MAINTENANCE, TESTING AND EQUIPPING OF BOREHOLES IN GERT SIBANDE DISTRICT MUNICIPALITY

TENDER: GSDM 02/2017

<table>
<thead>
<tr>
<th>TENDERER NAME:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>TENDER AMOUNT (Excl. VAT)</td>
<td></td>
</tr>
<tr>
<td>VAT @ 14%</td>
<td></td>
</tr>
<tr>
<td>TOTAL AMOUNT (Incl. VAT)</td>
<td></td>
</tr>
</tbody>
</table>

TENDERER ADDRESS:

CLOSING DATE: 01 AUGUST 2017

EMPLOYER

GERT SIBANDE DISTRICT MUNICIPALITY
P O BOX 1748
ERMELO
2350

TEL. 017-801 7000
FAX. 017-811 1207
<table>
<thead>
<tr>
<th><strong>GERT SIBANDE DISTRICT MUNICIPALITY</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>DEPARTMENT NAME:</strong> INFRASTRUCTURE AND TECHNICAL SERVICES</td>
</tr>
<tr>
<td><strong>CONTRACT NO:</strong> GSDM 02/2017</td>
</tr>
<tr>
<td><strong>FOR:</strong> APPOINTMENT OF A SERVICE PROVIDER FOR THE MAINTENANCE, TESTING AND EQUIPPING OF BOREHOLES IN GERT SIBANDE DISTRICT MUNICIPALITY</td>
</tr>
</tbody>
</table>

**SUMMARY FOR TENDER OPENING PURPOSES**

| **NAME OF TENDERER** : ____________________________ |
| **COMPANY REGISTRATION NO.** : ____________________________ |
| **VAT NUMBER** : ____________________________ |
| **INCOME TAX NUMBER** : ____________________________ |
| **PHYSICAL ADDRESS** : ____________________________ |

| **POSTAL ADDRESS:** ____________________________ |
| **TELEPHONE NUMBER** : ____________________________ |
| **CELLPHONE NUMBER** : ____________________________ |
| **FAX NUMBER** : ____________________________ |
| **E-MAIL ADDRESS** : ____________________________ |
| **CONTACT PERSON** : ____________________________ |
| **CLOSING DATE** : ____________________________ |

**CONTRACT PRICE : R ____________________________**

(Amount brought forward from the Form of Offer and Acceptance)*

Signed by authorised representative of the TENDERER: ____________________________

**DATE:** ____________________________

*Should any discrepancy occur between this page and the Form of Offer and Acceptance, the latter shall take precedence and shall apply.
## CONTENTS

### DESCRIPTION

#### PORTION 1: TENDER

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<tr>
<td>T1.2</td>
<td>TENDER DATA</td>
</tr>
</tbody>
</table>

| PART T2 | RETURNABLE DOCUMENTS |

#### PORTION 2: CONTRACT

<table>
<thead>
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</tr>
</thead>
<tbody>
<tr>
<td>C1.1</td>
<td>FORM OF OFFER AND ACCEPTANCE</td>
</tr>
<tr>
<td>C1.2</td>
<td>CONTRACT DATA</td>
</tr>
<tr>
<td>C1.3</td>
<td>HEALTH AND SAFETY AGREEMENT</td>
</tr>
</tbody>
</table>

| PART C2 | PRICING DATA |

<table>
<thead>
<tr>
<th>PART C3</th>
<th>SCOPE OF WORK</th>
</tr>
</thead>
<tbody>
<tr>
<td>C3.1</td>
<td>DESCRIPTION OF THE WORKS</td>
</tr>
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| PART C4 | SITE CONDITIONS |
PORTION 1: TENDER

PART T1: TENDERING PROCEDURES

CONTENTS

T1.1 TENDER NOTICE AND INVITATION TO TENDER
T1.2 TENDER DATA
T1.1 TENDER NOTICE AND INVITATION TO TENDER

GERT SIBANDE DISTRICT MUNICIPALITY

DEPARTMENT NAME: INFRASTRUCTURE AND TECHNICAL SERVICES

CONTRACT NO: GSDM 02/2017

FOR: APPOINTMENT OF A SERVICE PROVIDER FOR THE MAINTENANCE, TESTING AND EQUIPPING OF BOREHOLES IN GERT SIBANDE DISTRICT MUNICIPALITY

T1.1 TENDER NOTICE AND INVITATION TO TENDER

Tenders are hereby invited from experienced contractors for the maintenance, testing and equipping of boreholes in the Gert Sibande District municipality. Tenderers should have a minimum CIDB contractor grading of 2CEP/2MEP/3CE/3ME.

Tender documents will also be obtainable from Ms Nondumiso Tshabalala in Room 1E326 as from 17 July 2017 from the Gert Sibande District Municipality Office in Ermelo against payment of a non-refundable levy of R250.00. Only bank guaranteed cheques or cash will be accepted. Cheques shall be made payable to Gert Sibande District Municipality. Documents can be obtained during normal working hours which are 07h30 - 16h30 Mondays to Thursdays and 07h30 to 13h30 on Fridays. Tender documents will be available on http://www.etenders.gov.za/content/advertised-tenders as from 17 July 2017.

Duly completed tenders enclosed in a sealed envelope marked “TENDER NO GSDM 02/2017: APPOINTMENT OF A SERVICE PROVIDER FOR THE MAINTENANCE, TESTING AND EQUIPPING OF BOREHOLES IN GERT SIBANDE DISTRICT MUNICIPALITY; CLOSING DATE: 01 August 2017 at 12h00” with the name of the Tenderer, shall be deposited in the tender box provided at the Gert Sibande District Municipality in Ermelo before 12h00 on the closing date. The tenders will be opened in public.

There will be no compulsory briefing session for this tender, however tenderers are advised to read and understand the tender conditions.

Technical queries may be directed to Ms Porsche Sekhoto and Procurement enquiries may be directed to Mr Lucky Mbuyane on Tel. 017 801 7000 Fax. 017 811 1207 or email records@gtsibande.gov.za.

All tenders will be subjected to functionality evaluation and only the tenders meeting the minimum requirements in terms of functionality will be considered for the 80/20 point system. The 80/20 point system shall apply whereby a contract will be allocated to a tenderer in accordance with the Preferential Procurement Policy Framework Act, Act No 5 of 2000 and as defined in the Conditions of Tender in the tender document, read in conjunction with the Preferential Procurement Policy of Gert Sibande District Municipality where 80 points will be allocated in respect of price and 20 points in respect of BBBEE.

Tenderers must have the necessary skills, experience and capacity to perform the required work.

The closing date and time for the tender is 01 August 2017 at 12h00.

The District Municipality is not obliged to appoint the bidder with the lowest price but will consider the bidder scoring the highest number of points in line with the set criteria. The Gert Sibande District Municipality reserves the right not to make any appointment for this tender.

Tender Notice: GSDM 02/2017
**T1.2 TENDER DATA**

The conditions of tender are the Standard Conditions of Tender as contained in Annexure F of SANS 294: 2000

The Standard Conditions of Tender makes several references to the Tender Data. The Tender Data shall have precedence in the interpretation of any ambiguity or inconsistency between it and the Standard Conditions of Tender to which it mainly applies.

<table>
<thead>
<tr>
<th>Clause Number</th>
<th>Data</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>The conditions of tender are the <strong>Standard Conditions of Tender</strong> as contained in Annex F of the CIDB Standard for Uniformity in Construction Procurement, as printed in the Government Gazette No 28127 dated 14 October 2005. The <strong>Standard Conditions of Tender</strong> for Procurements makes 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.</td>
</tr>
<tr>
<td>F.1.1</td>
<td>The Employer is: The Municipal Manager, Mr CA Habile Gert Sibande District Municipality, PO Box 1748, Ermelo, 2350</td>
</tr>
<tr>
<td>F.1.2</td>
<td>The tender documents issued by the Employer comprise: <strong>THE TENDER</strong> Part T1 Tendering Procedures Part T1.1 Tender Notice and Invitation to Tender Part T1.2 Tender Data Part T2 Returnable Documents <strong>THE CONTRACT</strong> Part C1 Agreement and Contract Data Part C2 Pricing Data Part C3 Scope of Works Part C4 Site Conditions <strong>Appendices</strong> Appendix A General Conditions of Contract Appendix B Supply Chain Management Policy</td>
</tr>
<tr>
<td>F.1.4</td>
<td>The Employer's Representative is: Name: General Manager: Infrastructure and Technical Services, Mr M.E. Thabethe Address: Gert Sibande District Municipality, PO Box 1748, Ermelo, 2350 Tel: (017) 801 7045 Fax: (017) 811 1207 E-mail: <a href="mailto:EphraimT@gsibande.gov.za">EphraimT@gsibande.gov.za</a></td>
</tr>
<tr>
<td>F.2.1</td>
<td>Only those tenderers who are registered with the CIDB, or are capable of being so registered prior to the evaluation of tenders, in a contractor grading designation equal to or higher than a contractor grading designation determined in accordance with the sum tender for a 2CE PE / 2ME PE / 3 CE / 3 ME class of construction work, are eligible to submit tenders. Joint Ventures are eligible to submit tenders provided that:</td>
</tr>
<tr>
<td>Clause Number</td>
<td>Data</td>
</tr>
<tr>
<td>---------------</td>
<td>------</td>
</tr>
<tr>
<td>Clause Number</td>
<td>Data</td>
</tr>
<tr>
<td>(1)</td>
<td>every member of the joint venture is registered with the CIDB, or are capable of being so registered prior to the evaluation of tenders;</td>
</tr>
<tr>
<td>(2)</td>
<td>the lead partner has a contractor grading designation in the 2 CE / 2 ME class of construction work; and</td>
</tr>
<tr>
<td>(3)</td>
<td>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 bid for a 3 CE / 3 ME class of construction work, are eligible to submit tenders.</td>
</tr>
<tr>
<td>F.2.7</td>
<td>There will be no compulsory clarification meeting for this project</td>
</tr>
<tr>
<td>F.2.12</td>
<td>An alternative tender offer will not be considered.</td>
</tr>
<tr>
<td>F.2.13</td>
<td>A two-envelope procedure will not be followed.</td>
</tr>
<tr>
<td>F.2.13.3</td>
<td>Parts of each tender offer communicated on paper shall be submitted as an original only.</td>
</tr>
<tr>
<td>F.2.13.5</td>
<td>The Employer’s address for delivery of tender offers and identification details to be shown on each tender offer package are:</td>
</tr>
<tr>
<td></td>
<td>Location of tender box: Ermelo</td>
</tr>
<tr>
<td></td>
<td>Physical address: Cnr. Joubert and Oosthuise Streets</td>
</tr>
<tr>
<td></td>
<td>Identification details: Municipal Manager, Gert Sibande District Municipality, Tender GSDM 02/2017, APPOINTMENT OF A SERVICE PROVIDER FOR THE MAINTENANCE, TESTING AND EQUIPPING OF BOREHOLES IN GERT SIBANDE DISTRICT MUNICIPALITY</td>
</tr>
<tr>
<td>F.2.15</td>
<td>The closing time for submission of tender offers is:</td>
</tr>
<tr>
<td></td>
<td>12h00 on 01 August 2017</td>
</tr>
<tr>
<td>F.2.15</td>
<td>The time and location for opening of the tender offers are:</td>
</tr>
<tr>
<td></td>
<td>Time 12h00 on 01 August 2017</td>
</tr>
<tr>
<td></td>
<td>Location: Cnr. Joubert and Oosthuise Streets, Ermelo.</td>
</tr>
</tbody>
</table>

F.2.15

The closing time for submission of tender offers is:

12h00 on 01 August 2017

F.2.15

Telephonic, telegraphic, telex, facsimile or e-mailed tender offers will not be accepted.

F.2.16

The tender offer validity period is 90 days

F.2.23

The tenderer is required to submit with his tender.

1. Certificate of Contractor Registration issued by the Construction Industry Development Board in terms of the Construction Industry Development Board Act (Form F006);
2. an original valid Tax Clearance Certificate issued by the South African Revenue Services;
3. a joint venture (JV) agreement signed by all members who has authority to sign on behalf of their respective business entities, if applicable.
4. copies of the following CIPRO and other forms:
   - For a CC – supply CK1 and CK2 forms with shareholding certificates
   - For a (Pty) Ltd – supply CM1; CM42 and shareholding certificates.

F.3.4

The time and location for opening of the tender offers are:

12h00 on 01 August 2017

Cnr. Joubert and Oosthuise Streets, Ermelo.
<table>
<thead>
<tr>
<th>Clause Number</th>
<th>Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>F.3.11.1</td>
<td>The procedure for the evaluation of tenders is 90 points for price and 10 points for BBBEE.</td>
</tr>
</tbody>
</table>
| F.3.11.2 | The financial offer will be scored using the following formula:  
\[ W_F = W_1 \times A \]  
Where:  
- \( W_F \) = the number of evaluation points awarded for the financial offer  
- \( W_1 \) = the maximum possible number of bid evaluation points awarded for the financial offer and will be:  
  1) 80 where the financial value inclusive of VAT of all responsive tenders received.  
- \( A \) = the number calculated using Formula 2 (Option 1). |
| F.3.11.3 | Up to 20 tender evaluation points will be awarded to tenderers who furnish SANAS accredited B-BBEE certificates.  
Failure on the part of a bidder to fill in and/or to sign this form and submit a B-BBEE Verification Certificate from a Verification Agency accredited by the South African Accreditation System (SANAS) or a Registered Auditor approved by the Independent Regulatory Board of Auditors (IRBA) or and Accounting Officer as contemplated in the Close Corporation Act (CCA) together with the bid, will be interpreted to mean that preference points for B-BBEE status level of contribution are not claimed.  
Definitions:  
1. “SANAS” means South African Accreditation System;  
2. “IRBA” means Independent Regulatory Board of Auditors;  
3. “B-BBEE” means broad-based black economic empowerment as defined in section 1 of the Broad-Based Black Economic Empowerment Act;  
4. “B-BBEE status level of contributor” means the B-BBEE status receive by a measured entity based on its overall performance using the relevant scorecard contained in the Codes of Good Practice on Black Economic Empowerment, issued in terms of section 9(1) of the Broad-Based Black Economic Empowerment Act;  
5. “CCA” means Close Corporation Act;  
6. “Broad-Based Black Economic Empowerment Act” means the Broad-Based Black Economic Empowerment Act, 2003 (Act No. 53 of 2003);  
7. “EME” means any enterprise with an annual total revenue of R5 million or less.  
Method 2 Financial Offer and Preferences is scored as follows is to be reworded as "Functionality and Preferences":  
a) Score each tender in respect of functionality and preferences claimed, if any, in accordance with the provisions of F.3.11.7  
b) Calculate the total number of tender evaluation points (\( T_{EV} \)) in accordance with the following formula:  
\[ T_{EV} = N_{CO} + N_P \]  

---

**Definitions:**

1. **SANAS** means South African Accreditation System;
2. **IRBA** means Independent Regulatory Board of Auditors;
3. **B-BBEE** means broad-based black economic empowerment as defined in section 1 of the Broad-Based Black Economic Empowerment Act;
4. **B-BBEE status level of contributor** means the B-BBEE status received by a measured entity based on its overall performance using the relevant scorecard contained in the Codes of Good Practice on Black Economic Empowerment, issued in terms of section 9(1) of the Broad-Based Black Economic Empowerment Act;
5. **CCA** means Close Corporation Act;
6. **Broad-Based Black Economic Empowerment Act** means the Broad-Based Black Economic Empowerment Act, 2003 (Act No. 53 of 2003);
7. **EME** means any enterprise with an annual total revenue of R5 million or less.

**Method 2 Financial Offer and Preferences is scored as follows:**

a) Score each tender in respect of functionality and preferences claimed, if any, in accordance with the provisions of F.3.11.7.

b) Calculate the total number of tender evaluation points (\( T_{EV} \)) in accordance with the following formula:

\[ T_{EV} = N_{CO} + N_P \]
Clause
Number

Data

where: \( N_{FO} \) is the number of tender evaluation points awarded for the functionality;
\( N_{P} \) is the number of tender evaluation points awarded for preferences claimed in accordance with F.3.11.8.


c) Rank tender offers from the highest number of tender evaluation points to the lowest.
d) Recommend the tenderer with the highest number of tender evaluation points for the award of the contract, unless there are compelling and justifiable reasons not to do so.
e) Rescore and re-rank all tenderers should there be compelling and justifiable reasons not to recommend the tenderer with the highest number of tender evaluation points, and recommend the tenderer with the highest number of tender evaluation points, unless there are compelling and justifiable reasons not to do so and the process set out in this subclause is repeated.

