



## water & sanitation

Department:  
Water and Sanitation  
REPUBLIC OF SOUTH AFRICA

DW106

### REQUEST FOR BID

**BID NUMBER W11034**

## Appointment of Contractors for Test Pumping of Boreholes in South Africa for Three (03) years Term Contract

CLOSING DATE:

**24 May 2016**

CLOSING TIME:

**11:00 am**

#### **Compulsory Briefing Session**

**Date:** 05 May 2016

**Time:** 13:30

**Venue:** Department of Water and Sanitation  
Infrastructure Branch Training Centre  
Roodplaat Dam  
Pretoria

SUBMIT TENDER DOCUMENT

TO

POSTAL ADDRESS:  
DIRECTOR-GENERAL: WATER AND  
SANITATION  
PRIVATE BAG X 313  
PRETORIA,0001

OR

**TO BE DEPOSIT IN:**  
THE TENDER BOX AT THE ENTRANCE  
OF ZWAMADAKA BUILDING  
157 FRANCIS BAARD STREET  
(FORMERLY SCHOEMAN STREET)  
PRETORIA,0002

**TENDERER:** (Company address and stamp)

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## INVITATION TO BID

YOU ARE HEREBY INVITED TO BID FOR REQUIREMENTS OF THE DWS

BID NUMBER: **W11034**

CLOSING DATE: **24 May 2016**

CLOSING TIME: **11:00**

DESCRIPTION: **Appointment of Contractors for Test Pumping of Boreholes in South Africa for Three (03) years Term Contract**

**The successful bidder will be required to fill in and sign a written Contract Form (SBD 7).**

BID DOCUMENTS MAY BE POSTED TO:

**Private Bag x313,  
Pretoria,  
0001**

**OR**

DEPOSITED IN THE BID BOX SITUATED AT *(STREET ADDRESS)*

**Tender Box, Zwamadaka Building  
157 Francis Baard Street (Formerly Schoeman),  
Pretoria  
0001**

**Bidders should ensure that bids are delivered timeously to the correct address. If the bid is late, it will not be accepted for consideration.**

The bid box is generally open 24 hours a day, 7 days a week.

ALL BIDS MUST BE SUBMITTED ON THE OFFICIAL FORMS – (NOT TO BE RE-TYPED)

THIS BID IS SUBJECT TO THE PREFERENTIAL PROCUREMENT POLICY FRAMEWORK ACT AND THE PREFERENTIAL PROCUREMENT REGULATIONS, 2011, THE GENERAL CONDITIONS OF CONTRACT (GCC) AND, IF APPLICABLE, ANY OTHER SPECIAL CONDITIONS OF CONTRACT

THE FOLLOWING PARTICULARS MUST BE FURNISHED  
(FAILURE TO DO SO MAY RESULT IN YOUR BID BEING DISQUALIFIED)

NAME OF BIDDER.....

POSTAL ADDRESS.....

STREET ADDRESS.....

TELEPHONE NUMBER CODE.....NUMBER.....

CELLPHONE NUMBER.....

FACSIMILE NUMBER CODE ..... NUMBER.....

E-MAIL ADDRESS.....

VATREGISTRATIONNUMBER.....

HAS AN ORIGINAL AND VALID TAX CLEARANCE CERTIFICATE BEEN SUBMITTED? (SBD 2) YES or NO

HAS A B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE BEEN SUBMITTED? (SBD 6.1) YES or NO

IF YES, WHO WAS THE CERTIFICATE ISSUED BY?

AN ACCOUNTING OFFICER AS CONTEMPLATED IN THE CLOSE CORPORATION ACT (CCA).....☐

A VERIFICATION AGENCY ACCREDITED BY THE SOUTH AFRICAN ACCREDITATION SYSTEM (SANAS);OR.....☐

A REGISTERED AUDITOR .....☐  
[TICK APPLICABLE BOX]

**(A B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE MUST BE SUBMITTED IN ORDER TO QUALIFY FOR PREFERENCE POINTS FOR B-BBEE)**

ARE YOU THE ACCREDITED REPRESENTATIVE  
IN SOUTH AFRICA FOR THE GOODS / SERVICES / WORKS OFFERED? YES or NO

[IF YES ENCLOSE PROOF]

SIGNATURE OF BIDDER:.....

DATE:.....

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

TOTAL BID PRICE.....TOTAL NUMBER OF ITEMS OFFERED.....

---

**ANY ENQUIRIES REGARDING THE BIDDING PROCEDURE MAY BE DIRECTED TO:**

**Department: Department of Water and Sanitation**

**Contact Person: Mr. Syabonga Ngidi**

**Tel: 012 336 6611**

**Fax: 086 459 0176**

**E-mail address: [ngidis@dwa.gov.za](mailto:ngidis@dwa.gov.za)**

**ANY ENQUIRIES REGARDING TECHNICAL INFORMATION MAY BE DIRECTED TO:**

**Contact Person: Mr Fanus Fourie**

**Tel: 012 336 7303**

**E-mail address: [fourief@dws.gov.za](mailto:fourief@dws.gov.za)**

## TAX CLEARANCE CERTIFICATE REQUIREMENTS

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

- 1 In order to meet this requirement bidders are required to complete in full the attached form TCC 001 "Application for a Tax Clearance Certificate" and submit it to any SARS branch office nationally. The Tax Clearance Certificate Requirements are also applicable to foreign bidders / individuals who wish to submit bids.
- 2 SARS will then furnish the bidder with a Tax Clearance Certificate that will be valid for a period of 1 (one) year from the date of approval.
- 3 The original Tax Clearance Certificate must be submitted together with the bid. Failure to submit the original and valid Tax Clearance Certificate will result in the invalidation of the bid. Certified copies of the Tax Clearance Certificate will not be acceptable.
- 4 In bids where Consortia / Joint Ventures / Sub-contractors are involved, each party must submit a separate Tax Clearance Certificate.
- 5 Copies of the TCC 001 "Application for a Tax Clearance Certificate" form are available from any SARS branch office nationally or on the website [www.sars.gov.za](http://www.sars.gov.za).
- 6 Applications for the Tax Clearance Certificates may also be made via eFiling. In order to use this provision, taxpayers will need to register with SARS as eFilers through the website [www.sars.gov.za](http://www.sars.gov.za).

