KNYSNA MUNICIPALITY
REQUEST FOR QUOTATION RFQ 219/2017/18
KNYSNA AND SEDGEFIELD SWRO PLANTS – MAINTENANCE WORK

<table>
<thead>
<tr>
<th>EMPLOYER</th>
<th>EMPLOYER’S AGENT</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Knysna Municipality Logo" /></td>
<td><img src="image" alt="Royal HaskoningDHV Logo" /></td>
</tr>
</tbody>
</table>
| P O Box 21  
Knysna  
6570 | P O Box 434  
George  
6530 |

**SUMMARY FOR QUOTATION OPENING PURPOSES**
(In the event of any conflict between the Summary and that given in the Quotation, the latter shall apply)

<table>
<thead>
<tr>
<th>NAME OF BIDDER:</th>
<th>.................................................................</th>
</tr>
</thead>
</table>
| TELEPHONE NUMBER: | ..........................................................................................................
| FAX NUMBER: | ..........................................................................................................
| ADDRESS: | ..........................................................................................................
| E-MAIL: | ..........................................................................................................
| TIME FOR COMPLETION: | ................................................................. Weeks |

**QUOTATION CLOSES:** 12H00 ON 19 DECEMBER 2017
Page Intentionally Blank
## CONTACT DETAILS OF TENDERER

<table>
<thead>
<tr>
<th>Description</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knysna Municipality Supplier number</td>
<td></td>
</tr>
<tr>
<td>CSD Supplier number</td>
<td></td>
</tr>
<tr>
<td>CSD Unique Registration Reference Number</td>
<td></td>
</tr>
<tr>
<td>The name of the Tenderer</td>
<td></td>
</tr>
<tr>
<td>The name of the contact person</td>
<td></td>
</tr>
<tr>
<td>The address of the Tenderer</td>
<td></td>
</tr>
<tr>
<td>Telephone</td>
<td></td>
</tr>
<tr>
<td>Facsimile</td>
<td></td>
</tr>
<tr>
<td>E-mail</td>
<td></td>
</tr>
<tr>
<td>Address (physical)</td>
<td></td>
</tr>
<tr>
<td>Address (postal)</td>
<td></td>
</tr>
<tr>
<td>Signature</td>
<td></td>
</tr>
<tr>
<td>Date</td>
<td></td>
</tr>
</tbody>
</table>
# TABLE OF CONTENTS

SECTION Q: PROCEDURES AND RETURNABLE DOCUMENTS ............................................. 1

Q1 QUOTATION PROCEDURES - NOTICE AND INVITATION TO QUOTE ......................... 3

Q1.2 QUOTATION DATA ......................................................................................... 5

Q2 RETURNABLE DOCUMENTS ............................................................................ 6

Q2.1 LIST OF RETURNABLE DOCUMENTS ......................................................... 6

Q2.2.1 RETURNABLE SCHEDULES AND FORMS ..................................................... 6

C CONTRACT ....................................................................................................... 17

C1 AGREEMENTS AND CONTRACT DATA ......................................................... 19

C1.1 FORM OF OFFER AND ACCEPTANCE ......................................................... 19

C2 PRICING DATA ............................................................................................... 27

C2.1 PRICING INSTRUCTIONS .............................................................................. 27

C2.2 BILL OF QUANTITIES .................................................................................. 30

C3 SCOPE OF WORK ............................................................................................. 35

C3.1 DESCRIPTION OF THE WORKS ................................................................. 35

C3.1.1 EMPLOYERS OBJECTIVES .................................................................. 35

C3.1.2 SCOPE OF CONTRACT ....................................................................... 35

C3.1.3 LOCATION OF THE WORKS ................................................................. 35

C3.2 DETAILED SPECIFICATION ................................................................... 44

C3.2.1 STAFF ..................................................................................................... 44

C3.2.2 WORKING HOURS REQUIREMENTS ...................................................... 44

C3.2.3 MONITORING AND REPORTING ......................................................... 44

C3.2.4 MAINTENANCE REQUIREMENTS ......................................................... 45

C3.2.5 OBLIGATIONS OF THE EMPLOYER .................................................... 45

C3.2.6 HEALTH AND SAFETY ....................................................................... 46

C3.3 ENGINEERING ............................................................................................ 47

C3.4 FACILITIES .................................................................................................. 48

C3.4.1 PLANT AND MATERIALS SUPPLIED BY THE EMPLOYER ................. 48

C3.4.2 EQUIPMENT SUPPLIED BY THE EMPLOYER ..................................... 48

C3.4.3 SITE ESTABLISHMENT ....................................................................... 48

C3.4.4 SITE USAGE .......................................................................................... 48

C3.5 MANAGEMENT ............................................................................................. 50

C3.5.1 MANAGEMENT OF THE WORKS ......................................................... 50

C3.5.2 HEALTH AND SAFETY ....................................................................... 51

C3.6 SPECIFICATIONS ......................................................................................... 52

C3.6.1 LIST OF PROJECT SPECIFICATIONS .................................................... 52

C3.6.2 VARIATIONS AND ADDITIONS TO THE STANDARDIZED SPECIFICATIONS FOR THIS CONTRACT, AND PARTICULAR SPECIFICATIONS .......................................................... 52

C.4 SITE INFORMATION ....................................................................................... 53

C.4.1 LOCATION OF THE WORKS ................................................................... 53

C.4.2 ACCESS TO THE WORKS ....................................................................... 53

C.4.3 CLIMATE .................................................................................................. 53

C.4.4 GEOTECHNICAL INFORMATION ............................................................... 53

C5 ANNEXURES .................................................................................................. 54

C.5.1 DRAWINGS ............................................................................................... 54
Page intentionally left blank
KNYSNA MUNICIPALITY

RFQ 219/2017_18

KNYSNA AND SEDGEFIELD SWRO PLANTS - MAINTENANCE WORK

SECTION Q: PROCEDURES AND RETURNABLE DOCUMENTS

Q1: QUOTE PROCEDURES
Q2: RETURNABLE DOCUMENTS
**Q1 QUOTATION PROCEDURES - NOTICE AND INVITATION TO QUOTE**

(For publication on the Knysna Municipality website & notice boards)

<table>
<thead>
<tr>
<th>ADVERTISEMENT DATE:</th>
<th>11 December 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>RFQ NUMBER:</td>
<td>RFQ 219/2017/18</td>
</tr>
<tr>
<td>DESCRIPTION OF GOODS/SERVICES:</td>
<td>KNYSNA AND SEDGEFIELD SWRO PLANTS - MAINTENANCE WORK</td>
</tr>
</tbody>
</table>
| RFQ DOCUMENTS ARE OBTAINABLE FROM: | Supply Chain Management Section  
Clyde Street  
Knysna  
or  
| CLOSING DATE: | 19 December 2017 |
| TIME: | 12:00 |
| SUBMISSIONS: | Sealed quotations clearly marked, “RFQ 219/2017/18: KNYSNA AND SEDGEFIELD SWRO PLANTS - MAINTENANCE WORK”, can be submitted:  By hand to: Supply Chain Management Section  
Knysna Municipality  
Clyde Street  
Knysna  
By fax to: 086 650 1415  
By email to: procurement@knysna.gov.za  
Contact person: Sandra Fourie (Tel: 044 302 6328)  
Electronic bid documents must reach the Supply Chain Management Section before the closing time. |
| COMPULSORY REQUIREMENTS: | Minimum functionality score of 13, and MBD 6.1 and MDB 4 forms must be completed. |
| TECHNICAL ENQUIRIES: | Department: Technical Services  
Contact Person: Rhoydon Parry  
Email: rparry@knysna.gov.za  
Tel: 044 302 6300  
Employer'sAgent: Royal HaskoningDHV  
Contact Person: Keith Turner  
Email: keith.turner@rhdhv.com  
Tel: 082 491 1562 |

The following conditions will apply:
- Price(s) quoted must be firm and must be inclusive of VAT when applicable.
- Attached MDB6.1 must be completed to qualify for B-BBEE Status Level of Contribution.
- Tax Clearance Certificate or Sufficient Evidence that Tax matters are raised with SARS must be attached.
- An original or certified copy of B-BBEE Certificate must be attached to qualify for points.
- Price must include all related expenses, i.e. transport, accommodation etc.
- Attached MBD 4 document must be completed.
- Status of Municipal accounts must be submitted (attached MDB 15 form).
- More than 1 supplier could be appointed.
- Invoices must be submitted to jcordier@knysnagov.za and will be paid within 30 days of delivering the service.
- Only an Official order and appointment letter will bind the Council.

**MUNICIPAL MANAGER**  
KAM CHETTY

*The Knysna Municipality is implementing an online purchasing management system. This system allows vendors to register online, receive automated alerts via e-mail and will eventually allow vendors to submit bids electronically. All opportunities >R30 000 (RFQ’s and Tenders) are processed through our online system. To register go to [www.knysna.gov.za](http://www.knysna.gov.za) – Council adverts – Supply Chain Management – SCM e-mail list – complete info and click on submit form. Enquiries may be directed to: nmlisana@knysna.gov.za*
Q1.2 QUOTATION DATA

Q1.2.1 EVALUATION

All bids will be evaluated by a panel on the basis of Functionality and Price using the 80/20 system.

The points scored for Functionality will not be carried over to Price, but will be used as a functionality gateway to reach the next stage of evaluation.

The final evaluation will be done in terms of the Council’s Preferential Procurement Policy which states 80 points for Price and the remaining 20 points for B-BBEE level.

Point’s allocation for Functionality

1. Company experience on similar works with references to previous experiences. (10 points)
2. List of contactable references of similar municipal services previously provided. (5 points)
3. List of proposed staff, listing their previous experience (5 points)

EVALUATION SCHEDULE

NOTE: Your pricing schedule will not be considered if this table is not completed, as well as the schedules of A. experience and B. proposed staff.

