works and the direct access roads thereto. Temporary routes shall be subject to the written approval of the Engineer and be subject to the applicable Standardized Specifications.

C3.4.3 Materials and Equipment.

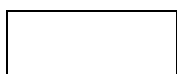
C3.4.3.1 General.

- (a) All material and equipment used shall be suitable for working at the temperature and pressures involved under all working conditions "without distortion or deterioration" or the setting up of undue stresses in any part and without impairing the efficiency or reliability of the plant and the strength of its components.

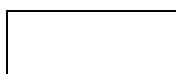
- (b) Where corrosion of metal may be expected from contact with water or chemicals or from any other cause, the contractor is to supply materials which are resistant to corrosion. Any equipment or material showing signs of corrosion, tuberculation or pitting before the expiry of the period of maintenance shall be replaced by the contractor at his own expense with material to ERWAT's approval.

- (c) The Employer shall have to refuse acceptance of any material or workmanship which is found to be unsound, damaged or contrary to the specification, or which is found, during the period of maintenance or during test at site to be defective or in any way contrary to the specification due to causes within the Contractor's control or responsibility. All material rejected shall be removed and replaced to the instruction and satisfaction of the ERWAT, whose decision in the matter shall be binding on the Contractor.

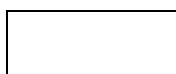
- (d) Where reference is made to standard specifications, the latest edition with amendments, up to the tender closing date shall apply.



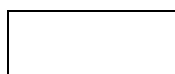
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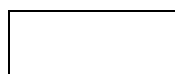
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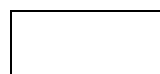
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C3.4.3.2 Quality Management.

(a) Applicable quality assurance standards.

- i. The Tenderer shall provide a coordinated and formally documented statement of his quality management objectives, policies, organization and procedures, for the compulsory implementation of SANS 9001:1987. The same applies to part II will not be implemented in all instances it will not exempt the Contractor of compliance with the quality requirements laid down in the tender documents. Monitoring and control by and they may be done at any time on any material.
- ii. The contractor shall submit with his tender an assessment report on his quality management and quality control system issued by an independent quality Assurance authority approved by ERWAT. The inspection on which this assessment report is based shall have taken place not more the twelve months prior to the closing date for this tender.
- iii. Responsibility for and all associated costs of compliance with this sub-clause shall rest with the Contractor.

(b) ERWAT quality assurance representative.

ERWAT may elect to appoint an independent quality assurance representative to act in a surveillance capacity on his behalf for part or the entire contract.

(c) Quality assurance staff.

- i. The contractor shall satisfy the ERWAT that a quality control specialist together with sufficient and suitably qualified staff will be assigned to control the quality of material used by the Contractor and monitor the quality of the material used by each sub-contractor engaged in the supply of critical and major components and sub-assemblies.
- ii. The curriculum vitae of quality specialists shall be submitted to the ERWAT at the time of tender. ERWAT shall approve the proposed quality staff in writing and changes of staff shall require written agreement with ERWAT.
- iii. If it is considered that the proposed quality specialist and/or quality staff is inadequate or becomes inadequate during the course of the contract and at his own cost an independent quality control specialist and/or sufficient and suitably qualified quality staff approved by ERWAT.

(d) Classification of material.

The above-mentioned Code of practice, i.e. a quality system for manufacture and installation, will apply only to certain critical material, products and services indicated in the tender documents, of which considers the manufacturing and installation stages of such critical importance that quality assurance by the contractor shall be of an even higher level than that prescribed.

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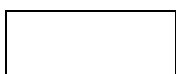
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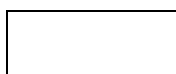
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(e) Quality Control Plan.

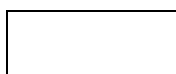
- i. Quality control plans are required for every stage of the project implementation process. The stages are divided as follows:
 - 1. Pre-manufacturing Quality control
 - 2. Material Quality control
 - 3. Manufacturing or constructing Quality control
 - 4. Installation Quality control
 - 5. Commissioning Quality control
- ii. The Quality control plan will be based on the project plan progress and quality evaluation intervention will be implemented at predetermined milestones.
- iii. At these milestones hold points will allow for Quality control inspection to take place before any further activities are undertaken.
- iv. The inspection details and documentation will be determined the product service or activity.
- v. In the case of a manufacturing process the manufacturer will be required to submit a QCP and related documentation to ERWAT to be approved with regards to the specific product. In the case of construction or installation work the supplier will be required to submit a detailed method statement that will be the bases of the QCP.
- vi. The same will apply to the commissioning process.
- vii. The following document is an example of the proposed format for a QCP.
- viii. The basic hold points will be for:
 - 1. Dimensional inspection-D
 - 2. Visual inspection - V
 - 3. Functional tests - F
 - 4. Factory acceptance test - FAT
 - 5. Site acceptance test - SAT
- ix. Other hold points may be added if required and alternative QCP may be used based on the approval from ERWAT.
- x. Quality control plan format below is a basic guide adjustment and enhancement may be added based on contractual requirements.



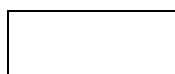
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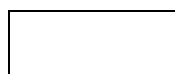
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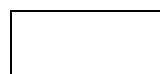
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Quality Control Plan												
Contract Description:								Contract Number:				
Component Item Description:						Section Description:						
Document Status:		QCP No:		Sheets:		Revision No:						
Hold Point Legend:		Dimensional Inspection:		D	Visual Inspection:		V	Functional Test:		F	Factory Acceptance Test:	
Approved Activities					Control activities							
Item	Activity	Document	Acceptance Criteria	Supplier	Sign	Engineer	Sign	Client	Sign			
A	Pre-Manufacture Control											
B	Material Quality Control											
C	Construction Process											
D	Installation Process											
E	Commissioning Process											
Supplier Approval				Engineer Approval			Client Approval					
Name:				Name:			Name:					
Designation:				Designation:			Designation:					
Signature:				Signature:			Signature:					
Date:				Date:			Date:					

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C3.4.4 Mechanical Equipment.

C3.4.4.1 Screwed and Socketed Steel Pipes and Malleable Cast Iron Fittings

- (a) All screw and socketed pipes shall be for medium duty and shall comply with the requirements as set in SANS 14:1994. Malleable fittings made of Cast iron which are used in conjunction with screwed and socketed pipes shall comply with all standards specified in SANS 14:1994.
- (b) Pipes and fittings shall be galvanized inside and outside in compliance with SANS 121:1999. No welding will be permitted on any galvanized pipes.

C3.4.4.2 Polyethylene Pipes and Fittings.

- (a) Polyethylene pipes shall be of high density and shall comply with requirements of SANS 4427:1996 and shall be of class (es) and type (es) as specified for each application.
- (b) Pipe fittings shall be compression type.

C3.4.4.3 Cast Iron Pipes and Fittings.

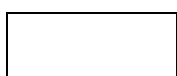
- (a) All cast iron pipes and fittings shall comply with the requirements of BS 2035 and unless otherwise specified of the following class:
 - i. Straight pipes Class D quality
 - ii. Fittings Class CD quality
- (b) All materials used shall comply with the requirements of SANS 1034:2012:2012 for “Grey iron Castings”.
- (c) All cast iron pipes and fittings shall be protected against corrosion in accordance with the relevant specification before leaving the foundry.

C3.4.4.4 Un-Plasticized Polyvinyl Chloride Pipes and Fittings.

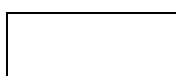
- (a) Un-plasticized Polyvinyl chloride (uPVC) pipes and fittings shall comply with the requirements of SANS 966-1:1998 and shall be of class (es) as specified for each application.
- (b) All uPVC pipes shall be fitted with spigot and socket Z-joints with rubber sealing rings.
- (c) Except for bends, which shall be of uPVC pipes shall be of cast iron with a wall thickness in accordance with SANS 5460:2008. Socket dimensions shall comply with SANS 966-1:1998.

C3.4.4.5 Mild Steel Pipes, Fittings and Specials.

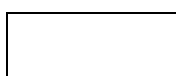
- (a) All mild steel pipes and fittings, except for screwed and socketed pipes, shall comply with the requirements of SANS 719: 2011 grade A.
- (b) Specials shall comply with the requirements of BS 534 and shall be manufactured from straight pipes.
- (c) All welding on pipes and fittings shall be electric fusion welding.
- (d) All mild steel pipes and fittings shall be protected against corrosion in accordance with the relevant specification before leaving the foundry.
- (e) All ends of pipes and fittings shall be covered and protected against damage while being transported from the factory to site.



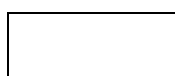
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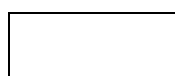
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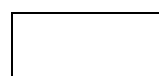
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(f) Minimum wall thickness of pipes and fittings shall be as follows:

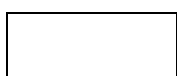
- i. Up to 350 mm diameter : 5 mm
- ii. Over 350 mm and under 650 mm : 6 mm
- iii. Over 650 mm and under 1 050 MM : 8 mm
- iv. Over 1 050 mm and under 1 750 mm : 10 mm
- v. Over 1 750 mm : 12 mm

C3.4.4.6 Bolts, Nuts and Washers.

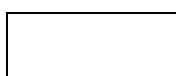
- (a) All bolts and nuts and washers shall be provided with the same material or coating, where applicable, to match the bolt and nut.
- (b) Single coil squared section spring washers shall be fitted to all nuts subjected to vibrations.
- (c) Bolts, except for jacking bolts, shall protect not less than 3 mm and not more than 10 mm from the heads of the nuts after tightening.
- (d) Jacking bolts and holding down bolts to be built into concrete as well as bolts installed above and under water shall be of SS 304.
- (e) Bolts to be installed inside buildings shall be painted as specified in the mild steel components unless otherwise specified in the Specifications.
- (f) Bolts used on flexible couplings and flanges for underground installation shall be hot dip galvanized and comply with requirements of SANS 121:1999.
- (g) Suitable plastic sleeves or washers shall be used against corrosion by metallic action.

C3.4.4.7 Stainless Steel Fabrications.

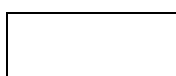
- (a) Grades and welding techniques
 - i. The grade of stainless steel to be used shall be as specified in the appropriate section of the mechanical specification or drawings. Where welding is necessary, the appropriate "L" grade (low carbon content) shall be used.
 - ii. Plate shall be supplied as No. 1 Finish in accordance with BS 1449 part 4
 - iii. Welding procedures shall be only those recommended by the stainless-steel manufacturer or by the South African Stainless Steel Development Association.
 - iv. Only welders coded by BS 4870 Part 1 or ASME IX, 1983 shall be employed.
 - v. Welds shall be smooth and free from blowholes, undercuts, sharp projections and similar visual defects.
 - vi. Fabrication of stainless-steel components shall be carried out in clean workplaces where there is no contamination by mild steel.
 - vii. Grinding and polishing equipment shall be dedicated and shall not be contaminated with iron or mild steel.
 - viii. Stainless steel shall be suitably handled to avoid scratching the surface.



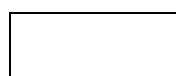
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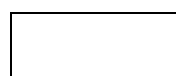
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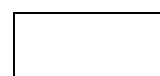
Witness 2



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Witness 1



Witness 2

(b) Passivation and pickling

- i. Cut edges, welds and heat-treated surfaces shall be pickled and passivated to remove all discoloration. Proprietary pickling and passivation pastes (as supplied by approved supplier) shall be used in accordance with the manufacture`s recommendations.
- ii. Care shall be taken not to exceed the maximum contact time recommended.
- iii. The safety precautions given in B.20.9 (b) shall be strictly observed.
- iv. After passivation, surfaces shall be very thoroughly washed with clean potable water to remove all traces of acids.
- v. The surface shall be allowed to dry, the polished where necessary, using polishing compounds recommended by the stainless-steel manufacturer or South African Stainless-Steel Association.
- vi. SAFTEY PRECAUTIONS as specified in Clause B.20.9 (b) shall be strictly observed.
- vii. The Contractor shall ensure that passivated stainless steel shall not be contaminated by handling or erection activities due to grinding, welding brushing or any other means contaminated materials shall be removed from site for re-pickling and passivation.

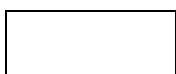
C3.4.4.8 Hot Dip Galvanizing.

(a) Design and fabrication

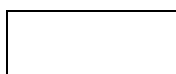
- i. Overlap joints shall be avoided wherever possible. If essential, such overlap joints shall be thoroughly degreased before assembly and shall be vented by drilling holes through one or both overlapping materials.
- ii. Closed sections shall be suitably vented. If the inside of a closed section is not to be galvanized, a snorkel vent tube of suitable length and bore shall be attached.
- iii. Gussets and internal baffles in tanks shall be cropped to allow free flow of zinc and air.
- iv. Joints shall be continuously welded, using balanced welding techniques to avoid stresses. Welds shall be free from cavities, undercutting, weld slag and spatter.
- v. Symmetrical design shall be used whenever possible and the use of thin gauge steel adjacent to heavy sections shall be avoided.
- vi. Openings shall be designed to be of as uniform section as possible and shall be blast cleaned in accordance with the relevant particular Specifications before dispatch to the galvanizer.

(c) Process

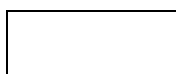
- i. Hot dip galvanizing shall comply with SANS 121:1999 For fabricated articles, SANS 4998:2015, for pre-galvanized sheet or SANS 10244-2:2011 for wire.
- ii. Mating surfaces on fabricated or cast-iron components shall be wiped or centrifuge on removal from the galvanizing bath to remove blobs, run or excess metal that may impair the air/gas/water tightness of the joints.



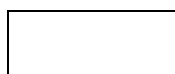
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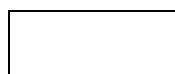
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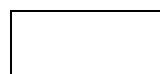
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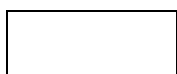
- iii. Bolts, nuts and washers used for fixing shall be hot dip galvanized to SANS 10684:2011. Electroplated fasteners will not be accepted unless otherwise agreed by ERWAT in writing.

(d) Repairs to hot dip galvanized items

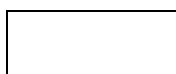
- i. Welding, flame cutting, or other processes shall not be carried out on galvanized articles unless permission is granted by ERWAT in writing.
- ii. If such permission is given, or if mechanical damage has occurred, repairs shall be carried out as follows:
 - 1. All scale, spatter and flux shall be removed by grinding and washing with clean water. Edges shall be ground to a radius not less than 2mm.
 - 2. The preferred repair process is to blast clean the bare steel and apply zinc by the thermal spray process in accordance with SANS 2063:1991.
 - 3. On completion of metal spraying burnish the surface by means of a mechanical wire brush to give a uniform appearance. Such burnishing shall remove not more than 10 micrometers of zinc.
 - 4. Where small areas are to be repairs, clean the surface thoroughly with fine abrasive paper, remove all debris with a damp cloth and allow to dry.
 - 5. Apply an approved one pack epoxy ester-based zinc rich primer containing not less than 90% by mass of zinc in the dry film.
 - 6. A sufficient number is not less than the average zinc thickness specified in SANS 121:1999, as appropriate. The repair shall extend not less than 5mm beyond the damaged area.
 - 7. On completion of the repair and when the zinc rich primer is complete dry, one coat of alkyd resin-based aluminum paint may be applied to obtain a uniform appearance.
 - 8. NOTE: Repair of galvanized surfaces by application of aluminum paint alone IS NOT PERMITTED.

(e) Storage specifications

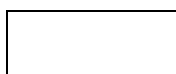
- i. Galvanized components shall be stored to avoid the formation of “white rust” or other forms of storage staining.
- ii. Components shall be separated and supported on wooden battens to ensure adequate ventilation of all surfaces and in such a manner to avoid “ponding” by rainwater.
- iii. If storage staining does occur, remove the stains by scrubbing with detergent solution and bristle brush or nylon pad. The use of steel wool or other metallic abrasive is not permitted.
- iv. Rinse thoroughly and allow it to dry. If the residual zinc thickness complies with the requirements of the appropriate grade in the relevant specification, no further action is required unless instructed by ERWAT.
- v. If the zinc thickness is below specification, the articles shall be re-galvanized or repaired in accordance with Clause 11.3(c), as instructed by ERWAT.



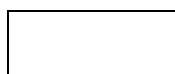
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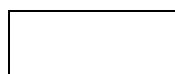
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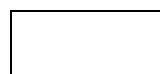
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C3.4.4.9 Aluminum.

(a) Powder coating

- i. When specified by ERWAT, aluminum handrails may be coated with polyurethane powder.
- ii. Such coating shall only be carried out by a Contractor with the necessary plant, equipment and experienced to pretreat and powder coat aluminum effectively.
- iii. The coating shall comply with BS 6496, 1984.

(b) Anodizing

- i. Aluminum components where specified as anodized and sealed in accordance with SANS 999:2013.
- ii. The corrosion resistance of the coating shall be not less than 8 when tested in accordance with 3.6 of specification SANS 99:2008. Anodizing shall be carried out after completion of all welding.

(c) Contact with concrete

- i. Whenever aluminum components, such as stop log frames, come into contact with concrete or grout, the surface of aluminum in contact with concrete shall be coated with two coats of an approved epoxy tar composition.

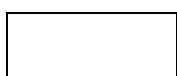
C3.4.4.10 Welding techniques.

- i. Welds shall be full penetration welds, using 309 austenitic electrodes or filler wire, or as recommended by the manufacturers (Middelburg steel & Alloys (Pty) Ltd).
- ii. Welded shall be suitably coded for welding similar thickness or austenitic stainless steel, in accordance with BS 4870 Part I or ASME IX, 1983.
- iii. Welding producers shall comply with the recommendations of the manufacture of 3CR12 (Middleburg steel & Alloys (Pty) Ltd).
- iv. Welds shall be smooth and free from blow holes, undercuts, sharp projections and similar visual defects.

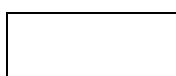
C3.4.5 Surface and Corrosion Protection.

C3.4.5.1 Coating Materials.

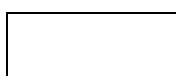
- (a) No variation in materials tendered and approved by ERWAT shall be permitted without the approval of ERWAT in writing.
- (b) Correct material selection shall be confirmed by the material supplier.
- (c) All coating materials shall be delivered in the manufacturer's original sealed containers clearly marked with the following:
 - i. Manufacturer's name
 - ii. Product brand and reference number
 - iii. Batch number which may incorporate the date of manufacture



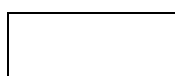
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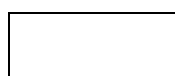
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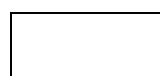
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- iv. Date of manufacture, unless already incorporated in the batch number
 - v. Abbreviated instructions for storage and use of the material, which shall include mixing ratios of components of multi-component material, minimum temperature of application and method of application
 - vi. The SABS mark in terms of the listed standards.
- (d) All coating materials shall be kept in an approved store, which shall be dry, enclosed and where the temperature is unlikely to exceed 40 degrees Celsius or drop below 0 degrees Celsius.
- (e) Usage of materials shall be on a first-in, first-out basis and no materials may be used which have exceeded the shelf life recommended by the manufacturer.

C3.4.5.2 Mild Steel.

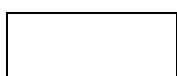
- (a) Oil and grease contamination, when present, shall be removed by degreasing before blast cleaning.
- (b) Mild steel shall be blast cleaned in accordance with Section 4.3 of SANS 10064:2011 Code of Practice for “The preparation of steel surfaces for coating”

C3.4.5.3 Galvanized steel surface.

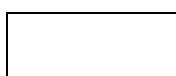
- (a) Prior to painting, the galvanized surfaces shall be degreased using either a mild acid detergent degreasing solution or a water risible solvent degreaser in accordance with the manufacturer’s instructions.
- (b) Care should be taken to avoid cleaning agents from being trapped in recesses or retention areas. In both cases, washing of the surfaces will take place until a “water break free” surface is achieved.
- (c) If necessary, the process should be completed until the required degree of cleanliness is achieved.
- (d) A water break free surface is a surface that when it is made wet with potable water, the entire surface stays wet (continuously) and no “dry” islands are formed.
- (e) Blast Cleaning Standards
 - i. After degreasing is finished, the surface shall be abraded by one of the following methods:
 - ii. Large areas “sweep blast cleaning”
 - iii. Use nozzle with pressure greater than 300 KPa and very fine abrasive. Removal of zinc by blast cleaning the surface is not permitted.
 - iv. Small areas Abrasive paper or non-metallic abrasive pads
 - v. Not coarser than 120 grade
 - vi. Dust and loose particles shall be removed by washing or vacuuming the surface. Ensure that the surface is dry before coating.