Jeyrel:\Mdk416-SBD2 tax clearance

## **COMPULSORY BRIEFING SESSION ATTENDANCE CERTIFICATE**

W 11034: **Appointment of Contractors for Test Pumping of Boreholes in South Africa  
for Three (03) years Term Contract**

This certificate serves to confirm that the representative of the below mentioned company attended the compulsory briefing session on 05 May 2016 as required for the above mentioned bid W11034 as issued by the Department of Water and Sanitation.

On behalf of the company

**Name of Representative:** .....

**Bidder Name:** .....

**Signature:** .....

**Date:**.....

**Department of Water and Sanitation confirmation:**

**Name of official:** Syabonga Ngidi

**Position:** SCM PRACTITIONER

**Signature:** .....

**SCM OFFICIAL STAMP**

## DECLARATION OF INTEREST

1. Any legal person, including persons employed by the state<sup>1</sup>, or persons having a kinship with persons employed by the state, including a blood relationship, may make an offer or offers in terms of this invitation to bid (includes an advertised competitive bid, a limited bid, a proposal or written price quotation). In view of possible allegations of favouritism, should the resulting bid, or part thereof, be awarded to persons employed by the state, or to persons connected with or related to them, it is required that the bidder or his/her authorised representative declare his/her position in relation to the evaluating/adjudicating authority where-

- the bidder is employed by the state; and/or
- the legal person on whose behalf the bidding document is signed, has a relationship with persons/a person who are/is involved in the evaluation and or adjudication of the bid(s), or where it is known that such a relationship exists between the person or persons for or on whose behalf the declarant acts and persons who are involved with the evaluation and or adjudication of the bid.

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

2.1 Full Name of bidder or his or her representative: .....

2.2 Identity Number:.....

2.3 Position occupied in the Company (director, trustee, shareholder<sup>2</sup>, member):

.....

2.4 Registration number of company, enterprise, close corporation, partnership agreement or trust:

.....

2.5 Tax Reference Number:.....

2.6 VAT Registration Number: .....

- 2.6.1 The names of all directors / trustees / shareholders / members, their individual identity numbers, tax reference numbers and, if applicable, employee / PERSAL numbers must be indicated in paragraph 3 below.

<sup>1</sup>"State" means –

- (a) any national or provincial department, national or provincial public entity or constitutional institution within the meaning of the Public Finance Management Act, 1999 (Act No. 1 of 1999);
- (b) any municipality or municipal entity;
- (c) provincial legislature;
- (d) national Assembly or the national Council of provinces; or
- (e) Parliament.

<sup>2</sup>"Shareholder" means a person who owns shares in the company and is actively involved in the management of the enterprise or business and exercises control over the enterprise.

2.7 Are you or any person connected with the bidder presently employed by the state? **YES / NO**

2.7.1 If so, furnish the following particulars:

Name of person / director / trustee / shareholder/ member: .....  
Name of state institution at which you or the person connected to the bidder is employed : .....  
Position occupied in the state institution: .....

Any other particulars:

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

2.7.2 If you are presently employed by the state, did you obtain the appropriate authority to undertake remunerative work outside employment in the public sector? **YES / NO**

2.7.2.1 If yes, did you attach proof of such authority to the bid document? **YES / NO**

(Note: Failure to submit proof of such authority, where applicable, may result in the disqualification of the bid.

2.7.2.2 If no, furnish reasons for non-submission of such proof:

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

2.8 Did you or your spouse, or any of the company's directors / trustees / shareholders / members or their spouses conduct business with the state in the previous twelve months? **YES / NO**

2.8.1 If so, furnish particulars:

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

2.9 Do you, or any person connected with the bidder, have any relationship (family, friend, other) with a person employed by the state and who may be involved with the evaluation and or adjudication of this bid? **YES / NO**



2.9.1If so, furnish particulars.

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

2.10 Are you, or any person connected with the bidder,  
aware of any relationship (family, friend, other) between  
any other bidder and any person employed by the state  
who may be involved with the evaluation and or adjudication  
of this bid?

**YES/NO**

2.10.1If so, furnish particulars.

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

2.11Do you or any of the directors / trustees / shareholders / members  
of the company have any interest in any other related companies  
whether or not they are bidding for this contract?

**YES/NO**

2.11.1 If so, furnish particulars:

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

**3 Full details of directors / trustees / members / shareholders.**

<b>Full Name</b>	<b>Identity Number</b>	<b>Personal Income Tax Reference Number</b>	<b>State Employee Number / Persal Number</b>

**4     DECLARATION**

I, THE UNDERSIGNED (NAME).....

CERTIFY THAT THE INFORMATION FURNISHED IN PARAGRAPHS 2 and 3 ABOVE IS CORRECT. I ACCEPT  
THAT THE STATE MAY REJECT THE BID OR ACT AGAINST ME SHOULD THIS  
DECLARATION PROVE TO BE FALSE.

.....  
Signature

.....  
Date

.....  
Position

.....  
Name of bidder

## PREFERENCE POINTS CLAIM FORM IN TERMS OF THE PREFERENTIAL PROCUREMENT REGULATIONS 2011

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, 2011.**

### 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 R1 000 000 (all applicable taxes included); and
- the 90/10 system for requirements with a Rand value above R1 000 000 (all applicable taxes included).

1.2 The value of this bid is estimated to exceed/not exceed R1 000 000 (all applicable taxes included) and therefore the 90/10 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:

	<b>POINTS</b>
<b>1.3.1.1 PRICE</b>	<b>90</b>
<b>1.3.1.2 B-BBEE STATUS LEVEL OF CONTRIBUTION</b>	<b>10</b>
<b>Total points for Price and B-BBEE must not exceed</b>	<b>100</b>

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 **“sub-contract”** means the primary contractor’s assigning, leasing, making out work to, or employing, another person to support such primary contractor in the execution of part of a project in terms of the contract;
- 2.16 **“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;
- 2.17 **“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
- 2.18 **“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 90/10 PREFERENCE POINT SYSTEMS**

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

**90/10**

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

Where

$P_s$  = Points scored for comparative price of bid under consideration

$P_t$  = 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:

<b>B-BBEE Status Level of Contributor</b>	<b>Number of points (90/10 system)</b>
1	10
2	9
3	8
4	5
5	4
6	3
7	2
8	1
Non-compliant contributor	0

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

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

## **6. BID DECLARATION**

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

## **7. B-BBEE STATUS LEVEL OF CONTRIBUTION CLAIMED IN TERMS OF PARAGRAPHS 1.3.1.2 AND 5.1**

- 7.1 B-BBEE Status Level of Contribution: ..... = .....(maximum of 10 or 20 points)

(Points claimed in respect of paragraph 7.1 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).