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Scoring criteria</th>
<th>Points Claimed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provide company profile, history, years of experience.</td>
<td>Years (points)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1 – 2 (3 points)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3 – 4 (5 points)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5 + (10 points)</td>
<td></td>
</tr>
<tr>
<td>Provide a list of contactable references of similar municipal services</td>
<td>1 ref (1)</td>
<td></td>
</tr>
<tr>
<td>previously provided</td>
<td>2 refs (2)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3 refs (3)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4 refs (4)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5 refs (5)</td>
<td></td>
</tr>
<tr>
<td>Provide a list of proposed staff, listing their previous experience</td>
<td>1 supervisor (1)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>+1 fitter (2)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>+1 electrician (3)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>+1 instrument tech (4)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>+1 technician (5)</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>20</td>
<td></td>
</tr>
</tbody>
</table>

Tenderers must achieve a **minimum of 13 points** in order to qualify for further evaluation on price and preference points
Q2 RETURNABLE DOCUMENTS

Q2.1 LIST OF RETURNABLE DOCUMENTS

The following is a list of the Returnable Documents:

1. All of the forms and schedules listed in Q2.2.1 below
2. All of the forms and agreements in the Contract data in C1.2
3. Pricing Data in C2.2: Bill of Quantities

Q2.2.1 RETURNABLE SCHEDULES AND FORMS

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Experience of Bidder</td>
</tr>
<tr>
<td>B</td>
<td>List of proposed staff</td>
</tr>
<tr>
<td>MD4</td>
<td>Declaration of Interest</td>
</tr>
<tr>
<td>MDB 6.1</td>
<td>Preferential Procurement Schedule and Affidavit</td>
</tr>
<tr>
<td>MDB 15</td>
<td>Certificate of Payment of Municipal Services</td>
</tr>
</tbody>
</table>

The Bidder is required to complete all schedules and forms listed above to the best of his ability as the evaluation of tenders and the eventual contract will be based on the information provided by the Bidder. Failure of a Bidder to complete the schedules and forms to the satisfaction of the Employer will prejudice the tender and may lead to rejection on the grounds that the tender is not responsive.
A. Experience of Bidder

The following is a statement of work of similar nature in the past 5 years successfully executed by myself/ourselves:

<table>
<thead>
<tr>
<th>Either, Employer: Contact Person and Telephone Number</th>
<th>Or: Other reference: Contact Person and Telephone Number</th>
<th>Nature of Work</th>
<th>Value of Work (Incl VAT)</th>
<th>Completion Date or Expected Completion Date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

SIGNATURE: ........................................................................................................ DATE: ........................................

(of person authorised to sign on behalf of the Bidder)
## B. List of Proposed Staff

The following is a list of our proposed staff:

<table>
<thead>
<tr>
<th>Name</th>
<th>Highest Qualification</th>
<th>Relevant Experience</th>
</tr>
</thead>
<tbody>
<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>
<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>

SIGNATURE: ..............................................………...……...

DATE: ................................

(of person authorised to sign on behalf of the Bidder)
## MBD 4
### DECLARATION OF INTEREST

1. **No bid will be accepted from persons in the service of the state¹.**

2. **Any person, having a kinship with persons in the service of the state, including a blood relationship, may make an offer or offers in terms of this invitation to bid. In view of possible allegations of favouritism, should the resulting bid, or part thereof, be awarded to persons connected with or related to persons in service of the state, it is required that the bidder or their authorised representative declare their position in relation to the evaluating/adjudicating authority.**

3. **In order to give effect to the above, the following questionnaire must be completed and submitted with the bid.**

   3.1 Full Name of bidder or his or her representative:

   3.2 Identity Number:

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

   3.4 Company Registration Number:

   3.5 Tax Reference Number:

   3.6 VAT Registration Number:

   3.7 The names of all directors / trustees / shareholders members, their individual identity numbers and state employee numbers must be indicated in paragraph 4 below.

   3.8 **Are you presently in the service of the state?**
   
   3.8.1 If yes, furnish particulars:

   3.9 **Have you been in the service of the state for the past twelve months?**
   
   3.9.1 If yes, furnish particulars:

   3.10 **Do you have any relationship (family, friend, other) with persons in the service of the state and who may be involved the evaluation and or adjudication of this bid?**
   
   3.10.1 If yes, furnish particulars:

   3.11 **Are you, aware of any relationship (family, friend, other) between any other bidder and any persons in the service of the state who may be involved with the evaluation and or adjudication of this bid**
   
   3.11.1 If yes, furnish particulars:

   3.12 **Are any of the company's directors, trustees, managers, principle shareholders or stakeholders in service of the state?**
   
   3.12.1 If yes, furnish particulars:
3.13 Are any spouse, child or parent of the company’s directors, trustees, managers, principle shareholders or stakeholders in service of the state?  YES  NO

<table>
<thead>
<tr>
<th>3.13.1</th>
<th>If yes, furnish particulars:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3.14 Do you or any of the directors, trustees, managers, principle shareholders, or stakeholders of this company have any interest in any other related companies or business whether or not they are bidding for this contract  YES  NO

<table>
<thead>
<tr>
<th>3.14.1</th>
<th>If yes, furnish particulars:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
MBD 6.1
PREFERENCE POINTS CLAIM FORM IN TERMS OF THE PREFERENTIAL PROCUREMENT REGULATIONS 2017

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

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

1. GENERAL CONDITIONS
1.1 The following preference point systems are applicable to all bids:
   - the 80/20 system for requirements with a Rand value of up to R50 000 000 (all applicable taxes included); and
   - the 90/10 system for requirements with a Rand value above R50 000 000 (all applicable taxes included).
1.2 The value of this bid is estimated not to exceed R200 000 (all applicable taxes included) and therefore the 80/20 system shall be applicable.
1.3 Preference points for this bid shall be awarded for:
   (a) Price; and
   (b) B-BBEE Status Level of Contribution.
1.3.1 The maximum points for this bid are allocated as follows:

<table>
<thead>
<tr>
<th>POINTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.3.1.1 Price</td>
</tr>
<tr>
<td>1.3.1.2 B-BBEE status level of contribution</td>
</tr>
<tr>
<td>Total points for Price and B-BBEE must not exceed</td>
</tr>
</tbody>
</table>

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

2. DEFINITIONS
2.1 “all applicable taxes” includes value-added tax, pay as you earn, income tax, unemployment insurance fund contributions and skills development levies;
2.2 “B-BBEE” means broad-based black economic empowerment as defined in section 1 of the Broad-Based Black Economic Empowerment Act;
2.3 “B-BBEE status level of contributor” means the B-BBEE status received by a measured entity based on its overall performance using the relevant scorecard contained in the Codes of Good Practice on Black Economic Empowerment, issued in terms of section 9(1) of the Broad-Based Black Economic Empowerment Act;
2.4 “bid” means a written offer in a prescribed or stipulated form in response to an invitation by an organ of state for the provision of services, works or goods, through price quotations, advertised competitive bidding processes or proposals;
2.5 “Broad-Based Black Economic Empowerment Act” means the Broad-Based Black Economic Empowerment Act, 2003 (Act No. 53 of 2003);
2.6 “comparative price” means the price after the factors of a non-firm price and all unconditional discounts that can be utilized have been taken into consideration;
2.7 “consortium or joint venture” means an association of persons for the purpose of combining their expertise, property, capital, efforts, skill and knowledge in an activity for the execution of a contract;

2.8 “contract” means the agreement that results from the acceptance of a bid by an organ of state;

2.9 “EME” means any enterprise with an annual total revenue of R5 million or less

2.10 “Firm price” means the price that is only subject to adjustments in accordance with the actual increase or decrease resulting from the change, imposition, or abolition of customs or excise duty and any other duty, levy, or tax, which, in terms of the law or regulation, is binding on the contractor and demonstrably has an influence on the price of any supplies, or the rendering costs of any service, for the execution of the contract;

2.11 “functionality” means the measurement according to predetermined norms, as set out in the bid documents, of a service or commodity that is designed to be practical and useful, working or operating, taking into account, among other factors, the quality, reliability, viability and durability of a service and the technical capacity and ability of a bidder;

2.12 “non-firm prices” means all prices other than “firm” prices;

2.13 “person” includes a juristic person;

2.14 “rand value” means the total estimated value of a contract in South African currency, calculated at the time of bid invitations, and includes all applicable taxes and excise duties;

2.15 “total revenue” bears the same meaning assigned to this expression 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 and promulgated in the Government Gazette on 9 February 2007;

2.16 “trust” means the arrangement through which the property of one person is made over or bequeathed to a trustee to administer such property for the benefit of another person; and

2.17 “trustee” means any person, including the founder of a trust, to whom property is bequeathed in order for such property to be administered for the benefit of another person.

3. ADJUDICATION USING A POINT SYSTEM

3.1 The bidder obtaining the highest number of total points will be awarded the contract.

3.2 Preference points shall be calculated after prices have been brought to a comparative basis taking into account all factors of non-firm prices and all unconditional discounts;

3.3 Points scored must be rounded off to the nearest 2 decimal places.

3.4 In the event that two or more bids have scored equal total points, the successful bid must be the one scoring the highest number of preference points for B-BBEE.

3.5 However, when functionality is part of the evaluation process and two or more bids have scored equal points including equal preference points for B-BBEE, the successful bid must be the one scoring the highest score for functionality.

3.6 Should two or more bids be equal in all respects, the award shall be decided by the drawing of lots.

4. POINTS AWARDED FOR PRICE

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

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

\[
Ps = 80 \left( 1 - \frac{Pt - P_{min}}{P_{min}} \right) \quad \text{or} \quad Ps = 90 \left( 1 - \frac{Pt - P_{min}}{P_{min}} \right)
\]

Where

- \( Ps \) = Points scored for comparative price of bid under consideration
- \( Pt \) = Comparative price of bid under consideration
- \( P_{min} \) = Comparative price of lowest acceptable bid
5. **POINTS AWARDED FOR B-BBEE STATUS LEVEL OF CONTRIBUTION**

5.1 In terms of Regulation 5 (2) and 6 (2) of the Preferential Procurement Regulations, preference points must be awarded to a bidder for attaining the B-BBEE status level of contribution in accordance with the table below:

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

5.2 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.

5.3 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.

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

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

5.6 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.