F.3.11.7

Price Points \( (N_{FO}) \) shall be scored as follows:

\[
N_{FO} = W, \times A
\]

where: \( N_{FO} \) is the number of tender evaluation points awarded for the financial offer.
\( W, \) is the maximum possible number of tender evaluation points and equals 80 for projects with a value less than R 50 000 000,000 and 90 for projects with a value exceeding R 50 000 000,000.
\( A \) is a number calculated using the Formula 2 and Option 1 as described in Table F.1 below.

<table>
<thead>
<tr>
<th>Formula</th>
<th>Comparison aimed at achieving</th>
<th>Option 1&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Option 2&lt;sup&gt;a&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Highest price or discount</td>
<td>( A = (1 + \frac{(P - P_m)}{P_m}) )</td>
<td>( A = \frac{P}{P_m} )</td>
</tr>
<tr>
<td>2</td>
<td>Lowest price or percentage commission /fee&lt;sup&gt;‘&lt;/sup&gt;</td>
<td>( A = (1 - \frac{(P - P_m)}{P_m}) )</td>
<td>( A = \frac{P_m}{P} )</td>
</tr>
</tbody>
</table>

<sup>a</sup> \( P_m \) is the comparative offer of the most favourable comparative offer.
\( P \) is the comparative offer of the tender offer under consideration.

Table F.1: Formulae for calculating the value of \( A \)

F.3.13.8

Scoring of points for Preferences \( (N_{P}) \) will be done in terms of Regulation 5(2) and 6(2) of the Preferential Procurement Regulations whereby preference points must be awarded to a bidder for attaining B-BBEE status level of contribution in accordance with the table below.

<table>
<thead>
<tr>
<th>B-BBEE Status Level of Contributor</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>90/10</td>
<td>80/20</td>
</tr>
</tbody>
</table>

| 1 | 10 | 20 |
Bidders who qualify as EMEs in terms of the B-BBEE Act must submit a certificate issued by an Accounting Officer as contemplated in the CCA or a Verification Agency accredited by SANAS or a Registered Auditor. Registered auditors do not need to meet the prerequisite for IRBA’s approval for the purpose of conducting verification and issuing EMEs with B-BBEE Status Level Certificates.

Bidders other than EMEs must submit their original and valid B-BBEE status level verification certificate or a certified copy thereof, substantiating their B-BBEE rating issued by a Registered Auditor approved by IRBA or a Verification Agency accredited by SANAS.

A trust, consortium or joint venture, will qualify for points for their B-BBEE status level as a legal entity, provided that the entity submits their B-BBEE status level certificate.

A trust, consortium or joint venture will qualify for points for their B-BBEE status level as an unincorporated entity, provided that the entity submits their consolidated B-BBEE scorecard as if they were a group structure and that such a consolidated B-BBEE scorecard is prepared for every separate bid.

Tertiary institutions and public entities will be required to submit their B-BBEE status level certificates in terms of the specialized scorecard contained in the B-BBEE Codes of Good Practice.

A person will not be awarded points for B-BBEE status level if it is indicated in the bid documents that such a bidder intends sub-contracting more than 25% of the value of the contract to any other enterprise that does not qualify for at least the points that such a bidder qualifies for, unless the intended sub-contractor is an EME that has the capability and ability to execute the sub-contract.

A person awarded a contract may not sub-contract more than 25% of the value of the contract to any other enterprise that does not have an equal or higher B-BBEE status level than the person concerned, unless the contract is sub-contracted to an EME that has the capability and ability to execute the sub-contract.

### F.3.13.1

Tender offers will only be accepted if the tenderer submits proof that:

(a) the tenderer has submitted an original valid Tax Clearance Certificate issued by the South African Revenue Services;

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

(c) the tenderer is not in arrears for more than 30 days with municipal rates and taxes and municipal service charges;
(d) the tenderer or any of its directors is not listed on the Register of Tender Defaulters in terms of the Prevention and Combating of Corrupt Activities Act of 2004 as a person prohibited from doing business with the public sector; and

(e) the tenderer has not:
   (i) abused the Employer's Supply Chain Management/Procurement Policy System or
   (ii) failed to perform on any previous contract.

<table>
<thead>
<tr>
<th>F.3.18</th>
<th>The number of paper copies of the signed contract to be provided by the Employer is one.</th>
</tr>
</thead>
<tbody>
<tr>
<td>The additional conditions of tender are:</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>The Employer may request that the tenderer provide written evidence that his financial, labour and other resources are adequate for carrying out the contract.</td>
</tr>
<tr>
<td>2</td>
<td>The Employer 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 tenderer. The tenderer shall provide all reasonable assistance in such investigations.</td>
</tr>
<tr>
<td>3</td>
<td>The Employer reserves the right to reduce the Scope of Works to within the available budget.</td>
</tr>
<tr>
<td>4</td>
<td>In addition the Employer may appoint more than one Contractor for the project, subject to the specific conditions agreed to in the Form of Acceptance.</td>
</tr>
</tbody>
</table>
PART T2  LIST OF RETURNABLE DOCUMENTS

The tenderer must complete the following returnable documents.

T2.1  RETURNABLE SCHEDULES REQUIRED FOR TENDER EVALUATION PURPOSES

T2.2  COMPULSORY DOCUMENTS REQUIRED

T2.3  RETURNABLE SCHEDULES THAT WILL BE INCORPORATED IN THE CONTRACT
T2.1 RETURNABLE SCHEDULES REQUIRED FOR TENDER EVALUATION PURPOSES

CONTENTS

FORM 2.1.2: SCHEDULE OF WORK CARRIED OUT BY TENDERER
FORM 2.1.3: PROPOSED KEY PERSONNEL
FORM 2.1.4: SCHEDULE OF CONSTRUCTION PLANT
FORM 2.1.5: SCHEDULE OF PROPOSED SUBCONTRACTORS
FORM 2.1.6: LOCALITY OF REGISTERED ADDRESS
FORM 2.1.7: AMENDMENTS AND QUALIFICATIONS BY TENDERER
The Tenderer shall list below the traceable last three **borehole drilling and equipping or maintenance** contracts of a **value of at least R 400 000 per project** as requested in the Tender, awarded to him in the last 3 years. This information is material to the award of the Contract.

<table>
<thead>
<tr>
<th>EMPLOYER (Name and contact number)</th>
<th>CONSULTING ENGINEER (Name and contact number)</th>
<th>NATURE OF WORK (Locality)</th>
<th>VALUE OF WORK</th>
<th>YEAR OF COMPLETION</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

NB: Completion Certificate has to be submitted as form of supporting document.
FORM 2.1.2    PROPOSED KEY PERSONNEL

The Tenderer shall list below the key personnel whom he proposes to employ on the contract should his tender be accepted, to direct and for the execution of the work, together with their qualifications, experience, positions held and their nationalities. The qualifications and experience should meet the minimum requirements as detailed in the below and in the functionality evaluation criteria.

<table>
<thead>
<tr>
<th>DESIGNATION &amp; REQUIREMENTS</th>
<th>NAME AND NATIONALITY OF:</th>
<th>SUMMARY OF QUALIFICATIONS, EXPERIENCE AND PRESENT OCCUPATION</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(i) NOMINEE</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(ii) ALTERNATE</td>
<td></td>
</tr>
<tr>
<td>Contracts Manager</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(minimum of Matric qualification with over 5 years experience in the construction industry related to borehole projects)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Foreman</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Certificate of Competence in borehole drilling or maintenance operations with a minimum of 5 years applicable experience.)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
FORM 2.1.3 SCHEDULE OF CONSTRUCTION PLANT

The Tenderer shall state below what Construction Plant will be available for the work should he be awarded the Contract. The sizes and numbers of each equipment shall meet the minimum requirements as detailed in the functionality evaluation criteria below.

<table>
<thead>
<tr>
<th>DESCRIPTION, SIZE, CAPACITY</th>
<th>NUMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Yield testing equipment</strong> (if to be subcontracted, provide information for subcontractor)</td>
<td></td>
</tr>
<tr>
<td>Monopump capable of pumping at least 10 l/s at a head of 150m</td>
<td>2</td>
</tr>
<tr>
<td>Diesel / Petrol powered engine capable of powering the above pump</td>
<td>2</td>
</tr>
<tr>
<td>Water Flowmeter capable of measuring flows of at least 10 l/s</td>
<td>2</td>
</tr>
<tr>
<td><strong>LDV</strong> (a minimum of 2 required, provide proof of ownership or attach a Lease/rental agreement)</td>
<td></td>
</tr>
</tbody>
</table>
FORM 2.1.4 SCHEDULE OF PROPOSED SUBCONTRACTORS

The Tenderer shall, in accordance with the provisions of the Conditions of Tender, list below the LOCAL subcontractors he proposes to employ for part(s) of the work.

The naming of any proposed LOCAL subcontractor hereunder shall not be deemed to constitute a qualification of the Tender, and acceptance of a Tender shall not be construed as approval of any or all of the listed subcontractors, neither shall it in any way limit or detract from the powers of the Employer and the obligations of the Contractor pertaining to subcontracting as stated in the Contract, nor shall it prevent the Tenderer from deviating in any way during the Contract from the list of proposed subcontractors hereunder if the Tender is accepted.

If any or all of the LOCAL subcontractors listed hereunder are not approved subsequent to acceptance of the Tender, it shall in no way invalidate the Tender or the Contract, and the tender unit rates for the respective items of work shall remain final and binding even if a subcontractor not listed below is approved by the Employer.

<table>
<thead>
<tr>
<th>PART OR TYPE OF WORK</th>
<th>PROPOSED SUBCONTRACTOR &amp; CONTACT NUMBER</th>
<th>WORK RECENTLY EXECUTED BY SUBCONTRACTOR</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
FORM 2.1.5  LOCALITY OF REGISTERED ADDRESS

The service provider shall provide proof of the registered address of the business as reflected on the registration documents in order to claim points for locality.
FORM 2.1.6   AMENDMENTS AND QUALIFICATIONS BY TENDERER

The service provider shall provide any amendments to the tender documents that he deems necessary or any special proposals if deemed necessary.

<table>
<thead>
<tr>
<th>AMENDMENTS / QUALIFICATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

Should there be no amendments / qualifications, mark the above “NIL”.
T2.2 COMPULSORY DOCUMENTS REQUIRED

CONTENTS

FORM 2.2.1: AUTHORITY FOR SIGNATORY

FORM 2.2.2: DECLARATION OF GOOD STANDING REGARDING TAX

FORM 2.2.3: PROOF OF REGISTRATION WITH CONSTRUCTION INDUSTRY DEVELOPMENT BOARD

FORM 2.2.4: PROOF OF ADDRESS AND MUNICIPAL RATES
FORM 2.2.1  AUTHORITY FOR SIGNATORY

Signatories for close corporations and companies shall confirm their authority by attaching to this form a duly signed and dated copy of the relevant resolution of their members or their board of directors, as the case may be.

An example for a company is shown below:

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

Mr/Ms ....................................................................................................................................................

has been duly authorised to sign all documents in connection with the Tender for Contract No
....................................................................................... 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 ......................................................................................................................................................
FORM 2.2.2 DECLARATION OF GOOD STANDING REGARDING TAX

SOUTH AFRICAN REVENUE SERVICES

Tender No: ............................
Closing Date: ..........................

DECLARATION OF GOOD STANDING REGARDING TAX

PARTICULARS

1. Name of Taxpayer/Tenderer: .................................................................
2. Trade Name: ..........................................................................................
3. Identification Number: (If applicable) ....................................................
4. Company / Close Corporation registration number: ............................
5. Income Tax reference number: ............................................................
6. VAT registration number: (If applicable) ............................................
7. PAYE employer’s registration number: (If applicable) .......................
8. Monetary value of tender: ....................................................................

DECLARATION

I, ...................................................... the undersigned, the above taxpayer/tenderer, hereby declare that my Income Tax, Pay-As-You-Earn (PAYE) and Value-Added-Tax (VAT) obligations of the above-mentioned taxpayer, which include the rendition of returns and payment of the relevant taxes:

(i) Have been satisfied in terms of the relevant Acts; or

(ii) That suitable arrangements have been made with the Receiver of Revenue, ................................................. ......................... to satisfy them.*

.............................................. .............................................. ..............................................
SIGNATURE CAPACITY DATE

PLEASE NOTE:* The declaration (ii) cannot be made unless formal arrangements have been made with the Receiver of Revenue with regard to any outstanding revenue/outstanding tax returns.

ORIGINAL TAX CLEARANCE CERTIFICATE FROM SARS MUST BE ATTACHED TO THIS PAGE. THE CERTIFICATE MUST BE VALID AT CLOSE OF TENDER.
FORM 2.2.3 PROOF OF REGISTRATION WITH CONSTRUCTION INDUSTRY DEVELOPMENT BOARD

The tenderer is to affix to this page either:

- Written proof of his registration with the CIDB as a Category 2 CE PE / 2 ME PE / 3CE / 3 ME

Or

- Written proof of his application to the CIDB for registration as a contractor in the category listed above.

Note:

1. Failure to affix such documentation as prescribed to this page shall result in this tender not being further considered for the award of the contract.

2. Should this tender be considered for award of the contract, based on proof of submission of application for registration in the appropriate category with the CIDB, and should proof of such subsequent registration not be forthcoming to the employer by the time of award of the contract, then this tender will no longer be considered for the award of the contract.
FORM 2.2.4 PROOF OF ADDRESS AND MUNICIPAL RATES

The tenderer is to affix to this page either

- the latest statement showing the address, from the local authorities showing that municipal rates are up to date;

Or

- a lease agreement showing the business address of the entity and also proof of payment of municipal rates.

Note:

1. Failure to affix such documentation as prescribed to this page shall result in this tender not being further considered for the award of the contract.
RETURNABLE SCHEDULES THAT WILL BE INCORPORATED IN THE CONTRACT

CONTENTS

FORM 2.3.1 FORM CONCERNING FULFILMENT OF THE CONSTRUCTION REGULATIONS, 2003
FORM 2.3.2 RECORD OF ADDENDA TO TENDER DOCUMENTS
FORM 2.3.3 PREFERENCE POINTS FOR B-BBEE STATUS LEVEL
FORM 2.3.4 COMPULSORY ENTERPRISE QUESTIONNAIRE
FORM 2.3.5 DECLARATION OF PAST SUPPLY CHAIN
FORM 2.3.6 DECLARATION OF INTEREST
FORM 2.3.1 FORM CONCERNING FULFILMENT OF THE CONSTRUCTION REGULATIONS, 2003

In terms of regulation 4(3) of the Construction Regulations, 2003 (hereinafter referred to as the Regulations), promulgated on 18 July 2003 in terms of Section 43 of the Occupational Health and Safety Act, 1993 (Act No 85 of 1993) the Employer shall not appoint a contractor to perform construction work unless the Contractor can satisfy the Employer that his/her firm has the necessary competencies and resources to carry out the work safely and has allowed adequately in his/her tender for the due fulfilment of all the applicable requirements of the Act and the Regulations.

1 I confirm that I am fully conversant with the Regulations and that my company has (or will acquire/procure) the necessary competencies and resources to timeously, safely and successfully comply with all of the requirements of the Regulations. (Tick)

   YES
   NO

2 Proposed approach to achieve compliance with the Regulations (Tick)

   Own resources, competent in terms of the Regulations (refer to 3 below)

   Own resources, still to be hired and/or trained (until competency is achieved)

   Specialist subcontract resources (competent) - specify:
   ........................................................................................................
   ........................................................................................................
   ........................................................................................................
   ........................................................................................................
   ........................................................................................................
   ........................................................................................................

3 Provide details of proposed key persons, competent in terms of the Regulations, who will form part of the Contract team as specified in the Regulations (CVs to be attached):

   ........................................................................................................
   ........................................................................................................
   ........................................................................................................
   ........................................................................................................
   ........................................................................................................
   ........................................................................................................
4 Provide details of proposed training (if any) that will be undergone:

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

5 Potential key risks identified and measures for addressing risks:

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

6 I have fully included in my tender rates and prices (in the appropriate payment items provided in the Schedule of Quantities) for all resources, actions, training and any other costs required for the due fulfilment of the Regulations for the duration of the construction and defects repair period. (Tick)

YES
NO

SIGNATURE OF PERSON(S) AUTHORISED TO SIGN THIS TENDER:

1 .............................................................................. ID NO: .................................................................

2 .............................................................................. ID NO: .................................................................
FORM 2.3.2  RECORD OF ADDENDA TO TENDER DOCUMENTS

We confirm that the following communications received from the Procuring Department before the submission of this tender offer, amending the tender documents, have been taken into account in this tender offer:

<table>
<thead>
<tr>
<th>No</th>
<th>Date</th>
<th>Title or Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
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<tr>
<td>4</td>
<td></td>
<td></td>
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<td>5</td>
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<td>6</td>
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<td></td>
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<td>7</td>
<td></td>
<td></td>
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<tr>
<td>8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Attach additional pages if more space is required.

Signed: ........................................ Date: ........................................
Name: ........................................ Position: ..................................