## **8 SUB-CONTRACTING**

- 8.1 Will any portion of the contract be sub-contracted? YES / NO (delete which is not applicable)

- 8.1.1 If yes, indicate:

- (i) what percentage of the contract will be subcontracted?

.....%

- (ii) the name of the sub-contractor?

.....

- (iii) the B-BBEE status level of the sub-contractor?

.....

- (iv) whether the sub-contractor is an EME? YES / NO (delete which is not applicable)

9 **DECLARATION WITH REGARD TO COMPANY/FIRM**

9.1 Name of company/firm ..... :

9.2 VAT registration number : .....

9.3 Company registration number .....  
:

9.4 TYPE OF COMPANY/ FIRM

- ☐ Partnership/Joint Venture / Consortium
- ☐ One person business/sole propriety
- ☐ Close corporation
- ☐ Company
- ☐ (Pty) Limited

[TICK APPLICABLE BOX]

9.5 DESCRIBE PRINCIPAL BUSINESS ACTIVITIES

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

9.6 COMPANY CLASSIFICATION

- ☐ Manufacturer
- ☐ Supplier
- ☐ Professional service provider
- ☐ Other service providers, e.g. transporter, etc.

[TICK APPLICABLE BOX]

9.7 Total number of years the company/firm has been in business? .....

9.8 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

**WITNESSES:**

1. ....

.....  
SIGNATURE(S) OF BIDDER(S)

2. ....

DATE:.....

ADDRESS:.....

.....

.....

**DECLARATION OF BIDDER'S PAST SUPPLY CHAIN MANAGEMENT PRACTICES**

- 1 This Standard Bidding Document must form part of all bids invited.
- 2 It serves as a declaration to be used by institutions in ensuring that when goods and services are being procured, all reasonable steps are taken to combat the abuse of the supply chain management system.
- 3 The bid of any bidder may be disregarded if that bidder, or any of its directors have-
- abused the institution's supply chain management system;
  - committed fraud or any other improper conduct in relation to such system; or
  - failed to perform on any previous contract.

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

Item	Question	Yes	No
4.1	Is the bidder or any of its directors listed on the National Treasury's Database of Restricted Suppliers as companies or persons prohibited from doing business with the public sector?  <b>(Companies or persons who are listed on this Database were informed in writing of this restriction by the Accounting Officer/Authority of the institution that imposed the restriction after the <i>audi alteram partem</i> rule was applied).</b>  The Database of Restricted Suppliers now resides on the National Treasury's website( <a href="http://www.treasury.gov.za">www.treasury.gov.za</a> ) and can be accessed by clicking on its link at the bottom of the home page.	Yes <input type="checkbox"/>	No <input type="checkbox"/>
4.1.1	If so, furnish particulars:		
4.2	Is the bidder or any of its directors listed on the Register for Tender Defaulters in terms of section 29 of the Prevention and Combating of Corrupt Activities Act (No 12 of 2004)?  <b>The Register for Tender Defaulters can be accessed on the National Treasury's website (<a href="http://www.treasury.gov.za">www.treasury.gov.za</a>) by clicking on its link at the bottom of the home page.</b>	Yes <input type="checkbox"/>	No <input type="checkbox"/>
4.2.1	If so, furnish particulars:		
4.3	Was the bidder or any of its directors convicted by a court of law (including a court outside of the Republic of South Africa) for fraud or corruption during the past five years?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
4.3.1	If so, furnish particulars:		
4.4	Was any contract between the bidder and any organ of state terminated during the past five years on account of failure to perform on or comply with the contract?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
4.4.1	If so, furnish particulars:		

**CERTIFICATION**

**I, THE UNDERSIGNED (FULL NAME).....  
CERTIFY THAT THE INFORMATION FURNISHED ON THIS DECLARATION FORM IS  
TRUE AND CORRECT.**

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

.....  
**Signature**

.....  
**Date**

.....  
**Position**

.....  
**Name of Bidder**

Js365bW

## CERTIFICATE OF INDEPENDENT BID DETERMINATION

- 1 This Standard Bidding Document (SBD) must form part of all bids<sup>1</sup> invited.
- 2 Section 4 (1) (b) (iii) of the Competition Act No. 89 of 1998, as amended, prohibits an agreement between, or concerted practice by, firms, or a decision by an association of firms, if it is between parties in a horizontal relationship and if it involves collusive bidding (or bid rigging).<sup>2</sup> Collusive bidding is a *pe se* prohibition meaning that it cannot be justified under any grounds.
- 3 Treasury Regulation 16A9 prescribes that accounting officers and accounting authorities must take all reasonable steps to prevent abuse of the supply chain management system and authorizes accounting officers and accounting authorities to:
  - a. disregard the bid of any bidder if that bidder, or any of its directors have abused the institution's supply chain management system and or committed fraud or any other improper conduct in relation to such system.
  - b. cancel a contract awarded to a supplier of goods and services if the supplier committed any corrupt or fraudulent act during the bidding process or the execution of that contract.
- 4 This SBD serves as a certificate of declaration that would be used by institutions to ensure that, when bids are considered, reasonable steps are taken to prevent any form of bid-rigging.
- 5 In order to give effect to the above, the attached Certificate of Bid Determination (SBD 9) must be completed and submitted with the bid:

<sup>1</sup> Includes price quotations, advertised competitive bids, limited bids and proposals.

<sup>2</sup> Bid rigging (or collusive bidding) occurs when businesses, that would otherwise be expected to compete, secretly conspire to raise prices or lower the quality of goods and / or services for purchasers who wish to acquire goods and / or services through a bidding process. Bid rigging is, therefore, an agreement between competitors not to compete.

### CERTIFICATE OF INDEPENDENT BID DETERMINATION

I, the undersigned, in submitting the accompanying bid:

---

(Bid Number and Description)

in response to the invitation for the bid made by:

---

(Name of Institution)

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

I certify, on behalf of: \_\_\_\_\_ that:

(Name of Bidder)

1. I have read and I understand the contents of this Certificate;
2. I understand that the accompanying bid will be disqualified if this Certificate is found not to be true and complete in every respect;
3. I am authorized by the bidder to sign this Certificate, and to submit the accompanying bid, on behalf of the bidder;
4. Each person whose signature appears on the accompanying bid has been authorized by the bidder to determine the terms of, and to sign the bid, on behalf of the bidder;
5. For the purposes of this Certificate and the accompanying bid, I understand that the word "competitor" shall include any individual or organization, other than the bidder, whether or not affiliated with the bidder, who:
  - (a) has been requested to submit a bid in response to this bid invitation;
  - (b) could potentially submit a bid in response to this bid invitation, based on their qualifications, abilities or experience; and
  - (c) provides the same goods and services as the bidder and/or is in the same line of business as the bidder
6. The bidder has arrived at the accompanying bid independently from, and without consultation, communication, agreement or arrangement with any competitor. However communication between partners in a joint venture or consortium<sup>3</sup> will not be construed as collusive bidding.