6. **BID DECLARATION**

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

6.1.2 **B-BBEE STATUS LEVEL OF CONTRIBUTION CLAIMED IN TERMS OF PARAGRAPHS 1.3.1.2 AND 5.1**

<table>
<thead>
<tr>
<th>6.1.2.1  B-BBEE Status Level of Contribution as reflected on the B-BBEE Certificate</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.1.2.2 Points claimed in respect of Level of Contribution (maximum of 10 or 20 points)</td>
</tr>
</tbody>
</table>

Points claimed in respect of paragraph 6.1 must be in accordance with the table reflected in paragraph 5.1 and must be substantiated by means of a B-BBEE certificate issued by a Verification Agency accredited by SANAS or a Registered Auditor approved by IRBA or an Accounting Officer as contemplated in the CCA.
7. SUB-CONTRACTING

<table>
<thead>
<tr>
<th>Question</th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.1. Will any portion of the contract be sub-contracted? (Tick applicable box)</td>
<td>YES</td>
<td>NO</td>
</tr>
<tr>
<td>7.1.1. If yes, indicate:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.1.1.1. what percentage of the contract will be subcontracted?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.1.1.2. the name of the sub-contractor?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.1.1.3. the B-BBEE status level of the sub-contractor?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.1.1.4. whether the sub-contractor is an EME? (Tick applicable box)</td>
<td>YES</td>
<td>NO</td>
</tr>
</tbody>
</table>

8. DECLARATION WITH REGARD TO COMPANY/FIRM

<table>
<thead>
<tr>
<th>Section</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.1 Name of Company / Firm</td>
<td></td>
</tr>
<tr>
<td>8.2 VAT Registration number</td>
<td></td>
</tr>
<tr>
<td>8.3 Company Registration number</td>
<td></td>
</tr>
<tr>
<td>8.4 Type of Company / Firm (Tick Applicable Box)</td>
<td>Partnership/Joint Venture / Consortium, One person business/sole propriety, Close corporation, Company, (Pty) Limited</td>
</tr>
<tr>
<td>8.5 Describe Principal Business Activities</td>
<td></td>
</tr>
<tr>
<td>8.6 Company Classification (Tick Applicable Box)</td>
<td>Manufacturer, Supplier, Professional Service Provider, Other service providers, eg transporter</td>
</tr>
<tr>
<td>8.7 TOTAL NUMBER OF YEARS THE ENTERPRISE HAS BEEN IN BUSINESS</td>
<td></td>
</tr>
</tbody>
</table>
9. DECLARATION

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

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

<table>
<thead>
<tr>
<th>NAME OF BIDDER</th>
<th>DATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>SIGNATURE</td>
<td></td>
</tr>
<tr>
<td>WITNESS 1</td>
<td>WITNESS 2</td>
</tr>
<tr>
<td>WITNESS 1</td>
<td></td>
</tr>
<tr>
<td>DATE</td>
<td>DATE</td>
</tr>
</tbody>
</table>
# MBD 15

Certificate for Payment of Municipal Services

<table>
<thead>
<tr>
<th>NAME OF THE BIDDER:</th>
<th></th>
</tr>
</thead>
</table>

**FURTHER DETAILS OF THE BIDDER’S; Director / Shareholder / Partners, etc:**

<table>
<thead>
<tr>
<th>Director / Shareholder / partner</th>
<th>Physical address of the Business</th>
<th>Municipal Account number(s)</th>
<th>Physical residential address of the Director / shareholder / partner</th>
<th>Municipal Account number(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**NB:** Please attach certified copy (ies) of ID document(s)

I, ________________________________, the undersigned, certify that the information furnished on this declaration form is correct and that I / we have no undisputed commitments for municipal services towards a municipality in respect of which payment is overdue for more than 90 days.

If the value of the transaction is expected to exceed R10 million (VAT included) I certify that the bidder has no undisputed commitments for municipal services towards a Municipality in respect of which payment is overdue for more than 30 days;

**THUS DONE AND SIGNED** for and on behalf of the Bidder, at ________________________________, on the ________________________________ day of ________________________________ 20______.

Number of sheets appended by the tenderer to this schedule (If nil, enter NIL)

<table>
<thead>
<tr>
<th>SIGNATURE:</th>
<th>NAME (PRINT):</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CAPACITY:</th>
<th>NAME OF FIRM:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
KNYSNA MUNICIPALITY

RFQ. 219/2017/18

KNYSNA AND SEDGEFIELD SWRO PLANTS - MAINTENANCE WORK

C  CONTRACT

C1  Agreement and Contract Data
C2  Pricing Data
C3  Scope of Works
C4  Site Information
C5  Annexures
A. OFFER

The Employer, identified in the Acceptance signature block, has solicited offers to enter into a contract for the KNYSNA AND SEDGEFIELD SWRO PLANTS – MAINTENANCE WORK.

The Bidder, identified in the offer signature block below, has examined the documents listed in the tender data and addenda thereto as listed in the returnable schedules, and by submitting this offer has accepted the conditions of tender.

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

The offered total of the prices inclusive of Value Added Tax is:

R................................... (In words...........................................................................................)

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

Signature: (of person authorised to sign the tender):........................................................................

Name: (of signatory in capitals): .............................................................................................

Capacity: (of Signatory): ........................................................................................................

Name of Bidder: (organisation): .............................................................................................

Address:..................................................................................................................................

Telephone number: .................................. Fax number: ..................................................

Witness:

Signature: ..........................................................

Name: (in capitals): .............................................................................................

Date: ..............................................
B. ACCEPTANCE

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

The terms of the contract are contained in
Part 1 Agreement, and Contract Data, (which include this Agreement),
Part 2 Pricing Data,
Part 3 Scope of Work,
Part 4 Site Information,
and drawings and documents or parts thereof, which may be incorporated by reference into Parts 1 to 4 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 Bidder and the Employer during this process of offer and acceptance, are contained in the schedule of deviations attached to and forming part of this Agreement. No amendments to or deviations from said documents are valid unless contained in this schedule, which must be duly signed by the authorised representatives of both parties.

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

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

Signature: ...........................................................................................................

Name: (in capitals) .....................................................................................................

Capacity: ...................................................................................................................

Name of Employer: (organisation) ..................................................................................

Address: ...................................................................................................................

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

Witness:
Signature: .............................................................................................................

Name: (in capitals): .......................................................... Date: .................................
C. SCHEDULE OF DEVIATIONS

Notes:
1. The extent of deviations from the tender documents issued by the Employer prior to the tender closing date is limited to those permitted in terms of the Tender Data and the Conditions of Tender,
2. A Bidder’s covering letter will not necessarily be included in the final contract document. Should any matter in such letter, which constitutes a deviation as aforesaid become the subject of agreements reached during the process of offer and acceptance, the outcome of such agreement shall be recorded here,
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: ……………………………………………………………………………………………………………………………………………
   ……………………………………………………………………………………………………………………………………………

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

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

Signature: 
Name:  
Capacity: 
Bidder (name and address of organisation): 
Witness: 

Signature: 
Name:  
Capacity: 
Bidder (name and address of organisation): 
Witness: 

FOR THE EMPLOYER

Signature: 
Name:  
Capacity: 
Bidder (name and address of organisation): 
Witness: 

Signature: 
Name:  
Date:  

C1.2 CONTRACT DATA

C1.2.1 PREAMBLE

The Conditions of Contract Data comprises of two parts

The first part is the "General Conditions", which shall be the "Conditions of Contract for Design, Build and Operate Projects" First Edition, 2008 published by the Fédération Internationale des Ingénieurs-Conseils (FIDIC).

The second part is the "Particular Conditions" which include amendments and additions to the General Conditions of Contract and which also include Contract Data provided by the Employer and Contract Data provided by the Contractor.

C1.2.2 GENERAL CONDITIONS OF CONTRACT

The General Conditions of Contract is a copyrighted publication and shall be purchased separately at each contracting party’s own cost.

This publication is available for purchase from:

Consulting Engineers South Africa
P O Box 68482
BRYANSTON 2021
Tel: +27 (0) 11 463 2022
Fax: +27 (0) 11 463 7383
E-mail: general@cesa.co.za
Website: www.cesa.co.za

or from

FIDIC Secretariat
P.O. Box 86
CH-1000 Lausanne 12
Switzerland
Facsimile: +41 21 653 5432
Telephone: +41 21 654 4411
E-mail: fidic@pobox.com
Website: http://www.fidic.org
### PARTICULAR CONDITIONS OF CONTRACT

#### Particular Conditions Part A1: Contract Data provided by the Employer

<table>
<thead>
<tr>
<th>Sub-Clause</th>
<th>Data to be given</th>
<th>Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1.32</td>
<td>Employer’s name and address:</td>
<td>Knysna Municipality P O Box 21 KNYSNA 6570</td>
</tr>
<tr>
<td>1.1.35</td>
<td>Employer’s Representative’s name and address:</td>
<td>Royal HaskoningDHV (Pty) Limited PO Box 1480 KNYSNA 6570</td>
</tr>
<tr>
<td>1.3</td>
<td>Agreed methods of electronic transmission:</td>
<td>Email or Facsimile (with proof of transmission)</td>
</tr>
<tr>
<td>1.3</td>
<td>Address of Employer for communications:</td>
<td>Knysna Municipality P O Box 21 KNYSNA 6570</td>
</tr>
<tr>
<td>1.3</td>
<td>Address of Employer’s Representative for communications:</td>
<td>Royal HaskoningDHV (Pty) Limited PO Box 1480 KNYSNA 6570</td>
</tr>
<tr>
<td>1.4</td>
<td>Contract shall be governed by the law of:</td>
<td>South Africa</td>
</tr>
<tr>
<td>2.1</td>
<td>After receiving the Letter of Acceptance, the Contractor shall be given right of access to all or part of the Site within:</td>
<td>1 day (refer to Employers requirements)</td>
</tr>
<tr>
<td>5.1</td>
<td>Period for notification of errors, faults and other defects is:</td>
<td>7 days</td>
</tr>
<tr>
<td>5.2</td>
<td>Contractor’s Documents requiring approval:</td>
<td>Unplanned expenditure as outlined in the Employers requirements.</td>
</tr>
<tr>
<td>6.5</td>
<td>Normal working hours on the Site:</td>
<td>As required with 24 hours availability as required by plant operation</td>
</tr>
<tr>
<td>8.2</td>
<td>Operation Service Period:</td>
<td>3 months (conditional on monthly performance review)</td>
</tr>
<tr>
<td>10.7</td>
<td>Performance damages:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Failure Damages</td>
<td>by Employer Proven Cost plus 10 %</td>
</tr>
<tr>
<td></td>
<td>Failure Damages</td>
<td>by Contractor to supply maintenance services for a period of time No payment of monthly maintenance fee over the period</td>
</tr>
<tr>
<td>10.7</td>
<td>Rights of Employer if failure continues for more than 14 days:</td>
<td>As per Clause 10.7 (b) - Failure period shall be 14 days, and Notice period in sub-clause 10.7 (b) (ii) shall be 7 days.</td>
</tr>
<tr>
<td>10.7</td>
<td>Minimum production outputs required (give details):</td>
<td>Refer to requirements in performance specification.</td>
</tr>
<tr>
<td>13.5</td>
<td>Percentage rate to be applied to Provisional Sums:</td>
<td>10% (for items not in pricing schedule)</td>
</tr>
</tbody>
</table>
### Particular Conditions Part A2: Contract Data provided by the Contractor