C3.4.5.4 Cast Iron and Cast Alloys.

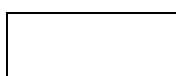
- (a) All cast surfaces shall be blast cleaned with platinum slag abrasive designed for blast cleaning.
- (b) No recycled abrasive shall be used.



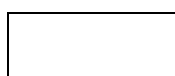
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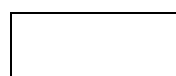
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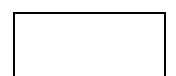
Witness 2



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Witness 2

- (c) Cast iron shall be blast cleaned until all residuals burnt on sand and casting skin and sand particles have been removed. The Foundry shall perform the blast cleaning prior to dispatching to the galvanizer or painting contractor.
- (d) Conventional cleaning of castings is inadequate for galvanizing.

C3.4.5.5 Aluminum.

- (a) Aluminium surfaces will generally be powder coated or anodized. If painting is required, the surface shall be degreased and washed with potable water until surface is “break free”.
- (b) Allow surface to dry and apply a thin layer, 7-14 micrometer (dry film thickness) of wash primer in compliance with SANS 723:1973. Application should also be in accordance with manufacturer’s instructions.

C3.4.5.6 Painted surfaces - Bare surfaces.

- (a) Bare surfaces shall be cleaned with abrasive paper, not coarser than grade 220, until surface is bright metal. Surrounded areas covered with paint shall be feathered for a distance of 20 mm beyond the damage area.
- (b) Debris and dust shall be removed using a dampened (with water) cloth or clean solvent that will not attack the coating. Spot repair shall be carried out with all coats previously applied and shall overlap the undamaged area with 20 mm.
- (c) When additional coats are required over entire surface, the whole surface shall be abraded to an even matt finish. Debris and dust shall be removed. Surface will be allowed to dry. Coats will be applied as specified to give an even finish.
- (d) Abrasion of coating is not required for vinyl systems.

C3.4.5.7 Painted surfaces - Primed surfaces.

- (a) Sanded with fine abrasive paper until an even matt finish is achieved
- (b) Degrease with a solution of suitable water-based detergent-degreaser with a brittle brush
- (c) Rinse with clean water to remove all grease and debris left.

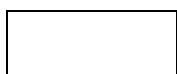
C3.4.5.8 Painted surfaces - Fully painted surface to be repaired.

- (a) When additional coats are required over entire surface, the whole surface shall be abraded to an even matt finish. Debris and dust shall be removed. Surface will be allowed to dry.
- (b) Coats will be applied as specified to give an even finish.
- (c) Abrasion of coating is not required for vinyl systems.

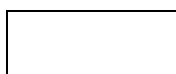
C3.4.5.9 Paint Application - Environmental condition.

Painting shall not be applied under the following conditions:

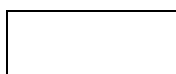
- (a) Dusty surfaces.
- (b) Steel temperature is less than 3 degrees Celsius above dew point.
- (c) Higher than the manufacturer’s instructions.
- (d) Humidity is higher than 85 %.



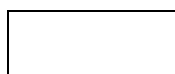
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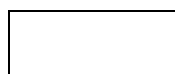
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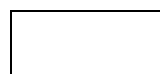
Witness 2



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- (e) Ambient temperature falls outside the region specified by the manufacturer.

C3.4.5.10 Paint Application - Manufacturer's instructions.

- (a) Printed data sheets or written recommendations from the manufacturer shall be followed at all times.
- (b) Verbal recommendations will not be accepted unless confirmed in writing by the company.

C3.4.5.11 Paint Application – Handling.

- (a) Coated components shall not be handled before the recommended hard dry time specified by the manufacturer, relevant to the ambient temperature.
- (b) Coated components shall be handled with broad band slings and transported in suitable packaging to minimize damage to the components.
- (c) Damage caused by handling, transportation and erection shall be required to the satisfaction of ERWAT at no extra cost.

C3.4.5.12 Paint Application – Mixing.

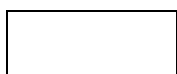
- (a) Coating material shall be mixed until completely homogeneous. When a two-pack material is used, each component which contains pigments shall be mixed.
- (b) Then the two components shall be mixed together in the proportions supplied by the manufacturer until mixture is homogeneous.
- (c) When solvent base epoxy materials are used, it is recommended that the component stand for an induction period of 20-30 minutes before application.

C3.4.5.13 Paint Application - Technique of application.

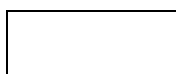
- (a) Application techniques shall be in accordance with that specified by the manufacturer. These techniques include the application with a: brush, roller, spray, airless spray.
- (b) Application equipment should be maintained in clean conditions and in good working order.
- (c) NOTE: Zinc silicate primers shall be applied by conventional spry, using a continuously agitated pressure pot, unless otherwise specified by the manufacturer.

C3.4.5.14 Paint Application – Overcoating.

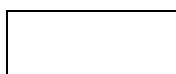
- (a) Overcoating times shall be within the region specified by the manufacturer relevant to the ambient temperature.
- (b) Strict adherence to over coating times is particularly important for coatings which are subsequently immersed.
- (c) The Contractor shall be held responsible for blistering of coatings on immersion, when shown to be caused by solvent retention.
- (d) Operators handling blast clean or partially painted surfaces shall wear gloves at all times to avoid contamination of the surface.



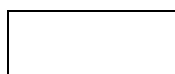
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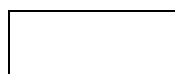
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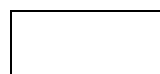
Witness 2



Employer



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Witness 2

C3.4.5.15 Coating System A: ALKYD Enamel.

- (a) ALKYD systems are intended for use in environments of low corrosivity, where a good decorative finish is required. Material shall therefore be applied with due cognizance of appearance and protection.
- (b) Defects such as runs, sags, curtaining, shrivelling or wrinkling will not be permitted.

C3.4.5.16 Coating System A1 – Alkyd system on to bare steel surfaces.

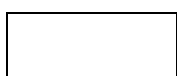
- (a) The surface to be coated shall be prepared as specified in the appropriate sub-section of Clause 2.
- (b) Apply one coat Zinc phosphate complying with SANS 1319:2014 Type 1, to a film thickness not less than 30 micrometers. Allow to dry for a minimum of 16 hours.
- (c) SANS 1319:2014.
- (d) Apply one coat alkyd-based undercoat complying with SANS 681:2014, to give a dry film thickness of not less than 30 micrometers. Allow to dry for a minimum of 16 hours.
- (e) Apply one coat of alkyd enamel complying with SANS 630:2009, in the colour specified by ERWAT, to give a dry film thickness of not less than 25 nor greater than 40 micrometers. Allow to dry for a minimum of 16 hours.
- (f) On exterior surfaces, apply a second coat of alkyd enamel within 30 hours, to give a dry film thickness of not less than 25 nor greater than 40 micrometers in the final colour as specified by ERWAT. Allow to dry for a minimum of 16 hours.
- (g) The total dry film thickness shall not be less than 75 micrometers in the case of interior surfaces and not less than 100 micrometers in the case of exterior surfaces.

C3.4.5.17 Coating System A2 – Alkyd system on surfaces already cleaned and primed

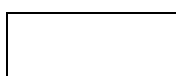
- (a) Clean and prepare the surface as specified in Clause 2
- (b) Touch up bare areas with Zinc phosphate complying with SANS 1319:2014 Type 1
- (c) Apply one coat of Zinc phosphate complying with SANS 1319:2014 Type 1
- (d) Continue the system as given in System A1 (iii) to, and inclusive (vi)

C3.4.5.18 Coating System A3 - Alkyd system on factory finished components

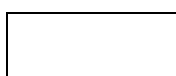
- (a) The Contractor shall ensure that the existing coating is compatible with the system to be applied
- (b) Prepare the surface as specified in Clause 2
- (c) On interior surfaces apply one coat of alkyd enamel complying with SANS 630:2009, in the colour specified by ERWAT, to give a dry film thickness of not less than 25 micrometers. The total dry film thickness shall not be less than 50 micrometers
- (d) On exterior surfaces, apply a second coat of alkyd enamel complying with SANS 630:2009 Type 2 to give a dry film thickness of not less than 50 micrometers. The total dry film thickness shall not be less than 75 micrometers
- (e) In both cases a further coat of enamel shall be applied after installation, to the final colour selected by ERWAT



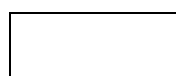
Contractor



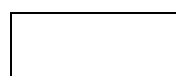
Witness 1



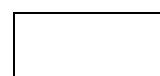
Witness 2



Employer



Witness 1



Witness 2

C3.4.5.19 Coating System A4 - Alkyd system on Galvanized surfaces – above water and non-corrosive environment

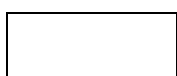
- (a) Prepare the system as specified in Clause 2 (2)
- (b) Apply one coat of an approved water-based vinyl chloride vinylidene chloride copolymer primer containing zinc phosphate to give a dry film thickness of no less than 40 micrometers and not greater than 80 micrometers. Allow 16 hours to cure in dry conditions before over coating. Since this material is water based, drying time shall be extended under humid conditions
- (c) Continue the system as given in System A1 (iii) and (iv)

C3.4.5.20 Site prepare of ALKYD system

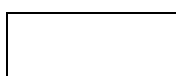
- (a) Any site repair required by ERWAT shall be carried out in accordance with the surface preparation method given in Clause 2, followed by all the coats required to restore the damaged area to the original system requirements.
- (b) Since patch application of the final coat rarely gives an acceptable uniform finish, the whole area in which damage has occurred shall be cleaned, abraded with fine wet or dry abrasive paper (not coarser than 200 mesh) and given one coat of enamel all over, unless otherwise accepted by ERWAT.

C3.4.5.21 Coating System B: Two Pack Chemically Cured Systems for Use Under Water

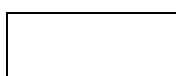
- (a) Two pack epoxy–polyamide materials (System B1) are suitable for application by conventional brush or airless spray methods and contain solvents.
- (b) It is important to note that this solvent must be allowed to escape and chemical reaction to fully complete before being subjected to water immersion.
- (c) For these reasons it is imperative that the applicator does not exceed the maximum film thickness per coat applied, nor must overcoating be carried out earlier than the minimum time specified by the manufacturer.
- (d) Since overcoating times are frequently quoted at 20/25 degrees Celsius, longer overcoating times shall be allowed at lower temperatures. As a rough guide, increase time by 50 % for a 5 degree decrease or by 100 % for a 10 degree decrease in ambient temperature below the quoted temperature.
- (e) These materials shall not be applied when ambient temperature is below 10 degrees Celsius.
- (f) All solvent-based epoxy resin-based materials shall be allowed 28 days to cure before immersion.
- (g) At temperatures below 20 degrees Celsius longer periods shall be allowed, as for overcoating times.
- (h) Overcoat times for System B1 are not applicable to System B3 solvent free epoxy.
- (i) Time between completion of application and immersion shall be a minimum of 7 days.
- (j) Two pack aliphatic polyurethane materials are similar in application and over coating properties to solvent-based epoxies. The curing agents are isocyanate based.
- (k) The latter and the mixtures must not be mixed with water or with any solvent (especially epoxy solvent) other than that recommended by the supplier.
- (l) The aliphatic polyurethanes are somewhat slower curing than epoxy enamels at 24 degrees Celsius.



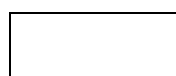
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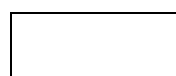
Witness 1



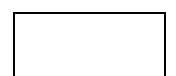
Witness 2



Employer



Witness 1



Witness 2

C3.4.5.22 Coating System B1 – on bare steel or cast-iron surfaces

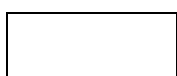
- (a) Materials used shall comply with the performance requirements of SANS 1217:2015 solvent borne chemically cured coating material, when applied at the manufacturer's recommended thickness, and shall be based on epoxy-polyamide resins.
- (b) Prepare surface as specified in Clause 2
- (c) Apply three of four coats of the epoxy polyamide material, mixed as recommended by the manufacturer and as required to give a total dry film thickness of no less than 250 micrometers
- (d) Each coat shall differ in colour from the preceding and succeeding coats in order to identify the number of coats applied
- (e) Each coat shall be applied to a thickness not less than the minimum time nor greater than the maximum recommended by the manufacturer.
- (f) The time interval between coats shall be in the specified region as recommended by the manufacturer
- (g) Should the overcoat time be exceeded, the surface shall be prepared as specified in Clause 2 before over coating
- (h) The coating system shall be smooth, glossy, free from orange peel effect, excessive runs, sags and bubbling. The dry film thickness shall be a minimum of 250 micrometers, maximum of 400 micrometers. The coating shall be free from electrical insulation defects when tested with a wet sponge detector set to operate at 90 Volts, Mega Ohms. Repair of defects is permissible provided that the repaired are complies with all requirements of lining in SANS 1217:2015.

C3.4.5.23 Coating System B2 – on bare steel or galvanized cast iron surfaces

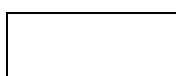
- (a) Use materials as specified in System B1 (i)
- (b) Prepare surface as specified in Clause 2
- (c) Apply System B1 (iii) to (vii), except that the dry film thickness shall be a minimum 150 micrometers and a maximum of 250 micrometers.

C3.4.5.24 Coating System B3 – solvent free epoxy on bare steel or cast-iron surfaces

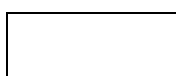
- (a) Material used shall be based on epoxy resins and shall comply with the performance requirements of SANS 1217:2015 solvent free chemically cured coating material when applied at the manufacturer's minimum thickness
- (b) Prepare surface as specified in Clause 2
- (c) Apply one or two coats by means of an airless spray machine suitable for the material to be used and as recommended by the manufacturer. The machine shall be maintained in a clean condition and in good working order. The Contractor may be required to demonstrate to Engineer that the machine is delivering components in the correct mixing ratio.
- (d) Alternatively, ERWAT may require application on to test substrates which can be subsequently tested for correct mixing ratio. Should the mixing ratio be found to be incorrect, all components will be rejected, and they shall be blast-cleaned and recoated.
- (e) The coating system shall be smooth, glossy, free from orange peel effect, excessive runs, sags and bubbling. The dry film thickness shall be a minimum of 250 micrometers, maximum of 500 micrometers. The coating shall be free from electrical insulation defects when tested with a wet sponge detector set to operate at 90 Volts, Mega Ohms. Repair of defects is permissible provided that the repaired are complies with all requirements of lining in SANS 1217:2015.



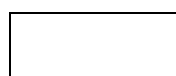
Contractor



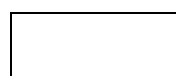
Witness 1



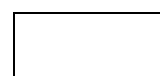
Witness 2



Employer



Witness 1



Witness 2

C3.4.5.25 Coating System B4 – Epoxy with aliphatic polyurethane topcoat on mild steel, cast iron or cast alloys

- (a) System B1 shall be used, with additional top coating of aliphatic polyurethane to give both good water resistance and resistance to chalking when exposed to sunlight
- (b) Aliphatic polyurethane shall be a two-pack chemically cured solvent borne polyester-based material, cured with an aliphatic isocyanate. The mixing ratio shall not exceed 4:1 volume
- (c) Prepare the surface and apply two-pack epoxy as specified in System B1 (i) to (vi)
- (d) Within the over coating time specified by the manufacturer, apply one or two coats of polyurethane, as required to achieve the colour by ERWAT. Each coat shall be applied to a dry film thickness not less than 30 micrometers or greater than 50 micrometers.
- (e) Polyurethanes are sensitive to moisture in the incurred state. Containers shall be kept in a dry store. Application shall be carried out in dry conditions with dry compressed air for spray application.

C3.4.5.26 Site repair epoxy or epoxy-polyurethane systems

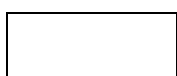
- (a) Fully cured epoxy or epoxy- polyurethane coatings are more difficult to repair due to chemical cure of the coating. Careful attention to the following repair procedure is therefore necessary to ensure adequate adhesion of the material used for repair
- (b) Prepare the surface by abrasion as specified in Clause 2, followed by wiping the surface with methyl ethyl ketone solvent, to give a contact time of approximately 30 seconds. Wipe off any surplus solvent with a clean rag and then apply as many coats of repair material as are necessary to achieve the specified film thickness. When using solvent borne materials, not the need for adequate time between coats as specified under System B1

C3.4.5.27 Coating System B5 – Epoxy with vinyl topcoat

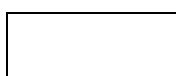
- (a) System B1 shall be used, with additional top coating of vinyl enamel on components partially immersed under water, adjacent to vinyl coated surfaces, to give improved resistance to chalking
- (b) The system shall be as specified in System B1, but in addition, one or two coats, as required to give complete obliteration of vinyl enamel as specified in System D General, shall be applied within the manufacturer's recommended overcoating time for the epoxy.

C3.4.5.28 Coating System D: Vinyl Resin Based Systems

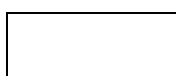
- (a) Single component vinyl resin-based paints good resistance to water, chemicals, hypochlorites and dilute acids. Resistance to heat is poor and is unacceptable to use on surface operating above 70 degrees Celsius. Vinyls should be used where contact with fats, oils, petrol and kerosene is possible.
- (b) The biggest advantage of Vinyls is their maintainability. Vinyls may be recoated after any period of time, provided that the surface is cleaned of dust, grease, chalking and general grime.
- (c) Vinyls are recommended for usage both interior and exterior in places where chemical fumes are present.
- (d) For South African conditions, the preferred resin is Polymerized vinyl chloride-vinyl acetate.
- (e) For improved colour retention when used in an exterior environment, the topcoat may be modified with acrylic resin. These modified types have a semi-gloss finish.



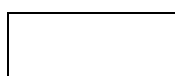
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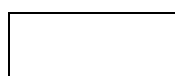
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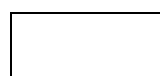
Witness 2



Employer



Witness 1



Witness 2

C3.4.5.29 Coating System D1 – On bare steel or cast-iron surfaces

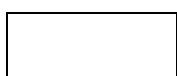
- (a) Material used shall be based on solution Polymerized vinyl chloride-vinyl acetate copolymer resin containing not less than 80 % vinyl chloride, and not more than 15% vinyl acetate.
- (b) Primer resin may be modified with an interpolymerized dibasic acid to improve adhesion. This acid may not exceed 2 % of the total resin
- (c) Prepare surfaces as specified in Clause 2. Apply one coat of approved primer to a dry film thickness not less than 30 micrometers and not more than 60 micrometers. Allow 16 hours to cure. If humidity is high, leave for longer
- (d) Apply one coat of approved primer to dry film thickness not less than 30 micrometers and not greater than 60 micrometers. Allow 16 hours to cure. If humidity is high, leave for longer
- (e) Apply two coats of high build vinyl intermediate coat, in different colours, to a dry film thickness of not less than 75 micrometers and not greater than 125 micrometers per coat. Allow 16 hours to cure. If humidity is high, leave for longer
- (f) Apply one coat vinyl enamel to a dry film thickness of not less than 25 micrometers and not greater than 35 micrometers
- (g) On completion of installation and all repairs, apply one additional coat of vinyl enamel
- (h) The final coating system shall be smooth, glossy, free from orange peel effect, excessive runs, sags and bubbling. The dry film thickness shall be a minimum of 200 micrometers, maximum of 350 micrometers.