7. In particular, without limiting the generality of paragraphs 6 above, there has been no consultation, communication, agreement or arrangement with any competitor regarding:
- (a) prices;
  - (b) geographical area where product or service will be rendered (market allocation)
  - (c) methods, factors or formulas used to calculate prices;
  - (d) the intention or decision to submit or not to submit, a bid;
  - (e) the submission of a bid which does not meet the specifications and conditions of the bid; or
  - (f) bidding with the intention not to win the bid.
8. In addition, there have been no consultations, communications, agreements or arrangements with any competitor regarding the quality, quantity, specifications and conditions or delivery particulars of the products or services to which this bid invitation relates.
9. The terms of the accompanying bid have not been, and will not be, disclosed by the bidder, directly or indirectly, to any competitor, prior to the date and time of the official bid opening or of the awarding of the contract.

<sup>3</sup> Joint venture or Consortium means an association of persons for the purpose of combining their expertise, property, capital, efforts, skill and knowledge in an activity for the execution of a contract.

10. I am aware that, in addition and without prejudice to any other remedy provided to combat any restrictive practices related to bids and contracts, bids that are suspicious will be reported to the Competition Commission for investigation and possible imposition of administrative penalties in terms of section 59 of the Competition Act No 89 of 1998 and or may be reported to the National Prosecuting Authority (NPA) for criminal investigation and or may be restricted from conducting business with the public sector for a period not exceeding ten (10) years in terms of the Prevention and Combating of Corrupt Activities Act No 12 of 2004 or any other applicable legislation.

.....

Signature

.....

Date

.....

Position

.....

Name of Bidder

Js914w 2

## **GOVERNMENT PROCUREMENT GENERAL CONDITIONS OF CONTRACT.**

### **NOTES**

**The purpose of this document is to:**

- (i) Draw special attention to certain general conditions applicable to government bids, contracts and orders; and**
- (ii) To ensure that clients be familiar with regard to the rights and obligations of all parties involved in doing business with government.**

**In this document words in the singular also mean in the plural and vice versa and words in the masculine also mean in the feminine and neuter.**

- ☐ **The General Conditions of Contract will form part of all bid documents and may not be amended.**
- ☐ **Special Conditions of Contract (SCC) relevant to a specific bid, should be compile separately for every bid (if (applicable) and will supplement the General Conditions of Contract. Whenever there is a conflict, the provisions in the SCC shall prevail.**

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## General Conditions of Contract

### 1. Definitions 1. The following terms shall be interpreted as indicated:

- 1.1 "Closing time" means the date and hour specified in the bidding documents for the receipt of bids.
- 1.2 "Contract" means the written agreement entered into between the purchaser and the supplier, as recorded in the contract form signed by the parties, including all attachments and appendices thereto and all documents incorporated by reference therein.
- 1.3 "Contract price" means the price payable to the supplier under the contract for the full and proper performance of his contractual obligations.
- 1.4 "Corrupt practice" means the offering, giving, receiving, or soliciting of any thing of value to influence the action of a public official in the procurement process or in contract execution.
- 1.5 "Countervailing duties" are imposed in cases where an enterprise abroad is subsidized by its government and encouraged to market its products internationally.
- 1.6 "Country of origin" means the place where the goods were mined, grown or produced or from which the services are supplied. Goods are produced when, through manufacturing, processing or substantial and major assembly of components, a commercially recognized new product results that is substantially different in basic characteristics or in purpose or utility from its components.
- 1.7 "Day" means calendar day.
- 1.8 "Delivery" means delivery in compliance of the conditions of the contract or order.
- 1.9 "Delivery ex stock" means immediate delivery directly from stock actually on hand.
- 1.10 "Delivery into consignees store or to his site" means delivered and unloaded in the specified store or depot or on the specified site in compliance with the conditions of the contract or order, the supplier bearing all risks and charges involved until the supplies are so delivered and a valid receipt is obtained.
- 1.11 "Dumping" occurs when a private enterprise abroad market its goods on own initiative in the RSA at lower prices than that of the country of origin and which have the potential to harm the local industries in the RSA.
- 1.12 "Force majeure" means an event beyond the control of the supplier and not involving the supplier's fault or negligence and not foreseeable. Such events may include, but is not restricted to, acts of the purchaser in its sovereign capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions and freight embargoes.
- 1.13 "Fraudulent practice" means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of any bidder, and includes collusive practice among bidders prior to or after bid submission) designed to establish bid prices at artificial non-competitive levels and to deprive the bidder of the benefits of free and open competition.

- 1.14 "GCC" means the General Conditions of Contract.
- 1.15 "Goods" means all of the equipment, machinery, and/or other materials that the supplier is required to supply to the purchaser under the contract.
- 1.16 "Imported content" means that portion of the bidding price represented by the cost of components, parts or materials which have been or are still to be imported (whether by the supplier or his subcontractors) and which costs are inclusive of the costs abroad, plus freight and other direct importation costs such as landing costs, dock dues, import duty, sales duty or other similar tax or duty at the South African place of entry as well as transportation and handling charges to the factory in the Republic where the supplies covered by the bid will be manufactured.
- 1.17 "Local content" means that portion of the bidding price which is not included in the imported content provided that local manufacture does take place.
- 1.18 "Manufacture" means the production of products in a factory using labour, materials, components and machinery and includes other related value-adding activities.
- 1.19 "Order" means an official written order issued for the supply of goods or works or the rendering of a service.
- 1.20 "Project site," where applicable, means the place indicated in bidding documents.
- 1.21 "Purchaser" means the organization purchasing the goods.
- 1.22 "Republic" means the Republic of South Africa.
- 1.23 "SCC" means the Special Conditions of Contract.
- 1.24 "Services" means those functional services ancillary to the supply of the goods, such as transportation and any other incidental services, such as installation, commissioning, provision of technical assistance, training, catering, gardening, security, maintenance and other such obligations of the supplier covered under the contract.
- 1.25 "Written" or "in writing" means handwritten in ink or any form of electronic or mechanical writing.