<table>
<thead>
<tr>
<th>Sub-Clause</th>
<th>Data to be given</th>
<th>Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.3</td>
<td>Address of Contractor for communications:</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>
C1.2.3.3 Particular Conditions Part B: Special Provisions

Clause 1 General Provisions

AT THE END OF SUB-CLAUSE 1.1.36 INSERT:

“Employer's Requirements’ also means ‘Scope of Work’ and it also means ‘Specifications’.

Sub-Clause 1.6 Contract Agreement

DELETE THE WORDS "unless they agree otherwise" FROM THE TEXT.

Clause 3 The Employer’s Representative

Sub-Clause 3.1 Employer’s Representative’s Duties and Authority

AT THE END OF THIS SUB-CLAUSE, INSERT:

“Employer's Representative’ also means ‘Employer's Agent’ or ‘Engineer’

“The Employer's Representative shall obtain the specific approval of the Employer before taking action under the following Sub-Clauses of these Conditions:

2. Rulings, in terms of Sub-Clause 3.5.”

Clause 8 Commencement, Delays and Suspension

Sub-Clause 8.1 Commencement Date

AT THE END OF THIS SUB-CLAUSE INSERT:

“Notwithstanding anything stated to the contrary, the Commencement Date shall also comply with the requirements of Sub-Clause 2.1.”

Clause 14 Contract Price and Payment

Sub-Clause 14.1 The Contract Price

AT THE END OF THIS SUB-CLAUSE INSERT:

The Bill of Quantities forms part of the definition of the Scope of Work as stated in the pricing Instructions in Part C2 (with particular attention drawn to clauses C2.1.1 and C2.1.4).
C2 PRICING DATA

C2.1 PRICING INSTRUCTIONS

C2.1.1 GENERAL

The Bill of Quantities forms part of the Contract Documents and must be read and priced in conjunction with all the other documents comprising the Contract Documents, which include the Tender Data, Contract Data, the Scope of Work (including the Project and Particular Specification) and the Drawings.

C2.1.2 DESCRIPTION OF ITEMS IN THE SCHEDULE

The Bill of Quantities has been drawn up generally in accordance with Civil Engineering Quantities 1990 issued by the SA Institution of Civil Engineers.

The short descriptions of the items in the Bill of Quantities are for identification purposes only and the measurement and payment clause of the Standardised Specifications and the Particular Specifications, read together with the relevant clauses of the Project Specification and directives on the drawings, set out what ancillary or associated work and activities are included in the rates for the operations specified.

C2.1.3 QUANTITIES REFLECTED IN THE SCHEDULE

All quantities given in the Bill of Quantities are provisional whether so marked as such or not, and are subject to re-measurement during the execution of the work. The Contractor shall obtain the Engineer's detailed instructions for all work before ordering any materials or executing work or making arrangements for it.

The Works as finally completed in accordance with the Contract shall be measured and paid for as specified in the Bill of Quantities and in accordance with the General and Special Conditions of Contract, the Specifications and Project Specifications and the Drawings. Unless otherwise stated, items are measured net in accordance with the Drawings, and no allowance has been made for waste.

The validity of the contract will in no way be affected by differences between the quantities in the Bill of Quantities and the quantities finally certified for payment.

C2.1.4 PROVISIONAL SUMS

Where Provisional sums or Prime Cost sums are provided for items in the Bill of Quantities, payment for the work done under such items will be made in accordance with Clause 13.5 of the General Conditions of Contract. The Employer reserves the right, during the execution of the works, to adjust the stated amounts upwards or downwards according to the work actually done under the item, or the item may be omitted altogether, without affecting the validity of the Contract.

The Tenderer shall not under any circumstances whatsoever delete or amend any of the sums inserted in the "Amount" column of the Bill of Quantities and in the Summary of the Bill of Quantities unless ordered or authorised in writing by the Employer before closure of tenders. Any unauthorised changes made by the Tenderer to provisional items in the schedule, or to the provisional percentages and sums in the Summary of the Bill of Quantities, will be treated as arithmetical errors.

C2.1.5 PRICING OF THE BILL OF QUANTITIES

The prices and rates to be inserted by the Tenderer in the Bill of Quantities shall be the full inclusive prices to be paid by the Employer for the work described under the several items, and shall include full compensation for all costs and expenses that may be required in and for the completion and maintenance during the defects liability period of all the work described and shown on the drawings, the construction of temporary works as and when required as well as all overheads, profits, incidentals and the cost of all general risks, liabilities and obligations set forth or implied in the documents on which the Tender is based.
Although the Tenderer is at liberty to insert a rate of his own choosing for each item in the Bill of Quantities, his attention is drawn to the fact that the Contractor has the right, under various circumstances, to payment for additional works carried out and that the Engineer is obliged to base his assessment of the payment to be paid for such additional work on the rates inserted in the Bill by the Contractor.

Each item shall be priced and extended to the “Total” column by the Tenderer, with the exception of the items for which only rates are required, or items which already have Prime Cost or Provisional Sums affixed thereto. If the Contractor omits to price any items in the Bill of Quantities, then these items will be considered to have a nil rate or price.

All items for which terminology such as "inclusive" or "not applicable" have been added by the Tenderer will be regarded as having a nil rate which shall be valid irrespective of any change in quantities during the execution of the Contract.

The Tenderer shall fill in rates for all items where the words "rate only" appear in the “Total” column. “Rate Only” items have been included where:

(a) an alternative item or material is contemplated;
(b) variations of specified components in the make-up of a pay item may be expected; and
(c) no work under the item is foreseen at tender stage but the possibility that such work may be required is not excluded.

For “Rate Only” items no quantities are given in the "Quantity" column but the quoted rate shall apply in the event of work under this item being required. The Tenderer shall however note that in terms of the Tender Data the Tenderer may be asked to reconsider any such rates which the Employer may regard as unbalanced.

All rates and amounts quoted in the Bill of Quantities shall be in rands and cents and shall include all levies and taxes (other than VAT). VAT will be added in the summary of the Bill of Quantities.

A price or rate is to be entered, in NON ERASABLE BLACK INK, against each item in the Bill of Quantities.

C2.1.6 CORRECTION OF ENTRIES

Incorrect entries shall not be erased or obliterated with correction fluid but must be crossed out neatly. The correct figures must be entered above or adjacent to the deleted entry, and the alteration must be initialed by the Tenderer.

C2.1.7 ARITHMETICAL ERRORS

Arithmetical errors found in the Bill of Quantities as a result of faulty multiplication or addition, will be corrected by the Engineer at the tender evaluation stage, as set out in the Tender Data.

C2.1.8 MONTHLY PAYMENTS

Unless otherwise specified in the Specifications and Project Specifications, progress payments in Interim Certificates, referred to in Clause 14.3 of the General Conditions of Contract, in respect of “sum” items in the Bill of Quantities shall be by means of interim progress installments assessed by the Engineer and based on the measure in which the work actually carried out relates to the extent of the work to be done by the Contractor.
C2.1.9 UNITS OF MEASUREMENT

The units of measurement described in the Bill of Quantities are metric units for which the standard international abbreviations are used. Non-standard abbreviations, which may appear in the Bill of Quantities, are as follows:

- AC : asbestos-cement
- b : barrel
- Br : branch
- c : centre
- c/f : centre to face
- CI : cast iron
- CID : constant internal diameter
- CISC : cast iron short collar
- COD : constant outer diameter
- FBE : flanged both ends
- dia : diameter
- DN : nominal diameter
- EO : extra over
- FA : flange adaptor
- FC : fibre cement
- f/f : face to face
- fl : flange or flanged face
- FTB : factory tested pressure
- GMS : galvanised mild steel
- GRP : glass reinforced polyester
- hdg : heavy duty galvanised
- HDPE : high density polyethylene
- ID : internal diameter
- Incl : Inclusive
- kPa : kilopascal
- mod : modified
- MS : mild steel
- NB : nominal bore
- No. : number
- £ : pound sterling
- £/m3 : pound sterling per cubic meter
- £/ton : pound sterling per ton
- % : percent
- OD : outside diameter
- PC sum : prime cost sum
- pe : plain-ended
- pe/fl : plain-ended and flanged
- PVC : poly-vinyl chloride
- RC : reinforced concrete
- RO : rate only
- scj : short collar joint
- S/S : stainless steel grade 304
- Sum : lump sum
- thk : thick
- uPVC : Unplasticised poly-vinyl chloride
- VJ : Viking-Johnson type
- wt : wall thickness
## C2.2 BILL OF QUANTITIES