SIGNED ON BEHALF OF TENDERER: ........................................................................................................
FORM 2.3.3 PREFERENCE POINTS FOR B-BBEE STATUS LEVEL

Scoring points for Preferences ($N_p$) will be done in terms of Regulation 5(2) and 6(2) of the Preferential Procurement Regulations whereby preference points must be awarded to a bidder for attaining a B-BBEE Status Level of Contribution.

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

B-BBEE Status Level of Contribution: ................. = ...........................(max of 20 points)

ATTACH TO THIS PAGE YOUR SANAS ACCREDITED B-BBEE STATUS LEVEL CERTIFICATE
**Form 2.3.4 Compulsory Enterprise Questionnaire**

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

**Section 1: Name of enterprise:**

**Section 2: VAT registration number, if any:**

**Section 3: CIDB registration number, if any:**

**Section 4: Particulars of sole proprietors and partners in partnerships**

<table>
<thead>
<tr>
<th>Name*</th>
<th>Identity number*</th>
<th>Personal income tax number*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

**Section 5: Particulars of companies and close corporations**

<table>
<thead>
<tr>
<th>Company registration number</th>
<th>Close corporation number</th>
<th>Tax reference number</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Section 6: Record of service of the state**

Indicate by marking the relevant boxes with a cross, if any sole proprietor, partner in a partnership or director, manager, principal shareholder or stakeholder in a company or close corporation is currently or has been within the last 12 months in the service of any of the following:

- ☐ a member of any municipal council
- ☐ a member of any provincial legislature
- ☐ a member of the National Assembly or the National Council of Province
- ☐ a member of the board of directors of any municipal entity
- ☐ an official of any municipality or municipal entity
- ☐ an employee of any provincial department, national or provincial public entity or constitutional institution
- ☐ an employee of any provincial department, national or provincial public entity
- ☐ a member of an accounting authority of any national or provincial public entity
- ☐ an employee of Parliament or a provincial legislature

If any of the above boxes are marked, disclose the following:

<table>
<thead>
<tr>
<th>Name of sole proprietor, partner, director, manager, principal shareholder or stakeholder</th>
<th>Name of institution, public office, board or organ of state and position held</th>
<th>Status of service (tick appropriate column)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>current</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Within last 12 months</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Insert separate page if necessary
Section 7: Record of spouses, children and parents in the service of the state
Indicate by marking the relevant boxes with a cross, if any spouse, child or parent of a sole proprietor, partner in a partnership or director, manager, principal shareholder or stakeholder in a company or close corporation is currently or has been within the last 12 months been in the service of any of the following:

- □ a member of any municipal council
- □ a member of any provincial legislature
- □ a member of the National Assembly or the National Council of Province
- □ a member of the board of directors of any municipal entity
- □ an official of any municipality or municipal entity
- □ an employee of any provincial department, national or provincial public entity or constitutional institution within the meaning of the Public Finance Management Act, 1999 (Act 1 of 1999)
- □ a member of an accounting authority of any national or provincial public entity
- □ an employee of Parliament or a provincial legislature

<table>
<thead>
<tr>
<th>Name of spouse, child or parent</th>
<th>Name of institution, public office, board or organ of state and position held</th>
<th>Status of service (tick appropriate column)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>current</td>
</tr>
</tbody>
</table>

*insert separate page if necessary*

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

i) authorizes the Employer to obtain a tax clearance certificate from the South African Revenue Services that my / our tax matters are in order;

ii) confirms that neither the name of the enterprise nor the name of any partner, manager, director or other person, who wholly or partly exercises, or may exercise, control over the enterprise appears on the Register of Tender Defaulters established in terms of the Prevention and Combating of Corrupt Activities Act of 2004;

iii) confirms that no partner, member, director or other person, who wholly or partly exercises, or may exercise, control over the enterprise appears, has within the last five years been convicted of fraud or corruption;

iv) confirms that I / we are not associated, linked or involved with any other tendering entities submitting tender offers and have no other relationship with any of the tenderers or those responsible for compiling the scope of work that could cause or be interpreted as a conflict of interest;

iv) confirms that the contents of this questionnaire are within my personal knowledge and are to the best of my belief both true and correct.
1. This Municipal tender document must form part of all tenders 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 tender of any Tenderer may be rejected if that Tenderer, or any of its directors have:
   a. abused the Municipality’s / Municipal entity’s supply 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;
   d. been listed in the Register for Tender Defaulters in terms of Section 29 of the Prevention and Combating of Corrupt Activities Act, 2004 (Act 12 of 2004).
4. In order to give effect to the above, this form must be completed in full and signed. Failure to comply will result in the tender being disqualified. The following questionnaire must be completed and submitted with the tender:

<table>
<thead>
<tr>
<th>ITEM</th>
<th>QUESTION</th>
<th>RESPONSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.1</td>
<td>Is the Tenderer or any of its directors listed on the National Treasurer’s database as a company or persons prohibited from doing business with the public sector? (Companies for persons who are listed on this database were informed in writing of this restriction by the National Treasury after the <em>audi alteram partem</em> rule was applied)</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>If so, furnish particulars:</td>
<td></td>
</tr>
<tr>
<td>4.2</td>
<td>Is the Tenderer 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, 2004 (Act 12 of 2004)? (To access this Register enter the National Treasury's website, <a href="http://www.treasury.gov.za">www.treasury.gov.za</a>, click on the icon “Register for Tender Defaulters” or submit your written request for a hard copy of the Register to facsimile number 012-326-5445)</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>If so, furnish particulars:</td>
<td></td>
</tr>
<tr>
<td>4.3</td>
<td>Was the Tenderer 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?</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>If so, furnish particulars:</td>
<td></td>
</tr>
</tbody>
</table>
4.4 Was any contract between the Tenderer 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 | No |

If so, furnish particulars:

4.5 Does the tenderer or any of its directors owe any Municipal rates and taxes or Municipal charges to the Municipality/Municipal entity, or to any other Municipality/Municipal entity, that is in arrears for more than three months?  

| Yes | No |

If so, furnish particulars:

---

**CERTIFICATION:**

_I, the undersigned_  
(name)  

Certify that the information furnished on this declaration form is correct. I further accept that the state may act against me should this declaration prove to be false.

____________________________  
Signature (Authorized person)  

____________________________  
Date  

____________________________  
Position of person who signed  

____________________________  
Company name
FORM 2.3.6 DECLARATION OF INTEREST

1. In terms of section 44 of the Supply Chain Management Regulations regarding the “Prohibition on awards to persons in the service of the state”, no municipality or municipal entity, irrespective of the procurement process followed, may not make any award to a person – (i) who is in the service of the state, (ii) if that is not a natural person, of which any director, manager, principal shareholder or stakeholder is a person in the service of the state, or (iii) who is an advisor or consultant contracted with the municipality or municipal entity.

In order to give effect to the above, please complete the following questions and return it together with your quotation / bid to the GSDM. (Please circle the correct answer to each question)

1.1 Are you presently in the service of the state? - YES / NO
   If yes, please provide particulars:
   ________________________________________________________________
   ________________________________________________________________

1.2 Have you been in the service of the state for the previous twelve months – YES / NO
   If yes, please provide particulars:
   ________________________________________________________________

1.3 Are any of your company’s directors, managers, principle shareholders or stakeholders in the service of the state, or has been in the service of the state the previous twelve months? – YES / NO
   If yes, please provide particulars:
   ________________________________________________________________

1.4 Is any spouse, child or parent of your company’s directors, managers, principle shareholders or stakeholders in the service of the state, or has been in the service of the state the previous twelve months? – YES / NO
   If yes, please provide particulars:
   ________________________________________________________________

2. Is your company in arrears with their municipal rates and taxes and services charges for more than 30 days at your Local Municipality? – YES / NO
   If yes, please provide particulars:
   ________________________________________________________________

3. Is your company or any of its directors listed on the National Treasury’s Database of Restricted Suppliers or persons prohibited from doing business with the public sector? YES / NO
   If yes, please provide particulars:
   ________________________________________________________________
4. Is your company 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)? YES / NO
If yes, please provide particulars:
____________________________________________________________________________
____________________________________________________________________________

Please note that if any of the information submitted above is changing within the next six months of your appointment, you are obliged to inform the Gert Sibande District Municipality immediately thereof in writing.

CERTIFICATION:

I, the undersigned
(name)_____________________________________________________

Certify that the information furnished on this declaration form is correct. I further accept that the state may act against me should this declaration prove to be false.

Signature (Authorized person) ______________________________     Date ______________________________

Position of person who signed _______________________________     Company name _______________________________
FUNCTIONALITY EVALUATION CRITERIA

All tenders will be subjected to a functionality evaluation prior to them being considered in terms of the 80/20 point system. Tenders need to achieve a minimum of 70% in the functionality evaluation for them to be considered in the final round of evaluation, which is the 80/20 point system for price and BBBEE. All those tenders failing to meet the minimum threshold in terms of functionality will not be considered further in the evaluation.

Functionality Evaluation

The service provider is to complete and submit all the schedules in order to claim functionality points as contained in the criteria below. Additional supporting information as required in the evaluation should be submitted together with the tender document as returnable schedules.

<table>
<thead>
<tr>
<th>Criterion</th>
<th>Assessment</th>
<th>Points Awarded</th>
<th>Max Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traceable experience</td>
<td>Provided 2 borehole drilling and equipping or maintenance contracts with a minimum contract value of R400 000 each executed in the past 3 years</td>
<td>40</td>
<td>40</td>
</tr>
<tr>
<td></td>
<td>Provided 1 borehole drilling and equipping or maintenance contract with a contract value less than R400 000 executed in the past 3 years</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Failed to provide any borehole drilling and equipping experience</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Team experience and organogram</td>
<td>Provided all the key personnel with the required minimum qualifications and experience</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>Provided all the key personnel but does not meet the requirements in terms of experience and qualifications</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Failed to provide key personnel</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Plant and Equipment</td>
<td>Provided all the required plant and equipment of sufficient capacity and quantities</td>
<td>30</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>Provided all the required plant and equipment but does not meet the requirements in capacity and quantities</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Failed to Provide all the plant and equipment</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Sub-contracting</td>
<td>Subcontracting proposed equivalent to less than 15% of the works</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Subcontracting proposed equivalent to over 15% but less than 25% of the works</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Subcontracting proposed over 25% of the works</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td><strong>MAXIMUM SCORE:</strong></td>
<td></td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>
PORTION 2: CONTRACT

PART C1: AGREEMENTS AND CONTRACT DATA

CONTENTS

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C1.3: HEALTH AND SAFETY AGREEMENT ......................................................... 29
C1.1 FORM OF OFFER AND ACCEPTANCE

OFFER

The Purchaser, identified in the Acceptance signature block, has solicited offers to enter into a contract for: MAINTENANCE, TESTING AND EQUIPPING OF BOREHOLES IN GERT SIBANDE DISTRICT MUNICIPALITY

The tenderer, identified in the offer signature block, 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 tenderer, deemed to be duly authorized, signing this part of this form of offer and acceptance, the tenderer offers to perform all of the obligations and liabilities of the Contractor under the contract including compliance with all its terms and conditions according to their true intent and meaning for an amount to be determined in accordance with the Conditions of Contract identified in the Contract Data.

The offered total of the prices inclusive of Value-Added Tax is ...........................................................

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

This offer may be accepted by the employer by signing the acceptance part of this form of offer and acceptance and returning one copy of this document to the tenderer before the end of the period of validity stated in the tender data, whereupon the tenderer becomes the party named as the contractor in terms of the conditions of contract identified in the contract data.

Signature(s) ............................................................ ............................................................

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

Capacity ............................................................ ............................................................

for the Tenderer ....................................................................................................................

(Name and address of organization)

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

NAME(s): (BLOCK LETTERS) .................................................................................................

CAPACITY of authorized agents: .................................................................................................

SIGNATURE(s) of authorized agents: .............................................................................................

SIGNED at ______________________ on this _________ day of _____________ 20____

WITNESSES: (Full name – BLOCK LETTERS – and signature)

1. .............................................................................................................................
ACCEPTANCE

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

The terms of the contract, are contained in

- Part T1: Tendering Procedures
- Part T2: Returnable Documents
- Part C1: Agreements and Contract Data, (which includes this Agreement) Part
- C2: Pricing Data
- Part C3: Scope of Work

and documents or parts thereof, which may be incorporated by reference into Parts C3 above.

Deviations from and amendments to the documents listed in the Tender Data and any addenda thereto listed in the Tender Schedules as well as any changes to the terms of the Offer agreed by the Tenderer and the Purchaser 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 signed by the authorised representative(s) of both parties.

The Tenderer shall within two weeks after receiving a letter of acceptance, contact the Purchaser’s representative (whose details are given in the Contract Data) to arrange the delivery of 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 Tenderer receives one fully completed original copy of this document, including the Schedule of Deviations (if any). Unless the Tenderer (now Supplier) within five days of the
date of such receipt notifies the Purchaser in writing of any reason why he cannot accept the contents of this Agreement, this Agreement shall constitute a binding contract between the parties.

<table>
<thead>
<tr>
<th>NAME(s): (BLOCK LETTERS)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CAPACITY of authorized agents:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SIGNATURE(s) of authorized agents:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SIGNED at on this day of</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>WITNESSES: (Full name – BLOCK LETTERS – and signature)</th>
</tr>
</thead>
</table>
| 1. .......................................................................  
| 2. .......................................................................  

SCHEDULE OF DEVIATIONS

Notes:

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

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

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

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

1. **Subject** ..............................................................................................................................................
   Details ...................................................................................................................................................

2. **Subject** ..............................................................................................................................................
   Details ...................................................................................................................................................

3. **Subject** ..............................................................................................................................................
   Details ...................................................................................................................................................

4. **Subject** ..............................................................................................................................................
   Details ...................................................................................................................................................

5. **Subject** ..............................................................................................................................................
   Details ...................................................................................................................................................

By the duly authorised representatives signing this agreement, the Purchaser and the Tenderer agree to and accept the foregoing Schedule of Deviations as the only deviations from the amendments to the documents listed in the Tender Data and addenda thereto as listed in the Tender Schedules, as well as any confirmation, clarification or change to the terms of the offer agreed by the Tenderer and the Purchaser during this process of offer and acceptance.
It is expressly agreed that no other matter whether, oral communication or implied during the period between the issue of the tender documents and the receipt by the Tenderer of a completed signed copy of this Agreement shall have any meaning or effect in the contract between the parties arising from this Agreement.

For the Tenderer & Purchaser:

NAME(s): (BLOCK LETTERS)

CAPACITY of authorized agents:

ADDRESS OF ORGANISATION

SIGNATURE(s) of authorized agents:

SIGNED at ........................................ on this ................................... day of ..............................................................

WITNESSES: (Full name – BLOCK LETTERS – and signature)

1. .......................................................... ..........................................................

2. ...........................................................................................................

NAME(s): (BLOCK LETTERS)

CAPACITY of authorized agents:

ADDRESS OF ORGANISATION

SIGNATURE(s) of authorized agents: ..............................................................

SIGNED at ........................................ on this ................................... day of ..............................................................

WITNESSES: (Full name – BLOCK LETTERS – and signature)
The Conditions of Contract are the General Conditions of Contract for Construction Works (2010) published by the South African Institution of Civil Engineering (SAICE). Copies of these conditions of contract may be obtained from the SAICE Tel no.: (0)11 805 5947.

The General Conditions of Contract for Construction Works make several references to the Contract Data. The Contract Data shall have precedence in the interpretation of any ambiguity or inconsistency between it and the General Conditions of Contract.