## **2. Application.**

- 2.1 These general conditions are applicable to all bids, contracts and orders including bids for functional and professional services, sales, hiring, letting and the granting or acquiring of rights, but excluding immovable property, unless otherwise indicated in the bidding documents.
- 2.2 Where applicable, special conditions of contract are also laid down to cover specific supplies, services or works.
- 2.3 Where such special conditions of contract are in conflict with these general conditions, the special conditions shall apply.

### **3. General**

- 3.1 Unless otherwise indicated in the bidding documents, the purchaser shall not be liable for any expense incurred in the preparation and submission of a bid. Where applicable a non-refundable fee for documents may be charged.
- 3.2 With certain exceptions, invitations to bid are only published in the Government Tender Bulletin. The Government Tender Bulletin may be obtained directly from the Government Printer, Private Bag X85, Pretoria 0001, or accessed electronically from [www.treasury.gov.za](http://www.treasury.gov.za)

### **4. Standards**

- 4.1 The goods supplied shall conform to the standards mentioned in the bidding documents and specifications.

### **5. Use of contract documents and information; inspection.**

- 5.1 The supplier shall not, without the purchaser's prior written consent, disclose the contract, or any provision thereof, or any specification, plan, drawing, pattern, sample, or information furnished by or on behalf of the purchaser in connection therewith, to any person other than a person employed by the supplier in the performance of the contract. Disclosure to any such employed person shall be made in confidence and shall extend only so far as may be necessary for purposes of such performance.
- 5.2 The supplier shall not, without the purchaser's prior written consent, make use of any document or information mentioned in GCC clause 5.1 except for purposes of performing the contract.
- 5.3 Any document, other than the contract itself mentioned in GCC clause 5.1 shall remain the property of the purchaser and shall be returned (all copies) to the purchaser on completion of the supplier's performance under the contract if so required by the purchaser.
- 5.4 The supplier shall permit the purchaser to inspect the supplier's records relating to the performance of the supplier and to have them audited by auditors appointed by the purchaser, if so required by the purchaser.

### **6. Patent rights.**

- 6.1 The supplier shall indemnify the purchaser against all third-party claims of infringement of patent, trademark, or industrial design rights arising from use of the goods or any part thereof by the purchaser.

### **7. Performance security**

- 7.1 Within thirty (30) days of receipt of the notification of contract award, the successful bidder shall furnish to the purchaser the performance security of the amount specified in SCC.
- 7.2 The proceeds of the performance security shall be payable to the purchaser as compensation for any loss resulting from the supplier's failure to complete his obligations under the contract.
- 7.3 The performance security shall be denominated in the currency of the contract or in a freely convertible currency acceptable to the purchaser and shall be in one of the following forms:

- (a) A bank guarantee or an irrevocable letter of credit issued by a reputable bank located in the purchaser's country or abroad, acceptable to the purchaser, in the form provided in the bidding documents or another form acceptable to the purchaser; or
- (b) A cashier's or certified cheque

7.4 The performance security will be discharged by the purchaser and returned to the supplier not later than thirty (30) days following the date of completion of the supplier's performance obligations under the contract, including any warranty obligations, unless otherwise specified in SCC.

## **8. Inspections, tests and analyses**

8.1 All pre-bidding testing will be for the account of the bidder 8.2 If it is a bid condition that supplies to be produced or services to be rendered should at any stage during production or execution or on completion be subject to inspection, the premises of the bidder or contractor shall be open, at all reasonable hours, for inspection by a representative of the Department or organization acting on behalf of the Department.

8.2 If it is a bid condition that supplies to be produced or services to be rendered should at any stage during production or execution or on completion be subject to inspection, the premises of the bidder or contractor shall be open, at all reasonable hours, for inspection by a representative of the Department or an organization acting on behalf of the Department

8.3 If there are no inspection requirements indicated in the bidding documents and no mention is made in the contract, but during the contract period it is decided that inspections shall be carried out, the purchaser shall itself make the necessary arrangements, including payment arrangements with the testing authority concerned.

8.4 If the inspections, tests and analyses referred to in clauses 8.2 and 8.3 show the supplies to be in accordance with the contract requirements, the cost of the inspections, tests and analyses shall be defrayed by the purchaser.

8.5 Where the supplies or services referred to in clauses 8.2 and 8.3 do not comply with the contract requirements, irrespective of whether such supplies or services are accepted or not, the cost in connection with these inspections, tests or analyses shall be defrayed by the supplier.

8.6 Supplies and services which are referred to in clauses 8.2 and 8.3 and which do not comply with the contract requirements may be rejected.

8.7 Any contract supplies may on or after delivery be inspected, tested or 8 analyzed and may be rejected if found not to comply with the requirements of the contract. Such rejected supplies shall be held at the cost and risk of the supplier who shall, when called upon, remove them immediately at his own cost and forthwith substitute them with supplies which do comply with the requirements of the contract .Failing such removal the rejected supplies shall be returned at the suppliers cost and risk. Should the supplier fail to provide the substitute supplies forthwith, the purchaser may, without giving the supplier further opportunity to substitute the rejected supplies, purchase such supplies as may be necessary at the expense of the supplier.

8.8 The provisions of clauses 8.4 to 8.7 shall not prejudice the right of the purchaser to cancel the contract on account of a breach of the conditions thereof, or to act in terms of Clause 23 of GCC

## **9. Packing**

- 9.1 The supplier shall provide such packing of the goods as is required to prevent their damage or deterioration during transit to their final destination, as indicated in the contract. The packing shall be sufficient to withstand, without limitation, rough handling during transit and exposure to extreme temperatures, salt and precipitation during transit, and open storage. Packing, case size and weights shall take into consideration, where appropriate, the remoteness of the goods' final destination and the absence of heavy handling facilities at all points in transit.
- 9.2 The packing, marking, and documentation within and outside the packages shall comply strictly with such special requirements as shall be expressly provided for in the contract, including additional requirements, if any, specified in SCC, and in any subsequent instructions ordered by the purchaser.

## **10. Delivery and documents**

- 10.1 Delivery of the goods shall be made by the supplier in accordance with the terms specified in the contract. The details of shipping and/or other documents to be furnished by the supplier are specified in SCC.
- 10.2 Documents to be submitted by the supplier are specified in SCC.

## **11. Insurance**

- 11.1 The goods supplied under the contract shall be fully insured in a freely convertible currency against loss or damage incidental to manufacture or acquisition, transportation, storage and delivery in the manner specified in the SCC.