C3.4.5.30 Coating System D2

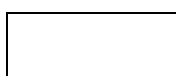
- (a) Material used as primer coat shall be water-based vinyl chloride – vinylidene chloride copolymer primer which contains zinc phosphate. Drying time should be extended in humid conditions. Avoid excessive film thickness and allow adequate drying time before applying an overcoat. Do not apply under conditions where temperatures are below 5 degrees Celsius. Do not apply to wet surfaces.
- (b) Prepare surface as specified in Clause 2
- (c) Apply one coat of water-based vinyl chloride – vinylidene chloride copolymer primer which contains zinc phosphate, dry film thickness not less than 30 micrometers and not more than 60 micrometers. Allow cure time of at least 16 hours before cover-coating. Drying time should be extended in humid conditions.
- (d) Apply one coat of vinyl enamel, based on solution polymerized vinyl chloride – vinyl acetate copolymer resin. This enamel should contain not less than 80 % vinyl chloride and not more than 15 % vinyl acetate. No alkyd resin or other saponifiable matter shall be present in the medium. Pigment should not be affected by bleach.
- (e) One final coat of vinyl enamel shall be applied after completion of installation and repairs. This coat shall comply with the requirements stated above and, in the colour, specified by ERWAT
- (f) The dry film thickness of each separate coat shall be not less than 25 micrometers and not greater than 35 micrometers. Time between each coat shall not be less than 16 hours.

C3.4.5.31 Coating System D3

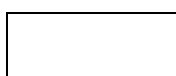
- (a) Material used as primer shall be either:
- (b) water based vinyl chloride – vinylidene chloride copolymer primer which contains zinc phosphate (for above water use)



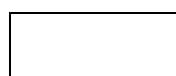
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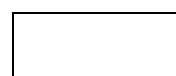
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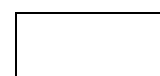
Witness 2



Employer



Witness 1

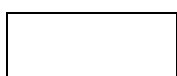


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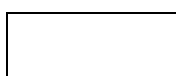
- (c) two pack epoxy resin-based primer (for galvanized steel and as primer for vinyl systems)
- (d) Prepare surface as specified in Clause 2
- (e) Apply the suitable primer as specified in (i) to a clean surface. Thickness shall be in the range specified by the manufacturer.
- (f) Apply one of vinyl high build intermediate coat. Dry film thickness shall be not less than 75 micrometers and not more than 125 micrometers. Allow at least 16 hours between coats
- (g) Apply one coat of vinyl enamel at dry film thickness not less than 25 micrometers and not greater than 35 micrometers.
- (h) The finished system shall be free from sags, blister and other visual defects. Total dry film thickness over the Galvanizing steel shall be not less than 125 micrometers and not greater than 175 micrometers.

C3.4.5.32 Colour Coding

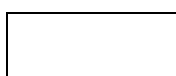
EQUIPMENT OR FLUID PIPEWORK	COLOUR	CODE TO SANS 1091:1975
Motors	Azure blue	F.05
Gearboxes	Light admiralty grey	E.46
Grit Classifier	Light admiralty grey	E.46
Compressor	Light admiralty grey	E.46
Blower	Light admiralty grey	E.46
Valves	Per pipeline base colour	-
Handwheels	Signal red	A.11
Guard and motor cowls	International orange	A.15
Electric panels (external)	International orange	A.15
Electric panels (internal)	White	G.80
Pipework for:		
Steam	Pastel grey	G 54
Compressed air	Arctic blue	F 28
Fresh water	Brilliant green	H 10



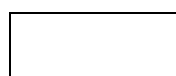
Contractor



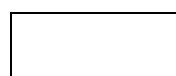
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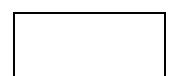
Witness 2



Employer



Witness 1



Witness 2

ERW2506/02: APPOINTMENT OF SERVICE PROVIDER/S FOR THE SUPPLY, DELIVERY AND INSTALLATION OF PUMPS AT ERWAT WASTEWATER CARE WORKS ON 'AS AND WHEN REQUIRED' BASIS FOR A PERIOD OF THIRTY-SIX (36) MONTHS

***PLEASE NOTE HEALTH AND SAFETY SPECIFICATION IMPLEMENTATION WILL FORM PART OF THE SERVICE LEVEL AGREEMENT (SLA) STAGE AND WILL BE APPLICABLE AND MONITORED FOR THE TERM OF THE CONTRACT, NOT LIMITED TO THE ITEMS LISTED BELOW AND MAY BE AMENDED ACCORDING TO THE LATEST LEGISLATIVE REQUIREMENTS.**

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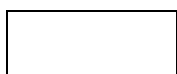
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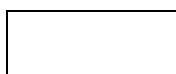
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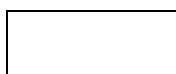
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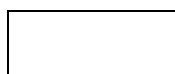
Contractor



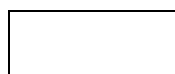
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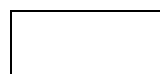
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Employer



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- C3.5.2.4.3 Confined Spaces
- C3.5.2.4.4 Existing Structures
- C3.5.2.4.5 Edge Protection and Penetrations
- C3.5.2.4.6 Hazardous Chemical Substances (HCS)
- C3.5.2.4.7 Stacking of Materials

C3.5.2.5 Plant and Machinery

- C3.5.2.5.1 Construction Plant
- C3.5.2.5.2 Vessels under Pressure (Gas bottles including Operations)
- C3.5.2.5.3 Fire Extinguishers and Fire Fighting Equipment
 - C3.5.2.5.4 Hired Plant and Machinery
- C3.5.2.5.5 Formwork for Structures
 - C3.5.2.5.6 General Machinery
- C3.5.2.5.7 High Voltage Electrical Equipment
- C3.5.2.5.8 Portable Electrical Tools / Explosive Power Tools
- C3.5.2.5.9 Welding Equipment
- C3.5.2.5.10 Public Health and Safety
- C3.5.2.5.11 Night Work

C3.5.2.6 Occupational Health

- C3.5.2.6.1 Occupational Hygiene
- C3.5.2.6.2 Welfare Facilities
- C3.5.2.6.3 Alcohol and Other Drugs

C3.5.2 HEALTH AND SAFETY SPECIFICATION

C3.5.2.1 Scope

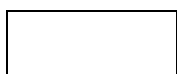
- C3.5.2.1.2 Provision for Health & Safety Cost

C3.5.2.2 Interpretations

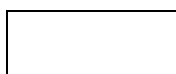
- C3.5.2.2.1 Application
- C3.5.2.2.2 Definitions

C3.5.2.3 Minimum Administrative Requirements

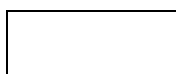
- C3.5.2.3.1 Notification of Intention to Commence Construction Work
- C3.5.2.3.2 Assignment of Contractor's Responsible Person to Supervise Health and Safety on Site
- C3.5.2.3.3 Competency of Principal Contractor Responsible Persons
- C3.5.2.3.4 Compensation of Occupational Injuries and Diseases Act (COIDA) Act 130 of 1993
- C3.5.2.3.5 Occupational Health and Safety Policy
- C3.5.2.3.6 Health and Safety Organogram
- C3.5.2.3.7 Preliminary Hazard Identification and Risk Assessment and Progress Hazard Identification and Risk Assessment
- C3.5.2.3.8 Health and Safety Representative(s)
- C3.5.2.3.9 Health and Safety Committee(s)
- C3.5.2.3.10 Health and Safety Training
 - C3.5.2.3.10.1 Induction
 - C3.5.2.3.10.2 Awareness
 - C3.5.2.3.10.3 Competency
- C3.5.2.3.11 General Record Keeping
- C3.5.2.3.12 Health and Safety Audits, Monitoring and Reporting
- C3.5.2.3.13 Emergency Procedures
- C3.5.2.3.14 First Aid Box and First Aid Equipment
- C3.5.2.3.15 Accident / Incident Reporting and Investigation
- C3.5.2.3.16 Hazards and Potential Situations
- C3.5.2.3.17 Personal Protection Equipment and Clothing



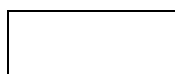
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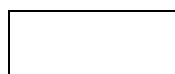
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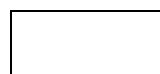
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Employer



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- C3.5.2.3.18 Occupational Health and Safety Signage
- C3.5.2.3.19 Contractors
- C3.5.2.3.20 Incentives and Penalties
- C3.5.2.3.21 Health & Construction Health and Safety Officer or Manager (Part-time)

C3.5.2.4 Physical Requirements

- C3.5.2.4.1 Civil Work
- C3.5.2.4.2 Excavations / Trenching
- C3.5.2.4.3 Confined Spaces
- C3.5.2.4.4 Existing Structures
- C3.5.2.4.5 Edge Protection and Penetrations
- C3.5.2.4.6 Hazardous Chemical Substances (HCS)
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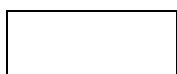
- C3.5.2.6.1 Occupational Hygiene
- C3.5.2.6.2 Welfare Facilities
- C3.5.2.6.3 Alcohol and Other Drugs

C3.5.3 ANNEXURE A TASK COMPLETION FORM

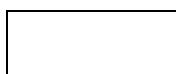
C3.5.4 ANNEXURE B PC RESPONSIBLE PERSON(S)

C3.5.5 ANNEXURE C OTHER REQUIREMENTS

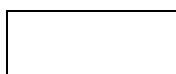
C3.5.6 ANNEXURE D ACKNOWLEDGEMENT OF H & S SPECS



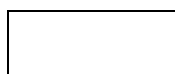
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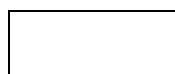
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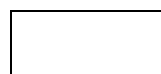
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C3.5. INTRODUCTION AND BACKGROUND

C3.5.1.1 BACKGROUND TO THE HEALTH AND SAFETY SPECIFICATION

The Construction Regulations (July 2003) place the onus on the Client to prepare a preconstruction Health and Safety specification, highlighting all risks not successfully eliminated during design setting standards for Health and Safety during construction phase.

C3.5.1.2 PURPOSE OF THE HEALTH AND SAFETY SPECIFICATION

To assist in achieving compliance with the Occupational Health and Safety Act 85/1993 and the promulgated Construction Regulations (July 2003) in order to reduce incidents and injuries. These specifications shall act as the basis for the drafting of the construction phase Health and Safety plan by the Contractor.

The specification sets out the requirements to be followed by the Principal Contractor and their Contractors so that the Health and Safety of all persons potentially at risk may receive the same priority as other facets of the project e.g. Cost, programmed, environment, quality etc.

C3.5.2 HEALTH AND SAFETY SPECIFICATION

C3.5.2.1 SCOPE

This specification covers the requirements for eliminating and mitigating incidents and injuries on the **ERW2506/02: APPOINTMENT OF SERVICE PROVIDER/S FOR THE SUPPLY, DELIVERY AND INSTALLATION OF PUMPS AT ERWAT WASTEWATER CARE WORKS ON 'AS AND WHEN REQUIRED' BASIS FOR A PERIOD OF THIRTY-SIX (36) MONTHS.**

The scope also addresses legal compliance, hazard identification and risk assessment, risk control and promoting a Health and Safety culture amongst those working on the project. The specification also makes provision for the protection of those persons other than employees.

C3.5.2.1.2 Provision for Health & Safety Cost

The Principal Contractor must make provision for the cost of Health & Safety Measures during the construction process as required by the Construction Regulation 4(h).

C3.5.2.2 INTERPRETATIONS

C3.5.2.2.1 APPLICATION

This specification is a compliance document drawn up in terms of the South African legislation and is therefore binding. It must be read in conjunction with relevant legislation as noted previously.

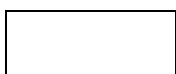
C3.5.2.2.2 DEFINITIONS

The definitions as listed in the Occupational Health and Safety Act 85/1993 and Construction Regulations (July 2003) shall apply.

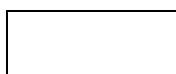
C3.5.2.3 MINIMUM ADMINISTRATIVE REQUIREMENTS

C3.5.2.3.1 NOTIFICATION OF INTENTION TO COMMENCE CONSTRUCTION WORK

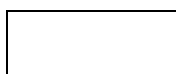
The Principal Contractor shall notify the provincial Director of the Department of Labour in writing that construction work commences.



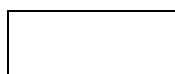
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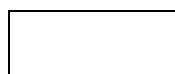
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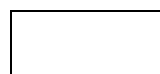
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C3.5.2.3.2 ASSIGNMENT OF CONTRACTOR’S RESPONSIBLE PERSONS TO SUPERVISE HEALTH AND SAFETY ON SITE

The Principal Contractor shall submit supervisory appointments as well as any relevant Appointments in writing (as stipulated by the OHS&A and Construction Regulations), prior to commencement of work. Proof of competency must be included. See annexure B.

C3.5.2.3.3 COMPETENCY FOR CONTRACTOR’S APPOINTED COMPETENT PERSON

The Principal Contractors’ competent persons for the various risk management portfolios shall fulfil the criteria as stipulated under the definition of Competent in accordance with the Construction Regulations (July 2003). Proof of competence for the various appointments must be included.

C3.4.5.3.4 COMPENSATION OF OCCUPATIONAL INJURIES AND DISEASES ACT 130 OF 1993 (COIDA)

The Principal Contractor shall submit a letter of good standing from their Compensation Insurer/FEM or Compensation Commissioner to the Client’s Representative as proof of registration. Contractors shall submit proof of registration to their Contractor before they commence work on site.

C3.5.2.3.5 OCCUPATIONAL HEALTH AND SAFETY POLICY

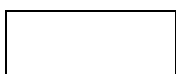
The Contractor and their Contractors shall submit a Health and Safety policy signed by their Chief Executive Officer. The Policy must outline objectives and how they will be achieved and implemented by the Company / Contractor.

C3.5.2.3.6 HEALTH AND SAFETY ORGANOGRAM

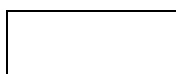
The Principal Contractor and their Contractors shall submit an organogram, outlining the Health and Safety site Management Structure including the relevant appointments / competent persons. In cases where appointments have not been made, the organogram shall reflect the intended positions. The organogram shall be updated when there are any changes in the site Management Structure.

C3.5.2.3.7 PRELIMINARY HAZARD IDENTIFICATION AND RISK ASSESSMENT AND PROGRESS HAZARD IDENTIFICATION AND RISK ASSESSMENT.

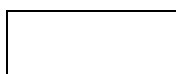
- Roof Work
- Mobile Cranes Management System
- Mechanical
- Working at heights, as per CR8 – Fall Protection Plan,
 - Scaffolding Management
 - Person falling
 - Material falling
 - Protection of decking edges finished floor slab edges, stairways, floor penetrations, lift shafts, any other openings and areas from where persons may fall.
- Excavations
 - Collapse of Walls
 - People/Equipment falling in Excavations
 - Shoring
 - Underground services
 - Drainage
 - Pipe-Jacking operations
- Confined Space entry
- Formwork and Support Work
 - Casting of Concrete
- Manual and Mechanical Handling
 - Lifting and placement of pipes



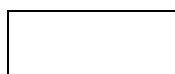
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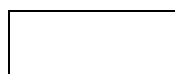
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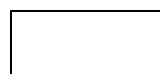
Witness 2



Employer



Witness 1



Witness 2

- Overhead works
- Noise Control
- Dust Control

Principal Contractor to ensure that these risk assessments as well as other risks identified by them are updated monthly or as the risk change and communicated to all relevant parties. CR 7(4)

C3.5.2.3.8 HEALTH AND SAFETY REPRESENTATIVE(S)

The Principal Contractor and their Contractors shall ensure that Health and Safety Representative(s) are appointed under consultation and trained to carry out their functions. The appointment must be in writing.

The Health and Safety Representative shall carry out regular inspections, keep records and report all findings to the Responsible Person forthwith and at Health and Safety meetings.

C3.5.2.3.9 HEALTH AND SAFETY COMMITTEES

Principal Contractor shall organize monthly Health & Safety meetings. Minutes and records shall be kept. Principal Contractors Health & Safety representative and responsible person shall attend this meeting.

C3.5.2.3.10 HEALTH AND SAFETY TRAINING

C3.5.2.3.10.1 Induction

Principal Contractor shall ensure that all undergo site-specific induction presented by a competent person and proof of it too.

C3.5.2.3.10.2 Awareness

The Principal Contractor shall ensure that, on site, periodic toolbox talks take place at **least once per week**. These talks should deal with risks relevant to the construction work at hand. A record of attendance shall be kept in the Health and Safety file. All Principal Contractor have to comply with this minimum requirement.

C3.5.2.3.10.3 Competency

All competent persons shall have the knowledge, experience, training and qualifications specific to the work they have been appointed to supervise, control, and carry out. This will have to be assessed on a regular basis e.g.

Periodic audits by the Client's Health & Safety Agent, progress meetings, etc. The Contractor is responsible to ensure that competent Contractors are appointed to carry out construction work.

C3.5.2.3.11 GENERAL RECORD KEEPING

The Principal Contractor and their Contractors shall keep and maintain Health and Safety records to demonstrate compliance with this Specification, with the OHS Act 85/1993, and with the Construction Regulations (July 2003). The Principal Contractor shall ensure that all records of incidents / accidents, emergency procedures training, inspections, audits, etc. are kept in a Health and Safety file held in the site office. The Principal Contractor must ensure that every sub-Contractor keeps its own Health and Safety file, maintains the file and make it available on request (The file must include the Sub-Contractor's health and safety plan). These records are crucial for inclusion in the Principal Contractors' consolidated health and safety file for handover to the Client on completion of construction work.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

C3.5.2.3.12 HEALTH AND SAFETY AUDITS, MONITORING AND REPORTING

The Client's Health & Safety Agent shall conduct monthly Health and Safety audits of the work. Operations including a full audit of physical site activities as well as an audit of the administration Health and Safety. The Principal Contractor is obligated to conduct similar audits on their Contractors.

Detailed reports of the audit findings and results shall be reported on at all levels of project management meetings / forums. Copies of the Client audit reports shall be kept in the Primary Project Health and Safety file while the Principal Contractor audit reports shall be kept in their file, a copy being forwarded to the Client. Principal Contractor has to audit their Contractors and keep records of these audits in their Health and Safety files, available on request.

C3.5.2.3.13 EMERGENCY PROCEDURES

The Principal Contractor shall compile a comprehensive Evacuation Plan with assemble point and contact details in the case of any emergency supplied by the Client's Health & Safety Agent.

C3.5.2.3.14 FIRST AID BOXES AND FIRST AID EQUIPMENT

The Principal Contractor and their Contractors shall appoint in writing First Aider(s). The appointed First Aider(s) are to be sent for accredited first aid training. Valid certificates are to be kept on site. All Principal Contractor with more than 5 employees shall supply their own first aid box. Principal Contractor with more than 10 employees shall have trained, certified first aider on site at all times & First aid Box adequately stocked at all times.

C3.5.2.3.15 ACCIDENT / INCIDENT REPORTING AND INVESTIGATION

Injuries are to be categorized into first aid, medical, disabling and fatal. The Principal Contractor must stipulate in its construction phase Health and Safety plan how it will handle each of these categories. When reporting injuries to the Client, these categories shall be used. All contractors must investigate and report on the 4 categories of injuries to the Principal Contractor at least monthly. Contractors must investigate injuries and accidents involving their employees within seven days of the incident in the form on Annexure1 (General Administrative Regulations) and forward a copy on the investigation report to the principal contractor forthwith. ***All incidents reportable in terms of the provision of Section 24 of the OHS Act 1993 must be reported to the local Dept. of Labour in the prescribed manner.***

The Principal Contractor must report all injuries to the Client in the form of a spreadsheet, which includes all contractor injuries/incidents and man-hours worked for the month as well as the cumulative total. This report must be done on a monthly basis and must form part of the Principal Contractor's progress report.

C3.5.2.3.16 HAZARDS AND POTENTIAL SITUATIONS

The Principal Contractor shall immediately notify the Client's Health & Safety Agent of any hazardous or potentially hazardous situations that may arise during the performance of construction activities.

C3.5.2.3.17 PERSONAL PROTECTIVE EQUIPMENT (PPE) AND CLOTHING

The Principal Contractor shall ensure that all workers are issued and wear hard hats, protective footwear and overalls. The Principal Contractor and their Contractors shall make provision and keep adequate quantities of SABS or SANS approved PPE on site at all times.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

C3.5.2.3.18 OCCUPATIONAL HEALTH AND SAFETY SIGNAGE

The Principal Contractor shall provide adequate on-site OHS signage. Including but not limited to: “no unauthorized entry”, “report to site office”, “site office”, and “hardhat area”. Signage shall be posted up at all entrances to site as well as on site in strategic locations e.g. Access routes, entrances to structures and buildings, scaffolding and other potential risk areas / operations. All Contractors to adhere to it.