<table>
<thead>
<tr>
<th>ITEM</th>
<th>PAY. REF</th>
<th>DESCRIPTION</th>
<th>UNIT</th>
<th>QTY</th>
<th>RATE</th>
<th>AMOUNT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1A</td>
<td></td>
<td>SECTION 1A: PRELIMINARY GENERAL (FIXED COSTS)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.1</td>
<td></td>
<td>FIXED CHARGE &amp; VALUE RELATED ITEMS</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.1.1</td>
<td></td>
<td>Contractual requirements for Full Contract Service Period</td>
<td>Sum</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.1.2</td>
<td></td>
<td>Facilities for contractor for Full Contract Service Period</td>
<td>Sum</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.1.3</td>
<td></td>
<td>Health &amp; Safety Plan compilation and submission</td>
<td>Sum</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.2</td>
<td></td>
<td>SUMS STATED PROVISIONALLY BY ENGINEER</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.2.1</td>
<td></td>
<td>Inputs Required from existing Supplier or Service Provider (SP)</td>
<td>Prov. Sum</td>
<td>1</td>
<td>5 000</td>
<td>5 000.00</td>
</tr>
<tr>
<td>1.2.2</td>
<td></td>
<td>Percentage mark-up on Item above (State % and extend as an amount)</td>
<td>%</td>
<td>5 000</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

SECTION 1A TOTAL CARRIED FORWARD TO SUMMARY
<table>
<thead>
<tr>
<th>ITEM</th>
<th>PAY. REF</th>
<th>DESCRIPTION</th>
<th>UNIT</th>
<th>QTY</th>
<th>RATE</th>
<th>AMOUNT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1B</td>
<td>SECTION 1B: PRELIMINARY GENERAL (MONTHLY COSTS)</td>
<td>1.3</td>
<td>TIME RELATED ITEMS (PER MONTH)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.3.1</td>
<td>Contractual requirements per month</td>
<td>months</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.3.2</td>
<td>Facilities for contractor per month</td>
<td>months</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.3.3</td>
<td>Management/Supervision per month</td>
<td>months</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.3.4</td>
<td>Company and office overhead costs per month</td>
<td>months</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.3.5</td>
<td>Other time-related obligations per month (State items)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.3.5.1</td>
<td></td>
<td>months</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.3.5.2</td>
<td></td>
<td>months</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.4</td>
<td>HEALTH AND SAFETY</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.4.1</td>
<td>Provision of all health and safety personal protection equipment for own staff</td>
<td>months</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.4.2</td>
<td>Training of all staff according to health and safety regulations.</td>
<td>months</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.4.3</td>
<td>H&amp;S Plan compliance over contract period</td>
<td>months</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>SECTION 1B TOTAL CARRIED FORWARD TO SUMMARY</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ITEM</td>
<td>PAY. REF</td>
<td>DESCRIPTION</td>
<td>UNIT</td>
<td>QTY</td>
<td>RATE</td>
<td>AMOUNT</td>
</tr>
<tr>
<td>------</td>
<td>---------</td>
<td>-------------</td>
<td>------</td>
<td>-----</td>
<td>------</td>
<td>--------</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td>SECTION 2: PLANT MAINTENANCE</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.1</td>
<td></td>
<td>Maintain plants - Full Production Mode</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.1.1</td>
<td></td>
<td>Plant maintenance and repairs <em>(as per C3.2.1.1 and C3.2.2.1)</em> for period December-February (or such other period as agreed with the Employer)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.1.1.1</td>
<td></td>
<td>a) Knysna plant per month</td>
<td>months</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.1.1.2</td>
<td></td>
<td>b) Sedgefield plant per month</td>
<td>months</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.1.2</td>
<td></td>
<td>All other costs for maintenance personnel (eg. travel costs etc.)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.1.2.1</td>
<td></td>
<td>a) Knysna plant per month</td>
<td>months</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.1.2.2</td>
<td></td>
<td>b) Sedgefield plant per month</td>
<td>months</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.1.3</td>
<td></td>
<td>Management, reporting and planning (maintenance plan), per plant per month</td>
<td>months</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.2</td>
<td></td>
<td>Maintain plants - Zero Production Mode</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.2.1</td>
<td></td>
<td>Plant maintenance and repairs <em>(as per C3.2.1.2 and C3.2.2.2)</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.2.1.1</td>
<td></td>
<td>a) Knysna plant per day</td>
<td>days</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.2.1.2</td>
<td></td>
<td>b) Sedgefield plant per day</td>
<td>days</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.2.2</td>
<td></td>
<td>All other costs for plant maintenance personnel (eg. travel costs etc.)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.2.2.1</td>
<td></td>
<td>a) Knysna plant per day</td>
<td>days</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.2.2.2</td>
<td></td>
<td>b) Sedgefield plant per day</td>
<td>days</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.2.3</td>
<td></td>
<td>Management, reporting and planning (maintenance plan), per plant per month</td>
<td>months</td>
<td>2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

SECTION 2 TOTAL CARRIED FORWARD TO SUMMARY
<table>
<thead>
<tr>
<th>ITEM</th>
<th>PAY. REF</th>
<th>DESCRIPTION</th>
<th>UNIT</th>
<th>QTY</th>
<th>RATE</th>
<th>AMOUNT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3</td>
<td>SECTION 3: DAYWORKS</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>On Employer instruction only</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3.1</td>
<td>Office Support</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Senior Manager / Engineer</td>
<td>h</td>
<td></td>
<td>Rate only</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Technician</td>
<td>h</td>
<td></td>
<td>Rate only</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3.2</td>
<td>Maintenance personnel</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Instrumentation technician</td>
<td>h</td>
<td>8</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Electrician</td>
<td>h</td>
<td>8</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fitter</td>
<td>h</td>
<td>8</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Semi-skilled labour</td>
<td>h</td>
<td>12</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Unskilled labour</td>
<td>h</td>
<td>16</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3.3</td>
<td>Materials</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Allow for net cost of goods or materials</td>
<td>Prov Sum</td>
<td></td>
<td>500.00</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Percentage mark-up on Item above (State % and extend as an amount)</td>
<td>%</td>
<td>500</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3.4</td>
<td>Plant</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Contractor's own, or hired, plant and equipment</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Net cost of plant and equipment</td>
<td>Prov Sum</td>
<td></td>
<td>500.00</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Percentage mark-up on Item above (State % and extend as an amount)</td>
<td>%</td>
<td>500</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3.5</td>
<td>Subsistence and Travel Allowances</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>All travel and subsistence costs per person</td>
<td>days</td>
<td>Rate only</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(for management/technical support resource acting on instruction only)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

SECTION 3 TOTAL CARRIED FORWARD TO SUMMARY
### SUMMARY OF BILL OF QUANTITIES

<table>
<thead>
<tr>
<th>SECTION</th>
<th>DESCRIPTION</th>
<th>AMOUNT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1A</td>
<td>SECTION 1A : PRELIM &amp; GENERAL (FIXED)</td>
<td></td>
</tr>
<tr>
<td>1B</td>
<td>SECTION 1B : PRELIM &amp; GENERAL (TIME RELATED)</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>SECTION 2 : PLANT MAINTENANCE</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>SECTION 3 : DAYWORKS</td>
<td></td>
</tr>
</tbody>
</table>

### TOTAL OF SCHEDULE OF QUANTITIES

- **CONTINGENCIES**: 10%
- **TOTAL (Excluding VAT)**
- **ADD VAT**: 14%
- **TOTAL (Including VAT)**

CARRIED FORWARD TO OFFER AND FRONT PAGE
KNYSNA MUNICIPALITY

RFQ 219/2017/18

KNYSNA AND SEDGEFIELD SWRO PLANTS - MAINTENANCE WORK

C3 SCOPE OF WORK

C3.1 DESCRIPTION OF THE WORKS

C3.1.1 EMPLOYERS OBJECTIVES

C3.1.1.1 BACKGROUND

The towns of Knysna and Sedgefield rely on the 2.0 Mℓ/day Knysna Reverse Osmosis Plant (RO) Plant and the 1.5 Mℓ/day Sedgefield Desalination Plant to meet the high season peak water demands, as well as to provide security of water supply in low rainfall periods (droughts).

Knysna Municipality requires a service provider to carry out maintenance duties for these plants in the short term.

C3.1.1.2 CONTRACT STRUCTURE

This enquiry calls for a contract with pricing data that includes maintenance duties at the SWRO Plants and associated Mechanical and Electrical work.

The scope of works is as described in this document and the attached schedule of quantities, with reference to the specifications that follow.

C3.1.2 SCOPE OF CONTRACT

The sites are defined as the areas within the KNYSNA AND SEDGEFIELD SWRO PLANTS fenced areas, as well as the seawater intake systems within the Knysna Estuary (adjacent to Loerie Park) and Myoli Beach (Sedgefield).

The scope of the contract includes, but is not limited to the following:

- Maintenance of the two SWRO Plants and feedwater systems for one (1) month
- On review of performance, extension of the services for a further period up to two (2) months
- Maintenance reporting
- Assistance to the Employer with compiling a maintenance plan/schedule
- Provide attendance on the Employer/sub-contractor/s for work carried out by others on site

The final scope of works will be determined by the Employer on award of the contract, in consultation and agreement with the successful tenderer.

Note: The bill of quantities items are based on 2 months of full time operation and one month of zero mode operation. See the detailed specification in C3.2 for a description of the modes of operation.

C3.1.3 LOCATION OF THE WORKS

Knysna - The work will take place within the Knysna RO Plant fenced area, and within the Knysna Estuary (Ashmead Channel area) and at the Loerie Park sports complex.

Sedgefield - The work will take place within the Sedgefield Desalination Plant fenced area next to the car park at Myoli Beach. Certain work items may also take place at on the beach.
C3.1.4 DETAILS OF THE KNYSNA RO PLANT

C3.1.4.1 INTRODUCTION

The Knysna RO Plant equipment is housed within buildings within a paved and fenced secure area. The overall plant layout is provided in drawing no. GRW_0221_1_001. The boreholes are located close to the Knysna Estuary at Loerie Park Sports complex, and are all within 500 metres of the Plant.