## **12. Transportation**

- 12.1 Should a price other than an all-inclusive delivered price be required, this shall be specified in the SCC.

## **13. Incidental services**

- 13.1 The supplier may be required to provide any or all of the following services, including additional services, if any, specified in SCC:
- (a) Performance or supervision of on-site assembly and/or commissioning of the supplied goods;
  - (b) Furnishing of tools required for assembly and/or maintenance of the supplied goods;
  - (c) Furnishing of a detailed operations and maintenance manual for each appropriate unit of the supplied goods;
  - (d) Performance or supervision or maintenance and/or repair of the supplied goods, for a period of time agreed by the parties, provided that this service shall not relieve the supplier of any warranty obligations under this contract; and
  - (e) Training of the purchaser's personnel, at the supplier's plant and/or on-site, in assembly, start-up, operation, maintenance, and/or repair of the supplied goods.
- 13.2 Prices charged by the supplier for incidental services, if not included in the contract price for the goods, shall be agreed upon in advance by the parties and shall not exceed the prevailing rates charged to other parties by the supplier for similar services.

## **14. Spare parts**

- 14.1 As specified in SCC, the supplier may be required to provide any or all of the following materials, notifications, and information pertaining to spare parts manufactured or distributed by the supplier:
- (a) Such spare parts as the purchaser may elect to purchase from the supplier, provided that this election shall not relieve the supplier of any warranty obligations under the contract; and
  - (b) In the event of termination of production of the spare parts:
    - (i) Advance notification to the purchaser of the pending termination, in sufficient time to permit the purchaser to procure needed requirements; and
    - (ii) Following such termination, furnishing at no cost to the purchaser, the blueprints, drawings, and specifications of the spare parts, if requested.

## **15. Warranty**

- 15.1 The supplier warrants that the goods supplied under the contract are new, unused, of the most recent or current models, and that they incorporate all recent improvements in design and materials unless provided otherwise in the contract. The supplier further warrants that all goods supplied under this contract shall have no defect, arising from design, materials, or workmanship (except when the design and/or material is required by the purchaser's specifications) or from any act or omission of the supplier, that may develop under normal use of the supplied goods in the conditions prevailing in the country of final destination.
- 15.2 This warranty shall remain valid for twelve (12) months after the goods, or any portion thereof as the case may be, have been delivered to and accepted at the final destination indicated in the contract, or for eighteen (18) months after the date of shipment from the port or place of loading in the source country, whichever period concludes earlier, unless specified otherwise in SCC.
- 15.3 The purchaser shall promptly notify the supplier in writing of any claims arising under this warranty.
- 15.4 Upon receipt of such notice, the supplier shall, within the period specified in SCC and with all reasonable speed, repair or replace the defective goods or parts thereof, without costs to the purchaser.
- 15.5 If the supplier, having been notified, fails to remedy the defect(s) within the period specified in SCC, the purchaser may proceed to take such remedial action as may be necessary, at the supplier's risk and expense and without prejudice to any other rights which the purchaser may have against the supplier under the contract.

## **16. Payment**

- 16.1 The method and conditions of payment to be made to the supplier under this contract shall be specified in SCC.
- 16.2 The supplier shall furnish the purchaser with an invoice accompanied by a copy of the delivery note and upon fulfilment of other obligations stipulated in the contract.
- 16.3 Payments shall be made promptly by the purchaser, but in no case later than thirty (30) days after submission of an invoice or claim by the supplier.

16.4 Payment will be made in Rand unless otherwise stipulated in SCC.

**17. Prices**

17.1 Prices charged by the supplier for goods delivered and services performed under the contract shall not vary from the prices quoted by the supplier in his bid, with the exception of any price adjustments authorized in SCC or in the purchaser's request for bid validity extension, as the case may be.

**18. Contract amendments**

18.1 No variation in or modification of the terms of the contract shall be made except by written amendment signed by the parties concerned.

**19. Assignment**

19.1 The supplier shall not assign, in whole or in part, its obligations to perform under the contract, except with the purchaser's prior written consent.

**20. Subcontracts**

20.1 The supplier shall notify the purchaser in writing of all subcontracts awarded under this contracts if not already specified in the bid. Such notification, in the original bid or later, shall not relieve the supplier from any liability or obligation under the contract.

**21. Delays in the supplier's performance**

21.1 Delivery of the goods and performance of services shall be made by the supplier in accordance with the time schedule prescribed by the purchaser in the contract.

21.2 If at any time during performance of the contract, the supplier or its subcontractor(s) should encounter conditions impeding timely delivery of the goods and performance of services, the supplier shall promptly notify the purchaser in writing of the fact of the delay, its likely duration and its cause(s). As soon as practicable after receipt of the supplier's notice, the purchaser shall evaluate the situation and may at his discretion extend the supplier's time for performance, with or without the imposition of penalties, in which case the extension shall be ratified by the parties by amendment of contract.

21.3 No provision in a contract shall be deemed to prohibit the obtaining of supplies or services from a national department, provincial department, or a local authority.

21.4 The right is reserved to procure outside of the contract small quantities or to have minor essential services executed if an emergency arises, the supplier's point of supply is not situated at or near the place where the supplies are required, or the supplier's services are not readily available.

21.5 Except as provided under GCC Clause 25, a delay by the supplier in the performance of its delivery obligations shall render the supplier liable to the imposition of penalties, pursuant to GCC Clause 22, unless an extension of time is agreed upon pursuant to GCC Clause 21.2 without the application of penalties.

21.6 Upon any delay beyond the delivery period in the case of a supplies contract, the purchaser shall, without cancelling the contract, be entitled to purchase supplies of a similar quality and up

to the same quantity in substitution of the goods not supplied in conformity with the contract and to return any goods delivered later at the supplier's expense and risk, or to cancel the contract and buy such goods as may be required to complete the contract and without prejudice to his other rights, be entitled to claim damages from the supplier.

## **22. Penalties**

- 22.1 Subject to GCC Clause 25, if the supplier fails to deliver any or all of the goods or to perform the services within the period(s) specified in the contract, the purchaser shall, without prejudice to its other remedies under the contract, deduct from the contract price, as a penalty, a sum calculated on the delivered price of the delayed goods or unperformed services using the current prime interest rate calculated for each day of the delay until actual delivery or performance. The purchaser may also consider termination of the contract pursuant to GCC Clause 23.