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

### PART 1 : DATA PROVIDED BY THE EMPLOYER

<table>
<thead>
<tr>
<th>Clause</th>
<th>Description</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1.1.13</td>
<td>The Defects Liability period is 12 months from the date “Certificate of Completion”</td>
<td></td>
</tr>
<tr>
<td>1.1.1.14</td>
<td>The time for completing the works will be 5 months</td>
<td></td>
</tr>
<tr>
<td>1.1.1.15</td>
<td>The Employer is the GERT SIBANDE DISTRICT MUNICIPALITY</td>
<td></td>
</tr>
<tr>
<td>1.2.1.2</td>
<td>The Employer’s address for receipt of communications and notices is:</td>
<td>Telephone: 017 801 7097 Fax: 017 811 1207 Address (Postal): P O BOX 1784, ERMELO Address (Physical): Corner Joubert and Oosthuise Str ERMELO 2350</td>
</tr>
<tr>
<td>1.1.1.16</td>
<td>Not applicable.</td>
<td></td>
</tr>
<tr>
<td>1.2.1.2</td>
<td>The Employer will assume the duties of the Engineer.</td>
<td></td>
</tr>
<tr>
<td>3.1.3</td>
<td>Not applicable as there will be no Engineer.</td>
<td></td>
</tr>
<tr>
<td>5.3.1.</td>
<td>The documentation required before commencement with Works execution are:</td>
<td></td>
</tr>
<tr>
<td>4.3</td>
<td>Health and Safety Plan</td>
<td></td>
</tr>
<tr>
<td>5.6</td>
<td>Initial Programme</td>
<td></td>
</tr>
<tr>
<td>5.3.2</td>
<td>Time to submit documentation required before commencement with Works execution is 14 days (unless a reasonable written explanation can be given to extend the time required to submit the documents)</td>
<td></td>
</tr>
<tr>
<td>5.8.1</td>
<td>The non-working days are Sundays</td>
<td></td>
</tr>
<tr>
<td></td>
<td>The Special non-working days are:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(1) Public Holidays</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(2) The year-end break commencing on 12th December 2015 to 4 January 2016.</td>
<td></td>
</tr>
<tr>
<td>5.13.1</td>
<td>The Penalty for failing to complete works will be calculated as follows:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• or the first 1 to 20 days - 0.6% of contract amount</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• or the first 21 to 40 days - 0.8% of contract amount</td>
<td></td>
</tr>
<tr>
<td>Clause</td>
<td>Description</td>
<td></td>
</tr>
<tr>
<td>-----------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>5.16.3</td>
<td>The latent defect period is 10 years.</td>
<td></td>
</tr>
<tr>
<td>6.5.1.2.3</td>
<td>Not applicable</td>
<td></td>
</tr>
<tr>
<td>6.10.1.5.</td>
<td>The percentage advance on materials not yet build into the Permanent Works is 0% of Materials.</td>
<td></td>
</tr>
<tr>
<td>6.10.3.</td>
<td>The limit of retention money is 10 % of the Contract Price.</td>
<td></td>
</tr>
<tr>
<td>8.6.1.1.2</td>
<td>The value of Plant and materials supplied by the Employer to be included in the insurance sum.</td>
<td></td>
</tr>
<tr>
<td>8.6.1.1.3</td>
<td>The amount to cover professional fees for repairing damage and loss to be included in the insurance sum is R 200 000.00.</td>
<td></td>
</tr>
<tr>
<td>8.6.1.3</td>
<td>The limit of indemnity for liability insurance is R 500 000.00.</td>
<td></td>
</tr>
<tr>
<td>10.5.3.</td>
<td>The number of Adjudication Board Members to be appointed is one.</td>
<td></td>
</tr>
<tr>
<td>2.2.4</td>
<td>Extensions of time in respect of clause 2.2.4 and 5.12.2.2 in respect of abnormal rainfall shall be calculated using the following formula for each calendar month or part thereof:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>[ V = (Nw - Nn) + \frac{(Rw - Rn)}{X} ]</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Where:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>( V ) = Extension of time in calendar days in respect of the calendar month under consideration</td>
<td></td>
</tr>
<tr>
<td></td>
<td>( Nw ) = Actual number of days during the calendar month on which a rainfall of 10 mm or more has been recorded.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>( Nn ) = Average number of days in the relevant calendar month, as derived from existing rainfall records, as stated in the Site Information, on which a rainfall of 20mm or more has been recorded for the calendar month.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>( Rw ) = Actual average rainfall in mm recorded for the calendar moth under Consideration</td>
<td></td>
</tr>
<tr>
<td></td>
<td>( Rn ) = Average rainfall in mm for the calendar month as derived from existing rainfall records as stated in the Site Information.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>For purposes of the Contract, ( Nn, Rn, X ) and ( Y ) shall have those values assigned to them in Section 4.7: Atmospheric and Environmental Criteria in this document</td>
<td></td>
</tr>
<tr>
<td></td>
<td>If ( V ) is negative and its absolute value exceeds ( Nn ), then ( V ) shall be taken as equal to minus ( Nn ).</td>
<td></td>
</tr>
<tr>
<td></td>
<td>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.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Extensions of time for part of a month shall be calculated using pro rata values of ( Nn ) and ( Rn ). 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.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>The factor ((Nw - Nn)) shall be considered to represent a fair allowance for variations for the average in the number of days which rainfall exceeds 10 mm. The factor ((Rw - Rn)) shall be considered to represent a fair allowance for variations for the number of days which rainfall exceeds 20 mm.</td>
<td></td>
</tr>
<tr>
<td>Clause</td>
<td>Description</td>
<td></td>
</tr>
<tr>
<td>--------</td>
<td>-------------</td>
<td></td>
</tr>
<tr>
<td></td>
<td>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 prevent of disrupted works.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>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 unauthorised person.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Expected delays due to normal climatic conditions</th>
<th>JAN 4.3</th>
<th>FEB 3.7</th>
<th>MAR 2.4</th>
<th>APR 1.2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MAY 0.4</td>
<td>JUN 0.4</td>
<td>JUL 0.3</td>
<td>AUG 0.4</td>
</tr>
<tr>
<td></td>
<td>SEP 1.2</td>
<td>OCT 2.7</td>
<td>NOV 3.6</td>
<td>DEC 4.3</td>
</tr>
</tbody>
</table>
### C1.2 : CONTRACT DATA (PART 2)

**PART 2 : DATA PROVIDED BY THE CONTRACTOR**

<table>
<thead>
<tr>
<th>Clause</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1.1.9</td>
<td>The Contractor is .................................................................................. [The Legal Name].</td>
</tr>
<tr>
<td>1.2.1.2</td>
<td>The Contractor’s address for receipt of communications and notices is : Telephone: .................................................................................................................. Facsimile: .................................................................................................. E-mail : .................................................................................................................. Address (Postal) : .................................................................................................. Address (Physical) : ..................................................................................................</td>
</tr>
<tr>
<td>6.8.3</td>
<td><strong>If price adjustments for a variation in the costs of special materials is allowed then:</strong> The variation in cost of special material is</td>
</tr>
<tr>
<td></td>
<td>Type of special material  Unit  Rate of price,</td>
</tr>
<tr>
<td></td>
<td>(The type of special materials may be listed, leaving the unit and rate or price to the tenderers to fill in or the tenderers are allowed to state the type of special materials, the unit and the rate or price.)</td>
</tr>
<tr>
<td>6.2.1</td>
<td>The security to be provided by the Contractor shall be one of the following:</td>
</tr>
<tr>
<td></td>
<td>Type of Security</td>
</tr>
<tr>
<td></td>
<td>Cash deposit of 10% of the Contract Sum, exclusive of Value Added Tax</td>
</tr>
<tr>
<td></td>
<td>Performance Guarantee of 10% of the Contract Sum, exclusive of Value Added Tax</td>
</tr>
</tbody>
</table>
C1.3: HEALTH AND SAFETY AGREEMENT

Article of Agreement in terms of Section 37(2) of the Occupational Safety Act, 1993 between

Gert Sibande District Municipal
(Hereinafter referred to as the “EMPLOYER”)

AND

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

Herein represented by in his/her capacity as

duly authorised by virtue of a resolution dated , Attached hereto

Annexure A, of the said (herein after referred to as the

“SERVICE PROVIDER”)

WHEREAS the SERVICE PROVIDER is the mandatory of the EMPLOYER as contemplated in an agreement in respect of

Contract number

AND WHEREAS section 37 of the Occupational Health and Safety act, 1993 (Act 85 of 1993, hereinafter referred to as the “ACT”), imposes certain powers and duties upon the EMPLOYER.

AND WHEREAS the parties have agreed to enter into an agreement in terms of section 37(2) of the ACT.

NOW THEREFORE the parties agree as follows:

(a) The SERVICE PROVIDER undertakes to acquaint the appropriate officials and employees of the SERVICE PROVIDER with all relevant provisions of the ACT and the regulations promulgated in terms thereof.

(b) The SERVICE PROVIDER undertakes that all relevant duties, obligations and prohibitions imposed in terms of the ACT and Regulations will be fully complied with. Provided that should the EMPLOYER prescribe certain arrangements and procedures, that same shall be observed and adhered to by the SERVICE PROVIDER, his officials and employees. The SERVICE PROVIDER shall bear the onus of acquainting himself/herself/itself with such arrangements and procedures.

(c) The SERVICE PROVIDER hereby accepts sole liability for such due compliance with the relevant duties, obligations, prohibitions, arrangements and procedure, if any, imposed by the ACT and Regulations and the EMPLOYER expressly absolves the EMPLOYER from itself being obliged to comply with any of the aforesaid duties, obligations, prohibitions, arrangements and procedure as the case may be.

(d) The SERVICE PROVIDER agrees that any duly authorised officials of the EMPLOYER shall be entitled, although not obliged, to take such steps as may be necessary to ensure that the SERVICE PROVIDER has complied with the undertakings as more fully set out in paragraphs 1 and 2 above, which steps may include, but shall not be limited to, the right to inspect any appropriate site or premises occupied by the SERVICE PROVIDER, or to inspect any appropriate records held by the SERVICE PROVIDER or to take such steps it may deem necessary to remedy the default of the SERVICE PROVIDER at the cost of
the SERVICE PROVIDER.

(e) The SERVICE PROVIDER shall be obliged to report forthwith to the EMPLOYER any investigations, complaint or criminal charge which may arise as a consequence of the provisions of the ACT and Regulations, pursuant to work performed in terms of this agreement, and shall, on written demand, provide full details in writing of such an investigation, complaint or criminal charge as the case may be.

FOR AND ON BEHALF OF THE EMPLOYER:

NAME(s): (BLOCK LETTERS)

CAPACITY of authorized agents:

SIGNATURE(s) of authorized agents:

SIGNED at on this day of ..................................................

WITNESSES: (Full name – BLOCK LETTERS – and signature)

1. ........................................................................

2. ........................................................................

FOR AND ON BEHALF OF THE CONTRACTOR:

NAME(s): (BLOCK LETTERS)

CAPACITY of authorized agents:

SIGNATURE(s) of authorized agents:

SIGNED at ______________________ on this ___________________________ day of __________ 20________.

WITNESSES: (Full name – BLOCK LETTERS – and signature)

1. ........................................................................

2. ........................................................................
PART C2: PRICING DATA

PRICING INSTRUCTIONS

1. The prices and rates to be inserted in the Bills of Quantities or Schedule of Quantities are to be the full inclusive prices for the work described under the several items. Such prices and rates shall cover all costs and expenses that may be required in and for the execution of the work described, and shall cover the cost of all general risks, liabilities, and obligations set forth or implied in the documents on which the tender is based, as well as overhead charges and profit. The prices will be used as a basis for assessment of payments for additional work that may have to be carried out.

2. It will be assumed that prices included in these Bill of Quantities are based on Acts, Ordinances, Regulations, By Laws, International Standards and National Standards that were published 28 days before closing date for tenders. (Refer to www.stanza.org or www.iso.org for information on standards)

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

4. A price or rate is to be entered against each item in the Schedule/Bills of Quantities, whether the quantities are stated or not. An item against which no price is entered will be considered to be covered by the other prices or rates in the Bills of Quantities. A single lump sum will apply should a number of items be grouped together for pricing purposes.

5. Except where rates only are required, the Tenderer shall insert all amounts to be included in his total tendered price in the “Amount” column and show the corresponding total tendered price.

6. The units of measurements described in the Bills of Quantities are metric units. Abbreviations used in the Bills of Quantities are as follows:

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ha</td>
<td>hectare</td>
</tr>
<tr>
<td>kℓ</td>
<td>kilolitre</td>
</tr>
<tr>
<td>km</td>
<td>kilometre</td>
</tr>
<tr>
<td>km-pass</td>
<td>kilometre pass</td>
</tr>
<tr>
<td>kPa</td>
<td>kilopascal</td>
</tr>
<tr>
<td>ℓ</td>
<td>litre</td>
</tr>
<tr>
<td>m</td>
<td>metre</td>
</tr>
<tr>
<td>mm</td>
<td>millimetre</td>
</tr>
<tr>
<td>m²</td>
<td>square metre</td>
</tr>
<tr>
<td>m².p</td>
<td>square metre-pass</td>
</tr>
<tr>
<td>m³</td>
<td>cubic metre</td>
</tr>
<tr>
<td>m³.km</td>
<td>cubic metre-kilometre</td>
</tr>
<tr>
<td>MPa</td>
<td>Megapascal</td>
</tr>
<tr>
<td>%</td>
<td>per cent</td>
</tr>
<tr>
<td>No.</td>
<td>number</td>
</tr>
<tr>
<td>R/only</td>
<td>Rate only</td>
</tr>
<tr>
<td>PC sum</td>
<td>Prime Cost sum</td>
</tr>
<tr>
<td>Prov sum</td>
<td>Provisional sum</td>
</tr>
<tr>
<td>MN</td>
<td>MegaNewton</td>
</tr>
<tr>
<td>MN.m</td>
<td>MegaNewton-metre</td>
</tr>
<tr>
<td>h</td>
<td>hour</td>
</tr>
<tr>
<td>kg</td>
<td>kilogram</td>
</tr>
<tr>
<td>kW</td>
<td>kilowatt</td>
</tr>
<tr>
<td>%</td>
<td>per cent</td>
</tr>
<tr>
<td>t</td>
<td>ton (1 000 kg)</td>
</tr>
<tr>
<td>W/day</td>
<td>Work day</td>
</tr>
<tr>
<td>Item</td>
<td>Description</td>
</tr>
<tr>
<td>------</td>
<td>------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>1.1</td>
<td>Pump head</td>
</tr>
<tr>
<td>1.2</td>
<td>Handle bar complete</td>
</tr>
<tr>
<td>1.3</td>
<td>Twin polymer bush assembly for handle bearings</td>
</tr>
<tr>
<td>1.4</td>
<td>Universal mounting flange</td>
</tr>
<tr>
<td>1.5</td>
<td>Compressed rubber cone</td>
</tr>
<tr>
<td>1.6</td>
<td>Rising main</td>
</tr>
<tr>
<td>1.7</td>
<td>Rising main centraliser</td>
</tr>
<tr>
<td>1.8</td>
<td>Rising main joint</td>
</tr>
<tr>
<td>1.9</td>
<td>Pump rod</td>
</tr>
<tr>
<td>1.11</td>
<td>Pump rod connector</td>
</tr>
<tr>
<td>1.12</td>
<td>Borehole casing</td>
</tr>
<tr>
<td>1.13</td>
<td>Hooked pump rod with centraliser</td>
</tr>
<tr>
<td>1.14</td>
<td>Plunger</td>
</tr>
<tr>
<td>1.15</td>
<td>Valve bobbin</td>
</tr>
<tr>
<td>1.16</td>
<td>U-seal</td>
</tr>
<tr>
<td>1.17</td>
<td>Foot valve</td>
</tr>
<tr>
<td>1.18</td>
<td>Foot valve receiver</td>
</tr>
<tr>
<td>1.19</td>
<td>Guide bush</td>
</tr>
<tr>
<td>1.21</td>
<td>Piston assembly</td>
</tr>
<tr>
<td>1.22</td>
<td>Cylinder</td>
</tr>
<tr>
<td>1.23</td>
<td>Flap valve</td>
</tr>
<tr>
<td>1.24</td>
<td>Grapple</td>
</tr>
<tr>
<td>1.25</td>
<td>Rod hanger</td>
</tr>
<tr>
<td>1.26</td>
<td>Fulcrum</td>
</tr>
<tr>
<td>1.27</td>
<td>Chain guide</td>
</tr>
<tr>
<td>1.28</td>
<td>Chain connecting link</td>
</tr>
<tr>
<td>1.29</td>
<td>Pedestal</td>
</tr>
<tr>
<td>1.31</td>
<td>Bolt, nut and washer assembly</td>
</tr>
<tr>
<td>1.32</td>
<td>Axle washer, nut and check</td>
</tr>
<tr>
<td>1.33</td>
<td>Bearings in pump head assembly</td>
</tr>
<tr>
<td>1.34</td>
<td>Connecting rod check nut</td>
</tr>
<tr>
<td>1.35</td>
<td>Chain coupling</td>
</tr>
<tr>
<td>1.36</td>
<td>Riser pipe holder</td>
</tr>
<tr>
<td>1.37</td>
<td>Reducer cap</td>
</tr>
<tr>
<td>1.38</td>
<td>Upper valve sheet</td>
</tr>
<tr>
<td>1.39</td>
<td>Upper valve guide</td>
</tr>
<tr>
<td>1.41</td>
<td>Pump bucket</td>
</tr>
<tr>
<td>1.42</td>
<td>Follower</td>
</tr>
<tr>
<td>1.43</td>
<td>Rubber seating</td>
</tr>
<tr>
<td>1.44</td>
<td>Sealing ring</td>
</tr>
<tr>
<td>1.45</td>
<td>Rubber seat retainer</td>
</tr>
<tr>
<td>1.46</td>
<td>Check valve guide</td>
</tr>
<tr>
<td>1.47</td>
<td>Lubricating of all moving parts per borehole</td>
</tr>
<tr>
<td>1.48</td>
<td>Removal of the pump cylinder and pipes from the well for inspection and assessment for each borehole</td>
</tr>
<tr>
<td>1.49</td>
<td>Provisional sum for any other maintenance requirement on any borehole type</td>
</tr>
</tbody>
</table>

**TOTAL CARRIED FORWARD TO NEXT PAGE**
### 2: Windmill boreholes

The borehole part below are for either the Climax windmill, Ironman windmill, Turbex or similar approved in South Africa.