The general plant details are provided in the table and paragraphs that follow.
## PLANT DETAILS
### KNYSNA SWRO PLANT

<table>
<thead>
<tr>
<th>Description</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Plant Description</strong></td>
<td>Seawater reverse osmosis plant, capacity 2.0 Ml/d</td>
</tr>
<tr>
<td><strong>Raw Water</strong></td>
<td>Knysna Estuary (Sub surface groundwater)</td>
</tr>
<tr>
<td><strong>Water Quality</strong></td>
<td>Poor</td>
</tr>
<tr>
<td><strong>Intake type</strong></td>
<td>&quot;Beach wells&quot; (shallow boreholes) 15-25m deep, 160mm dia uPVC slotted pipes</td>
</tr>
<tr>
<td><strong>Pumps</strong></td>
<td>Grundfos SP-30-3R</td>
</tr>
<tr>
<td><strong>Pre-treatment</strong></td>
<td>BH screens</td>
</tr>
<tr>
<td><strong>Conditioning</strong></td>
<td>Coagulation</td>
</tr>
<tr>
<td><strong>Media Filtration</strong></td>
<td>DMF Pressure Aufran, 12.75m³</td>
</tr>
<tr>
<td><strong>Filter Pumps</strong></td>
<td>SPSA, CEN 65-200</td>
</tr>
<tr>
<td><strong>Backwash Pumps</strong></td>
<td>SPSA, CEN 125-250</td>
</tr>
<tr>
<td><strong>Blowers</strong></td>
<td>Robuschi, ES 25/1P</td>
</tr>
<tr>
<td><strong>RO System</strong></td>
<td></td>
</tr>
<tr>
<td><strong>RO Feed Pumps</strong></td>
<td>SPSA, CEN 125-250</td>
</tr>
<tr>
<td><strong>RO Train</strong></td>
<td>3 trains</td>
</tr>
<tr>
<td><strong>Micro-Filters (per train)</strong></td>
<td>Pevasa (Aquafab supply)</td>
</tr>
<tr>
<td><strong>HP Pump (per train)</strong></td>
<td>Aquafab</td>
</tr>
<tr>
<td><strong>Energy recovery device (ERD)</strong></td>
<td>Grundfos (Pelton wheel)</td>
</tr>
<tr>
<td><strong>Pressure Vessels (per train)</strong></td>
<td>Baekert (Aquafab Supply) 8 inch GRP</td>
</tr>
<tr>
<td><strong>Membranes (per vessel)</strong></td>
<td>DOW Filmtec SW30HR - 380</td>
</tr>
<tr>
<td><strong>Remineralisation</strong></td>
<td>Partial - Soda ash</td>
</tr>
<tr>
<td><strong>Waste Pumps</strong></td>
<td>SPSA, CEN 150-315</td>
</tr>
<tr>
<td><strong>Process Control</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Operator System</strong></td>
<td>HMI</td>
</tr>
<tr>
<td><strong>RO trains</strong></td>
<td>PLC, VSD on train</td>
</tr>
<tr>
<td><strong>Feed water specification</strong></td>
<td><strong>Design</strong></td>
</tr>
<tr>
<td>TDS (mg/l)</td>
<td>36 000</td>
</tr>
<tr>
<td>Sodium (mg/l)</td>
<td>11 000</td>
</tr>
<tr>
<td>Chloride (mg/l)</td>
<td>20 400</td>
</tr>
<tr>
<td>SDI / Turbidity</td>
<td>1</td>
</tr>
<tr>
<td><strong>Product water specification</strong></td>
<td>SANS 241: 2006 (now SANS 241: 2011)</td>
</tr>
<tr>
<td><strong>Outfall Type</strong></td>
<td>Brine co-disposed with WWTW outfall to estuary</td>
</tr>
</tbody>
</table>

C3.1.4.2 .......... REQUIRED QUALITY OF TREATED WATER

The required permeate quality leaving the works after desalination shall comply with the SANS 241 drinking water specification (2011).
C3.1.4.3 DESCRIPTION OF THE PROCESS

The main process elements are described below:

- The Plant is designed to produce 2.0Mℓ/day of product water
- Feedwater is obtained from six seawater pumps in the Knysna Estuary adjacent to the Loerie Park Sports Complex
- Feedwater is stored in polyethylene tanks
- Pre-treatment consists of coagulation using ferric chloride, and dual media filtration
- The RO units are housed in the main plant building on concrete plinths
- Filtered water is passed through microfilters and dosed with an anti-scalant at each RO unit
- Brine is discharged to the waste sump via drainage channels at each RO unit
- The combined RO permeate is partially remineralised using soda ash
- The product water is chlorinated using chlorine gas from the WWTW chlorine facility
- Product water is stored in an epoxy lined steel tank on site
- Product water is pumped from the product water tank to the Old Place, Bigai and Leisure Isle reservoirs
- Brine is pumped from the waste sump to the WWTW contact tank, and co-discharged with the treated wastewater effluent to the Knysna Estuary

C3.1.4.4 FEEDWATER SYSTEM

Six seawater pumps with intakes in the Estuary provide water to the Plant.

Each pump is equipped with its own power supply and feedwater is pumped to the plant in a common delivery pipeline. The quality of the feedwater is variable and must be closely monitored.

C3.1.4.5 PRETREATMENT

The feedwater is dosed intermittently with a biocide, and then dosed with Ferric chloride and pumped through dual media filters.

A future additional pre-treatment unit, is being considered.

C3.1.4.6 RO MEMBRANE UNITS

The RO membrane units consist of three trains, each capable of producing 0.67 Mℓ/day of permeate and able to operate independently of each other.

The filtrate is passed through 5 micron microfilters and dosed with an anti-scalant at each of the RO units.

The RO units each have their own control panel which includes a frequency converter for the HP pump.

Each RO train is fitted with a pelton wheel type energy recovery system.

The instrumentation on the units monitors the Plant for pressure, flow rate, conductivity, turbidity, pH and temperature.

A full description and a process and instrumentation diagram (P&ID) showing how the system works and is controlled, will be provided to the successful tenderer.

C3.1.4.7 DISPOSAL OF WASTE WATER

The brine/wastewater is pumped from the waste sump into the WWTW contact tank and co-discharged, together with the treated wastewater effluent, to the Knysna Estuary.

C3.1.4.8 REMINERALISATION

Partial remineralisation of the permeate is carried out downstream of the RO units by the addition of soda ash, in order to stabilise the water before storing it and pumping it to the town’s water network.

C3.1.4.9 CHLORINATION
The product water is chlorinated using chlorine gas from the WWTW chlorine facility at a rate to ensure an active chlorine residual concentration of at least 0.5mg/l.

C3.1.4.10 ......... PUMPING OF PRODUCT WATER

Product water is stored in the 64 kℓ product water epoxy lined steel tank. Two pumps (1 duty/ 1 standby) pump the product water in a 200mm diameter pipeline, to the Old Place, Bigai and Leisure Isle reservoirs, where it is blended with water from the town’s other sources.

C3.1.4.11 ......... CONTROL SYSTEM

The Plant is controlled by a PLC in the plant MCC and an HMI system in the plant office, whereby the operator can adjust certain settings. Certain equipment can be operated manually within the set parameters of the system.

C3.1.4.12 ......... OPERATION AND MAINTENANCE MANUAL

Copies of the O&M Manual will be issued to the successful tenderer, upon dealing with the confidentiality and proprietary issues. The successful Tenderer may be required to sign a non-disclosure agreement.
C3.1.5 DETAILS OF THE SEDGEFIELD DESALINATION PLANT

C3.1.4.1 INTRODUCTION

The Desalination Plant equipment is housed in containers that are located in a paved and fenced area with shadecloth covering most of the outside equipment. The overall plant layout is provided in drawing no. GRW_0221_2_001. The boreholes are located close to the Myoli Beach carpark, and within 100 metres of the Plant.

The general plant details are provided in the table and paragraphs that follow.
PLANT DETAILS | SEDGEFIELD SWRO PLANT
---|---
**Plant Description** | Seawater reverse osmosis plant, capacity 1.5 Ml/d
**Raw Water** | Indian Ocean Seawater
**Water Quality** | See below | See below
**Intake type** | Boreholes 40-60m deep (pumps at 20m depth) | 2 duty, 1 standby (1 future standby)
| (Beach wells 6-8m deep) | Abandoned
**Pumps** | Grundfos SP-46-4R (submersible for seawater) | 2 duty, 1 standby (1 future standby)
**Pretreatment** | Borehole (natural filter) | BH screens
**Conditioning** | Calcium Sulphate Antiscalant / Dispersant | 2-3 mg/l
**Micro Filtration** | | |
**Media Filtration** | N/A | (Possible future addition)
**Filter Pumps** | N/A | |
**RO System** | | |
**RO Train** | GrahamTek | 2 trains 0.75 Ml/d each
**Micro-Filters (per train)** | Jumbo Carousel (Removed) | (4 cartridges 50 micron)
**Feedwater pumps (per train)** | Grundfos | CR90-2 : 2
| | | 1 duty
**HP Pump (per train)** | Grundfos | BME17 - 19
| | | 1 duty
**Energy recovery device (ERD)** | Press exchanger | ERI PX-180
| | | Grundfos BMC
**Pressure Vessels (per train)** | GrahamTek | 16 inch GRP
| | | 3 (2 parallel into 1)
**Memembranes (per vessel)** | GrahamTek | SWC3-16
| | | 4 membrane cartridges
**Remineralisation** | Partial remineralisation | By addition of soda ash
**Process Control** | | |
**Operator System** | SCADA | Adriot
**RO trains** | In main panel | |
**Feed water specification** | | |
**Design** | TDS (mg/l) | 36 133 | 24 320
| | Sodium (mg/l) | 11 500 | 7 100
| | Chloride (mg/l) | 19 639 | 12 800
| | SDI / Turbidity | < 5 / < 1.0 | Turbidity 3.0 NTU
**Actual (Borehole feedwater)** | Product water specification | SANS 241: 2006 | (now SANS 241: 2011)
**Outfall Type** | Brine wells (reverted to open discharge) | On beach

C3.1.5.2 ............ REQUIRED QUALITY OF TREATED WATER

The required permeate quality leaving the works after desalination shall comply with the SANS 241 drinking water specification (2011).
C3.1.5.3 DESCRIPTION OF THE PROCESS
The main process elements are described below:

- The Plant is designed to produce 1.5Mℓ/day of product water
- Feedwater is obtained from boreholes adjacent to the Myoli Beach carpark
- Pre-treatment consists of microfiltration and dosing of anti-scalant
- Feedwater is stored in 2 x 10 000 ℓ plastic tanks
- The RO units are housed in containers
- Partial remineralisation is carried out using soda ash
- The partially remineralised permeate is chlorinated using sodium hypochlorite and stored in 2 x 10 000 ℓ product water tanks
- Product water is pumped from the product storage tanks to the Blombosnek reservoirs
- Brine is stored in a 10 000 ℓ tank and pumped back to the beach for disposal in the sea

C3.1.5.4 FEEDWATER BOREHOLES
Three submersible seawater pumps, installed in 2 wells on the beach, provide water to the Plant. Each pump is equipped with its own power supply and delivery pipeline. Feedwater is delivered into a common manifold at the Plant.