## **23. Termination for default**

- 23.1 The purchaser, without prejudice to any other remedy for breach of contract, by written notice of default sent to the supplier, may terminate this contract in whole or in part:
- (a) If the supplier fails to deliver any or all of the goods within the period(s) specified in the contract, or within any extension thereof granted by the purchaser pursuant to GCC Clause 21.2;
  - (b) If the Supplier fails to perform any other obligation(s) under the contract; or
  - (c) If the supplier, in the judgment of the purchaser, has engaged in corrupt or fraudulent practices in competing for or in executing the contract.
- 23.2 In the event the purchaser terminates the contract in whole or in part, the purchaser may procure, upon such terms deems appropriate, goods, works or services similar to those undelivered, and the supplier shall be liable to the purchaser for any excess costs for such similar goods, works or services. However, the supplier shall continue performance of the contract to the extent not terminated.
- 23.3 Where the purchaser terminates the contract in whole or in part, the purchaser may decide to impose a restriction penalty on the supplier by prohibiting such supplier from doing business with the public sector for a period not exceeding 10 years.
- 23.4 If a purchaser intends imposing a restriction on a supplier or any person associated with the supplier, the supplier will be allowed a time period of not more than fourteen (14) days to provide reasons why the envisaged restriction should not be imposed. Should the supplier fail to respond within the stipulated fourteen (14) days the purchaser may regard the intended penalty as not objected against and may impose it on the supplier.
- 23.5 Any restriction imposed on any person by the Accounting Officer / Authority will, at the discretion of the Accounting Officer / Authority, also be applicable to any other enterprise or any partner, manager, director or other person who wholly or partly exercises or exercised or may exercise control over the enterprise of the first-mentioned person, and with which enterprise or person the first-mentioned person, is or was in the opinion of the Accounting Officer / Authority actively associated.
- 23.6 If a restriction is imposed, the purchaser must, within five (5) working days of such imposition, furnish the National Treasury, with the following information:



- (i) The name and address of the supplier and / or person restricted by the purchaser;
- (ii) The date of commencement of the restriction
- (iii) The period of restriction; and
- (iv) The reasons for the restriction.

These details will be loaded in the National Treasury's central database of suppliers or persons prohibited from doing business with the public sector.

- 23.7 If a court of law convicts a person of an offence as contemplated in sections 12 or 13 of the Prevention and Combating of Corrupt Activities Act, No. 12 of 2004, the court may also rule that such person's name be endorsed on the Register for Tender Defaulters. When a person's name has been endorsed on the Register, the person will be prohibited from doing business with the public sector for a period not less than five years and not more than 10 years. The National Treasury is empowered to determine the period of restriction and each case will be dealt with on its own merits. According to section 32 of the Act the Register must be open to the public. The Register can be perused on the National Treasury website.

## **24. Anti-dumping and countervailing duties and rights**

- 24.1 When, after the date of bid, provisional payments are required, or antidumping or countervailing duties are imposed, or the amount of a provisional payment or anti-dumping or countervailing right is increased in respect of any dumped or subsidized import, the State is not liable for any amount so required or imposed, or for the amount of any such increase. When, after the said date, such a provisional payment is no longer required or any such anti-dumping or countervailing right is abolished, or where the amount of such provisional payment or any such right is reduced, any such favourable difference shall on demand be paid forthwith by the contractor to the State or the State may deduct such amounts from moneys (if any) which may otherwise be due to the contractor in regard to supplies or services which he delivered or rendered, or is to deliver or render in terms of the contract or any other contract or any other amount which may be due to him.

## **25. Force Majeure**

- 25.1 Notwithstanding the provisions of GCC Clauses 22 and 23, the supplier shall not be liable for forfeiture of its performance security, damages, or termination for default if and to the extent that his delay in performance or other failure to perform his obligations under the contract is the result of an event of force majeure.
- 25.2 If a force majeure situation arises, the supplier shall promptly notify the purchaser in writing of such condition and the cause thereof. Unless otherwise directed by the purchaser in writing, the supplier shall continue to perform its obligations under the contract as far as is reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the force majeure event.

## **26. Termination for insolvency**

- 26.1 The purchaser may at any time terminate the contract by giving written notice to the supplier if the supplier becomes bankrupt or otherwise insolvent. In this event, termination will be without compensation to the supplier, provided that such termination will not prejudice or affect any right of action or remedy which has accrued or will accrue thereafter to the purchaser.

## **27. Settlement of Disputes**

- 27.1 If any dispute or difference of any kind whatsoever arises between the purchaser and the supplier in connection with or arising out of the contract, the parties shall make every effort to resolve amicably such dispute or difference by mutual consultation.
- 27.2 If, after thirty (30) days, the parties have failed to resolve their dispute or difference by such mutual consultation, then either the purchaser or the supplier may give notice to the other party of his intention to commence with mediation. No mediation in respect of this matter may be commenced unless such notice is given to the other party.
- 27.3 Should it not be possible to settle a dispute by means of mediation, it may be settled in a South African court of law.
- 27.4 Mediation proceedings shall be conducted in accordance with the rules of procedure specified in the SCC.
- 27.5 Notwithstanding any reference to mediation and/or court proceedings herein,
- (a) The parties shall continue to perform their respective obligations under the contract unless they otherwise agree; and
  - (b) The purchaser shall pay the supplier any monies due the supplier.

## **28. Limitation of liability**

- 28.1 Except in cases of criminal negligence or wilful misconduct, and in the case of infringement pursuant to Clause 6;
- (a) The supplier shall not be liable to the purchaser, whether in contract, tort, or otherwise, for any indirect or consequential loss or damage, loss of use, loss of production, or loss of profits or interest costs, provided that this exclusion shall not apply to any obligation of the supplier to pay penalties and/or damages to the purchaser; and
  - (b) The aggregate liability of the supplier to the purchaser, whether under the contract, in tort or otherwise, shall not exceed the total contract price, provided that this limitation shall not apply to the cost of repairing or replacing defective equipment.

## **29. Governing language**

- 29.1 The contract shall be written in English. All correspondence and other documents pertaining to the contract that exchanged by the parties shall also be written in English.

## **30. Applicable law**

- 30.1 The contract shall be interpreted in accordance with South African laws, unless otherwise specified in SCC.

## **31. Notices**

- 31.1 Every written acceptance of a bid shall be posted to the supplier concerned by registered or certified mail and any other notice to him shall be posted by ordinary mail to the address

furnished in his bid or to the address notified later by him in writing and such posting shall be deemed to be proper service of such notice.

- 31.2 The time mentioned in the contract documents for performing any act after such aforesaid notice has been given, shall be reckoned from the date of posting of such notice.