The rate shall include for all labour and tools required for dismantling the existing infrastructure, supply of new spare parts and installation of the new spare parts as detailed below.

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Unit</th>
<th>Qty</th>
<th>Rate</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1</td>
<td>Windmill head complete</td>
<td>No.</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.2</td>
<td>Windmill tower complete</td>
<td>No.</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.3</td>
<td>Gearbox</td>
<td>No.</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.4</td>
<td>Tail</td>
<td>No.</td>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.5</td>
<td>Tower cap</td>
<td>No.</td>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.6</td>
<td>Lower guide</td>
<td>m</td>
<td>30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.7</td>
<td>Pump rods</td>
<td>m</td>
<td>50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.8</td>
<td>Foot valve and strainer</td>
<td>No.</td>
<td>8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.9</td>
<td>Poly pipe</td>
<td>m</td>
<td>50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.11</td>
<td>Poly joiner</td>
<td>No.</td>
<td>20</td>
<td></td>
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</tr>
<tr>
<td>2.12</td>
<td>Stabiliser</td>
<td>No.</td>
<td>15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.13</td>
<td>Poly nipple</td>
<td>No.</td>
<td>20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.14</td>
<td>Brass pump</td>
<td>No.</td>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.15</td>
<td>Poly discharge tee</td>
<td>No.</td>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.16</td>
<td>O’Ring</td>
<td>No.</td>
<td>100</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.17</td>
<td>Mill columns</td>
<td>m</td>
<td>20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.18</td>
<td>Rubber stabiliser</td>
<td>No.</td>
<td>20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.19</td>
<td>Column sockets</td>
<td>No.</td>
<td>30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.21</td>
<td>Pull rod adaptors</td>
<td>No.</td>
<td>20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.22</td>
<td>Bolts, nuts and washer set</td>
<td>No.</td>
<td>100</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.23</td>
<td>Keeper rings for ball joints</td>
<td>No.</td>
<td>100</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.24</td>
<td>Brass pump rod couplings</td>
<td>No.</td>
<td>40</td>
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<td></td>
</tr>
<tr>
<td>2.25</td>
<td>Galvanised fish plates</td>
<td>No.</td>
<td>30</td>
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</tr>
<tr>
<td>2.26</td>
<td>Steel pump rods with steel ball joints</td>
<td>No.</td>
<td>20</td>
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</tr>
<tr>
<td>2.27</td>
<td>Steel ball joints</td>
<td>No.</td>
<td>20</td>
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</tr>
<tr>
<td>2.28</td>
<td>Bronze fork connections</td>
<td>No.</td>
<td>50</td>
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<tr>
<td>2.29</td>
<td>Combined pipe and casing clamp</td>
<td>No.</td>
<td>80</td>
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<td></td>
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</table>

### 3: Electrical boreholes

The rate shall include for all labour and tools required for dismantling the existing infrastructure, supply of new spare parts and installation of the new spare parts as detailed below.

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Unit</th>
<th>Qty</th>
<th>Rate</th>
<th>Amount</th>
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</thead>
<tbody>
<tr>
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<td></td>
</tr>
<tr>
<td>3.2</td>
<td>Pressure gauge</td>
<td>No</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.3</td>
<td>Electrodes for water level control</td>
<td>No</td>
<td>20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.4</td>
<td>Non-return valve</td>
<td>No</td>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.5</td>
<td>Submersible electric cable</td>
<td>m</td>
<td>100</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.6</td>
<td>Cable clamps</td>
<td>No</td>
<td>100</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.7</td>
<td>Nylon rope</td>
<td>m</td>
<td>100</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.8</td>
<td>Electric control box</td>
<td>No</td>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.9</td>
<td>Maintenance of each electrical control panel</td>
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</table>

### Electric pump

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Unit</th>
<th>Qty</th>
<th>Rate</th>
<th>Amount</th>
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<tbody>
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<tr>
<td>3.12</td>
<td>0.55kW</td>
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</tr>
<tr>
<td>3.13</td>
<td>0.75kW</td>
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<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.14</td>
<td>1.1kW</td>
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<td>5</td>
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</tr>
<tr>
<td>3.15</td>
<td>1.5kW</td>
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<td>5</td>
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</tr>
<tr>
<td></td>
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<td>---</td>
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<td></td>
</tr>
<tr>
<td>3.16</td>
<td>2.2kW</td>
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<td></td>
<td></td>
</tr>
<tr>
<td><strong>Electric motor</strong></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.17</td>
<td>0.37kW</td>
<td>No.</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.18</td>
<td>0.55kW</td>
<td>No.</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.19</td>
<td>0.75kW</td>
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<td></td>
</tr>
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<td>3.21</td>
<td>1.1kW</td>
<td>No.</td>
<td>5</td>
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</tr>
<tr>
<td>3.22</td>
<td>1.5kW</td>
<td>No.</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.23</td>
<td>2.2kW</td>
<td>No.</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>VAT @ 14%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL CARRIED FORWARD TO FORM OF OFFER</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
PART C3:

SCOPE OF WORK C3.1. DESCRIPTION OF THE WORKS

1 EMPLOYER’S OBJECTIVES

The employer’s objectives are:

(a) To provide reliable water supply to rural areas of Gert Sibande District Municipality through maintenance, testing and equipping of boreholes to ensure people have access to potable water.

(b) To ensure that the work is of a high standard and is completed in the shortest practical time whilst complying with EPWP requirements for using labour intensive construction methods to deliver public infrastructure, and complying with the Occupational Health and Safety Act’s requirements for safety.

C3.1.2 OVERVIEW OF THE WORKS

The works include the maintenance, testing and equipping of boreholes (hand pumps, windmill and electrical boreholes as applicable) in rural areas of GERT SIBANDE DISTRICT MUNICIPALITY.

C3.1.3 EXTENT OF THE WORKS

The Scope of Work to be carried out by the Contractor under this Contract comprises mainly the following:

(a) Assessment of the maintenance needs of each non-functional borehole
(b) Maintenance, testing and equipping of boreholes
(c) Provision and installation of hand pumps where necessary
(d) Provision and installation of all ancillary works to render the borehole functional

This description of the Works is not necessarily complete and shall not limit the work to be carried out by the Contractor under this Contract. Approximate quantities of each type of work are given in the Bill of Quantities.

C3.1.4 LOCATION OF WORKS

The boreholes are generally located in or near existing villages within municipal jurisdiction of the GERT SIBANDE DISTRICT MUNICIPALITY. Access to the individual site is generally via gravel roads and it can be expected that four wheel drive vehicles would generally be required.

C3.1.5 TEMPORARY WORKS

No temporary works will be required for the execution of this contract.
### C3.2 : ENGINEERING

#### C3.2.1 DESIGN SERVICES AND ACTIVITY MATRIX

Works designed by, per design stage:

<table>
<thead>
<tr>
<th>Description</th>
<th>Responsible Party</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concept, feasibility and overall process</td>
<td>Employer</td>
</tr>
<tr>
<td>Basic engineering and detail layout</td>
<td>Contractor</td>
</tr>
<tr>
<td>Final design to approve for construction stage</td>
<td>Contractor</td>
</tr>
<tr>
<td>Preparation of ‘as built’ drawings</td>
<td>Contractor</td>
</tr>
</tbody>
</table>
C3.3 : PROCUREMENT

C3.3.1  PREFERENTIAL PROCUREMENT PROCEDURES

C3.3.1.1  Requirements

The works shall be executed in accordance with the conditions attached to preferences granted in accordance with the preference schedule.

The procurement procedure stipulated in the Gert Sibande District Municipality’s Supply Chain Management Policy, attached as Appendix B, will be followed.

C3.3.1.2  Resources standard pertaining to targeted procurement

The Supply Chain Management Policy of the Gert Sibande District Municipality is applicable to this project. Points will be awarded for functionality and specific contract participation goals as contained in the Tender Data.

C3.3.2  SUBCONTRACTING

C3.3.2.1  Scope of mandatory subcontract works

There are no mandatory subcontract works under this Contract. However, tenderers should note that it is expected that portions of the Works will be subcontracted to CIDB registered local contractors to encourage local participation in accordance with the subcontracting procedures described hereafter.

C.3.3.2.2  Preferred subcontractors / suppliers

Preference should be granted to the employment of local competent subcontractors in order to encourage local skills development and experience. The resource of materials or supplies should be preferably sourced locally unless the items are specialized.

C3.3.2.3  Subcontracting procedures

Portions of the works shall be subcontracted to local CIDB registered contractors where necessary.

Competitive tenders shall be invited in respect of each of the above portions of the works in
C3.4 : CONSTRUCTION

C3.4.1 WORK SPECIFICATION

C3.4.1.1 Applicable SANS 1200 Standards

Applicable SANS 1200 Standardised Specifications for the purpose of this Contract the latest issues of the following Standard Specifications for Civil Engineering Construction, applicable at the date of tender advertisement, shall apply:

- SANS 1200 AA : 1986 General (Small Works)
- SANS 1200 C : 1980 Site Clearance (Amendment 1, 1982)
- SANS 1200 D : 1988 Earthworks (Amendment 1, 1990)
- SANS 1200 DA : 1988 Earthworks (Small Works) (Amendment 1, 1990)
- SANS 1200 DB : 1989 Earthworks (Pipe Trenches)
- SANS 1200 GA : 1982 Concrete (Small Works)
- SANS 1200 H : 1990 Structural Steelwork
- SANS 1200 HC : 1988 Corrosion Protection Of Structural Steel
- SANS 1200 L : 1983 Medium-Pressure Pipelines
- SANS 1200 LB : 1983 Bedding (Pipes)
- SANS 1200 LF : 1983 Erf Connections (Water)

The term project specifications appearing in any of the SABS 1200 standardised specifications must be replaced with the terms scope of work.

C3.4.1.2 Applicable National and International standards

The following SANS standards are referred to in this document and the Contractor is advised to obtain them from Standards South Africa (a division of SABS) in Pretoria:

- SANS 241 : 2006 Drinking Water
- SANS 1914 : 2002 Targeted Construction Procurement
- SANS 1921 : 2004 Construction and management requirements for works contracts
- SANS 10299 : 2003 Development, maintenance and management of groundwater resources

C3.4.1.3 Particular Specification

The following particular specifications, attached as Annexes, are applicable to this Contract:

EPWP Labour Intensive Construction;
Drilling, test-pumping and equipping of boreholes.
PSAA  GENERAL

All material must, where applicable, carry the SANS mark.

PSAB  SITE OFFICE

No site office or notice board will be required as this is a maintenance project.

PSL  MEDIUM PRESSURE PIPELINES (SANS 1200L)

PSL1  TYPE OF PIPE

1.1  Steel pipes

1.1.1  General

All steel pipes shall be in accordance with SANS 719 Grade A with a minimum wall thickness of 4.5mm. All flanges shall be drilled according to SANS 1123 table 1000/3 except flanges which have no holes or if otherwise specified on the drawings or in the Schedule of Quantities.

Before leaving the factory the pipes shall be hydraulically tested in accordance with SANS 719 and a test certificate shall be provided.

Where plain ends are specified the external welds of the pipe shall be ground flush for a distance of 150 mm from the end. The pipes shall be sufficiently round to ensure that flexible couplings can fit onto the ends.

1.1.2  Jointing materials (Sub clause 3.8)

Pipe fitting rate to include jointing materials.

- Flexible couplings

Flexible couplings shall be Viking Johnson or approved equivalent without centre registers.

Rubber rings shall be wedge-shaped and manufactured from natural and/or synthetic rubber. Reclaimed rubber shall not be used in their manufacture.

- Flanges and accessories

Flanges shall be drilled to Table 1500/3 of SANS 1123. Bolts and nuts installed in an exposed (above ground) flange connection shall be hot galvanised and painted to the same finish as associated pipe work.

1.2  HPDE Pipes

HPDE Pipes and fittings shall be fitted with spigot and socket rubber ring joints and shall comply with the relevant requirements of SANS/ISO 4427 .1996. The type of pipes to be utilised will be Class 12.

1.3  Pipe ends to be sealed
At the end of each working period, the pipe ends should be sealed off to keep the pipeline clean and to prevent animals or foreign material from entering.

**PSL2 CORROSION PROTECTION (Sub clause 3.9)**

Corrosion protection shall be as follows:

2.1 **Cast-iron pipes and fittings**

All cast-iron fittings shall be factory-coated internally and externally with one coat bitumen paint to BS 3416 Type II leaving a dried film thickness of not less than 25 microns.

2.1.1 **Exposed pipes and fittings not submerged in water, sludge or effluent**

After installation and when factory-coat is at least eight weeks old, paint with one coat bitumen-based aluminium paint to SANS 802, one undercoat and one coat alkyd-based enamel paint to SANS 630, Grade 1 colour as directed by the Engineer.

2.1.2 **Exposed pipes and fittings submerged in water, sludge or effluent**

After installation paint with one further coat as per factory coat.

2.2 **Low Pressure Steel Pipes (Gravitational Lines : Pipe Bridges)**

Internal: Polybrone grade 350/001 750 micron thickness

External: System 070 high built multi purpose epoxy, 300 micron thickness

2.3 **High Pressure Steel Pipes**

2.3.1 **Internal protection of steel pipes**

(a) Material to be used

Solvent Free Liquid Epoxy – hot applied to internal surfaces of steel pipes to a minimum dry film thickness of 0,25 mm.

(b) Surface preparation

- **Preliminary**

  Internal pipe surfaces shall have all projections, sharp edges, laminations and tool marks removed to provide a smooth surface.

  All oil and grease shall be removed by use of solvent or alkali cleaners.

  Blast cleaning media and air used for blowing out dust and debris shall be from free oil and grease.

- **Blast cleaning**

  Internal pipe surfaces shall be abrasive blast cleaned to meet the following requirements:

  - Cleanliness not less than SA 2,5 when tested by SANS Test Method 767.
- Surface profile not greater than 90 microns when tested by SANS Method 772.
- Freedom from dust and debris not less than 0.2 when tested by SANS Test Method 709.

(c) Application of solvent free liquid epoxy lining

- Pipes shall be at a temperature not less than 10 °C and not more than 50 °C.
- The material shall be applied using airless, heated, dual component application equipment fitted with an accurate metering system to ensure precise and adequate mixing in a fixed ratio (as recommended by the supplier).
- The material shall be applied in single or multiple layers, at an interval not exceeding 48 hours (at 25 °C) to give an uniform thickness not less than 250 microns when cured.

(d) Repairs and making good

Repairs and making good of damaged or repaired area shall be affected using a suitable repair solventless epoxy composition. If the latter is applied more than 72 hours (at 25 °C) after application of the lining material, the surface must be abraded and kept clean during this period.

(e) Inspection

After curing of the epoxy lining, the whole of the lined area shall be tested with a wet sponge pinhole detector operated at not less than 80V and not more than 100V. When instruments having a sensitivity control area used, the control shall be set to 2 megohm. Traverse of the pipes shall not commence until continuity has been tested. The lined area shall give no positive indications when traversed at a speed not exceeding 4 m per min.

2.3.2 External protection of steel pipe

(a) Material to be used

Fusion Bonded Epoxy Powder Coating

(b) Surface Preparation

- Preliminary

  All surfaces shall have all projections, sharp edges, laminations and tool marks removed to provide a smooth surface.

  All oil and grease shall be removed by use of approved degreasers.

  Blast cleaning media shall be free from oil and grease.

  Air used for blowing out dust and debris shall be free from oil and grease.

- Blast Cleaning
All surfaces shall be abrasive blast cleaned to meet the following requirements:

- Cleanliness not less than SA 2.5 when tested by SANS Test Method 767.
- Surface profile not greater than 90 microns when tested by SANS Method 772.
- Freedom from dust and debris not less than 0.2 when tested by SANS Test Method 769.

(c) Application of Epoxy Powder

Items shall be pre-heated to a temperature not exceeding 250 °C.

When powder is applied, the temperature of the item shall not be less than 130 °C.

Powder shall be applied to give a coating of uniform thickness not less than 250 microns when cured.

Powder coated items shall be, if necessary, post cured to ensure that the total curing schedule, according to the manufacturer’s recommendations, has been completed. After cooling, a random mechanical adhesion test (impact) shall be carried out on 10% of the items.

(d) Repairs and making good

Repairs and making good of damaged or repaired area shall be affected using a suitable repair, solventless epoxy composition. Painted surfaces to be over-coated shall be thoroughly abraded with 220 grit waterproof abrasive paper. Application of the repair material shall be within the abraded area. The abraded surface shall be kept clean during the repair operation.