C3.5.2.3.19 CONTRACTORS

The Principal Contractor shall ensure that all Contractors appointed by them comply with this Specification, the OHS Act 85/1993, and Construction Regulation (July 2003).

The Principal Contractor may only appoint a sub-contractor after approving the sub-contractor's health & safety plan. The Principal Contractor must audit each of its Contractors on a monthly basis, with audit reports filed in the health & safety file on site. The audit must include an administrative assessment as well as a physical inspection of the contractor's health & safety system.

The Principal Contractor must stop any Contractor from carrying out construction work that is not in accordance with the Principal Contractor's or Contractor's health & safety plan or if there is an immediate threat to the health and safety of persons.

The Principal contractor shall take all reasonable steps necessary to ensure co-operation between all Contractors to enable each of those Contractors to comply with the provisions of these regulations;

The Principal Contractor must ensure that their Contractor is registered and in good standing with a recognized compensation fund or with a licensed compensation insurer prior to work commencing on site;

The Principal Contractor must ensure that potential Contractors submitting tenders have made provision for the cost of health and safety measures during the construction process; The Principal Contractor shall discuss and negotiate with their Contractor the contents of the health and safety Plan and shall finally approve that plan for implementation.

C3.5.2.3.20 PENALTIES

Penalties may be imposed for ongoing non-compliance to the provisions of the Client's Health and Safety specification and Principal Contractors' health & safety plans. The penalty procedure shall consist of a written warning with a compliance time frame. ***Failure to comply within the time frame stipulated would result in a R1000 penalty per non-compliance item per day that the non-compliance persists.***

C3.5.2.3.21 A HEALTH AND CONSTRUCTION HEALTH AND SAFETY OFFICER OR MANAGER CR 6.6

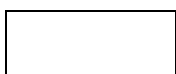
The Principal Contractor shall provide a full-time Construction Health and Safety Officer or Manager on site and proof of their competency to be attached to their appointment.

C3.5.2.4 PHYSICAL REQUIREMENTS

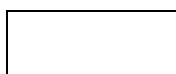
C3.5.2.4.1 CIVIL WORK

Principal Contractor to ensure that the Contractor complies with Construction regulation 21 and that the following is undertaken during civil work:

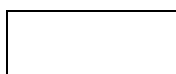
- A competent site supervisor to be on site at all times.
- Plant and equipment inspected daily and registers kept.
- All operators of plant and vehicles: trained, competent and physically and psychologically fit.



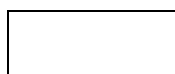
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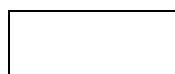
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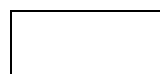
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- Certificates to be put in their Health & Safety File.
- Workers that are working close to the traffic to be visible and are to wear reflective vests.
- Adequate safety signage to be posted ahead of any work area in the road.
- All signage, including delineators to be maintained and kept clean at all times.
- The required PPE must be worn at all times (Hard hats, safety shoes, overalls, etc.)
- Risk assessments to be conducted on all high-risk activities.
- Speed reduction road signs to be posted.
- Dust control practices used to limit dust generation.

Laying of pipes / Backfilling

- A competent site person to supervise lifting operations at all times.
- No employee to stand under any suspended loads.
- Loads must not be slewed over personnel, plant, site huts or property.
- All lifting equipment and accessories must be marked with the Safe Working Load.
- Slings must not be placed on sharp edges.
- Workers to wear proper PPE at all times.
- Work to be stopped when weather conditions prevent safe operations during trenching work or laying of pipes.
- Everyone to stand clear of any area being backfilled by mobile plant.

C3.5.2.4.2 EXCAVATIONS, SHORING, DEWATERING OR DRAINAGE

The Principal Contractor and any relevant Contractors shall make provision at tendering stage for shoring, dewatering or drainage of any excavations as per this specification.

The Principal Contractor shall make sure that:

- The excavations are inspected before every shift, after any blasting, after an unexpected fall of ground, after any substantial damage to the shoring and after rain, records kept thereof.
- Safe work procedures have been communicated to the workers.
- The safe work procedures are enforced and maintained by the Contractor's Responsible Persons at all times,
- The requirements as per section 11 of the Construction Regulations are adhered to.
- Where pipe-jacking activities are taking place safe work procedures/method statements to be submitted to Client's Health & Safety Agent prior to these activities.

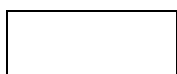
Method statement to be developed where shoring will be done, especially near public roads and also where explosives will be / are used.

C3.5.2.4.3 CONFINED SPACE ENTRY

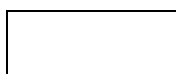
The Principal Contractor to prepare a confined space procedure in line with General Safety Regulation (5) OHS Act

C3.5.2.4.4 EXISTING STRUCTURES

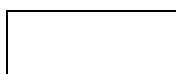
Any adjacent structures that may be affected by work must be considered in the planning process. Precautionary measures must be detailed and applied to prevent damage, uncontrolled collapse of existing structures and/or loss to property and persons during the entire construction phase.



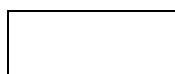
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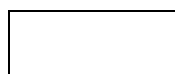
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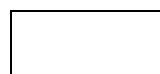
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C3.5.2.4.5 EDGE PROTECTION AND PENETRATIONS

The Principal Contractor must ensure that all exposed edges and openings are guarded and demarcated at all times until permanent protection has been erected. The Principal Contractors' risk assessment must include these items finished floor slab edges, floor penetrations, and all other openings and areas where a person may fall.

C3.5.2.4.6 HAZARDOUS CHEMICAL SUBSTANCES (HCS)

The Principal Contractor working with Hazardous chemical substances to obtain copies of all the (MSDS) Material Safety Data Sheets and this is to be kept on site and a copy to be forwarded to Client's Health & Safety Agent.

C3.5.2.4.7 STACKING OF MATERIALS

The Principal Contractor shall ensure that there are sufficient appointed stacking supervisors and that all materials and equipment is stacked and stored safely. Double handling of material should be avoided and for this purpose, pallets and other stacking options should be used.

C3.5.2.5 PLANT AND MACHINERY

C3.5.2.5.1 CONSTRUCTION PLANT

The Principal Contractor shall ensure that all such plant complies with the Requirements of the OHS Act 85/1993 and Construction Regulations (July 2003). The Principal Contractor shall inspect and keep records of inspections of construction plants used on site. Only authorized / competent persons are to use machinery under proper supervision. Appropriate PPE must be provided and maintained at all times.

C3.5.2.5.2 VESSELS UNDER PRESSURE (VUP) AND GAS BOTTLES

The Principal Contractor shall comply with the Vessels under Pressure Regulations, including:

Providing competency and awareness training to the operators, Providing PPE, Inspect Equipment regularly and keep record of inspections, Provide appropriate firefighting equipment (Fire Extinguishers) on hand.

C3.5.2.5.3 FIRE EXTINGUISHERS AND FIRE FIGHTING EQUIPMENT

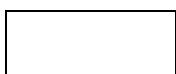
The Principal Contractor shall provide adequate, regularly serviced firefighting equipment located at strategic points on site, specific to the classes of fire likely to occur. The appropriate notices and signs must be posted as required.

C3.5.2.5.4 HIRED PLANT AND MACHINERY

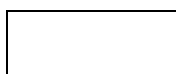
The Principal Contractor shall ensure that any hired plant and machinery used on site is safe for use. The necessary requirements as stipulated by the OHS Act 85/1993 and Construction Regulations (July 2003) shall apply. The Contractor shall ensure that operators hired with machinery are competent and that certificates are kept on site in the Health and Safety file. All relevant Contractors must ensure the same.

C3.5.2.5.5 FORMWORK AND SUPPORT WORK FOR STRUCTURES

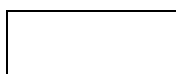
The Principal Contractor shall ensure that the provisions of section 10 of Construction Regulations (July 2003) are adhered to. These provisions must include but not be limited to ensuring that all equipment used is examined for suitability before use, that all formwork and support work is inspected by a competent person immediately before, during and after placement of concrete or any other imposed load and thereafter on a daily basis until the formwork and support work has been removed. Records of all inspections must be kept



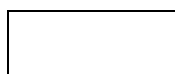
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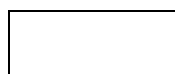
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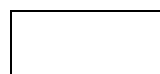
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in a register on site.

C3.5.2.5.6 GENERAL MACHINERY

The Principal Contractor shall ensure compliance with the Driven Machinery Regulations, which include inspecting machinery regularly, appointing a competent person to inspect and ensure maintenance, issuing PPE, and training those who operate the machinery.

C3.5.2.5.7 HIGH VOLTAGE & ELECTRICAL INSTALLATIONS

If high voltage electrical lines are present on the site perimeter, the Contractor must be aware of the location of them and are to demarcate its positions.

These demarcations must be maintained throughout the duration of the construction work. The minimum safety clearances as per Electrical Machinery Regulation 15 must be adhered to. **All installation must comply with SANS 10142 & the regulations of the OHS Act 85/1993 and Construction Regulation 22.**

All temporary electrical installations must be inspected at least weekly.

C3.5.2.5.8 PORTABLE ELECTRICAL TOOLS AND EXPLOSIVE POWERED TOOLS

The Principal Contractor shall ensure that use and storage of all explosive powered tools and portable electrical tools are in compliance with relevant legislation.

The Contractor shall ensure that all electrical tools, electrical distribution boards, extension leads, and plugs are kept in safe working order. Regular inspections and toolbox talks must be conducted to make workers aware of the dangers and the control measures that are to be implemented e.g. Personal protection equipment, guards, etc.

A competent person to undertake routine inspections and records are to be kept on file. Only authorized trained persons are to use the tools, the safe work procedures to apply. Awareness training to be carried out, compliance enforced at all times, and PPE are provided and maintained,

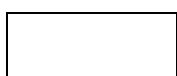
C3.5.2.5.9 WELDING EQUIPMENT

- Only authorised / trained persons to use the equipment.
- The operators are to wear correct PPE - eye/ face/foot/body/respirator.
- Flashback arrestors are to be fitted on cylinders and gauges when using gas welding equipment.
- Fire prevention methods to be applied.
- Where electric arc welders are used, equipment only to be used in a dry area, protected from wetness.

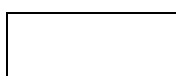
C3.5.2.5.10 PUBLIC AND SITE VISITOR HEALTH AND SAFETY

Both the Client and the Principal Contractor have a duty in terms of the OHS Act 85/1993 to do all that is reasonably practicable to prevent members of the public and site visitors from being affected by the construction activities. Site visitors must be briefed on the hazards and risks they may be exposed to and what measures are in place or should be taken to control these hazards and risks. A record of these inductions must be kept on site in accordance with the Construction Regulations. Principal Contractor to ensure that no unauthorized personal enter the construction area.

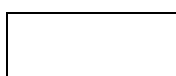
Method statements are to be drafted on traffic management on site, including work near the public.



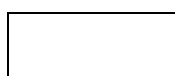
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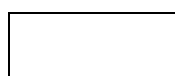
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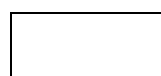
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C3.5.2.5.11 NIGHT WORK

Adequate lighting to be provided where required. Personnel should not work alone at night.

C3.5.2.6 OCCUPATIONAL HEALTH

C3.5.2.6.1 OCCUPATIONAL HYGIENE

Exposure of workers to occupational health hazards and risks is very common in any work environment, especially in construction. Occupational exposure is a major problem, and Principal Contractor must ensure that proper health and hygiene measures are put in place to prevent exposure to these hazards. The Risk to be looked at includes:

Ventilation

Adequate ventilation / extraction / exhausting in hazardous areas e.g. chemicals / adhesives / welding / petrol or diesel/ motors running and in confined spaces / basements.

Noise

Tasks identified where noise exceeds 85 dBa. All reasonable steps are to be taken to reduce noise levels. Hearing protection is to be used where noise levels cannot be reduced to below 85 dBa.

Dust

Principal Contractor to ensure that employees working with grinders, saws & jackhammers, etc. are issued with dust masks and dust exposure to be minimized at all times.

C3.5.2.6.2 WELFARE FACILITIES

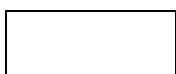
The Principal Contractor will provide ablution facilities for all on site, including changing facilities & hand washing facilities. Safe and adequate facilities will be provided. Waste bins must be strategically placed and emptied regularly. Safe and clean storage areas must be provided for workers to store personal belongings and personal protective equipment.

C3.5.2.6.3 ALCOHOL AND OTHER DRUGS

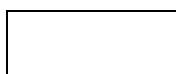
The Principal Contractor is to ensure that no alcohol and other drugs are allowed on site. No person may be under the influence of alcohol or any other drugs while on the construction site. Any person on prescription drugs must inform his/her superior, who shall in turn report this to the Contractor forthwith. Any person suffering from any illness / condition that may have a negative effect on his/her safety performance must report this to his/her superior, who shall in turn report this to the Principal Contractor forthwith.

Any person suspected of being under the influence of alcohol or other drugs must be sent home immediately, to report back the next day for a preliminary inquiry. The Contractor concerned must follow a full disciplinary procedure and a copy of the disciplinary action must be forwarded to the Principal Contractor for his records.

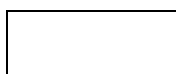
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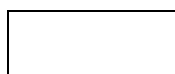
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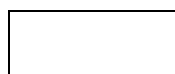
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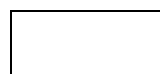
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HEALTH AND SAFETY SPECIFICATIONS (HSS)

PROJECT: ERW2506/02: APPOINTMENT OF SERVICE PROVIDER/S FOR THE SUPPLY, DELIVERY AND INSTALLATION OF PUMPS AT ERWAT WASTEWATER CARE WORKS ON 'AS AND WHEN REQUIRED' BASIS FOR A PERIOD OF THIRTY-SIX (36) MONTHS

Annexure A

The Principal Contractor must submit compliance with Annexure A within **one week** of receiving this Specification.

HSS Item no.	REQUIREMENT	OHS REQUIREMENT	SUBMISSION DATE
2.3.1	Assignment of Responsible Persons to supervise Construction work	OHS Act (section 16.2) & Construction Regulation 6	Before commencement on site
2.3.2	Competence of Responsible Persons	OHS Act (section 16.2) & Construction Regulation 6	Together with H & S plan
2.3.3	Compensation of Occupational Injuries and Diseases - Proof of Registration- FEM or CC	COIDA	Together with H & S plan
2.3.4	Occupational Health and Safety Policy	OHS Act	Together with H & S plan
2.3.5	Health and Safety Organogram	Client Requirement	Together with H & S plan
2.3.6	Initial Hazard Identification and Risk Assessment based on the Client/s assessment	Construction Regulations.	Together with H & S plan
2.3.7	Health and Safety Representative	OHS Act	Submit as soon as There are more than 20 employees on site
2.3.8	Detailed breakdown of Safety cost	OHS Act	During SLA

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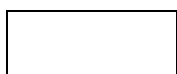
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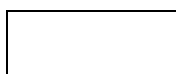
Annexure B

The Principal Contractor shall make the following appointments according to the initial risk assessment: (further appointments could become necessary as the project progresses). Contractors shall make the relevant appointments as per their operations. The Client reserves the right to insist on any appointment as determined by its risk assessment of the Contractor concerned.

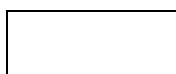
APPOINTMENT	OHSA REFERENCE	REQUIREMENT
CEO Assignee	Section 16(2)	A competent person to assume the overall H & S responsibility - Contractor's Responsible Person
Construction Work Supervisor	CR 6.1	A competent person to supervise and be responsible for Health and Safety related issues on site
Subordinate Construction Work Supervisors	CR 6.2	A competent person to assist with the daily supervision of construction / building work. The person(s) assists the Construction Work Supervisor
Health and Safety Representative(s)	Section 17	A competent person(s) to assist with identifying risks, attend H & S meetings, conduct inspections, assist with investigations, etc.
Incident Investigator	GAR 8	A competent person to investigate incidents / accidents on site, this could either be: * The 6.1 or 6.2 Person * H & S Representative * Member of the H & S Committee * H & S officer
Risk Assessment Co-ordinator	CR 7	A competent person to co-ordinate all assessments on behalf of the Principal Contractor. The same applies to Contractors.
Fall protection plan co-ordinator	CR 8	A competent person to prepare and amend the fall protection plan
First Aiders	GSR 3	A qualified person to address all on site first aid cases
Lifting machine and equipment Inspector	DMR 18	A competent person to inspect lifting machines and equipment
Lifting tackle Inspector	DMR 18	A competent person to inspect lifting tackles
Scaffolding Inspector	SANS 10085- 1:2004	A competent person to inspect scaffolding before use and every time after bad weather, etc.
Scaffolding Erector	SANS 10085- 1:2004	A competent person to erect scaffolding
APPOINTMENT	OHSA REFERENCE	REQUIREMENT
Scaffolding Supervisor	SANS 10085- 1:2004	A competent person to supervise scaffolding
Stacking Supervisor	CR 26	A competent person to supervise all stacking and storage operations
Explosive powered tools Inspector / Supervisor	CR 19	A competent person to inspect and clean the tools daily and controlling all operations thereof
Temporary electrical installations Supervisor	CR 22	A competent person to control all temporary electrical installations
Fire-fighting equipment Inspector	CR 27	A competent person to inspect fire-fighting equipment



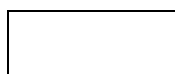
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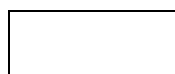
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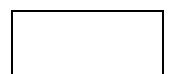
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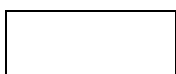
OTHER REQUIREMENTS

PROJECT: ERW2506/02: APPOINTMENT OF SERVICE PROVIDER/S FOR THE SUPPLY, DELIVER & INSTALLATION OF PUMPS AT ERWAT WASTEWATER CARE WORKS ON 'AS AND WHEN REQUIRED' BASIS FOR A PERIOD OF THIRTY-SIX (36) MONTHS

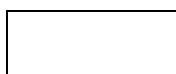
Annexure C

The Principal Contractor shall comply but not be limited to the following requirements: Reports on these to the addressed to the Client at progress meetings or at least monthly whichever is sooner. A report with supporting documents shall be tabled at the Contractor/s monthly Health and Safety meeting.