C3.1.5.5 PRETREATMENT
At present, the feedwater is passed through 5 µm micofilters and can be dosed with an anti-scalant.

C3.1.5.6 RO MEMBRANE UNITS
The RO membrane units consist of two trains, each capable of producing 0.75 Mℓ/day of permeate and able to operate independently of each other.

The containers housing the RO units are insulated to ensure that sound levels are contained, and air-conditioned to prevent overheating of the motor driven equipment.

Each RO train is fitted with a pressure exchanger type energy recovery system.

The instrumentation on the units monitors the Plant for pressure, flow rate, conductivity, turbidity, pH and temperature.

A full description and a process and instrumentation diagram (P&ID) showing how the system works and is controlled, will be provided to the successful tenderer.

C3.1.5.7 DISPOSAL OF WASTE WATER
The brine/wastewater is pumped, by two brine pumps, into two discharge pipelines which join together and discharge to an open outlet on the beach. (A future sea outfall is planned to discharge directly into the surf zone).

C3.1.5.8 REMINERALISATION
Partial remineralisation of the permeate is carried out downstream of the RO units by the addition of soda ash, in order to stabilise the water before discharging it to the potable water network.

C3.1.5.9 CHLORINATION
The partially remineralised permeate is chlorinated by dosing hypochlorite at a rate to ensure an active chlorine residual concentration of at least 0.5mg/l.

C3.1.5.10 PUMPING OF PRODUCT WATER
Two pumps (1 duty/ 1 standby) pump the product water in a 200mm diameter pipeline, to the Blombosnek Reservoirs, where it is blended with water from the town’s other (surface water and groundwater) sources.
C3.1.5.11 CONTROL SYSTEM

The Plant is controlled by a SCADA system (Adroit software) and is normally operated in Automatic mode, with certain settings and options available for operator inputs. Certain equipment can be operated manually within the set parameters of the system.

C3.1.5.12 OPERATION AND MAINTENANCE MANUAL

Copies of the O&M Manual will be issued to the successful tenderer, upon dealing with the confidentiality and proprietary issues. The successful Tenderer may be required to sign a non-disclosure agreement.
C3.2  DETAILED SPECIFICATION

The detailed specifications for the Maintenance duties at the Plants are contained in this section.

C3.2.1  STAFF

Maintenance staff will be considered to be locally based for all normal work, call outs, or dayworks. No additional payments will be made for Travel and Subsistence for such staff, except as detailed and priced in the bill of quantities.

C3.2.1.1  STAFF REQUIREMENTS

The maintenance staff that work at the Plants shall be suitably qualified to carry out mechanical, electrical and instrumentation repairs and maintenance work required on a water treatment plant and associated equipment.

C3.2.1.2  OTHER STAFF REQUIREMENTS PER SHIFT

There shall be at least one suitably qualified person on call, and able to respond within one hour, at all times that the Plants are operational.

Furthermore, there shall be a supervisor available to be called when necessary.

C3.2.2  WORKING HOURS REQUIREMENTS

C3.2.2.1  FULL PRODUCTION MODE

In full production mode, the Plants may be operated 24 hours a day, but with repairs and maintenance work being carried out on standby equipment, or during arranged shutdown times, as follows:

- 16 hours per week, at each plant, consisting of
- 4 separate sessions per week, consisting of
  - 2 mechanical sessions
  - 1 electrical session
  - 1 instrumentation session

Plant operation times may vary daily depending on operational requirements. Repairs and maintenance work shall preferably be carried out during times when the Plants, or units of the Plants, are being rinsed and flushed, as arranged with the operational supervisor and plant manager.

All work times must be planned, co-ordinated and agreed with the operational supervisor and plant manager, and signed off each completed week.

C3.2.2.2  ZERO PRODUCTION MODE

In zero production mode, the Plants shall be repaired and maintained as follows:

- 8 hours per week, at each plant, consisting of
- 2 separate sessions per week, consisting of
  - 1 mechanical session
  - 1 electrical session, or 1 instrumentation session (alternating weeks)

All work times must be planned, co-ordinated and agreed with the operational supervisor and plant manager, and signed off each completed week.

C3.2.3  MONITORING AND REPORTING

C3.2.3.1  REPORTING

The Contractor shall report weekly, in all production modes (full and zero), as follows:

- Repairs and maintenance carried out as per maintenance plan
- Repairs and maintenance requests received, and status of items
Incidents, observations and issues requiring attention

The Contractor shall report monthly, as follows:

- Summary of all repairs and maintenance carried out
- Status of pending items
- Major incidents, observations and issues requiring attention
- General comments and recommendations

C3.2.3.2 O&M MANUALS

The Contractor shall, throughout the duration of the Contract, compile and submit Addenda to the existing O&M manuals and procedures, as and when necessary, to facilitate maintenance improvements and/or alterations. This shall be part of the duties of the supervisor and management team and the cost thereof must be allowed for in the monthly rates provided for operation and maintenance.

C3.2.4 MAINTENANCE REQUIREMENTS

The Contractor shall maintain the Plant as a fully functioning installation and shall repair and replace all equipment and components thereof, as and when necessary. The Contractor shall implement a Maintenance Plan for all items on the Plant equipment list.

C3.2.4.1 SPARES AND CONSUMABLES

At the commencement of the Operation Service Period, the existing spares will be handed over to the Contractor. A list of all required spares and consumables shall be compiled by the Contractor, within two weeks of commencement. Three competitive quotes shall be obtained by the Contractor for additional items required to complete the list.

The cost of the maintenance spares and consumables must be approved by the Employer, and shall be procured by the Contractor under the appropriate items in the pricing schedule, or by the Employer.

The targets for consumables use shall be agreed with the Employer and recorded within two (2) weeks of commencement.

C3.2.4.2 ASSET REPLACEMENT

Allowance for the cost of asset replacement is not included the Contract, however, the Maintenance Plan shall include all asset replacements required in the following 5 years.

C3.2.4.3 TOOLS

The Contractor shall supply all tools required to carry out repair and maintenance activities.

Any additional tools purchased through the contract, with the approval of the Employer, shall be entered into the Employer’s asset register, and shall remain the property of the Employer.

C3.2.5 OBLIGATIONS OF THE EMPLOYER

The Employer's obligations are the following:

- Handover of the Plant O&M manuals, and approve maintenance plan
- Conduct Contract performance review

C3.2.5.1 CONTRACT EXTENSION REVIEW

The Employer will carry out the Contract Review monthly. The minimum number of points for Extension of the contract is 75, subject to no criterion being scored less than satisfactory.

The Contractor performance review criteria are as follows:
### C3.2.6 HEALTH AND SAFETY

The Contractor shall comply with the requirements of the Occupational Health and Safety Act (No 85 of 1993), and with Annexure HS, the Health and Safety Specification, in section C3.6.3.
C3.3 ENGINEERING

C3.3.1 EMPLOYER’S DESIGN
The Employer, or the Engineer, will be responsible for the design of any specific work only if agreed so in terms of the contract.

C3.3.2 DESIGN BRIEF
The Contractor will be responsible for the design of all temporary works, and for any specific work as agreed in terms of the contract.

C3.3.3 DRAWINGS
The drawing and information issued to tenderers as part of the enquiry documents must be regarded as provisional and preliminary for the tenderer’s benefit to generally assess the scope of work.

Drawings issued separately are listed hereafter.

<table>
<thead>
<tr>
<th>Drawing No.</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Knysna:</strong></td>
<td></td>
</tr>
<tr>
<td>GRW_0221_1_002</td>
<td>Locality Plan / General Layout</td>
</tr>
<tr>
<td>GRW_0221_1_003</td>
<td>Plant Layout</td>
</tr>
<tr>
<td>GRW_0221_1_004</td>
<td>Seawater Pumps in Ashmead Channel</td>
</tr>
<tr>
<td><strong>Sedgefield:</strong></td>
<td></td>
</tr>
<tr>
<td>GRW_0221_2_001</td>
<td>General Site Layout</td>
</tr>
<tr>
<td>GRW_0221_2_002</td>
<td>Collector Drains Longitudinal Section</td>
</tr>
</tbody>
</table>
C3.4 FACILITIES

C3.4.1 PLANT AND MATERIALS SUPPLIED BY THE EMPLOYER

The plant equipment and materials are supplied by the Employer.

C3.4.2 EQUIPMENT SUPPLIED BY THE EMPLOYER

The plant equipment and materials are supplied by the Employer.

C3.4.3 SITE ESTABLISHMENT

C3.4.3.1 SERVICES AND FACILITIES PROVIDED BY THE EMPLOYER

Water supply, power supply, and sewage facilities are available on site.

C3.4.3.2 FACILITIES PROVIDED BY THE CONTRACTOR

As described in the Detailed Specification C3.2.

C3.4.3.3 STORAGE AND LABORATORY FACILITIES

No additional facilities required.

C3.4.3.4 AREA FOR CONTRACTOR’S SITE ESTABLISHMENT

The site office can be used by the Contractor, when needed and on agreement with operational staff and plant manager.

C3.4.3.5 OTHER SERVICES AND FACILITIES

Disposal of refuse

The Contractor shall be responsible for disposal of refuse and waste generated by his staff on a daily basis. The entire site is to be kept clean, neat and tidy, to the Employer’s satisfaction.

Telephone facilities

The Contractor is to provide his own telephone facilities on site.

Rail facilities

The nearest goods handling station is George.

Survey Equipment and Facilities

Not required.