(e) Inspection

After curing of the epoxy powder coating and when the item is cold, the whole of the coated area shall be tested with a wet sponge pinhole detector operated at not less than 80 V and not more than 100 V. When instruments having a sensitivity control are used, the control shall be set to 2 megohm. Traverse of the item shall not commence until continuity has been tested. The coated area shall give no positive indications when traversed at a speed not exceeding 4 m/min. All pipes shall be marked as “Tested” in accordance with these specifications if all the specified tests have been executed and the requirements met.

(f) Painting of pipes and fittings

In addition to the above corrosion protection the pipes in the pumping stations shall be painted to the specification required for internal structural steelwork (Section HA). Suction (low pressure) pipes and fittings shall be painted red and outlet (high pressure) pipes shall be painted blue.

2.4 Flexible Couplings
Flexible couplings shall be coated with two layers of Polybrone Grade 350/001, applied to a thickness between 200 micron and 250 micron. After installation the coupling will be protected with Denso mastic followed by Denso tape and PVC sheeting.

PSL3 VALVES

3.1 Sluice Valves

3.1.1 Type

Valves shall be double flanged, wedged-gate, non-rising spindle resilient seal types of which gates shall be completely clear of the waterway in the fully open position.

3.1.2 Standards

SANS 664 and SANS 191 shall apply as and where applicable and where not in contradiction to this Specification. The class of sluice valves shall be Class 16 with a maximum working pressure of 16 Bar.

3.1.3 Opening and closing

(a) Closure of valves shall be by clockwise rotation of spindles or hand wheels.

- All sluice valves shall be capable of being opened or closed under an unbalanced pressure equal to design pressure.

- The effort required on hand wheels to open or close valves under these conditions shall not exceed 250 N in the case of valves up to 300 mm NB and shall not exceed 400 N in the case of larger valves. Valves of 300 mm diameter and larger shall be fitted with spur gearing and an indicator, clearly visible from above, to show the position of the valve gate. The spur gearing shall be fitted with a cast iron cap. The gear ratios shall comply with the values tabulated below:

<table>
<thead>
<tr>
<th>Size of valve (mm)</th>
<th>Spur Gear Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>300.00</td>
<td>2 : 1</td>
</tr>
<tr>
<td>350.00</td>
<td>2 : 1</td>
</tr>
<tr>
<td>375.00</td>
<td>2.5 : 1</td>
</tr>
<tr>
<td>400.00</td>
<td>2.5 : 1</td>
</tr>
<tr>
<td>450.00</td>
<td>3 : 1</td>
</tr>
<tr>
<td>500.00</td>
<td>3 : 1</td>
</tr>
<tr>
<td>525.00</td>
<td>3 : 1</td>
</tr>
<tr>
<td>600.00</td>
<td>3 : 1</td>
</tr>
</tbody>
</table>

3.1.4 By-passes

Where indicated in the documents, valves shall be fitted with bypasses and bypass sluice valves. Bypasses shall be bolted on the body of the main valve and not to the adjoining pipework. Bypass sluice valves shall conform to this Specification. Pipe work and fittings shall receive specified surface protection after fabrication.
3.1.5 Materials

(a) Valve bodies and gates shall be of cast-iron or cast-steel. Cast-iron shall conform to B.S. 1452/1961 Grade 14 or B.S. 2789/1973 Grade 420/12 or 500/7. Cast–steel shall conform to B.S. 592 (as incorporated in B.S. 3100/1967) Grades A or B. Test specimens shall be submitted on request free of charge.

(b) Spindles shall be of high strength stainless steel.

(c) Body and gate sealing rings shall be of stainless steel, bronze or zinc-free gunmetal (unless otherwise specified because of the specific nature of the sewage).

(d) Gate position indicators, i.e. marking plates and needles shall be of cast aluminium or cast brass.

(e) Channel guides and shoes shall be in bronze or zinc-free gunmetal or stainless steel.

3.1.2 Construction

(a) Body

The body shall be of rugged design with substantial ribs to minimise distortion under pressure where necessary.

Where gearing is provided, bodies shall be designed and manufactured to withstand any additional stresses with an ample margin of safety.

(b) Gate

One face of the gate shall be marked, corresponding to a similar mark on the body to ensure correct replacement after removal.

The gate shall operate satisfactorily under the conditions specified.

(c) Sealing faces

Body and gate seals shall be of design and construction such that would prevent (under all conditions of operation and test) seals becoming loose or water passing behind seals. This feature must be proved at supply stage by suitable drawings and documentation.

The leading edges of sealing rings shall be slightly chamfered.

(d) Channel guides and shoes

Channel guides with shoes shall be as deep and long as possible to support the gate during its travel.

Shoes shall be accurately fitted in the guides so as to ensure that sealing rings do not make contact before the gate is sealed.
With the valve fully open at least half of the shoe shall be supported by the guides.

(e) Spindles and hand wheels

The spindle thrust collar shall bear against a ball thrust bearing of approved design, details of which shall be furnished before supply.

Provision shall be made for glands to be repackable under pressure without shutting off the water.

Unless otherwise specified all valves shall be complete with hand wheels which shall have arrows cast on them together with the wording “TO CLOSE”.

(f) Position Indicators

All valves of 300 mm NB and larger shall, except where otherwise specified elsewhere in the document, be fitted with mechanical indicators to show the position of the gate.

Marking plates shall be embossed to show clearly the fully open and closed positions and the ¼ (quarter), ½ (half) and ¾ (three quarter) intermediate open positions.

Indicators shall be of robust and rigid design and manufacture.

Rates in the Schedule of Quantities for valves, pipes and auxiliaries shall include all material and full installation.

3.2 Air Valves

The air valves shall be 80 mm double acting valve (air released and vacuum breaker) or 25 mm single orifice air valves as indicated on the drawings.

This item includes the necessary nipples to complete the unit. Air valves to be Vent-o-Mat 050RBX 4001 or similar approved.

3.3 Water Meters

Water meters shall be Meinecke Cosmos WS/100, double flanged and drilled to SANS 1123 table 1500/3 or similar approved. Bolts, nuts and washers will be hot dipped galvanised and rubber packing must comply with the requirements of SANS 546.

3.4 Hydraulic control valves i.e. pressure reducing and relief valves and flow control valves

Automatic pressure sustaining / relief valve to be Bermad 730-20 or similar approved, are required.

The valves to comply with:

(a) Flanges ends to SANS 1123 Table 1500/3
(b) Single seat, diaphragm actuated
(c) Pressure reducing 4:1 maximum
(d) Normal operating flow rate 6 – 7 m/s
(e) It must be possible to service the valve without removal from line
(f) All valves, except pressure relief valves, to prevent reverse flow
(g) Flow control with orifice plate

**TESTING OF WATER PIPELINES**

4.1 All pipes after completion and before scouring and disinfecting shall be tested to 1.5 x rated working pressure of pipes.

4.2 All tests must be carried out in the presence of the Engineer.

4.3 Backfilling of Water Pipelines

Backfilling of water pipelines should be carried out in two phases:

(a) Phase 1 involves partial backfilling to 300 mm above the pipeline before pressure testing.

(b) Partial backfilling should leave the joints totally exposed and rise at least 300 mm above pipes.

(c) Mechanical shovels may not be used for placing the partial backfilling in the trench.

(d) Phase 2 involves completion of backfilling after pressure testing.

(e) Backfilling should be compacted at their optimum moisture content to give the maximum density.

(f) The pipeline should not be left partially exposed for longer than 1 week. Pipes should either be fully exposed or have a minimum cover of 300 mm.

4.4 Payment for pipelines

(a) Excavation

80% of excavation tender rate will be paid after excavation and before completion of backfill and finishing-off.

(b) Pipes and fittings

80% of tender rates will be paid after installation, but before successful testing.

**CONCRETE (STRUCTURAL) (SANS 1200 G)**

**CONCRETE FINISHES**

Concrete surfaces must have the following finishes:

- All visible concrete: Grade I accuracy with smooth homogeneous surface
- Inside of structures: Grade II accuracy with smooth surfaces
• Rest of concrete : Grade III accuracy

All edges to be chamfered.

PSG2

SPECIAL FOR WATER RETAINING STRUCTURE

(a) Concrete mix design

The concrete mix must be designed by an approved laboratory for water retaining structures. The aggregates used must also be approved by the laboratory. The design mix with the report from the laboratory must be submitted to the engineer. Poly-propylene fibres @ 1,5 kg/m$^3$ must be added to the concrete mix (contact Fluropack, Annette Lubbe, tel (012) 371 9374). The concrete must also comply with the following:

• Cement/Water ratio of < 2
• Sand content 40 – 45 % to obtain maximum water tightness
• Natural sands with low water demand
• Must be designed for low shrinkage
• Approved add mixtures may be used to obtain workability
• Concrete may not be pumped

(b) Pipe and bolts and ties through concrete

Only pipes indicated on the drawings may go through the concrete and must be placed in position before the concrete is cast. Shutter ties to be fitted with an approved centre stop.

(c) Water tightness test

The structures must be tested for water tightness as follows:

• Structure to be filled @ ± 1 m/day.
• After the structure has been full for 14 days the full water level must be restored and marked.
• If the water level falls less than 5 mm in 96 hours and there is no visible leaks, the structure will be taken as watertight.

Should the structure be found not to be watertight the contractor will empty it and seal the leak(s). The structure must then be tested again, all at the cost of the contractor.

(d) Water permeability test

The design mix must be tested with regard to permeability by the NAI of the CSIR. The maximum permeability coefficient may not be more than 1 x 10$^{-7}$/second. One set of six samples must be tested for the 30 Mpa design mix. The contractor is responsible for the tests and the costs thereof.

(e) Strength tests

Two sets of three test cubes per 50 m$^3$ concrete placed are required to be tested at 7 and 28 days. The contractor is responsible for the tests and the
(f) **Welding of reinforcing**

Reinforcing may not be welded.

(g) **Curing**

Curing compounds may not be used on floors. Floor curing must be done by constant wetting.

(h) **Plums**

Plums may not be used.

**P A1**

**SPECIFICATIONS FOR BOREHOLES**

**PA1.1**

**SCOPE**

The specifications are for the drilling of boreholes, installation of casings and for the development and capping of boreholes for rural water supply.

The Contractor shall provide all labour, transport, plant, tools, materials and appurtenances, and shall perform all work necessary to satisfactorily construct and complete the boreholes in accordance with this Specification and to any further details as may be ordered by the Engineer. The boreholes depths will be dependant in drilling results and the strata intersected.

**PA1.2**

**EQUIPMENT**

The equipment to be used must be of such standard that the requirements as set out in the Project Specifications can be accomplished without any disruption of the works.

- The Contractor shall specify in the List of Available Plant Equipment in Section 7: Forms to be completed by Tenderer the type of plant he intends to use as well as the method of operation. Its capacity shall be sufficient to cope with the work as specified for each particular work order. It shall be kept at all times in full working order and in good repair. The Engineer will reserve the right to inspect the equipment to be used for the completion of the Works prior to the commencement of the Works.

- If the Engineer considers that the plant in use on the site of the Works is in any way inefficient or inadequate in capacity, he shall have the right to call upon the Contractor to put such equipment in order with seven (7) days, or alternatively, to remove such plant and replace it with additional plant or equipment which he considers necessary to meet the requirements of the Contract. In the event that his requirement is not satisfied, the Engineer reserves the right to advise the GSDM to terminate the Contract immediately.

- It is the condition of this Contract that:-

**Compressors** used shall have a minimum capacity of 21BAR, 200 PSI (750 CFM);

**Drills rigs** used shall be mounted on a 6x4 or 4x4 or 6x6 truck.
- It will be the responsibility of the Contractor to arrive on site with all equipment required to complete the work without interruption.

**PA1.3 MATERIALS**

All materials to be used shall be new and undamaged and shall be supplied and delivered as such on site.

All material as are required in the drilling and construction of the boreholes shall be assembled in an approved manner and in accordance with normal groundwater engineering practice.

**PA1.4 DRILLING**

a) **Rotary Percussion Air Flush Drilling**

Where the geological formation comprises consolidated rock with limited overburden the standard drilling technique shall be rotary percussion air flush drilling unless otherwise ordered by Engineer. Under this technique provision must be made for drilling through boulders (Alluvial deposits) and the provision of Odex Air Percussion drilling for advancement through collapsible layers.

b) **Rotary Mud Drilling**

Where the geological formation comprises predominantly unconsolidated soils and subordinate partially to well cemented sediments, the standard drilling technique shall be rotary mud drilling unless otherwise ordered by the Engineer. Under this technique provision must be made for drilling through boulders.

Both drilling techniques shall further include the necessary facilities with adequate capacity to consistently introduce lubrication water and / or foam as required.

i) **Design and Depth**

Various boreholes design options will be employed

It is anticipated that borehole depths will vary typically between 40m and 150m. The Employer will determine the final borehole depth and boreholes shall not be paid for, unless it can be satisfactorily proved that the borehole cannot be drilled to the required depth.

A minimum 10m sump will be drilled below the level at which the major water strike is intersected or to a level as specified by the Employer.

ii) **Drilling Diameter**

Drilling diameters will be 165 mm, 167 mm, 202 mm, 216 mm, 254 mm, 205 mm and 454 mm. The Engineer will specify the diameter/s for each borehole to be drilled.

iii) **Drilling Media**

The Contractor may not use drilling media which may cause hole erosion or involve the use of native clay, oil, salt or any lost circulation agent, sawdust, cement, or any form of plugging that could affect the production capacity of the water bearing strata
intersected.

In the event of circulation losses, commercially available foam can be introduced during drilling operations.

iv) **Drilling Foam**

The Contractor at his own discretion and cost may use drilling foam.

v) **Straightness and Verticality**

   a) **Straightness**

   Boreholes shall be sufficiently straight to permit a steel tube 6m in length and with outer diameter no more than 15 mm smaller than the inner diameter of the cased borehole, to be lowered without hindrance to the full depth of the particular borehole. Any deviation, which prevents the lowering of such plumb to the bottom of the borehole, will not be accepted, and the hole declared a lost borehole. The contractor shall, in such case, re-drill the hole at his own cost to specification.

   The Contractor shall ensure that the above piping, complete with the necessary attachments and equipment required for testing straightness, is available at the drilling machine and such piping shall form part of his standard equipment.

   b) **Verticality**

   The center of the borehole at any depth shall not deviate from the vertical through the centre of the borehole at the top by more than one third (1/3) of the borehole diameter per 20m of the depth.

   The diameter of the deviation of a borehole from the vertical shall be carried out in accordance with the latest issue of (SABS) 045. The apparatus referred to in SABS 045 shall be supplied by the Contractor and shall form part of his standard equipment under this Contract.

   In the event that these requirements for verticality are not met, the borehole will be declared a lost borehole. The Contractor shall thereupon re-drill the hole at his own cost, to specification.

vi) **Sampling**

Representative drilled cutting samples of the materials intersected shall be collected every metre and stacked in a representative fashion per rod length completed on a cleared patch near the drilling site. The samples shall be clearly marked and fenced off to prevent tampering and the borehole information recorded on the borehole Drilling Report as supplied to the contractor and as outlined in Clause 1.11.

vii) **Blow Yield Measurement**

Blow Yield Measurement shall be undertaken and recorded during drilling operations in order to establish the blow yields for different water strikes occurring in each borehole.
viii) **Cleaning of borehole**

On completion of drilling a borehole the borehole shall be cleaned out, developing the borehole for minimum duration as stated below, or as otherwise specified by the Engineer under Clause 1.6 (i).

(a) Unconsolidated material – 6 hours.
(b) Consolidated material – 2 hours.

ix) **Water Quality Testing**

a) All borehole water should be chemically and bacteriological tested, according to SABS 241 proposed recommended code of practice as published by the South African Bureau of Standards.

b) The first test should be on a water sample taken after the construction is complete and the aquifer has been pumped continuously for at least 6 hours and preferably at the same time as yield testing.

c) Thereafter a water quality test should be done at regular intervals, the frequency of which shall be determined by the competent person who issued the first test results but at least every 6 months.

d) Constituents for any specific test shall be determined in accordance with the SABS 241 proposed Standard and/or any local government of municipal by-laws.

x) **Water level Monitoring**

Water level measurement is to be recorded prior to the capping of the borehole.

xi) **Disinfection**

On completion of cleaning of borehole and water quality testing the borehole shall be disinfected with a solution of 0.5 kg HTH mixed in 250 litres of water.

xii) **Reaming**

Where a borehole has previously been drilled a smaller diameter than that required, the original borehole should be reamed to the required diameter as specified by the Engineer. Reaming shall comprise the widening of the existing borehole using rotary percussion air flush methods for varying borehole diameters advanced through all types of consolidated rock formations encountered. Reaming shall be to one of the following diameters: 202 mm, 219 mm, 254 mm, and 205 mm.