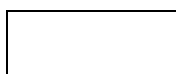
WHAT	WHEN	OUTPUT	ACCEPTED BY CLIENT WITH DATE
Construction-phase Health and Safety plan	Within one weeks of receipt of the Spec.	Principal Contractor to report on status of Principal Contractors' Health and Safety plans	
Health and Safety file	Open file when construction begins and maintain throughout	Have file on hand at meetings	
Awareness Training (Tool Box Talks)	At least weekly	Attendance registers	
Health and Safety Reports	Monthly	Report covering: * Incidents/Accidents and Investigations * Non-conformances by employees & contractor * Internal & External H & S audit reports	
Risk assessment	Updated and signed off at least monthly	Documented risk assessment	
Method statements (safe work procedures)	Drawn up before workers are exposed to new risks	Documented set of safe work procedures (method statements) updated and signed off	
General Inspections	Weekly and Daily	OHS Act compliance Registers: * Scaffolding * Excavations * Formwork & support work * Explosive tools * Temporary electrical Installations	
General Inspections	Monthly	* Fire-fighting equipment * Portable electrical equipment * Ladders	
General Inspections	3 - Monthly	* Lifting tackle * Oxy acetylene cutting and welding sets * Fall prevention and arrest equipment	



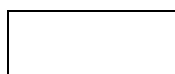
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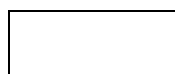
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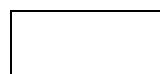
Witness 2



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General Inspections	6 - Monthly	* Lifting machines	
Workman's Compensation	Updated Weekly	Table list of Principal Contractors' workman's compensation proof of good standing	
Construction site rules & Section 37.2 Mandatory Agreement	Update Weekly	Table a report of all signed up Mandatory's	

Contractor

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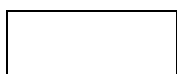
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Annexure D

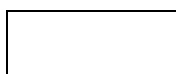
The following checklist shall be used to approve the Health and Safety File

CONTRACTOR SAFETY FILE ASSESSMENT CHECKLIST

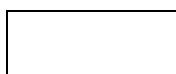
SCOPE/COVERAGE:	Contractor Safety file Assessment	ERWAT CONTRACTING DEPT:		
CONTRACTOR NAME:		INSPECTION BY:		
SERVICE RENDERED:		INSPECTION DATE:		
No.	Are items on file and meet requirements?	Approved	Not Approved	N/A
1	Scope of Work			
2	Valid Letter of Good Standing with Compensation Fund or licensed insurer			
3	Public Liability Insurance			
4	Notification Letter of Construction Work (If Applicable)			
5	Health and Safety Organogram			
6	All required legal appointments signed and on file i.e Section 16(2), SHE Reps, First Aiders, Risk Assessor, Incident Investigators, Construction Work Appointments etc			
7	All employees have valid Medical Certificate of Fitness			
8	Health and Safety Policy			
9	Health & Safety Plan,			
10	Client Health and Safety Specification			
11	Section 37(2) Mandatary Agreement			
12	Risk Assessments: Method Statements: Safe Operating Procedures (including LOTO where applicable)			
13	Incidents / Accidents Register and Investigation Reports			
14	Emergency Plan			
15	Health and Safety Induction			
16	Documented Proof of Daily Toolbox Safety Talks/ DSTI			
17	Personal Protective Equipment (PPE)			



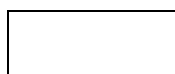
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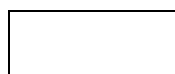
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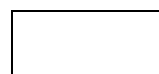
Witness 2



Employer



Witness 1



Witness 2

18	Equipment Registers, Inspections Checklist and testing certificates			
19	List of Hazardous Chemicals and MSDS (If applicable)			
20	Environmental Management Plan			
21	Fall Protection Plan (If Applicable)			
22	Training Records and Competency Certificates			
23	Other, as per scope of work			

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

PROJECT: ERW2506/02: APPOINTMENT OF SERVICE PROVIDER/S FOR THE SUPPLY, DELIVER & INSTALLATION OF PUMPS AT ERWAT WASTEWATER CARE WORKS ON 'AS AND WHEN REQUIRED' BASIS FOR A PERIOD OF THIRTY-SIX (36) MONTHS

Annexure E

Acknowledgement of Receipt of the Health and Safety Specifications:

I, _____ representing

_____ Contractor

Have satisfied myself with the content of the construction Health and Safety Specification and shall ensure that the Contractor and its personnel comply with all obligations / requirements in respect thereof.

COMMENTS:

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

C3.6 ENVIRONMENTAL MANAGEMENT DURING CONSTRUCTION

C3.6.1 INTRODUCTION

A comprehensive Environmental Scoping Report was prepared as part of the environmental and social assessment of the preceded project. Included in the report is an Environmental Management Plan (EMP) and the purpose of this Particular Specification is to make the Contractor aware of his obligations in terms of the EMP during construction and to afford him the opportunity to insert rates and prices in the Schedule of Quantities to cover these obligations.

Sub-Contractors and their employees must comply with all the requirements of this specification. Absence of specific reference to any sub-contractor in any specification does not imply that the sub-contractor is not bound by this specification.

The Contractor must arrange for all his employees and those of his sub- contractors to be informed of this specification before the commencement of construction to ensure:

- (a) Basic understanding of the key environmental features of the work site and environments, and
- (b) Familiarity with the requirements of this document.

C3.6.2 MONITORING AND ASSESSMENT OF COMPLIANCE.

The environmental management performance of the Contractor (including his subcontractors and staff) will be reviewed on a regular basis by the Employer's ECO. The Contractor will be deemed not to have complied with the EMP if:

- (a) There is evidence of negligence or recklessness resulting in the contravention of any of the clauses, both within and outside the boundaries of the construction site;
- (b) The Contractor fails to comply with corrective or other instructions within a time specified by the Engineer;
- (c) The Contractor fails to respond adequately in terms of the contract, to complaints from the public.
- (d) The Contractor will be given a period of 2 weeks after the commencement date of the contract, before compliance is enforced.

Via these environmental specifications the Contractor has been made aware of what actions are required of him and/or his subcontractors. Certain do's and don'ts have been given and onus for these controls rests with the Contractor as he is the only person capable of controlling these aspects and a fine/reward system will be implemented to encourage compliance.

Compliance to the EMP will be reported by the ECO in the form of a monthly Environmental Compliance Report which will include all transgressions of the EMP and the environmental specification and rate them in order of significance. The Environmental Compliance Report will be forwarded to the Engineer, the Employer and GDACE on a monthly basis.

A percentage point will be given based on a questionnaire which is attached to the Report. Any percentage compliance above 80% will be considered to be within acceptable limits. If the Contractor has not complied with any of the clauses of the EMP, or the score in the monthly environmental audit drops to below 80% compliance, the ECO will advise the Engineer who shall order the Contractor in terms of the contract to remedy the deficiencies. Failure on the part of the Contractor to carry out such order shall be dealt with in terms of the contract.

Should compliance drop below 60% the ECO shall immediately advise the Engineer who shall have the right in terms of the contract to order in writing the suspension of the Works.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

C3.6.3 COMPLIANCE WITH SANS 1200

All environmental clauses stated in the SANS 1200 "Standard Specification for Civil Engineering Construction" as amended in this document shall be adhered to by the Contractor. Where the EMP is in conflict with the Standard Specification, the EMP shall take precedence.

C3.6.4 SITE MANAGEMENT

C3.6.4.1 General

The Contractor shall draw up a plan of all parts of the construction site, showing the layout of site establishment, stockpiles, planned access and circulation routes, etc. to depict the scope of his planned operations. The plan shall be submitted to the ECO for comment and approval by the Engineer.

The Works area will be indicated on the layout plan and shall never exceed the boundaries of the site at any given location during the construction period.

Every precaution shall be taken, in accordance with this specification, to prevent pollution of air, soil, ground, and surface water as a result of construction or associated activities.

All equipment must be inspected regularly for oil or fuel leaks before it is operated. Leakages must be repaired on mobile equipment or containment trays placed underneath immobile equipment until such leakage has been repaired.

C3.6.4.2 Housekeeping

The Contractor shall ensure that his working areas are kept clean and tidy at all times. The ECO shall inspect these areas on a regular basis.

C3.6.4.3 Works area

Routes for temporary access and haul roads shall be located within the approved Works area and vehicle movement shall be confined to these roads. Movement of vehicles outside the Works area shall not be permitted without authorisation from the Engineer, after consultation with the ECO.

All construction activities shall be restricted to working areas designated on the drawings and/or demarcated and approved by the Engineer. Materials, including spoil, shall only be stockpiled in the Works area.

C3.6.4.4 Fire risk and burning

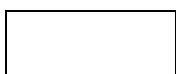
Burning of vegetation including tree trunks and stumps cut during site clearing and establishment shall not be permitted.

The Contractor shall ensure that the risk of fire at any location on the site is kept to a minimum.

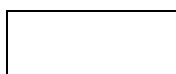
The Contractor shall supply fire-fighting equipment in proportion to the fire risk presented by the type of construction and other on-site activities and materials used on site. This equipment shall be kept in good operating order.

Open fires for heating and cooking shall only be permitted in protected areas designated by the ECO for this purpose.

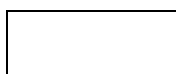
No fires will be allowed adjacent to the boundary fence, either inside or outside the construction site.



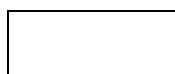
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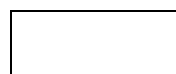
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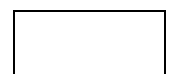
Witness 2



Employer



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Witness 2

Any welding or other sources of heating of materials must be done in a controlled environment, wherever possible and under appropriate supervision, in such a manner as to minimise the risk of veld fires and/or injury to staff.

C3.6.4.5 Storage of fuel and other materials

Fuel, lubricants, transmission, and hydraulic fluids shall only be stored in the Works area.

All fuel tanks must be installed above ground, depending on the volume of stored fuel, for easy detection of fuel leaks. All fuel tanks must be placed on a thick plastic sheet so as to prevent soil pollution, be set in a bund with earthen walls, and maintained throughout the contract.

Areas made available for fuelling or greasing of equipment and vehicles must be clearly demarcated on the layout plan. In order to prevent soil pollution, these areas must be covered with a protective material (e.g. a thick plastic sheet). No fuelling, greasing, or filling of oils may take place outside these demarcated areas.

The Contractor must provide adequate and approved facilities for the storage and recycling of used oil and contaminated hydrocarbons. Such facilities must be designed and sited with the intention of preventing pollution of the surrounding area and environment.

Cement must be stored and mixed on an impermeable substratum.

C3.6.4.6 Concrete batching plants

Concrete must be mixed only in an area demarcated for this purpose. All concrete spilled outside this area, must be promptly removed by the Contractor and taken to a permitted waste disposal site. After all concrete mixing is complete all waste concrete must be removed from the batching area and disposed of at an approved dumpsite.

The batching plant shall be enclosed by a bund wall with divisions and dedicated compartments for the various types of materials. Air filters shall be monitored and cleaned and replaced as per the supplier's guidelines.

Storm water must not be allowed to flow through the batching area.

Water laden with cement must be collected in a retention area for evaporation and not allowed to escape the batching area. This pond will be cleaned monthly.

Operators must wear suitable safety clothing.

C3.6.4.7 Safety

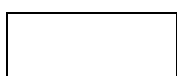
Equipment and stores should be locked up and not left unattended.

The Contractor must ensure that no unemployed labour seekers are permitted to gather at the site and no camp followers/shebeen operators shall be allowed to operate on or adjacent to the site.

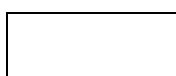
Measures must be taken to prevent any interference that could result in flashover of power lines due to breaching of clearances or the collapse of power lines due to collisions by vehicles and equipment.

Measures must be taken during thunderstorms to protect workers and equipment from lightning strikes. All tall structures must be properly earthed and protected against lightning strikes.

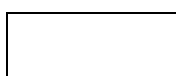
The Contractor must have a first aid box available on site and on all vehicles working on site. The Contractor must submit a copy of the minutes of weekly health and safety meetings to the ECO.



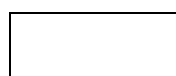
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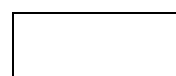
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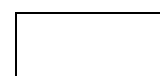
Witness 2



Employer



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C3.6.4.8 Blasting and drilling

A written warning of 2 days indicating the date and approximate time period of blasting activities shall be given to affected residents for the temporary removal of sensitive domestic animals such as horses, dogs, cats, birds, and cattle, before blasting and/or drilling activities commence during that period.

During blasting the stipulations of the Minerals Act, Act 50 of 1991 shall apply.

Should any warning not be given within the period specified above, the Contractor will be held liable for injuries to or deaths of the affected animals.

In order to minimise the potential impact on animals, it is proposed that soft explosives and/or noise mufflers be used.

When blasting, the Contractor shall take measures to limit flying rock. This may be achieved by matching the charge to the rock type, by using milli-second delay detonators or by using rubber blasting mats placed over the area to be blasted. Flying rock 150mm and larger which falls beyond the cleared working area shall be collected and removed together with the rock spoil.

When blasting under power lines the Contractor shall arrange for power to be temporarily switched off or have the lines moved.

C3.6.4.9 Fencing

Fencing shall be erected around sensitive natural or cultural elements to protect them from damage. No pedestrian or vehicular access shall be allowed to such fenced areas.

In places where temporary fencing is required, the Contractor shall erect such fencing and, when and where required by the Engineer, re-erect and maintain temporary fencing as necessary. Temporary fencing shall remain in position either until it is replaced by permanent fencing or until completion of the whole of the Works, unless the Contractor requires, or the Engineer directs its earlier removal. The Contractor shall erect and maintain the aforementioned temporary fencing in the locations and for the period described in the Contract.

If temporary fencing is removed temporarily for the execution of any part of the Works, it shall be reinstated as soon as practicable by the Contractor.

The clearing for permanent fencing shall be limited to the removal of trees and shrubs within 1m of the fence line. Where possible, the fence line must be aligned to retain trees or tree groups. There shall be no removal of the grass cover or topsoil within this width.

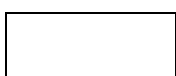
C3.6.5 CONTROL OF DAMAGE TO VEGETATION AND ANIMALS

The Contractor shall ensure that all works are undertaken in a manner which minimises the impact on vegetation and animals inside or outside of the Works area

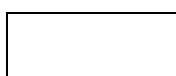
C3.6.5.1 Vegetation

As much of the existing vegetation as possible shall be retained. The removal of existing vegetation shall only occur at the sites designated for construction activities. Only woody vegetation may be cleared. During clearing of woody vegetation no basal cover or grass and topsoil shall be removed and damage to this layer shall be minimised as far as possible.

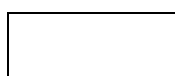
Bush and grass veld must only be cleared to provide essential access for construction purposes.



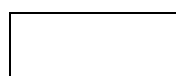
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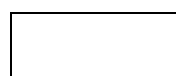
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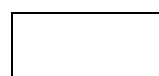
Witness 2



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No indigenous shrubs and/or trees shall be cut down by the Contractor. Removal, damage or disturbance of any vegetation outside the Works area is not permitted. Special care shall be taken not to disturb or destroy riverine vegetation.

Trees which have been selected for preservation by the ECO within or adjacent to the Works areas shall be fenced around their drip line. The fence shall be clearly marked with danger tape. No open fires shall be allowed within this fenced area, nor shall vehicles be parked underneath these trees. The area shall also not be used for materials storage or as allocation for temporary buildings. If such trees are located within the 15m working width of the pipeline, the pipeline shall be aligned to avoid these trees wherever possible. Gathering of firewood shall not be permitted.

The Contractor shall take care that seeds are collected during the removal of alien vegetation in order to counter the spread of this vegetation type. Failure to do so may result in prosecution in terms of the Conservation of Agricultural Resources Act (Act 43 of 1983). A fine not exceeding R5000 and/or 2 years imprisonment can be imposed.

No vehicular access will be allowed on the grassy parts of the construction site.

C3.6.5.2 Disturbance of animals

Under no circumstances shall any animals be handled, removed, killed or interfered with by the Contractor, his employees, his sub-contractors or his sub-contractors' employees. Snakes and other reptiles that may be encountered on the construction site must not be killed unless the animal endangers the life of an employee. Disturbances to nesting sites of birds must be minimized. Anthills and/or termite nests that occur in the Works area must not be disturbed unless it is unavoidable for construction purposes.

The Contractor and his employees shall not bring any domestic animals onto the site.

The Contractor shall ensure that the work site is kept clean and tidy and free from rubbish which would attract animal pest species. There shall be no feeding of native animals.

The Contractor shall ensure that domestic and native animals are safe from injury that may arise from unprotected Works.

The Contractor shall advise his workers and subcontractors of the penalties associated with the needless destruction of wildlife, as set out in the Animals Protection Act (Act 71 of 1962) sec. 2 (fine R2 000 and/or 12 months imprisonment).

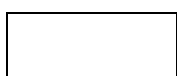
C3.6.6 CONTROL OF DAMAGE TO SOIL AND WATER

C3.6.6.1 Stripping of topsoil

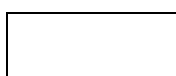
Topsoil shall be deemed to be the top 300mm layer of soil. This layer contains organic material, nutrients and plant and grass seed. For this reason it is an extremely valuable resource for the rehabilitation and re-vegetation of disturbed areas.

Topsoil shall be stripped from all areas that are to be utilized during the construction period and where permanent structures, and access is required. These areas will include the area comprising the permanent works, pipeline trenches, stockpiles, temporary and permanent access roads, construction camps, lay down areas, and any other area as indicated on the Works area drawings. Topsoil shall be stripped after clearing of woody vegetation and before excavation or construction commences.

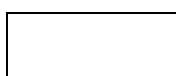
Soil shall be stripped to a minimum depth of 150mm and maximum depth of 300mm or to the depth of bedrock where soil is shallower than 300mm. Herbaceous vegetation, overlying grass and other fine organic matter shall not be removed from the stripped soil.



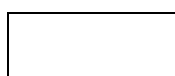
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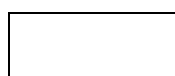
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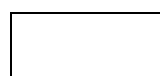
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Employer



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No topsoil which has been stripped shall be buried or in any other way be rendered unsuitable for further use by mixing with spoil or by compaction by machinery.

Topsoil shall be stripped when it is in a dry condition in order to prevent compaction.

Stripping of topsoil shall be undertaken in such a way as to minimise erosion by wind or runoff.

C3.6.6.2 Stockpiling of topsoil

Topsoil should be temporarily stockpiled, separately from (clay) subsoil and rocky material, when areas are cleared. The Contractor shall ensure that subsoil and topsoil are not mixed during stripping, excavation, reinstatement, and rehabilitation. If mixed with clay sub-soil the usefulness of the topsoil for rehabilitation of the site will be lost. Temporary soil stockpiles shall not be higher than 2,5m, and the slopes of soil stockpiles shall not be steeper than 1 vertical to 1,5 horizontal.

Areas from which topsoil is to be removed shall be cleared of any foreign material which may come to form part of the topsoil during removal including bricks, rubble, any waste material, litter any other material which could reduce the quality of the topsoil.

Soil must not be stockpiled on drainage lines or near watercourses.

No vehicles shall be allowed access onto the stockpiles after they have been placed. Topsoil stockpiles shall be clearly demarcated in order to prevent vehicle access and for later identification when required.

After topsoil stockpiling has been completed, the Contractor shall apply soil conservation measures to the stockpiles where and as directed by the Engineer / Environmental Officer.

This may include the use of erosion control fabric and/or grass seeding.

C3.6.6.3 Placement of topsoil

Topsoil shall be placed to a minimum depth of 150mm over all areas where it has been stripped, after construction in those areas has ceased. Topsoil placement shall follow as soon as construction in an area has ceased.

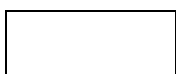
All areas onto which topsoil is to be spread shall be graded to the approximate original landform with maximum slopes of 1:2,5 and shall be ripped prior to topsoil placement. The entire area to be covered with top soil shall be ripped parallel to the contours to a minimum depth of 300mm.

Topsoil shall be placed in the same soil zone from which it had been stripped. However, if there is insufficient topsoil available from a particular soil zone to produce the minimum specified depth, topsoil may be brought from other soil zones on approval by the Engineer after consultation with the ECO.

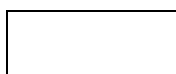
Where topsoil that has been stripped by the Contractor is insufficient to provide the minimum specified depth, the Contractor shall obtain suitable substitute material from other sources at no cost to the employer. The suitability of the substitute material shall be determined by means of a soil analysis which is acceptable to the Engineer.

No vehicles shall be allowed access onto or through topsoil after it has been placed.

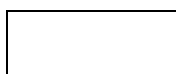
After topsoil placement is complete, cleared and stockpiled vegetative matter shall be spread randomly by hand over the area covered with topsoil.



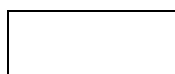
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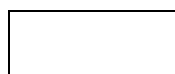
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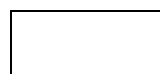
Witness 2



Employer



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C3.6.6.4 Klip river and Rietspruit

The Klip River is situated approximately 250 m to the west of the construction site at its closest point, and the Rietspruit approximately 300 m to the east.

Site staff shall not be permitted to use the Klip River or the Rietspruit for the purpose of bathing, washing of clothing or vehicles nor disposal of any type of waste.

The Contractor shall not in any way modify nor damage the banks or bed of the Klip River or the Rietspruit and its drainage lines, unless required as part of the construction project specification and in consultation with the Project Manager and the ECO. Abstraction of water from the Klip River is allowed provided that no damage to the banks of the Klip River shall occur. Should damage occur the Contractor will be held liable for any reparation and/or rehabilitation to the banks of the Klip River and for prosecution in terms of the National Water Act (Act No. 36 of 1998).

All fuel, chemical, oil, etc spills must be confined to areas where the drainage of water can be controlled.

Appropriate structures and methods to confine spillages such as the construction of berm shall be provided.