C3.4.4 SITE USAGE

C3.4.4.1 HOUSING FACILITIES

No accommodation of the Contractor’s employees will be permitted on site

C3.4.4.2 CONSTRUCTION AREA FINISHING, TIDYING AND ENVIRONMENTAL REINSTATEMENT
On no account shall spoil, rubble, materials, equipment or unfinished operations be allowed to accumulate in such a manner as to unnecessarily impede the activities of others or give rise to complaints from the Engineer, Municipal officials or members of the public. In the event of this occurring the Employer shall have the right to withhold payment for as long as may be necessary in respect of the relevant works in the areas concerned without thereby prejudicing the rights of others to institute claims against the Contractor on the grounds of unnecessary obstruction.

C3.4.4.3 CARE, DAMAGE AND PROTECTION

The Contractor shall at his own cost make full provision for all watching and lighting necessary for the protection of all persons, animals, vehicles, etc., from injury by reason of the Works. He shall provide ample warning signs, guard rails, etc., around open excavations, stacks of materials, excavated material, debris or the like, and he shall be held liable for all claims made upon himself or upon the Employer by reason of his neglect of all such precautions and provisions. If at any time the Contractor fails to take proper or adequate precautions in this respect, the Employer may take such steps as he deems necessary and recover the cost thereof from the Contractor.

C3.4.4.4 PERMITS AND WAYLEAVES

The Employer is to obtain the necessary approvals and wayleaves from inter alia, SANParks, Telkom and Eskom. The Contractor is to confirm that permission has been granted before commencing work.

C3.4.4.5 INSPECTION OF ADJOINING PROPERTIES

A photo or video record shall be kept of the condition of the site and adjoining properties, before, during and after the Contract.

C3.4.4.6 EXISTING SERVICES

The Contractor shall at all times exercise the utmost care when working in the vicinity of existing services and shall take all necessary steps to protect any existing services whatsoever against damage which may arise as a result of his operations on site. The Contractor shall bear the cost of the repair of damage to any service the possible existence of which could reasonably have been ascertained by him in good time. All cables and pipes shall be considered “live” unless confirmed otherwise by the relevant service authority.
C3.5 MANAGEMENT

C3.5.1 MANAGEMENT OF THE WORKS

C3.5.1.1 APPLICABLE SANS 1921 STANDARDS

The following SANS 1921 Construction and Management requirements for works standards and associated specification data are applicable:


C3.5.1.2 ENVIRONMENT

The Western Cape Department of Environmental Affairs Standard Construction Phase Environmental Management Plan (EMP) is included in the Annexure to this document. The requirements of this plan are to be strictly adhered to during all activities involved in the execution of this Contract.

The Contractor will be responsible for environmental control on site during construction and the maintenance period. The construction activities will be monitored by an independent environmental specialist and audited against the EMP.

The Contractor shall restrict his operations to the limits of the Site and any approved access route/s thereto.

The Contractor shall, for the duration of the contract, take appropriate measures to control the water, soil, and dust movement which may arise due to his operations and shall at all times ensure that his operations do not endanger any member of the public.

An item has been included in the Bill of Quantities for implementing and adhering to the EMP.

C3.5.1.3 RECORDING OF WEATHER

Measuring the rainfall is not required and the records from the Knysna wastewater treatment works (WWTW) or Segdefield WWTW will be used if such records are required.

C3.5.1.4 LOCAL LABOUR

It is intended that the contractor must make the maximum possible use of the local labour force which is at present under-employed. To this end the Contractor shall limit the use of non-local staff to key personnel only and is to employ local labour on this Contract. The Contractor will be required to submit weekly labour returns indicating the numbers of workers in the various categories of workers and wages paid, in a format as approved by the Engineer.

C3.5.1.5 MANAGEMENT MEETINGS

The Contractor and such other persons as may be nominated by the Engineer shall be required to attend periodic site meetings, the date and place for which will be set by the Engineer in consultation with the Employer and Contractor, and also as per the Detailed Specification C3.2.

All persons attending the site meetings must be empowered to act on behalf of the firms they represent.

C3.5.1.6 DAILY RECORDS

The Contractor is to provide a site diary, which is to be kept on site, for the purpose of keeping daily records in respect of work performed on the site, also as per the Detailed Specification C3.2.
C3.5.2 HEALTH AND SAFETY

The Contractor shall prepare a Health and Safety Plan in terms of the Occupational Health and Safety Act No 85 of 1993 and the Construction Regulations issued in terms of Section 43 of the Act. The employers' pre-construction health and safety specification is attached to this Document as specification PZ.

Items are provided in the Bill of Quantities for the preparation of, and adherence to, this plan.
C3.6 SPECIFICATIONS

C3.6.1 LIST OF PROJECT SPECIFICATIONS

The following particular specifications shall apply:

PZ: Health and Safety

C3.6.2 VARIATIONS AND ADDITIONS TO THE STANDARDIZED SPECIFICATIONS FOR THIS CONTRACT, AND PARTICULAR SPECIFICATIONS

PZ PRE-CONSTRUCTION HEALTH AND SAFETY SPECIFICATION

PZ 1 INTRODUCTION AND BACKGROUND

The Construction Regulations, 2014 place the onus on the Employer (defined as the Client in terms of the Construction Regulations) to ensure compliance with the OHS Act, and the Construction Regulations.

PZ2 HEALTH AND SAFETY SPECIFICATION

This short summary of health and safety (H&S) aspects covers the requirements for eliminating and mitigating incidents and injuries during the project. The summary addresses legal compliance, hazard identification and risk assessment, risk control, and promoting a health and safety culture amongst those working on the project. Provision for the protection of those persons other than employees of the Principal Contractor and Contractors shall also be addressed in the H&S plan.

PZ2.2 FINANCIAL PROVISION FOR HEALTH AND SAFETY

Tenderers (including those sub-contractors and/or suppliers who are preparing prices/quotations for submission to the main Tenderer) must ensure that they make adequate financial provision in their tenders for compliance with the OHS Act, the Regulations thereto. Financial provision shall therefore be made by each Tenderer for, inter alia, the following:

- Carrying out and documenting risk assessments of all work to be carried out under the contract.
- Preparation of safe work procedures for all work to be carried out under the contract.
- Preparation of an H&S plan, discussing it with the Client, and then amending it as agreed.
- Preparation for and conducting “toolbox talks” with relevant employees.
- Induction and training as and where required.
- Preparation of a Project H&S File.
- Regular updating of all of the foregoing.
- Provision of PPE and protective clothing for employees
- Complying with all H&S requirements for the duration of the contract.

To enable the Client to be appraised of the allowances that Tenderers have made for H&S in their tenders, so that he/she can fulfill his/her obligations in terms of Clause 4 (h) of the Construction Regulations, the following H&S items have been included in the Schedules of Quantities and must be individually priced:

- Fixed Charge Item for the preparation of risk assessments, the H&S plan, the provision of PPE and protective clothing, and any other H&S matters that the contractor deems necessary.
- Time Related Items for updating and amending the risk assessments, the H&S plan, the provision of PPE and protective clothing and any other H&S matters that the contractor deems necessary.
C.4 SITE INFORMATION

C.4.1 LOCATION OF THE WORKS

**Knysna** - The work will take place within the Knysna RO Plant fenced area, and within the Knysna Estuary (Ashmead Channel area) and at the Loerie Park sports complex.

The Knysna RO Plant is located at the lower side of the Knysna WWTW, on George Rex Drive, at coordinates 34° 02'54.23"S and 23° 04'13.44"E.

**Sedgefield** - The work will take place within the Sedgefield Desalination Plant fenced area next to the car park at Myoli Beach. Certain work items may also take place at on the beach.

The Plant is located at coordinates 34°01'58.93"S and 22°48'04.84"E.

C.4.2 ACCESS TO THE WORKS

The Plants are accessible from normal suburban roads, and in addition, there are approved access points at Loerie Park, and onto Myoli Beach respectively. Access to other properties and any community related issues is to be undertaken in consultation with the Engineer’s Representative and Client if necessary.

The Knysna Estuary and the Coastal area at Sedgefield form part of the environmentally valuable and sensitive Garden Route National Park, and extreme care is to be exercised while working in the Estuary and on the Beach. The designated access points at Loerie Park and at Myoli Beach will be arranged and communicated by the Employer’s Agent and the ECO.

C.4.3 CLIMATE

The Knysna area experiences a moderate coastal climate with an all year rainfall. The average monthly rainfall is as follows:

<table>
<thead>
<tr>
<th>Month</th>
<th>Average Monthly Rainfall (mm)</th>
<th>Month</th>
<th>Average Monthly Rainfall (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td>68</td>
<td>July</td>
<td>67</td>
</tr>
<tr>
<td>February</td>
<td>62</td>
<td>August</td>
<td>95</td>
</tr>
<tr>
<td>March</td>
<td>73</td>
<td>September</td>
<td>75</td>
</tr>
<tr>
<td>April</td>
<td>78</td>
<td>October</td>
<td>90</td>
</tr>
<tr>
<td>May</td>
<td>71</td>
<td>November</td>
<td>74</td>
</tr>
<tr>
<td>June</td>
<td>69</td>
<td>December</td>
<td>65</td>
</tr>
</tbody>
</table>

C.4.4 GEOTECHNICAL INFORMATION

Limited excavation and sub-soil work is proposed. Any work in the Estuary is mainly above ground (or mud) level, and at the Loerie Park precinct there is sandy materials to the depths of any proposed work.

Any subsurface work at Sedgefield will be in sandy material or beach sand.
### C5 ANNEXURES

#### C.5.1 DRAWINGS

<table>
<thead>
<tr>
<th>Drawing No.</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Knysna:</strong></td>
<td></td>
</tr>
<tr>
<td>GRW_0221_1_002</td>
<td>Locality Plan / General Layout</td>
</tr>
<tr>
<td>GRW_0221_1_003</td>
<td>Plant Layout</td>
</tr>
<tr>
<td>GRW_0221_1_004</td>
<td>Seawater Pumps in Ashmead Channel</td>
</tr>
<tr>
<td><strong>Sedgefield:</strong></td>
<td></td>
</tr>
<tr>
<td>GRW_0221_2_001</td>
<td>General Site Layout</td>
</tr>
<tr>
<td>GRW_0221_2_002</td>
<td>Collector Drains Longitudinal Section</td>
</tr>
</tbody>
</table>