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**PA1.5 CASING, PERFORATED CASING AND SCREENS**

i) **General**

The Contractor shall supply casings, perforated casings and screens as specified in the Schedule of Rates or as specified otherwise by the Engineer. Mild steel casing will be used predominantly.

All material to be used shall be new and undamaged and shall be supplied and delivered as such on site.
ii) **Plain Casing**

Plain casing shall be used as outer and / or inner lining to a borehole and shall be made of either mild or steel or PVC depending on the nature of the formation and as determined by the Engineer.

The outer casing shall be inserted through the overburden and any zones of non-potable / undesirable seepage water and driven into the consolidated rock formation below. The inner casing shall be installed in conjunction with perforated casing and /or screens.

All steel casing shall have a minimum wall thickness (as specified) and shall be level edged. All PVC casing shall be minimum CLASS (as specified) and shall threaded both ends. All steel casing shall be weld jointed and all PVC casing joined with threaded sockets unless otherwise specified by the Engineer.

Casing shall be installed to depths as specified by Engineer. After completion of the work, the casing shall protrude a minimum of 500 mm above natural ground level.

The casing shall be of the diameter specified, self- aligning and from approved suppliers. It must be possible to uplift, disconnect and re-use the casing. Refer to figures 2.2 and 4 for typical construction details of casing installations.

iii) **Perforated Casing**

Perforated casing shall be used as an inner lining to a borehole where collapsing conditions occurs at water bearing horizons and for production boreholes. The perforated casing shall be made of either mild or stainless steel or PVC as determined by the Engineer and shall comply with the requirements of Clause 2.5 (ii) for plain casings. The perforated casings shall be installed under supervision to levels as given by the Engineer. The casing may be perforated on-site or factory perforated as specified by the Engineer.

(a) **Perforation on-site**

The manner in which the perforations are to be cut is shown in Figure 5 (To be compiled by compiler). The width of the perforations shall be as specified by the Engineer within the range of 1 mm minimum and 4 mm maximum. The perforations shall be of uniform width with no resultant protrusions and shall be clear or debris.

(b) **Factory Perforated Casing**

The manners in which the perforations are to be cut are shown in figure 5 (To be compiled by compiler). The perforated casing shall comprise 200mm long slots at 150 mm intervals with an effective open area of a minimum 2% or as otherwise specified by the Engineer. The perforations shall be cut clean and square and shall be flush with the casing wall. The casing wall shall be guided and supported by casing centralizers where requested by the Engineer.

iv) **Screens**

Where production boreholes are constructed the Engineer may request that stainless
steel, wedge wire Johnson screens (or equivalent) be installed at the water bearing horizons. The diameter, slot size and % open area of the screens shall be determined by the Engineer. A minimum 0.25 mm slot size and minimum 20% open area is allowed for in this contract.

The screens shall be installed under supervision to levels as given by the Engineer.

v) **Temporary Casing**

Where difficult drilling conditions occur, the insertion of temporary casing during drilling and borehole construction will be necessary. This casing must also comply with the requirement of Clause 1.5 (ii).

### PA1.6 BOREHOLE CONSTRUCTION

i) **Development of Borehole**

On completion of construction the borehole shall be developed to attain the maximum possible yield of groundwater, free of suspended materials. Where the required development time exceeds the stipulated duration as specified in paragraph 2.4 (ix), approval from the Engineer must be obtained. Development by means of flushing and blowing large volumes of water shall be carried out using either air surging, air jetting, or such other standard techniques as may be directed by the Engineer.

Where there is insufficient natural water in the borehole then sanitized water shall be imported to site by the Contractor to augment the low yielding borehole.

ii) **Jetting Borehole**

High pressure water jetting to effectively develop a sand filter shall be carried out in a screened borehole at the instruction and supervision of the Engineer. The jetting tool to be used is detailed in Figure 6.

iii) **Formation Stabilizer / Gravel pack**

Where collapsing conditions are found, formation stabilizer is to be inserted in the annular space of the borehole and perforated casing at depths specified by the Engineer. Formation stabilizer material shall be rounded; uniform and clean gravel with a grain size varying between 6 and 14 mm. Sieved and washed river gravel can also be accepted. Samples of formation stabilizer must be submitted to the Engineer for approval before placement. Refer to Drawing Figure 2, .2 and 4 for typical construction details.

iv) **Filter Pack**

A filter pack installed between the annular space of the borehole and the Engineer may specify perforated casing or screens for boreholes where specific geological conditions are encountered. The filter material shall comprise clean, graded sand and/or gravel (as specified) and shall be trimmed to the levels as specified by the Engineer. Sanitized water shall be used for this purpose.

v) **Grout Back / Bentonite Seal**
Where specific levels in a borehole require to be sealed off, the Engineer shall specify a grout backfill or bentonite seal. The grout shall comprise a mixture of bentonite, sand and cement as specified by the Engineer.

vi) Capping of Borehole

On completion of the borehole the Contractor shall cap the borehole by completely welding a 2 mm thick steel cover onto the protruding steel casing or by permanently affixing a PVC cap onto the protruding PVC casing. It is the responsibility of the Contractor to ensure that the capping is not broken off and the borehole not damaged.

A borehole identification number will be inscribed onto the capping as given in Clause 1.7.

vii) Plugging of unsuccessful borehole

Where the unsuccessful borehole is drilled or a borehole abandoned or lost the outer casing may not be removed.

A borehole identification number and the word DRY will be inscribed onto the capping as given in Clause 1.7.

viii) Blow Yield Testing

The Contractor shall carry out a blow yield test after completion of drilling of the borehole as specified by the Engineer. The blow yield test comprises the constant displacement of ground water at optimum yield using air flush methods with the yield measured by draw –off pipe and bucket method.

PA1.7 BOREHOLE NUMBER IDENTIFICATION

Each new borehole shall be allocated borehole Number issued to the Contractor by the Engineer. It is the responsibility of the Contractor to clearly inscribe the Borehole Number for each new borehole as follows:

<table>
<thead>
<tr>
<th>Position</th>
<th>Type</th>
<th>Method of Inscripton</th>
<th>Details Inscribed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Borehole capping ( for capped successful and unsuccessful Boreholes)</td>
<td>Steel cover</td>
<td>Welding</td>
<td>Borehole No. Wet or Dry</td>
</tr>
<tr>
<td></td>
<td>PV cap</td>
<td>Indelible Marker Pen</td>
<td></td>
</tr>
</tbody>
</table>

PA 1.8 CESSATION OF DRILLING ACTIVITIES

The termination, at any stage, of drilling operations on a particular borehole shall rest with the Employer.

PA 1.11 REPORTS

The Contractor shall accurately record the following reports:
<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
<th>Supplied</th>
</tr>
</thead>
<tbody>
<tr>
<td>Borehole Drilling Report</td>
<td>An accurate record for each borehole of borehole No., locality, drilling techniques used and stratigraphic data including depths, strata type, water strike levels, blow yields, casing diameter, lengths, etc.</td>
<td>On completion of each borehole drilled</td>
</tr>
</tbody>
</table>

The Contractor shall not be paid for work invoiced unless the abovementioned reports pertaining to the work invoiced has been satisfactorily submitted.

The Contractor shall submit each report to the Engineer within 2 days of completion of the work as detailed in the Report. Failure to do so shall be regarded as non-performance in terms of the contract and will be subjected to the conditions of the contract.

**PA1.12 TESTING PROCEDURES**

i) The boreholes allocated to the Contractor shall be tested by means of –

   a. Sequential step-draw –down tests. Four (4) steps of 100 minutes duration each shall be executed.
   b. Recovery measurements shall be in the same fashion as above, but not necessarily have to coincide with the discharges volumes as measured with the step-draw-test.
   c. Constant discharge test with a minimum duration of 4 hours up to a maximum of 48 hours.

ii) Water level measurements shall be taken in the pumped hole. Accuracy of less than 10 mm is required. Time intervals for pumping and recovery tests are detailed on the forms supplied with this tender.

iii) Water samples shall be taken during the test period. The Engineer will supply sampling bottles.

iv) Discharge shall be measured twofold either:

   a. by using stopwatch and cubic tank or drum not smaller than 220 litres.
   b. by means of a calibrated measuring device of approved design with a range with a range of 0, 2 – 20 l/s.

v) The discharge pipeline should be of sufficient diameter to cope with flows of 20 l/s and should have a length of 100m or more above ground with facilities for extension of up to 400m.

vi) The pump(s) should be capable of a variable discharge between 6 000 litres per hour and 220 000 litres per hour. The pump(s) shall be inserted to a depth varying as determined by the Engineer.

vii) Prescribed data sheets should be signed and submitted to the Engineer on completion of tests on each borehole.

viii) The site and borehole collars and caps, if disturbed, shall be restored to the original state unless instructed to the contrary. Caps to be welded flush to the casing.
ix) The Contractor should state whether he has, or will have, equipment with a discharge capacity of up to 150 00 litres per hour.

x) The Contractor will be responsible for water level measurements in observation boreholes within 100 meters of the pumped borehole, if available. The timing of these water level measurements are to be the same as those for the constant yield, but will be determined by the Engineer.

xi) The Contractor should ascertain before every test with a dummy run that the erection and lowering of this equipment would cause no damage to either the borehole or his own equipment. Any such damage or loss of equipment is the Contractor’s liability.

xii) If, for some reason the Contractor discovers the borehole to be blocked during the dummy run his equipment is to be removed, the borehole capped and the Engineer informed.

xiii) Once the pump test that comprises 4 step tests, which extends to a water level recovery measurement followed by a constant discharge test has commenced, followed by recovery measurement, the Contractor shall not interrupt or terminate the testing procedure until completion thereof.

Test pumping of water boreholes must be in line with the SANS 0299-4 1998 code of Practice or latest revised code.

PA 1.13 INSTALLATION OF HAND PUMP

Hand pumps must be installed complete as per supplier’s guidelines and the typical drawing as provided by the engineer. The hand pumps will be mono Orbit type or similar approved by the engineer.

PA 1.14 SUPERVISION

The Contractor is to provide a suitable experienced drilling foreman who is required to supervise and direct the work at all times, and who will be responsible.

a. confirmation of borehole positions (with allocated Borehole Numbers) as set out by the Engineer;
b. supervision of drilling operations;
c. reporting of water strike levels and recording blow yield measurement and borehole construction;
d. preparation of all field reports.
PA 2. MEASUREMENT & PAYMENT
The service provider is to provide rates against each and every item listed below, assuming all quantities are 1 and for the production of 1 borehole. This information will be critical in the drawing up of the Framework Agreement with the successful service providers. The final rate will be agreed to with the successful service providers during the signing of the Framework Agreement based on prevailing markets rates and the tendered rates.

PA 2.1 GENERAL
The Contractor under this Contract is considered to be an expert groundwater borehole driller and is expected to organize and carry out the work specified hereunder in a competent manner. Drilling problems encountered will be overcome entirely within the framework of this Specification and Schedule of Rates, and no claims for extra payments will be entertained for problems foreshadowed in the Specification or due to limitation placed by this Specification.

PA 2.2 ESTABLISHMENT
The rate is inclusive of provision of all equipment, plant, personnel and facilities that are necessary to perform the work as required per rig with establishment thereof at the first borehole site only and de-establishment on completion of the work order.

PA 2.3 RELOCATION OF BOREHOLE EQUIPMENT
a) Set-up
The rate is inclusive of all transport and personnel required for relocation of the rig and all plant equipment from one borehole site to another site and the set-up thereof. The provision of sumps is included in the Rotary Mud set-up.

b) Travel
Moves involving travel over and above the first 10 km travel in Payment 2.2 (a)

PA 2.4 WATER HAULAGE
Where additional water is required to be hauled to site in order to satisfactorily carry out Rotary Mud Drilling (Payment Items 2.11), Development of Borehole (Payment 2.12) and Jetting of Borehole (Payment 2.12). The rate is inclusive of all water supply equipment and personnel required to draw and contain water and the haulage thereof from water source to site. Payment shall be made as follows: Unit rate per cubic metre (m³/km) of water hauled.

PA 2.5 TRANSPORT OF SPECIAL ITEMS
The rates are to include for the provision of suitable vehicular transport and personnel for additional transport of Odex Casing Shoes (Payment Item 2.5) Special Casing and / or Screens (Payment Item 2.25) or Additional Items (Payment 2.27) as directed by the Engineer.

PA 2.6 AIR PERCUSSION DRILLING
The rates for Air Percussion Drilling are based on the diameter and cover all costs for labour, plant, materials and fuel required for advancement of borehole to specified depths, and which are not covered under other payment items. The Contractor shall be paid a rate per borehole diameter per linear metre advanced for depth ranges up 200 m under Payment Item 2.6.

PA 2.7 AIR PERCUSSION. DRILLING: THROUGH BOULDERS (ALLUVIUM)
The rate provides for all additional labour, plant, materials, and fuel required for the successful advancement of the borehole through alluvial boulder layers of any thickness
overlying the consolidated rock formation where standard air percussion drilling methods are ineffective. The rates are determined as a drilling rate per borehole diameter for the drilling depth range 0 – 50 m as provided in Payment Item 2.7.

PA 2.8 ODEX AIR PERCUSSION DRILLING

The rates for Odex Air Percussion Drilling are based on diameter and cover all costs for labour, plant, material, and fuel required for all successful advancement of the borehole through collapsible layers of any thickness overlying the consolidated rock formation where standard air percussion drilling methods are proved to be ineffective, and which are not covered under other payment items. The Contractor shall be paid at a rate per linear metre advanced as per borehole diameter of 165 mm only for the depth range of 0 - 100 m under Payment Item 2.8.

PA 2.9 ODEX AIR PERCUSSION CASING SHOE

Where Odex Air Percussion drilling is required a casing shoe shall be used.

Where the requirement for Odex drilling has not been specified in the work order and if special transport of the casing shoe is required the transport costs thereof shall be covered under Payment Item 2.5.

PA 2.10 REAMING

The rates provides for all additional labour, plant, material and fuel required for reaming a smaller diameter borehole to a larger diameter as specified by the Engineer. The Contractor shall be paid at a rate per linear metre advanced for the depth range up to 150 m under Payment Item 2.10.

PA 2.11 ROTARY MUD DRILLING

The rates for Rotary Mud Drilling are based on diameter and cover all costs for labour, plant, material, and fuel required from advancement of borehole to specified depths and which are not covered under the other payment items. The Contractor shall be paid a rate per linear metre advanced for the depth range up to 150 m under Payment Item 2.11.

PA 2.12 DEVELOPMENT OF BOREHOLE

The borehole development time rate is to cover all the time effectively spent on borehole development as instructed by the Engineer. The Contractor is deemed to have all the necessary equipment on site for development.

On completion of drilling a borehole, a minimum of 2 hours of development is deemed to be necessary cleaning out of the borehole. The Contractor shall be paid at an hourly rate under Payment Item 2.12.

If additional water is require for jetting the water haulage cost thereof shall be covered under Payment Item 2.4.

PA 2.13 JETTING OF BOREHOLE

The rate is to cover all special equipment used and time effectively spent on jetting the borehole a minimum 6 hours as instructed by the Engineer. The Contractor is deemed to have all the necessary equipment on site for jetting under payment Item 2.12.

If additional water is required for jetting the water haulage cost thereof shall be covered under Payment Item 2.14.

PA 2.14 INSERTION OF CASING

The rate provides for the insertion of permanent casings in boreholes as instructed by the Engineer under Payment Item 2.14.
PA 2.15 **REMOVAL OF CASINGS** ................................................................. Unit: m
There shall be **no payment** for removal of casing in boreholes declared lost or in which the casing cannot be set in position due to misalignment or other operational problems. Removal of casing as instructed by the Engineer under Payment Item 2.15.

PA 2.16 **INSTALLATION OF FACTORY PERFORATED CASING AND OR SCREENS** 
.......................................................................................................................... Unit: m
Where factory casing and / or screens are to be installed in production boreholes in accordance with specific instructions under the supervision of the Employer a metre rate shall cover all costs for the installation thereof under Payment Item 2.16.

PA 2.17 **EXTRA OVER PAYMENT ITEM A2.22 FOR PERFORATION OF CASING (ON-SITE)** .................................................................
The rate provides for the on-site perforation of plain casing as supplied under Payment Item 2.22 and is inclusive of all equipment and labour required for perforation. The Contractor is deemed to have all necessary equipment on site for perforation. Payment shall be measured at a rate per linear metre of casing perforated under Payment Item 2.17.

PA 2.18 **FORMATION STABILIZER / GRAVEL PACK** .......................................................... Unit: m³
Where instructed by the Engineer a formation stabilizer or a gravel pack shall be inserted and will be measured at a rate per cubic metre (m³) of material supplied and inserted under Payment Item 2.18.