C3.6.7 Control of pollution

As a minimum requirement all waste emissions (hazardous, airborne, liquid and solid) from the site shall be kept within the limits of standards set in terms of relevant national and local pollution legislation and regulations.

C3.6.7.1 General

No waste of a solid, liquid or gaseous nature shall be emitted from the site without approval by the Engineer.

Precautionary measures must be taken to prevent any form of pollution.

Accidental pollution incidents shall be reported to the Engineer and the ECO immediately after they occur and shall be cleaned up by the Contractor or a nominated clean-up organisation at the expense of the Contractor.

C3.6.7.2 Soil

Vehicle and plant maintenance shall be confined to the areas demarcated for this purpose. Should any amount of fuel, oil transmission or hydraulic fluids be spilled onto the soils the Engineer and the ECO shall be informed immediately. If ordered by the Engineer, tests must be conducted to determine the extent of soil contamination. The polluted soil shall be rehabilitated or remediated to the satisfaction of the Engineer, after consultation with the ECO. Proof of disposal of contaminated soil must be submitted by the Contractor to GDACE within 14 days of the disposal thereof.

C3.6.7.3 Water

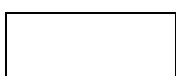
Water containing waste shall be prevented from entering the Klip River or the Rietspruit either by seepage or natural flow. Oil absorbent fibres must be used to contain oil spilled in water.

Cost effective measures must be taken to minimise the flow of surface water to trench excavations.

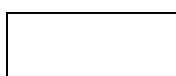
On-site storm water management over the construction site shall be to the satisfaction of the Engineer.

C3.6.7.4 Air

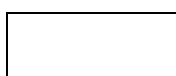
All reasonable measures should be taken to minimise air emissions in the form of smoke, dust, and gases. All machinery and vehicles used for the Works shall be in good working order. Any vehicle or piece of



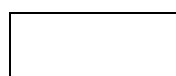
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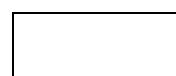
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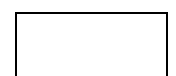
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machinery that visibly emits excess pollutant shall be removed from site. Waste must not be allowed to stand on site to decay, resulting in malodours. No fires shall be allowed if smoke from such fires will cause a nuisance to neighbouring residents.

C3.6.7.5 Sewage

Any spillage of sewage caused by the Contractor or any of his employees or subcontractors during the construction activities shall be cleaned up at the expense of the Contractor.

C3.6.8 MANAGEMENT OF WASTE

In practice all wastes arising from construction activities are to be handled, transported and disposed of in accordance with the relevant regulations. All efforts should be made to minimise, reclaim or recycle waste, and failing that, dispose of it in a manner licensed by the government for that purpose.

C3.6.8.1 Sanitation

The Contractor shall provide adequate sanitation facilities in accordance with Clause PSA 1.2 hereof. The use of the surrounding veld for toilet purposes shall not be permitted under any circumstance.

C3.6.8.2 Wastewater

Definition: Wastewater is water that is contaminated by humans through their actions.

All run-off from fuel depots, workshops, truck washing areas, and washwater from concreting vehicles and other equipment shall be collected and directed through pollution traps to the operational sewers. If connection to the sewers is not possible, the wastewater shall be collected in settlement ponds, which shall be suitably lined at the Contractor's expense.

Wastewater may not be disposed of directly or indirectly into the Klip River or the Rietspruit. The Contractor shall provide suitable retention and filtration structures (which shall be properly maintained) for the collection of wastewaters.

The Contractor shall provide washing and changing facilities. All run-offs from these washing and/or changing facilities shall be contained in the retention structures to the satisfaction of the Engineer.

C3.6.8.3 Solid waste

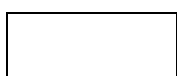
Definition: "Solid Waste" refers to all construction waste (such as rubble, cement bags, waste cement, timber, cans, other containers, wires and nails), household and office waste.

Solid waste shall be collected and stored in demarcated, fenced areas in skips and/or bins. The fenced areas or containers should be designed to prevent solid waste from being blown out by wind and should be strategically and conspicuously placed throughout the site.

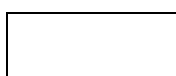
Wherever possible solid waste that can be recovered shall be recycled.

Solid waste shall be disposed of at a registered solid waste disposal site. The prices submitted by the Contractor shall include all transportation and disposal costs of waste. Solid waste shall not be buried nor burned on site.

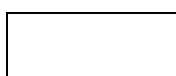
The entire works area and all construction sites must be swept of all pieces of wire, metal, wood or other material foreign to the natural environment.



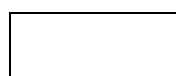
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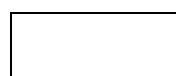
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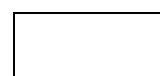
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C3.6.8.4 Hazardous wastes

Definition: Hazardous wastes are those which are proven to be toxic, corrosive, explosive, flammable, carcinogenic, radioactive, poisonous or as determined by the Hazardous Substance Act as amended. Discharges of hazardous chemicals (such as paint, turpentine, oil and cement), as declared under the Hazardous Substances Act as amended, on the site or to the storm water system are prohibited.

Potentially hazardous raw and waste materials shall be handled and stored on-site in containers with tight lids that must be sealed and must be disposed of at an appropriately permitted hazardous waste disposal site. Such containers must not be used for purposes other than those originally designed for.

The following hazardous waste products shall be disposed of at a registered hazardous waste disposal site:

- (a) cement;
- (b) diesel, petroleum, oil and lubricants;
- (c) explosives;
- (d) drilling fluids;
- (e) pesticides;
- (f) paints and turpentine;
- (g) concrete additives; and
- (h) any other material which is listed in terms of the Hazardous Substances Act.

The Contractor must maintain a hazardous materials register.

C3.6.9 MANAGEMENT OF STORMWATER AND SOIL EROSION

The aim is to minimise soil loss from the site due both to wind and water.

C3.6.9.1 Storm water

At all stages of the contract, storm water control measures shall be applied to keep soil onsite by minimising

- (a) Erosion or leaching of water from temporary stockpiles of topsoil and permanent spoil dumps
- (b) Erosion from construction roads, excavations and borrow pits, where applicable
- (c) Silt-laden run-off from all areas stripped of vegetation, including excavation surfaces and stockpiles of spoil and topsoil (the correct placement of rocks together with straw bales can be used to prevent silt-laden run-off); and
- (d) Contaminated run-off from storage areas;

Thereby preventing it from entering waterways or the storm water drainage system.

Natural storm water run-off that is not polluted by site operations shall be diverted around spoil dumps and topsoil stockpiles. Effective measures shall be taken to minimise the flow of storm water to excavations.

Where uncontaminated storm water has accumulated in excavations and needs to be pumped out, it must be disposed of in such a way that erosion does not occur along the course of its passage. Contaminated storm water shall not be disposed of into the waterways, unless it has been treated to the satisfaction of the Engineer, after consultation with the ECO.

C3.6.9.2 Control of erosion

At all stages of the contract, erosion of bare soil, other excavation surfaces and stockpiles of topsoil and spoil shall be prevented by the application of erosion control measures.

Should erosion occur due to negligence on the part of the Contractor to apply adequate measures, the

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Contractor will be responsible for reinstatement of the eroded area to its former state at his own expense. Any surface water pollution occurring, as a result of this negligence, shall be cleaned up by the Contractor or a nominated clean-up organization at the expense of the Contractor.

Cross and side storm water drainage measures shall be constructed on access and haul roads to the site and on roads within the site.

The Contractor shall ensure that run-off from access and haul roads, and that diverted into cross and side drains, does not cause erosion

C3.6.10 CONTROL OF DISTURBANCE TO NEIGHBOURS AND/OR AFFECTED RESIDENTS

All issues and items agreed to in the negotiations and discussions between the Owner and affected residents must be implemented.

C3.6.10.1 Scenic quality

The Contractor shall position all temporary structures as well as temporary plant on site in locations and at elevations which limit visual intrusion on neighbours. The type and colour of roofing and cladding materials shall be selected to reduce reflection.

The Contractor shall not establish or undertake any activities which, in the opinion of the Engineer, are likely to adversely affect the scenic quality of the area. The Engineer may direct the Contractor to refrain from such activities or to take ameliorative actions to reduce the adverse effect of such activities on the scenic quality of the environment.

No painting or marking of natural features shall be done. Marking for surveying and other purposes shall only be done with pegs and beacons.

All cut and fill forms shall be rounded at the edges to blend them with the surrounding landforms.

All packed rock and exposed rock cuttings shall be treated in order to blend their colour with the colours of the natural weathered rocks of the adjacent environment.

The colours of all permanent structures shall be chosen to blend in with the dominant colours of the surrounding landscape. Painted surfaces shall be painted with non-reflective (matt) colours.

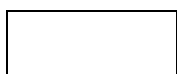
C3.6.10.2 Noise

All noise levels must be controlled at the source. All employees must be given the necessary ear protection gear. Neighbouring residents must be informed of excessive noise factors.

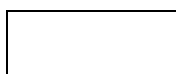
Noise emanating from construction activities must not be "disturbing noise", that is, the sound level from the site measured at the nearest dwelling must not exceed the ambient noise level by 7dBA or more.

Appropriate directional and intensity settings should be maintained on hooters and sirens, if applicable. Silencer units on plant and vehicles shall be maintained in good working order. Any vehicle/machine emitting excess noise shall immediately be removed from site or effectively repaired.

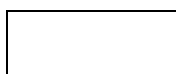
Where required by the ECO after consultation with the Engineer, the Contractor shall provide noise reduction measures in the form of cladding and earth berm between sources of onsite noise and neighbours and/or affected property owners.



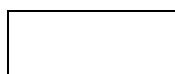
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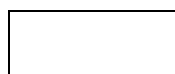
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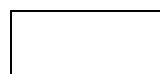
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A speed restriction of 40 km/h shall be imposed on all construction vehicles in order to limit additional noise generated by these vehicles. This restriction shall apply to the site and any road within 2 kilometres of the site.

No loud music shall be allowed on site and in construction camps.

C3.6.10.3 Dust

The Contractor shall ensure that a minimum of dust is generated by construction and related activities. Roads and working areas should be maintained regularly and this may include the sprinkling of water. Water for this purpose shall be used sparingly to not generate run-off and resulting soil erosion.

The Contractor shall control dust from spoil dumps as specified above.

Soil and aggregate loads in transit must be kept covered, to prevent wind borne pollution (dust).

Stockpiles of soil must be kept covered or have a suitable dust palliative applied, such as water or commercial dust suppressants, to prevent windborne pollution.

C3.6.10.4 Social interaction and disruption

The Contractor shall maintain normal working hours (i.e. from 07:00 until 17:00) from Mondays to Fridays for the duration of the construction period. The Contractor must inform all adjacent landowners of any after-hour construction activities and any other activity that could cause a nuisance e.g. the application of chemicals to the work surface.

The Contractor's activities and movement of staff shall be restricted to designated construction areas only. The Contractor and site staff may not interact directly with adjacent landowners but only through the Engineer, who will contact property owners to obtain permission.

The Contractor's staff shall wear special identity cards (with the employee's photograph displayed on the card), which shall make identification possible, at all times. Any temporary staff employed by the Contractor or any sub-contractor appointed by the Contractor shall also comply with this clause.

Rapid migration of job seekers could lead to squatting and social conflict with resident communities and increase in social pathologies if not properly addressed. The Contractor must ensure that signs indicating the availability of jobs are installed.

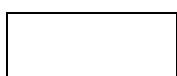
Criteria for selection and appointment, by the Contractor, of construction labour must be established to allow for preferential employment of local communities.

C3.6.10.5 Disruption of services and access

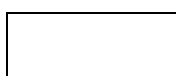
Care must be taken by the Contractor to avoid damaging major and minor pipelines and other services. The relevant authorities must be notified of any interruptions of services, especially the Mid Vaal Local Municipality, the National Roads Agency, Spoornet, TELKOM and ESKOM.

Disruption of access for local residents during construction, and haulage or any other construction activity shall only take place with the prior consent of the Engineer.

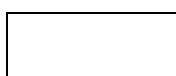
The Contractor shall liaise with the Engineer on a regular basis with regard to specific activities that could cause inconvenience to property owners, especially increased vehicular traffic through residential areas adjacent to the site. The Contractor shall prior to commencement inform property owners of his planned activities within a reasonable period of time.



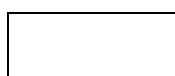
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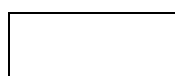
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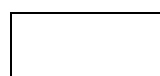
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The movement of construction vehicles through the affected areas shall be restricted to off-peak hours to minimise adverse impacts on private vehicular traffic. Temporary access roads must not be opened until required and must be restored to its former state as soon as the road is no longer needed.

C3.6.10.6 Traffic control

The Contractor shall ensure that all construction traffic including that of subcontractors, vendors, suppliers of materials and services are notified that a special speed limit of 40 kph shall apply along any road within the adjacent Klipwater Township; and special attention shall be given to road signs. Vehicles not complying with this ruling shall on the instruction of the Engineer, be denied access to the Site.

C3.6.11 Archaeology and cultural sites

All finds of human remains must be reported to the nearest police station.

Human remains from the graves of victims of conflict, or any burial ground or part thereof which contains such graves and any other graves that are deemed to be of cultural significance may not be destroyed, damaged, altered, exhumed or removed from their original positions without a permit from the South African Heritage and Resource Agency (SAHRA).

Work in areas where artefacts are found must cease immediately.

Under no circumstances must the Contractor, his/her employees, his/her sub- contractors or his/her sub-contractors' employees remove, destroy or interfere with archaeological artefacts. Any person who causes intentional damage to archaeological or historical sites and/or artefacts could be penalised or legally prosecuted in terms of the National Heritage Resources Act, 25 of 1999.

A fence at least 2m outside the extremities of the site must be erected to protect archaeological sites. All known and identified archaeological and historical sites must be left untouched.

Work in the area can only be resumed once the site has been completely investigated. The Engineer will inform the Contractor when work can resume.

C3.6.12 REHABILITATION

It is important that rehabilitation will commence as soon as feasible and to run in parallel with the construction and not to be left until completion of the works. This will increase the chances of successful rehabilitation as it can be monitored throughout the construction period.

The construction site shall be cleaned and rehabilitated as close as is reasonably possible to its original state.

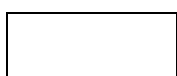
All drainage deficiencies must be corrected.

Cut and fill areas must be restored and re-shaped.

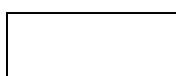
Areas compacted by vehicles during construction must be scarified to allow penetration of plant roots and the re-growth of natural vegetation.

Rehabilitation of all the disturbed and compacted areas shall mean that these areas are ripped and covered with topsoil.

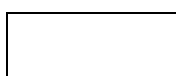
- Ripped shall mean - ploughed with a ripper to a depth of not less than 300mm in two directions at right angles.
- Top soiled shall mean - the spreading of a minimum of 150mm of stockpiled topsoil either before or after ripping over the surface to be rehabilitated.



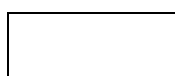
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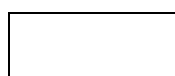
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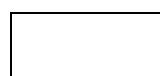
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The areas immediately adjacent to the Works which are not designated for paving shall be grassed in accordance with the relevant engineering specification.

All alien vegetation removed during construction shall not be replaced.

The rehabilitated areas will be weeded by the nominated rehabilitation contractor for a period of 1 year.

C3.6.13 RESPONSE TO PUBLIC COMPLAINTS

The Contractor shall assist the Engineer with responding to queries and complaints from the public regarding construction activities by:

- (a) Documenting the details of such communications and submitting the information to the
- (b) Engineer for inclusion in the complaints register;
- (c) Bringing any such matters to the attention of the Engineer immediately as they arise;
- (d) Taking any remedial action as per the Engineer; and d.) discuss such matters at the site meetings.

The Contractor shall assist the Engineer and consult with affected parties for the purpose of explaining the construction process and answering questions raised by affected parties at reasonable times.

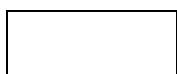
Should the owner of any property, contact the Contractor during the construction period regarding specific requests, the Contractor shall include all pertinent details in his report (Section 2.3 hereof).

C3.6.14 CLEARANCE OF SITE ON COMPLETION

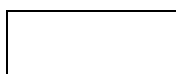
On completion of the Works, the Contractor shall clear away and remove from the site all construction plant, surplus materials, foundations, plumbing and other fixtures, rubbish and temporary works of every kind. Areas thus cleared shall be graded and scarified to restore the ground to its original profile as near as practicable before topsoil placement.

C3.6.15 COMPLIANCE WITH ENVIRONMENTAL MANAGEMENT SPECIFICATIONS

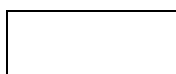
- (a) All persons employed by the Contractor or his subcontractors shall abide by the requirements of these Environmental Management Specifications.
- (b) Any employees of the Contractor or his subcontractors found to be in breach of any of the Environmental Management Specifications may be ordered by the Engineer to leave the site forthwith. The order may be given orally or in writing. Confirmation of an oral order will be given as soon as practicable but lack of confirmation in writing shall not be a cause for the offender to remain on site. No extension of time will be granted for any delay or impediment to the Contractor brought about by a person ordered to leave the site.
- (c) Supervisory staff of the Contractor or his subcontractors shall not direct any person to undertake any activities which would place such person in contravention of the Environmental Management Specifications.
- (d) Via these specifications the Contractor has been made aware of what actions are required of him and/or his subcontractors. Certain do's and don'ts have been given and onus for compliance rests with the Contractor as he is the only person capable of controlling these aspects. A fine/reward system will be implemented to encourage compliance. For every week that the Contractor successfully complies with the Environmental Management Plan and Specifications a bonus sum of R500 will be generated. However, for each and every time that the Environmental Management Plan and Specification is not met, a fine of R500 will be imposed.



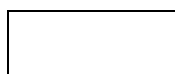
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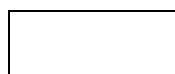
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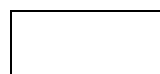
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C3.6.16 MEASUREMENT AND PAYMENT.

Unit:

Under Schedule No. 1 in Bill: Environmental Management Sum.

The lump sum tendered shall include full compensation for initiating and maintaining the environmental awareness campaign as required in the Environmental Management Plan and Specifications.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2



DRAFT SERVICE LEVEL AGREEMENT

Bidders should take note of the attached draft service level agreement that will be concluded upon final confirmation of award. This draft will be used as a format and structure for the final document. The contract will thus take effect on the date of the last signatory on the finalised Service Level Agreement.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Service Level Agreement (SLA)

Document Owner:	Ekurhuleni Water Care Company (ERWAT)
Contractor:	XXXXXXXXXXXXXXXXXXXXXXX

Version

Version	Date	Description	Author
1.0	xxxxx	Service Level Agreement	Jeffrey Mathunzi

Approval

(By signing below, all Approvers agree to all terms and conditions outlined in this Agreement.)

Approvers	Role	Signed	Approval Date
Ms. Zimasa Socikwa	Company Secretary (ERWAT)		
Mr. Victor Chuene	Supply Chain Manager (ERWAT)		
Mr. Emmanuel Khomela	Project Sponsor (ERWAT)		
Mr. Sipho Mateza	Senior Project Manager		
Mr. Jeffrey Mathunzi	Project Manager		
XXXXXXXXXXXXXXXXXXXXXXX	Service Provider Representative		
XXXXXXXXXXXXXXXXXXXXXXX	Service Provider Representative		

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

SERVICE LEVEL AGREEMENT

MADE AND ENTERED INTO BETWEEN

EKURHULENI WATER CARE COMPANY (ERWAT)

Company registration number: 1992/005753/08

Herein referred to as ERWAT, a Section 21 company. Represented by **Mr. Kennedy Chihota** in his capacity as Interim Managing Director or his duly authorized representative.

(HEREINAFTER REFERRED TO AS “**EMPLOYER OR CLIENT**”)

AND

XXXXXXXXXXXX

A Private Company duly registered and incorporated as such under laws of the Republic of South Africa with Registration Number **XXXXXXXXXXXX** under VAT Registration Number **XXXXXXXXXXXX** herein represented by **XXXXXXXXXXXX** in his capacity as the **Director** and duly authorized thereto by virtue of a resolution passed on **XXXXXXXXXXXX** (*as attached herewith under Annexure A*).

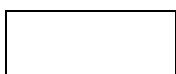
(HEREINAFTER REFERRED TO AS “**CONTRACTOR**”)

1. PREAMBLE

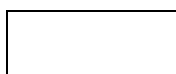
WHEREAS ERWAT has awarded Bid Number: **ERW2506/02** the CONTRACTOR and the CONTRACTOR accepted the bid for **APPOINTMENT OF SERVICE PROVIDER/S FOR THE SUPPLY, DELIVERY AND INSTALLATION OF PUMPS AT ERWAT WASTEWATER CARE WORKS ON ‘AS AND WHEN REQUIRED’ BASIS FOR A PERIOD OF THIRTY-SIX (36) MONTHS** as per the Scope of Work (Part C3 under the Bid); Pricing Instructions (Part C2.1 under the Bid) and Bill of Quantities (Part C2.2 under the Bid) included in the said Bid;

AND WHEREAS the CONTRACTOR as part of the terms and conditions of the said Bid warrants the services and administration thereof as stated in the Bid Document and Bid Proposal. Furthermore, it shall administer the service as per the service levels set out in this Agreement:

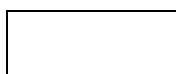
AND WHEREAS the CONTRACTOR agrees to enter into this Service Level Agreement which is an integral part of the Bid Proposal submitted by the CONTRACTOR in respect of Bid No: **ERW2506/02** and which is further subjected to the General Conditions of Contract for Construction Works (GCC, third edition, 2015) and Special Conditions of contract.



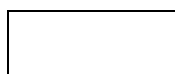
Contractor



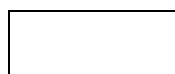
Witness 1



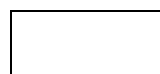
Witness 2



Employer



Witness 1



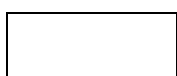
Witness 2

THEREFORE, the parties wish to record in writing the terms and conditions of their agreement relating to the aforementioned and incidental thereto.

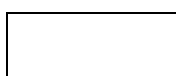
2. DEFINITIONS AND INTERPRETATIONS

2.1. DEFINITIONS:

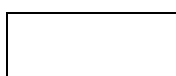
- 2.1.1 **“Agreement or Contract”** shall mean this Service Level Agreement including the Bid Document, General Conditions of Contract for Construction Works (GCC, third edition, 2015), letter of acceptance and all the attached Annexes as applicable.
- 2.1.2 **“Bid Document”** shall mean the request and description of work called for including the subsequent offer to supply a service to ERWAT at a specified price and in accordance with the specifications contained in the ERWAT description of work and for purposes of the Agreement is also referred to as Terms of Reference and Bid Document under Bid Number: ERW2309/11.
- 2.1.3 **“Award Letter”** shall mean the written communication by ERWAT to the CONTRACTOR recording the acceptance by ERWAT of the CONTRACTOR’s Bid, subject to the further terms and conditions to be included in this Agreement.
- 2.1.4 **“Service”** shall mean APPOINTMENT OF SERVICE PROVIDER/S FOR THE SUPPLY, DELIVERY AND INSTALLATION OF PUMPS AT ERWAT WASTEWATER CARE WORKS ON ‘AS AND WHEN REQUIRED’ BASIS FOR A PERIOD OF THIRTY-SIX (36 N) MONTHS as per the Scope of work (Part C3 under the Bid); Pricing Instructions (Part C2.1 under Bid) and Bill of Quantities (Part C2.2 under Bid) included in the said Bid.
- 2.1.5 **“Employer”** shall mean the party for whom the works are to be carried out and who is named as the Employer in the Contract Data, and the legal successors in title of this person.
- 2.1.6 **“Contractor”** shall mean the party named in the Contract Data whose offer has been accepted in the Form of Offer and Acceptance and the legal successors in title of this person.
- 2.1.7 **“Subcontractor”** shall mean the primary Contractor’s assigning, leasing, making out work to, or employing another person to support such primary contractor in the execution of part of a project in terms of the Agreement.



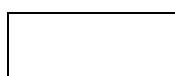
Contractor



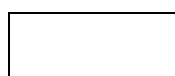
Witness 1



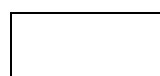
Witness 2



Employer



Witness 1



Witness 2

- 2.1.8 **“The parties”** shall mean ERWAT (The Employer or Client) and XXXXXXXXXXXX (The Contractor).
- 2.1.9 **“Managing Director”** shall mean ERWAT’s Accounting Officer or his duly authorised representative.
- 2.1.10 **“Contractor’s Representative”** shall mean the CONTRACTOR or its designated employee, who has been appointed in writing, by the CONTRACTOR, respectively whose responsibility is to ensure that it complies with its contractual obligations under this Agreement and will be communication channel between the parties.
- 2.1.11 **“Day”** shall mean a calendar day.
- 2.1.12 **“Appointment date”** shall mean the date that a written communication of award of the contract by ERWAT was issued to the CONTRACTOR.
- 2.1.13 **“Commencement Date”** shall mean the date of the last signatory on the Service Level Agreement.
- 2.1.14 **“Effective date”** shall mean the date of issuing of the Purchase Order (PO).
- 2.1.15 **“Project Duration”** shall mean the number of calendar days from a specified Commencement Date to a specified Completion Date as provided for in this agreement.
- 2.1.16 **“Completion Date”** – shall mean the date of expiry of the time stated in the Bid Document for achieving Completion of the Works, calculated from the Commencement Date and as adjusted by such extensions of time or acceleration as may be allowed in terms of this Agreement. This includes the hand over and close out report to the satisfaction and acceptance by ERWAT.
- 2.1.17 **“Contract Duration”** shall mean the number of calendar days from a specified Commencement Date to the end of the specified Defect Liability Period as provided for in this agreement.
- 2.1.18 **“Warranties”** – shall mean, collectively any and all warranties given by the CONTRACTOR in terms of this Agreement.
- 2.1.19 **“GA drawings”** – shall mean the General Arrangement drawings, which indicate the locations of the works.
- 2.1.20 **“FAT”** – shall mean the Factory Acceptance Test, described as the functional test of the equipment that is performed by the CONTRACTOR upon completion of the manufacturing process, to prove the

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

equipment has the same specification and functionality that is outlined in the Scope of work (Section C3 under the Bid).

2.1.21 **“OEM”** – shall mean the Original Equipment Manufacturer, described as a company that makes components or subsystem that is used in another company’s end product.

2.1.22 **“Defect Liability Period”** – shall mean the period stated in the Contract Data, if any, commencing from the issue of the Certificate of Completion, or Certificates of Completion in the event of more than one Certificate of Completion having been issued for different parts of the Works, during which the Contractor has both the right and the obligation to make good defects in the materials, Plant and workmanship covered by the Agreement.

2.1.23 **“Re-measurement Contract”** – shall mean the Contractor is paid an amount determined from the actual quantities of work completed multiplied by the rates or prices for such work, subject to adjustments in accordance with the Agreement.

2.1.24 **“Site”**- shall mean the land and other places made available by the Employer, for the purposes of the Contract, on, under, over, in or through which the Works are to be carried out.

2.1.25 **“Works”** shall mean the permanent works together with such temporary works as may be necessary for carrying out the Works.

2.2. INTERPRETATION:

2.2.1 In this Agreement the clause headings are for convenience and shall not be used in its interpretation and, unless the context clearly indicates a contrary intention: -

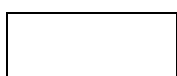
2.2.2 An expression which denotes –

2.2.2.1 Any gender includes the other genders;

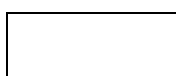
2.2.2.2 a natural person includes an artificial or juristic person and vice versa;

2.2.2.3 The singular includes the plural and vice versa.

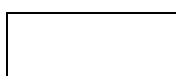
2.2.3 Any reference to any statute, regulation or other legislation or official policy shall be a reference to that statute, regulation or other legislation or national policy as at the signature date of this Agreement, and as amended or re-enacted from time to time;



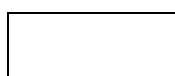
Contractor



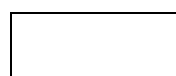
Witness 1



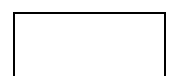
Witness 2



Employer



Witness 1



Witness 2

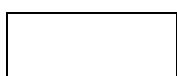
- 2.2.4 When any number of days is prescribed, such shall be reckoned exclusively of the first and inclusively of the last day, unless the last day falls on a Saturday, Sunday or Public Holiday, in which case the last day shall be the next succeeding day which is a business day;
- 2.2.5 Where any term is defined within a particular clause, other than the interpretation clause, that term shall bear the meaning ascribed to it in that clause wherever it is used in this Agreement.
- 2.2.6 The law which is to apply to the Agreement, and according to which the contract is to be interpreted, shall be the law of the Republic of South Africa, unless otherwise stated in the Contract Data.
- 2.2.7 The language of the Contract and written communication shall be English, unless otherwise stated in the Contract Data.
- 2.2.8 In respect of any indemnification against liability to third parties given by either party to the other, the indemnification shall cover all claims, demands, proceedings, damages, costs, charges and expenses in relation thereto or arising therefrom.

3. CONFIRMATION OF DATES

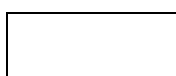
- 3.1 In this Agreement, each of the dates and durations specified hereunder shall refer to the days and months respectively allocated to in the following:
 - 3.1.1 “**Appointment date**” – shall mean the date that a written communication of award of the contract by ERWAT was issued to the CONTRACTOR.
 - 3.1.2 “**Commencement Date**” – shall mean the date of the last signatory on the Service Level Agreement.
 - 3.1.3 “**Effective date**” – shall mean the date of issuing of the Purchase Oder (PO).
 - 3.1.4 “**Completion Date**” – shall be xx months” from the commencement date as per Clause SCC 30.0 [1.1] under Contract Data.

4. APPOINTMENT OF THE CONTRACTOR

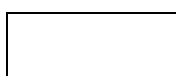
- 4.1 ERWAT hereby appoints the CONTRACTOR who, with its signing of this Agreement at the end hereof, accepts such appointment to provide the Services outlined, subject to the terms and conditions set out herein.
- 4.2 All rights and obligations arising from this Agreement shall be deemed to have come into operation on the Commencement Date.



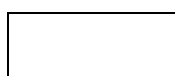
Contractor



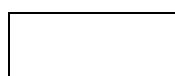
Witness 1



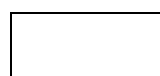
Witness 2



Employer



Witness 1



Witness 2

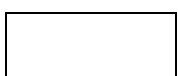
- 4.3 Neither the appointment of the CONTRACTOR in clause 4.1 nor anything in this Agreement shall give rise to or be construed as giving rise to an employer/employee relationship between the parties, nor shall it give rise to a joint venture nor an agreement of partnership between the parties, nor shall it give rise to a labour broking agreement.
- 4.4 The parties acknowledge that neither of the parties has any authority whatsoever to represent or to bind the other party in any capacity whatsoever. In particular, but without limiting the generality, neither of the parties shall be entitled to conclude any agreement or sign any document on behalf of the other party, or in any way bind the other party's performance or discharge of any obligation.
- 4.5 The parties agree that no staff member of ERWAT may be requested or solicited to accept any reward gift or favour, nor may any staff member of ERWAT accept any reward gift or favour, for persuading the municipal council or any structure or functionary of the council with regard to the exercise of any power or the performance of any duty; or to make a representation to the council or any structure or functionary; or to disclose any privileged or confidential information; or to do or not to do anything within that staff member's powers or duties.
- 4.6 The conduct described under sub-clause 4.5 goes to the root of the Agreement and constitutes a breach of this Agreement with the further proviso that any person found guilty of such conduct shall be dealt with in terms of the provisions of South African Law.

5. COMMENCEMENT AND TERMS OF THE AGREEMENT

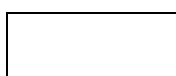
- 5.1 The Agreement shall endure for the entire Contract Duration established from the Commencement date to the date of the end of the Defect Liability period.
- 5.2 The Defects Liability Period is **12 Calendar months** from the date of the Certificate of Completion of the all the works as per the *General Conditions of Contract for Construction Works, (GCC, Third Edition, 2015)*".

6. CONTRACT PRICE

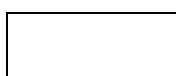
- 6.1 The price charged by the CONTRACTOR for Service performed under this Agreement shall not vary from the prices quoted by the CONTRACTOR in their Bid Document, with the exception of any authorized price adjustments.
- 6.2 The Bid of the CONTRACTOR was awarded and accepted as Rates Based tender as outlined in the summary of the bill of quantities (as attached herewith under **Annexure B**).



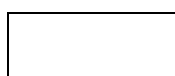
Contractor



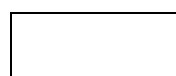
Witness 1



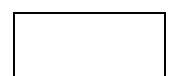
Witness 2



Employer



Witness 1



Witness 2

7. **SECURITY**

7.1 **Retention**

7.1.1 The CONTRACTOR commits to a security of **Ten (10) percent** retention of the value of the contract amount (*payment reduction of 10% of the value certified in the payment certificate (excluding VAT)*) which shall be deducted according to Clause 6.2.2 of the General Conditions of Contract for construction works (GCC, third edition, 2015) read in its entirety, and shall be released to the CONTRACTOR in terms of clause 6.10.5 of the General Conditions of Contract for construction works (GCC, third edition, 2015) read in its entirety.

7.2 **Site Security**

7.2.1 The Contractor further undertakes to provide security and safeguarding of equipment and supplies to be used for this project until construction, installation, testing, commissioning and handover has taken place. Therefore, ERWAT will not be liable for any damages or losses resulting from the omission of the fore mentioned precaution.

8. **TERMS OF REFERENCE AND BID DOCUMENT**

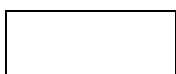
8.1 Where possible the stipulations in the Terms of Reference and Bid Document must be interpreted in such a way that it is not in conflict with this Agreement. However, where any terms, conditions, prescription or guidelines in the Terms of Reference are in direct conflict with this Service Level Agreement and cannot be given a meaning or meanings that are not in conflict with the Agreement, and cannot be reconciled with it, then the Bid Document shall prevail, and where the Service level agreement and Bid document is silent the General Conditions of Contract for Construction Works (GCC, third edition, 2015) shall prevail.

9. **MEASURING AND PAYMENTS**

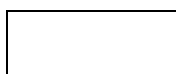
9.1. The Contractor shall be entitled to receive a progress payment which shall be based on his statement for payment and progress payment certificate delivered to the Project Manager.

9.2. The contractor must submit acceptable proof of ownership of material delivered on site before any payment advance may be given for material on site. The percentage advance on materials on site is 80%.

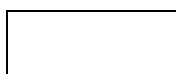
9.3. The Works under this Agreement shall be Re-measurable during construction.



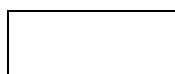
Contractor



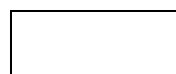
Witness 1



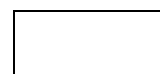
Witness 2



Employer



Witness 1



Witness 2

9.4. The following supporting documents must be attached to the progress payments:

- 9.4.1. Contractors Award Letter
- 9.4.2. ERWAT Copy of Purchase Order
- 9.4.3. Project Financial Statement
- 9.4.4. Payment Certificate
- 9.4.5. Revised Cash-flow
- 9.4.6. Progress Report

10. DELAYS IN THE AGREEMENT

- 10.1 The CONTRACTOR in accordance with the time schedule agreed to, and which forms part of this Agreement must adhere to performance of the Service.

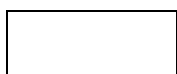
- 10.2 If at any time during the course of this Agreement, the CONTRACTOR or his Sub-contractors encounters inclement weather conditions impeding timely performance of Service, the CONTRACTOR shall promptly notify ERWAT in writing of the effect of the delays and its likely duration. As soon as practicable after receipt of the CONTRACTOR's notice, ERWAT shall evaluate the situation and may at their discretion extend the CONTRACTOR's time for performance, with or without the imposition of penalties, in which case the extension shall be ratified by the parties by amendment to this Agreement.

- 10.3 Except as provided for under Clause 11, a delay by the CONTRACTOR in the performance of its delivery obligations shall render the CONTRACTOR liable to the imposition of penalties pursuant to Clause 11, unless an extension of time is agreed upon pursuant to Clause 11 without the application of penalties.

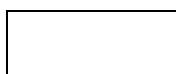
- 10.4 Upon delay beyond the Completion date, ERWAT shall be entitled to procure a similar Service at the CONTRACTOR's expense and risk, or to cancel the Agreement and procure such a Service as may be required to complete the Agreement without prejudice obligations to their other rights, and further be entitled to claim damages from the CONTRACTOR.

11. PENALTIES

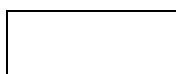
- 11.1 Subject to Clause 24.0 - Penalty for late or non-completion Penalty amount R 6000.00 per calendar day, if the CONTRACTOR fails to deliver on any or all of the terms and conditions of this Agreement or fails to perform the Service within the period(s) specified in this Agreement, ERWAT shall, without prejudice to its other remedies in terms of this Agreement and/or the law, impose such penalties on the CONTRACTOR as prescribed under Clause 5.13 "Penalty for Delay" in the General Conditions of Contract for construction works (GCC, third edition,2015).



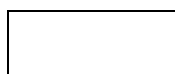
Contractor



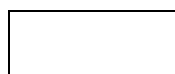
Witness 1



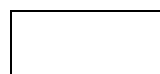
Witness 2



Employer



Witness 1



Witness 2

11.1.1 The penalties accepted by the CONTRACTOR will be **0.4%** of the Contract Value excluding VAT and Contingencies per day as per the provisions of Clause SCC 5.13.1 under Contract Data.

12. FORCE MAJEURE

12.1 For purpose of this Clause, "Force Majeure" means an event beyond the control of the CONTRACTOR and not involving the CONTRACTOR's fault or negligence and not foreseeable. Such events may include, but are not limited to, serious fire, flood, typhoon and earthquake including any other "acts of God".

12.1.1 Notwithstanding the provisions of Clauses 12 and 22, the CONTRACTOR shall not be liable for damages, penalties, forfeiture of its performance security, or termination for default if and to the extent that this delay in performance or other failure to perform their obligations under the Agreement is the result of an event of force majeure.

12.1.2 If a force majeure situation arises, THE CONTRACTOR shall promptly notify ERWAT in writing of such condition and the cause thereof. Unless otherwise directed by ERWAT in writing, THE CONTRACTOR shall continue to perform its obligations under the Agreement as far as is reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the force majeure event.