PA 2.19 **FILTER PACK** .................................................................................................. Unit: m³
Where instructed by the Engineer a filter pack shall be inserted and will be measured at a rate per cubic metre (m³) of material supplied and inserted under Payment Item 2.19.

To take into account the higher cost of a special supply of filter material (specified by the Engineer) payment shall be made for the supply and insertion of a minimum 0.5 m³ of filter pack at a time.

PA 2.20 **GROUT BACKFILL / BENTONITE SEAL** ........................................................................................................ Unit: m
Grout backfill / Bentonite Seal shall be paid for at a rate per linear metre inserted under Payment Item 2.20.

PA 2.21 **CAPPING OF BOREHOLE**
The rate for capping of a borehole of varying diameter includes the provision and affixing of the steel or PVC cover to the steel or PVC casing respectively and the inscription of the borehole number identification thereof under Payment Item 2.21.

PA 2.22 **SUPPLY OF MILD STELL CASING, SPECIAL CASINGS, AND SCREENS** 
.......................................................................................................................... Unit: m and no
Payment under Payment Item 2.22 for the cost of supply, transport, delivery, and safe keeping on site of mild steel casing, special casing and screens of varying diameter and wall thickness with fittings as given in Section 6: Schedule of Rates and as specified by the Engineer shall be on the basis of proven cost with a percentage mark-up of 12% on the net price (excluding VAT). Payment shall be made only for materials used and shall be calculated for each completed borehole. No claims for extra payment will be entertained by reason of remoteness. The Contractor shall purchase the specified
casings and screens on the basis of competitive quotes as approved by the Engineer.

There shall be no payment for casings and screens declared lost or made unusable due to damage thereof.

Where the requirement for special casings and screens has not been specified in the work order and if special transport as approved by the Engineer is required to deliver these items to site the cost thereof shall be made in accordance with payment Item 2.5: Transport of Special Items.

PA 2.23 ADDITIONAL ITEMS

Where additional Items are specified by the Engineer and rates are not included in the Schedule of Rates, the cost thereof shall be recovered on the basis of proven cost with a percentage mark up of 12% on the net price (excluding VAT).

Payment shall be made only for material used and shall be calculated for each completed borehole. No claim for extra payment will be entertained by reason of remoteness. The Contractor shall purchase specified materials on the basis of competitive quotes as approved by the Engineer.

The ‘proven cost’ shall then be approved by the Engineer on the following basis:

a. Materials .................................................. .............. Unit : TBS
   Original Invoices and receipts provided by the Contractor.

b. Labour ............................................................. Unit : hr
   A day work rate with calculations based on the aggregate of the gross remuneration of the workmen and of the foremen for the time they are actually engaged on the work concerned.

PA 2.24 TESTING OF BOREHOLES

a. Yield test, constant discharge test, recovery measurement & Travelling
   ................................................................. Unit: No

   The rate per borehole will include:

   (i) Setup, test run, installation, calibration, of equipment

   The rate shall cover all cost for setup, “dummy run, “installation and calibration of equipment for each test.

   (ii) Travelling relocating testing equipment

   The rate shall cover all cost incurring for travelling and moving plant between boreholes for testing of boreholes.

   (iii) Sequential step – draw – down tests of 110 minutes duration

   The rate will cover the cost for executing all necessary processes for each step separately.

   (iv) Recovery measurement to 80% of static water level

   The rate shall cover the cost for all proceedings during the period at an hourly
rate.

(v) Constant discharge test

The rates cover the cost to perform the test and will be measured separately for (a) Blow yield and (b) time.

b. Sampling of water and test if potable

The rate shall cover the cost for taking a water sample per borehole according to the minimum requirements, the correct transporting of the sample to a commercial laboratory and the subsequent tests to determine whether the water is acceptable for long terms human consumption.

PA 2.27 HANDPUMP INSTALLATION ................................................................. Unit: No
The rate shall cover the cost for supply, deliver, install and test of the hand pump with the Concrete base as shown in the drawing. The hand pump will be mono Orbit type or similar Set complete with pump element, gear drive, columns, shafts for each borehole as Specified.

PA 3.1 Elevated tank ................................................................. Unit: No
The rate shall cover the cost for supply, deliver, install and test the JOJO Tank with the steel stand of 6m high as detail by the supplier.

PA 3.2 WINDMILLS SPECIFICATION
Specifications were obtained from the Southern Cross Industries windmill design manual.

1. Windmill Sizes

Wind pumps are sized by the diameters of the rotor or fan, not by the height of the tower. They are mounted to the sizes are listed below:

a. 2.5m diameter wheel
b. 3.0m diameter wheel
c. 3.7m diameter wheel
d. 4.3m diameter wheel
e. 6.3m diameter wheel
f. 7.5m diameter wheel

2. Wind pump Gearboxes

Two types of gearboxes, differences are that climax windmill uses ball bearings and the Southern Cross Babbitt or white metal.

3. Pumps

Pumps are manufactured of brass and are installed at the bottom of the source. The sizes and the specifications are listed below:
4. Pipes

Water pumped from the bottom of the borehole is conveyed to the surface via steel pipes in three meter lengths, which are held together by couplings. The pump rods which connect the pump to the windmill operate inside the steel pipes. The steel pipes are screwed into the brass pump. The steel pipes are supported to stop them from falling down the borehole by base plates or clamps. The base plates are installed at the surface of the borehole which clamp on the steel pipes.

Two types of gearboxes, differences are that climax windmill uses ball

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PA 3.2 Installation of windmills

The rate shall cover the cost for supply, deliver and assembly of a complete windmill, Comprising of gearbox, wheel, tail, chasse ladder, brake band, piping, tower cap, 3 post Stub tower and 44mm dia, cylinder pump. (turbex or similar approved).
C3.5. MINIMUM OCCUPATIONAL HEALTH & SAFETY REQUIREMENTS

I.................................................................................................................. in my capacity as ................................................................................................ representing .......................................................................................................................... (contractor)

hereby agree in terms of Section 37(2) of the Occupational Health and Safety Act 1993 (Act 85 of 1993) that I am an employer in own right and hereby take upon myself the duty to ensure that myself and my employees will adhere to the requirements as set out below and all other requirements as set out in the Occupational Health and Safety Act 1993 and its regulations.

1. INTRODUCTION

The Municipality requires a high standard of safe work performance from all employees and expects that the standard be maintained by the contractor within the Municipality’s jurisdictional area or on its premises.

Irrespective of human considerations, the maintaining of these health and safety rules shall be the execution of the prescribed legal requirements. These rules are not to hinder the contractor in rendering services or indemnify the contractor from any legal responsibility to ensure healthy and safe work circumstances.

The Municipality shall assist the contractor in any practical considerations to accommodate the healthy and safe execution of work and therefore require co-operation in the execution of these safety rules.

2. LOCK OUT PROCEDURE

When power or air driven machines or equipment, electrical apparatus or pipe lines are examined, repaired, adjusted, cleaned, lubricated or serviced in any other way than normal servicing, then all isolating switches, -levers, valves or appliances must be put in the “off” or “closed” position and locked.

Should more than one team work on a machine, then each person in control of a team, must put a separate lock on the switch, lever, valve or appliance.

3. CRANES, VEHICLES AND HOISTING

For each crane or hoisting equipment used, the contractor must submit a valid and recent test certificate or other form of the last examination of the machine or equipment, to the Municipality.

Only trained personnel with written permission and where determined by Law, with a valid driver’s license, may be allowed to operate any electrical diesel or petrol driver
overhead crane, hydraulic or electrical hoisting equipment, self driven forklift, tractor
or any other crane
or vehicle. No employee of the contractor may perform any overhead work or work on
an overhead crane or hoisting equipment or work near cranes or crane rail, before:

• An agreement was concluded with the Municipality.

• Approval has been obtained from the Municipality to perform the work.

• All applicable danger – and warning symbolic signs are put into position, or
exemption, if applied for, is in operation

4. MACHINE VALANCES, PROTECTION AND FENCING

No machine valances, protection or fencing may be removed from machines,
manholes, etc without the written permission of Municipality if applicable exemption
procedures were not appropriated.

5. SCAFFOLD, LADDERS, TOOLS AND EQUIPMENT

No equipment or appliance belonging to Municipality may be used without written
permission from the Municipality.

Unless prior arranged, contractors must bring sufficient tools and equipment to the site
to finish the contract, including offices and storerooms. The mentioned equipment
remains the responsibility of the contractor with respect to loss, damage and theft.

6. EXCAVATIONS

Before any excavations commence, the contractor must obtain information with regard to all
existing services. The Municipality does not guarantee the accurateness of the information
supplied.

All excavations and obstructions in floor, tar and dirt surfaces must be fenced effectively and
safeguarded between sundown and sunup with a sufficient amount of red/yellow warning
lights and symbolic signs.

The surrounding area must be kept clean, safe and tidy during excavation. Excess material
may not obstruct unnecessarily

If any property is in danger during excavation, it must be supported and the proposed support
work must be submitted to the Department of Labour (OHS) and Municipality for approval.

Written permission must be obtained from Municipality to grant admittance to restricted
areas as well as areas where dangerous or poisonous gases are present
That all excavations be done in accordance with the stipulations of the Occupational Health and Safety Act

7. FIRST AID

The contractor must provide and maintain a first aid box equipped according to legal requirement where more than (5) five persons are employed. The first aid box must be in the care of a person with a competency certificate from one of the following organizations

- SA Red Cross Association
- St John's Ambulance
- SA First Aid League; or
- A person or organization approved by the Chief inspector for this purpose

A visible notice must be put up on any work premises with the name of the person responsible for first aid. In an emergency the Municipality's Ambulance / Fire Department or emergency services may be contacted at (0178013400).

8. FLAMMABLE LIQUIDS

The contractor shall be held responsible for the necessary precautionary fire prevention measures. No smoking signs must be put up where applicable. The contractor's employees must be informed of Municipality's fire prevention measures and evacuation procedures.

9. INCIDENT REPORTING

All incidents referred to in Section 24 of the Occupational Health and Safety Act and or other incidents shall be reported, by the contractor, to the Department of Labour, as well as to the Municipality

The Municipality will obtain an interest in the issue of any formal inquiry conducted in terms of the Occupational Health and Safety Act in any incident involving the contractor and/or his employees and/or his subcontractors.

The contractor undertakes to report to the Municipality anything deemed to be unhealthy and/or unsafe and that he undertakes to verse his employees and/or subcontractors in this regard

The contractor undertakes to immediately report all injuries on duty sustained by the employees of the contractor to the Municipal Contract manager.
10. LIAISON AND SUPERVISION

The contractor hereby undertakes to report on a regular basis, not exceeding a period of one (1) week in the instances of long term contracts, to the Municipal Contract Manager regarding any hazards or incidents that may be identified or encountered during the performance of the principal contract.

11. SERVICE INTERRUPTION

11.1 Should any work done by the contractor cause a possible interruption, written permission must be obtained from the Municipality, before such work commences. The contractor may not switch on or off any service without written permission from the Municipality.

12. LIQUOR, DRUGS, DANGEROUS WEAPONS AND FIREARMS

The contractor shall ensure that he and his employees comply with the official policy of the Municipality at all times.

13. GENERAL CONDITION

Notwithstanding anything to the contrary in this agreement, it is hereby specifically determined that the Contractor shall have acquainted himself and be conversant with the contents of all statutory provisions applicable to the health and safety of workers and other persons on the site including the execution of the work, and in particular the conditions contained in the Occupational Health and Safety Act, 1993 (Act 85/1993), and the regulations promulgated in terms thereof, and shall comply therewith meticulously and in all aspects and/or take care that it is complied with.

14. CONTRACTOR IDENTIFICATION BOARD

Will not be required
PART C4 : SITE INFORMATION

C4.1 SCOPE

The project entails the maintenance of hand pump boreholes, windmills, electrical boreholes, elevated tanks and borehole testing where required.

C4.2 SUBSOIL INVESTIGATIONS, BOREHOLE RECORDS AND TEST RESULTS

The contractor will be required to conduct a maintenance need assessment for each non-functional borehole in liaison with the local municipality, as part of the contract. A complete report with needs and costing shall be submitted to the Employer for approval prior to work commencing.

C4.3 REPORTS OBTAINED BY THE EMPLOYER CONCERNING THE PHYSICAL CONDITIONS WITHIN THE SITE OR ITS SURROUNDINGS INCLUDING MAPPING, HYDRO-GRAPHIC DATA, AND HYDROLOGICAL INFORMATION

There are no credible reports or data available for the existing infrastructure. The locality of the boreholes which are non-functional will be done with the assistance of the local municipality where GPS coordinates are not available.

C4.4 REFERENCES TO PUBLICLY AVAILABLE INFORMATION ABOUT THE SITE AND ITS SURROUNDINGS SUCH AS PUBLISHED PAPERS AND INTERPRETATIONS OF THE GEOTECHNICAL INVESTIGATION

No information available at tender stage

C4.5 INFORMATION ABOUT PIPED AND OTHER SERVICES BELOW THE SURFACE OF THE SITE FOR CONTRACTS INVOLVING GROUND WORKS, AND ABOUT HOOK-UP AND BOUNDARY DETAILS FOR CONTRACTS WITH PLANT INTERFACES, IN ADDITION TO ANYTHING ABOUT THE PHYSICAL SITE WHICH IMPACTS UPON THE CONTRACT

No information about services below the surface. The contractor is advised to liaise directly with the farm owners in attempt to establish existing services.

C4.6 INFORMATION ABOUT ADJACENT BUILDINGS AND STRUCTURES, AND ABOUT EXISTING BUILDINGS AND STRUCTURES ON THE SITE (RESTRICTIONS FOR HEAVY LOADS ETC.), AND

There are no buildings that could sustain any damages due to the construction works as the works are located in the rural areas.

C4.7 ATMOSPHERIC AND ENVIRONMENTAL CRITERIA

Not applicable
APPENDICES

APPENDIX A:
The applicable contract conditions shall be the General Conditions of Contract for construction works. The Contractor is to purchase the GCC 2015 from the South African Institution of Civil Engineers (SAICE)

APPENDIX B: GSDM: SUPPLY CHAIN MANAGEMENT POLICY
Policy obtainable from the Gert Sibande District Municipality's Supply Chain Management Unit upon request.
GERT SIBANDE DISTRICT MUNICIPALITY

INVITATION TO TENDER AND TENDER NOTICE

Tenders are hereby invited from experienced contractors for the maintenance, testing and equipping of boreholes in the Gert Sibande District municipality. Tenderers should have a minimum CIDB contractor grading of 2CEPE/2MEPE/3CE/3ME.

Tender documents will also be obtainable from Ms Nondumiso Tshabalala in Room 1E326 as from 17 July 2017 from the Gert Sibande District Municipality Office in Ermelo against payment of a non-refundable levy of R250.00. Only bank guaranteed cheques or cash will be accepted. Cheques shall be made payable to Gert Sibande District Municipality. Documents can be obtained during normal working hours which are 07h30 - 16h30 Mondays to Thursdays and 07h30 to 13h30 on Fridays.

Tender documents will be available on http://www.etenders.gov.za/content/advertised-tenders as from 17 July 2017.

Duly completed tenders enclosed in a sealed envelope marked “TENDER NO GSDM 02/2017: APPOINTMENT OF A SERVICE PROVIDER FOR THE MAINTENANCE, TESTING AND EQUIPPING OF BOREHOLES IN GERT SIBANDE DISTRICT MUNICIPALITY; CLOSING DATE: 01 August 2017 at 12h00” with the name of the Tenderer, shall be deposited in the tender box provided at the Gert Sibande District Municipality in Ermelo before 12h00 on the closing date. The tenders will be opened in public.

There will be no compulsory briefing session for this tender, however tenderers are advised to read and understand the tender conditions.

Technical queries may be directed to Ms Porsche Sekhoto and Procurement enquiries may be directed to Mr Lucky Mbuyane on Tel. 017 801 7000 Fax. 017 811 1207 or email records@gsibandegov.za.

All tenders will be subjected to functionality evaluation and only the tenders meeting the minimum requirements in terms of functionality will be considered for the 80/20 point system. The 80/20 point system shall apply whereby a contract will be allocated to a tenderer in accordance with the Preferential Procurement Policy Framework Act, Act No 5 of 2000 and as defined in the Conditions of Tender in the tender document, read in conjunction with the Preferential Procurement Policy of Gert Sibande District Municipality where 80 points will be allocated in respect of price and 20 points in respect of BBBEE.

Tenderers must have the necessary skills, experience and capacity to perform the required work.

The closing date and time for the tender is 01 August 2017 at 12h00.

The District Municipality is not obliged to appoint the bidder with the lowest price but will consider the bidder scoring the highest number of points in line with the set criteria. The Gert Sibande District Municipality reserves the right not to make any appointment for this tender.

Mr CA HABILE
MUNICIPAL MANAGER