13. SITE LOCATION

13.1. The site whereas the works will be carried out shall be at the following treatment works:

13.1.1. **Ancor WCW**, Remaining Extension of Portion 151 farm Daggafontein 125 Ermelo Road, Springs
GPS Co-ordinates: S 26°16'11" E 28°28'56"

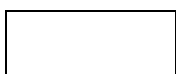
13.1.2. **Benoni WCW**, 6 Lancaster Road, Actonville, Benoni
GPS Co-ordinates: S 26°12'30.19", E 28°19'00.48"

13.1.3. **Carl Grundling WCW**, Portion 58 of farm Varkenfontein 169 Vorsterkroon, Nigel
GPS Co-ordinates: S 26°12'30" E 28°19'01"

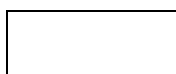
13.1.4. **Daveyton WCW**, 6 Lancaster Road, Actonville, Benoni
GPS Co-ordinates: S 26°08'08.72", E 28°27'49.20"

13.1.5. **Dekema WCW**, 536 Sontonga Street, Motsamai Section, Katlehong
GPS Co-ordinates: S 26°19'36.94", E 28°09'48.25"

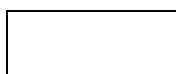
13.1.6. **Esther Park WCW**, Parkland Drive, Esther Park, Kempton Park
GPS Co-ordinates: S 26°06'02.43", E 28°10'57.80"



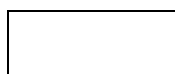
Contractor



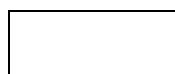
Witness 1



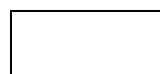
Witness 2



Employer



Witness 1

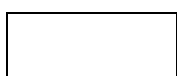


Witness 2

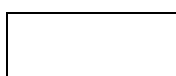
- 13.1.7. **Hartebeestfontein Office Park**, R25 (Bapsfontein / Bronkhorstspruit) Kempton Park
GPS Co-ordinates: S 26° 01' 25.8" and E 28° 17' 10.0"
- 13.1.8. **Hartebeestfontein WCW**, Portion 20 & Remaining of Portion 4 of farm Hartebeestfontein 17, Bapsfontein Road, Norkem Park, Kempton Park
GPS Co-ordinates: S 26°01'11" E 28°17'1"
- 13.1.9. **Heidelberg WCW**, Portion 28 of farm Boschhoek 385 Vaaldam Road, Heidelberg
GPS Co-ordinates: S 25°57'43" E 28°12'49"
- 13.1.10. **Herbert Bickley WCW**, Heidelberg Road, Plot 14, Maraisdrift, Nigel
GPS Co-ordinates: S 26°26'40.37", E 28°26'46.89"
- 13.1.11. **Jan Smuts WCW**, Corner Escombe and Wanderers Street, Brakpan
GPS Co-ordinates: S 26°13'24.45", E 28 22'33.01"
- 13.1.12. **JP Marais WCW**, Corner of N12/Kingsway Road, Benoni
GPS Co-ordinates: S 26°10'13.46", E 28°23'49.21"
- 13.1.13. **Olifantsfontein WCW**, Keramiek Road, Olifantsfontein
GPS Co-ordinates: S 25°56'24.48", E 28°12'57.96"
- 13.1.14. **Ratanda WCW**, Farm Klipstapel, Vaaldam Road, Ratanda
GPS Co-ordinates: S 26°34'57.80", E 28°18'11.27"
- 13.1.15. **Rondebult WCW**, Corner Kalk/Van Dyk Roads, Rondebult
GPS Co-ordinates: S 26°17'57.92", E 28°13'37.82"
- 13.1.16. **Rynfield WCW**, 69 Sarel Cilliers Street, Rynfield, Benoni
GPS Co-ordinates: S 26°09'31.05", E 28°21'21.41"
- 13.1.17. **Tsakane WCW**, Corner Modjadji and Khama Street, Tsakane, Brakpan
GPS Co-ordinates: S 26°22'31.93", E 28°21'58.20"
- 13.1.18. **Vlakplaats WCW**, Portion 191 farm of Vlakplaats 138 Cnr Brickfield / Bierman Street, Vosloorus
GPS Co-ordinates: S 26°12'30" E 28°19'01"
- 13.1.19. **Waterval WCW**, Portion 50,62,12 and 1 of farm Waterval 150 and Remaining portion 3 of the farm Witkop Waterfal Farm, Meadow Road, kliprivier
GPS Co-ordinates: S 26°12'30" E 28°19'01"
- 13.1.20. **Welgedacht WCW**, 1 Carnation Road, Welgedacht Agricultural Holdings, Springs
GPS Co-ordinates: S 26°11'29.18", E 28°28'26.86"

13.2. Clause 6.9 "**Vesting of Plants and material**" in the General Conditions of Contract for construction works (GCC, third edition,2015) refers and will be applicable to this Agreement and read in its entirety.

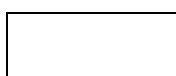
13.2.1 The assembling factory and storage site shall be at the both the client's, contractors' and supplier's premises, which is at the following location:



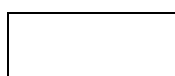
Contractor



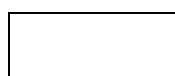
Witness 1



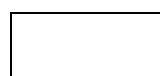
Witness 2



Employer



Witness 1



Witness 2

13.2.1.1 Client’s premises: As Stated on 13.1

13.2.1.2 Contractor’s premises :

XXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXX

14. WORKING HOURS

14.1 The working hours on site will be from 07:00 until 17:00 under normal conditions (excluding Saturdays and Sundays).

14.2 Clause 5.8. “Non-working times” of General Conditions of Contract for construction works (GCC, third edition,2015) refers and will be applicable to the Works.

14.2.1 The special non-working days are:

14.2.1.1 Public Holidays;

14.2.1.2 The year-end break/builder’s holiday commences on 12th December 2026 and ends on the 10th January 2027, 11th December 2027 and ends on the 09th January 2028, and 16th December 2028 and ends on the 07th January 2029.

15. DAMAGE TO EXISTING SERVICES

15.1 The Contractor shall be liable to pay for any damages emanating from the activities of their site construction teams including those of the subcontractors. Hence, precaution must be taken when performing works at the existing wastewater care works with existing varying services to avoid discontinuity of the already operational equipment (or plant).

15.2 Any damage to an existing service must be reported to ERWAT immediately and reasons and circumstances for the damage must be submitted in writing.

15.3 The arrangement to have the damage repaired must immediately be implemented. The damages to be repaired within a day, should this be not possible, at least a mitigation plan must be implemented as a temporary measure until the damages can be permanently resolved. Damages that occur, which is not the Contractor’s fault, must be motivated by the Contractor for a ruling by ERWAT.

16. DOMICILE AND NOTICE

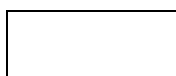
16.1 The parties choose their domicile for all purposes relating to this Agreement, including the giving of any notice, the payment of any sum and the serving any process, as follows:



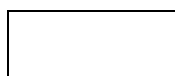
Contractor



Witness 1



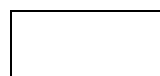
Witness 2



Employer



Witness 1



Witness 2

16.1.1 EKURHULENI WATER CARE COMPANY

Physical: - Hartebeestfontein Office Park
 R25 (Bronkhorstspuit/Bapsfontein)
 Kempton Park
Postal: - PO. Box 13106
 Norkem Park
 1631
Fax no: - (011) 927 7031
Tel: - +27 11 929 7000
Email Address: - mail@erwat.co.za

16.1.2 THE CONTRACTOR

Physical: - XXXXXXXXXXXXXXXXX
 XXXXXXXXXXXXXXXXX
Fax no: - 086 XXX
Cell no: - XXXXXXXXXXXXXXXXX
Email Address: XXXXXXXXXXXXXXXXX

16.2 Each party shall be entitled from time to time, by giving written notice to the others, to vary its physical domicile to any other physical address (not being a post office box or "remainder post") within the Republic or to vary its postal domicile or its facsimile domicile to any other within the Republic.

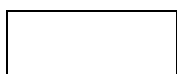
16.3 Any notice given or any payment made by any party to any other ("addressee") which is;

16.3.1 Delivered by hand between the hours of 08:00 and 16:30 on any business day to the addressee's physical domicile for the time being, shall be deemed to have been received by the addressee at the time of delivery;

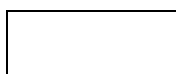
16.3.2 Posted by registered post to the addressee's postal domicile for the time being, shall be presumed to have been received by the addressee on the fourteenth day after date of posting.

16.4 Any notice given by any party to any other which is sent by facsimile to the addressee's facsimile domicile for the time being shall be deemed to have been received by the addressee on the day immediately succeeding the date of successful transmission thereof.

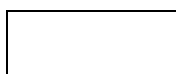
16.5 This domicile clause shall not operate so as to invalidate the giving or receipt of any notice, which is actually received by the addressee other than by a method referred to in this clause.



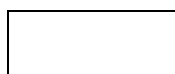
Contractor



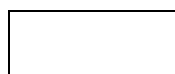
Witness 1



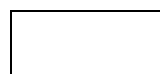
Witness 2



Employer



Witness 1



Witness 2

16.6 Any notice required or permitted to be given in terms of this Agreement shall be valid and effective only if in writing.

17. VARIATIONS

17.1 Clause 6.3 “**Variations**” of the General Conditions of Contract for construction works (GCC, third edition, 2015), refers and will be applicable to this Agreement and read in its entirety.

18. RISK AND RELATED MATTERS

18.1 Protection of the works.

18.1.1 Clause 8.1 “**Protection of the Works**” of the *General Conditions of Contract for construction works (GCC, third edition, 2015)*, refers and will be applicable to this Agreement and read in its entirety.

18.2 Care of the Works

18.2.1 Clause 8.2 “**Care of the Works**” of the General Conditions of Contract for construction works (GCC, third edition, 2015), refers and will be applicable to this Agreement and read in its entirety.

18.3 Excepted risks

18.3.1 Clause 8.3 “**Excepted risks**” of the General Conditions of Contract for construction works (GCC, third edition, 2015), refers and will be applicable to this Agreement and read in its entirety.

18.4 Indemnifications.

18.4.1 Clause 8.4.1 “**Indemnification**” of the General Conditions of Contract for construction works (GCC, third edition, 2015) refers and will be applicable to this Agreement and read in its entirety.

18.5 Reporting accidents.

18.5.1 Clause 8.5 “**Reporting accidents**” of the General Conditions of Contract for construction works (GCC, third edition, 2015) refers and will be applicable to this Agreement and read in its entirety.

18.6 Insurances.

18.6.1 Clause 8.6 “**Insurance**” of the General Conditions of Contract for construction works (GCC, third edition, 2015) refers and will be applicable to this Agreement and read in its entirety.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

19 TERMINATION OF CONTRACT

19.1 *Termination of Contract.*

19.1.1 Clause 9.1 “**Termination of Contract**” of the General Conditions of Contract for construction works (GCC, third edition,2015) refers and will be applicable to this Agreement and read in its entirety.

19.2 *Termination by Employer.*

19.2.1 Clause 9.2 “**Termination by Employer**” of the General Conditions of Contract for construction works (GCC, third edition, 2015) refers and will be applicable to this Agreement and read in its entirety.

19.3 *Termination by Contractor.*

19.3.1 Clause 9.3 “**Termination by Contractor**” of the General Conditions of Contract for construction works (GCC, third edition,2015) refers and will be applicable to this Agreement and read in its entirety.

20 CLAIMS AND DISPUTES

20.1 *Contractor’s claim*

20.1.1 Clause 10.1 “**Contractor’s claim**” of the General Conditions of Contract for construction works (GCC, third edition,2015) refers and will be applicable to this Agreement and read in its entirety.

20.2 *Dissatisfaction claim*

20.2.1 Clause 10.2 “**Dissatisfaction claim**” of the General Conditions of Contract for construction works (GCC, third edition,2015) refers and will be applicable to this Agreement and read in its entirety.

20.3 *Dispute notice*

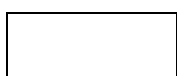
20.3.1 Clause 10.3 “**Dispute notice**” of the General Conditions of Contract for construction works (GCC, third edition,2015) refers and will be applicable to this Agreement and read in its entirety.

20.4 *Amicable settlement*

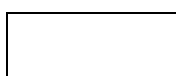
20.4.1 Clause 10.4 “**Amicable settlement**” of the General Conditions of Contract for construction works (GCC, third edition,2015) refers and will be applicable to this Agreement and read in its entirety.

20.5 *Adjudication*

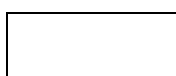
20.5.1 Clause 10.5 “**Adjudication**” of the General Conditions of Contract for construction works (GCC, third edition,2015) refers and will be applicable to this Agreement and read in its entirety.



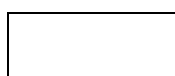
Contractor



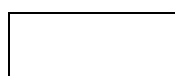
Witness 1



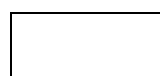
Witness 2



Employer



Witness 1



Witness 2

20.6 Disagreement with Adjudication Board’s decision

20.6.1 Clause 10.6 “**Disagreement with Adjudication Board’s decision**” of the General Conditions of Contract for construction works (GCC, third edition,2015) refers and will be applicable to this Agreement and read in its entirety.

20.7 Arbitration

20.7.1 Clause 10.7 “**Arbitration**” of the General Conditions of Contract for construction works (GCC, third edition, 2015) refers and will be applicable to this Agreement and read in its entirety.

20.8 Court proceedings

20.8.1 Clause 10.8 “**Court proceedings**” of the General Conditions of Contract for construction works (GCC, third edition,2015) refers and will be applicable to this Agreement and read in its entirety.

20.9 Appointment

20.9.1 Clause 10.9 “**Appointment**” of the General Conditions of Contract for construction works (GCC, third edition,2015) refers and will be applicable to this Agreement and read in its entirety.

20.10 Common provision

20.10.1 Clause 10.10 “**Common provision**” of the General Conditions of Contract for construction works (GCC, third edition,2015) refers and will be applicable to this Agreement and read in its entirety.

20.11 Continuing validity

20.11.1 Clause 10.11 “**Continuing validity**” of the General Conditions of Contract for construction works (GCC, third edition,2015) refers and will be applicable to this Agreement and read in its entirety.

21 CONFIDENTIALITY

21.1 It is recorded that the CONTRACTOR, by virtue of his/her association with ERWAT, will become in possession of and will have access to confidential information belonging to ERWAT including, but without limiting the generality of the foregoing, the following matters:

21.1.1 The contractual and financial arrangements between ERWAT and other bidders;

21.1.2 ERWAT’s financial matters;

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

21.1.3 All other matters, which relate to ERWAT's business and in respect of which information is not readily available in the ordinary course of business to a competitor.

21.2 Having regard to the facts recorded above, the CONTRACTOR undertakes that in order to protect the proprietary interest of ERWAT in the confidential information-

21.2.1 They will not during the contract period or at any time thereafter, directly or indirectly, either use or disclose any of the confidential information, other than as may be required by their Contract with ERWAT or as may be required to comply with any law or to enforce service provider's rights in terms of this Contract;

21.2.2 Any written or other Instructions, Drawings, Notes, Memoranda or Records which are made available to them or which come into their possession by any means whatsoever shall be deemed to be the property of ERWAT. Such property of ERWAT shall be surrendered to ERWAT on demand and in any event on the termination date of this Agreement and the CONTRACTOR shall not retain any copies thereof or extracts there from.

22 PATENTS

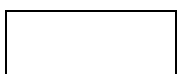
22.1 The CONTRACTOR shall pay all royalties and expenses and be liable for all claims in respect of the use of patent rights, trademarks or other protected rights and hereby indemnifies ERWAT against any claims arising there from or in connection therewith.

23 PUBLICITY

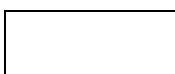
23.1 None of the parties shall issue any public document or make any press release relating to or arising out of this Agreement or its subject matter without obtaining the prior written approval of all other party to this Agreement, to the contents thereof and the manner of its presentation and publication; provided that such approval shall not be unreasonably withheld or delayed.

24 WAIVER OF RIGHTS

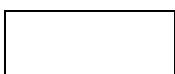
24.1 No party's partial exercise of, or failure to exercise or delay in exercising any right, power, privilege or remedy in terms of this Agreement shall be construed as a waiver by that party.



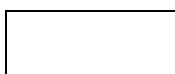
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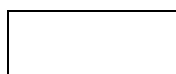
Witness 1



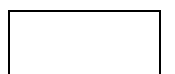
Witness 2



Employer



Witness 1



Witness 2

- 24.2 Such partial exercise or failure shall not operate so as to preclude that party from exercising its rights strictly in accordance with this Agreement, unless such party has expressly waived or otherwise foregone its ability to exercise such right, power, privilege or remedy (at all or in part or until after such period of delay) in terms of a written document signed by such party.
- 24.3 In the event of a party having concluded such a written document it shall be strictly construed to form an integral part of this Agreement.

25 CESSION OF RIGHTS

- 25.1 Save as otherwise expressly stipulated in this Agreement, this Agreement is personal to the parties;
- 25.2 No party may cede, delegate or assign any of its rights or obligations in terms of this Agreement without the prior written consent of the other party, which consent shall not be unreasonably withheld or delayed.

26 AMENDMENT OR VARIATION OF THIS AGREEMENT

- 26.1 All amendments or variations to this agreement, if any arises, shall be reduced to writing and signed off by both parties in terms of the provisions of clause 22.1 of the National Treasury General Conditions of Contract (NT GCC), and such clause read in its entirety.

27 ENTIRE AGREEMENT

This service level agreement constitutes the entire Agreement between the parties and replaces all previous representations, arrangements, discussion and agreements between the parties.

SIGNED at _____ on this _____ day of _____ 20____.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

AS WITNESSES:

1. _____
Duly authorised for and on behalf of **Ekurhuleni Water Care Company**

2. _____

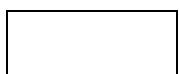
SIGNED at _____ on this _____ day of

_____ 20_____.

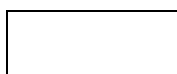
AS WITNESSES:

1. _____
Duly authorised for and on behalf of **XXXXXXXXXXXX**

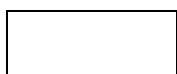
2. _____



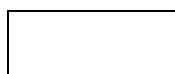
Contractor



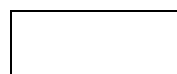
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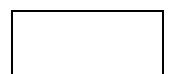
Witness 2



Employer



Witness 1



Witness 2

ANNEXURE “A”

A1. AUTHORITY OF SIGNATORY

ANNEXURE “B”

B1. SUMMARY OF THE BILL OF QUANTITIES

ANNEXURE “C”

C1. PROJECT ORGANOGRAM

ANNEXURE “D”

D1. COMMUNICATION AND MANAGEMENT PERSONNEL TO BE INCLUDED IN ALL COMMUNICATIONS DURING THE EXECUTION OF THE CONTRACT.

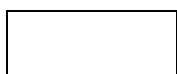
The listed personnel shall be responsible for the execution of the contract.

- 1. Name : Emmanuel Khomela
Designation : Executive Manager: IPAP
Telephone : 011 929 7103
Cell : xx xxxx
Email : emmanuel.khomela@erwat.co.za

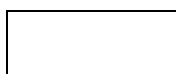
- 2. Name : Siphon Mateza
Designation : Senior Project Manager- ERWAT
Telephone : 011 929 7103
Cell : xxxxxx
Email : siphon.mateza@erwat.co.za

- 3. Name : Jeffrey Mathunzi
Designation : Project Manager- ERWAT
Telephone : 011 929 7023
Cell : xxxxxx
Email : jeffrey.mathunzi@erwat.co.za

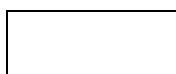
- 4. Name : XXXXXXXXXXXX
Designation : Plant Manager- ERWAT
Telephone : XXXXXXXXXXXX
Cell : XXXXXXXXXXXX
Email : XXXXXXXXXXXX



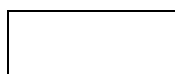
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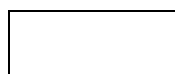
Witness 1



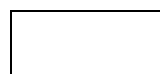
Witness 2



Employer

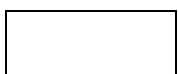


Witness 1

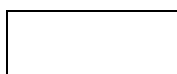


Witness 2

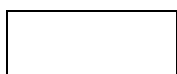
5. Name : **XXXXXXXXXXXX**
Designation : **XXXXXXXXXXXX** - Contractor
Telephone : **XXXXXXXXXXXX**
Cell : **XXXXXXXXXXXX**
Email : **XXXXXXXXXXXX**



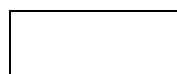
Contractor



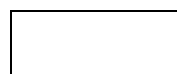
Witness 1



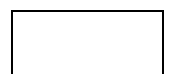
Witness 2



Employer



Witness 1



Witness 2



DRAFT PERFORMANCE EVALUATION MANAGEMENT

The Municipal Finance Management Act (No. 56 of 2003) Section 116 (2) (d) determines that a Municipality must enter into a Performance Management System (PMS) with all service providers.

A PMS will be concluded with the appointed bidder and the costing for this project will run during the **2025/2026**, 2026/2027, 2027/2028 and 2028/2029 financial budget years.

The following document is a draft of the performance evaluation that will be conducted with the awarded bidders on a regular basis as determined in the Service Level Agreement. The final performance evaluation document will be finalised at SLA stage and signed together with the SLA and will be annexed to the SLA.

The IPAP Department will monitor performance on a monthly basis at scheduled meetings with the service provider where minutes of progress, activities, challenges, risks encountered, and planned work will be recorded. Evaluation will be based on progress, outputs, targets on key deliverables and compliance to the reporting timelines as specified. The draft Performance Evaluation Document is attached to this document for ease of reference and will be finalised at signing of the service level agreement.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2