### **32. Taxes and duties**

- 32.1 A foreign supplier shall be entirely responsible for all taxes, stamp duties, license fees, and other such levies imposed outside the purchaser's country.
- 32.2 A local supplier shall be entirely responsible for all taxes, duties, license fees, etc., incurred until delivery of the contracted goods to the purchaser.
- 32.3 No contract shall be concluded with any bidder whose tax matters are not in order. Prior to the award of a bid the Department must be in possession of a tax clearance certificate, submitted by the bidder. This certificate must be an original issued by the South African Revenue Services.

### **33. National Industrial Participation (NIP) Programme**

- 33.1 The NIP Programme administered by the Department of Trade and Industry shall be applicable to all contracts that are subject to the NIP obligation

### **34. Prohibition of Restrictive practices**

- 34.1 In terms of section 4 (1) (b) (iii) of the Competition Act No. 89 of 1998, as amended, an agreement between, or concerted practice by, firms, or a decision by an association of firms, is prohibited if it is between parties in a horizontal relationship and if a bidder (s) is / are or a contractor(s) was / were involved in collusive bidding (or bid rigging).
- 34.2 If a bidder(s) or contractor(s), based on reasonable grounds or evidence obtained by the purchaser, has / have engaged in the restrictive practice referred to above, the purchaser may refer the matter to the Competition Commission for investigation and possible imposition of administrative penalties as contemplated in the Competition Act No. 89 of 1998.
- 34.3 If a bidder(s) or contractor(s), has / have been found guilty by the Competition Commission of the restrictive practice referred to above, the purchaser may, in addition and without prejudice to any other remedy provided for, invalidate the bid(s) for such item(s) offered, and / or terminate the contract in whole or part, and / or restrict the bidder(s) or contractor(s) from conducting business with the public sector for a period not exceeding ten (10) years and / or claim damages from the bidder(s) or contractor(s) concerned.

### 35. SPECIAL CONDITIONS OF CONTRACT

- 35.1 The State reserves the right to verify and authenticate all the information supplied in this document by the bidder.
- 35.2 The Bid must be strictly in accordance with the conditions and specifications contained herein.
- 35.3 If it is found that any information has been tampered with during the evaluation process and/or after the Bid/Contract has been awarded that any false information has been provided, the State reserves the right to take the necessary action as it deems fit, including but not limited to the institution of criminal proceedings.
- 35.4 Failure to sign all relevant places shall invalidate your bid (**SBD1, SBD 3.1, SBD 4, SBD 6.1 or 6.2, SBD 8, SBD 9 and SCC**)
- 35.5 All queries should be sent to the relevant person via email state above. No query will be responded to if sent 3 days before the closing date.
- 35.6 If you are not a registered supplier with the Department of Water and Sanitation, please complete the supplier registration forms and banking details, supplier registration forms are available at Departmental website, [www.dwa.gov.za](http://www.dwa.gov.za)
- 35.7 Bidders/ Individuals that are directors or members in more than one company bidding for this tender and do not openly declare their interests will be disqualified
- 35.8 **Failure to submit original and valid Tax Clearance Certificate shall invalidate your bid.**
- 35.9 The DWS reserves the right to not make an award on any of the responses to this Bid.
- 35.10 The DWS reserves the right to award only parts of this bid and re-bid for other parts.
- 35.11 All bid documents should be hand delivered and deposited in to the Tender Box, if sent via post, envelope or package, the envelope must be clearly marked to avoid your submission been mixed with normal letters sent to the Department.
- 35.12 Only signed, original documents will be accepted.

### 36. ACCEPTANCE OF TERMS AND SPECIAL CONDITIONS

The above terms of the bid and all Annexure have been read, understood and accepted.

For and on behalf of the Bidder:

.....

\_\_\_\_\_

Signature of Bidder:

\_\_\_\_\_

Date:

\_\_\_\_\_

Bidder's Name & Surname:

\_\_\_\_\_

Designation

\_\_\_\_\_

Witness Name & Surname:

\_\_\_\_\_

Date

\_\_\_\_\_

Signature:

\_\_\_\_\_

Address (Physical):

**TRADING NAME:** \_\_\_\_\_

**CONTACT PERSON:** \_\_\_\_\_

**CONTACT NUMBER:** \_\_\_\_\_

**CLOSING DATE:** \_\_\_\_\_



## water & sanitation

Department:  
Water and Sanitation  
**REPUBLIC OF SOUTH AFRICA**

**This template must be completed by the bidder**

TENDER NUMBER		
SERVICE /PROJECT DESCRIPTION		
NAME OF BIDDER		
TENDER AMOUNT		
BBBEE LEVEL		
<b>COMPANY'S COMPOSITION OF EXISTANCE</b>		
	% OWNERSHIP	TOTAL NUMBER
WOMEN		
PEOPLE WITH DISABILITIES		
BLACK MALES		
YOUTH		
<b>PARTICIPATION IN PROJECT IMPLEMENTATION</b>		
	TOTAL NUMBER	LEVEL OF PARTICIPATION (eg Project Management, Technical, Administrative)
WOMEN		
PEOPLE WITH DISABILITIES		
BLACK MALES		
YOUTH		

*Please note that this information is for reporting purposes only, and will not prejudice the company in anyway nor will it be considered as an evaluation tool.*

Name:.....

Position:.....

Signature:.....Date:.....



water & sanitation

Department:  
Water and Sanitation  
REPUBLIC OF SOUTH AFRICA

## **Appointment of Contractors for Test Pumping of Boreholes in South Africa for Three (03) years Term Contract**

### **Terms of References**





**DEPARTMENT OF WATER AND SANITATION**

**SOUTH AFRICA**

**DIRECTORATE WATER RESOURCE PLANNING  
SYSTEMS**

**DISASTER MANAGEMENT,  
COMMUNITY WATER SUPPLY,  
RESOURCE ASSESSMENT AND  
RESOURCE MANAGEMENT  
OF GROUNDWATER**

**BID NO. W11034**

**TEST PUMPING OF BOREHOLES  
IN SOUTH AFRICA**

(Term contract for a period of three (3) years)

**TEST PUMPING OF BOREHOLES IN SOUTH AFRICA      BID W11034**  
**(DISASTER MANAGEMENT, COMMUNITY WATER SUPPLY, RESOURCE**  
**ASSESSMENT, AND RESOURCE MANAGEMENT OF GROUNDWATER)**

**BIDDER'S COMPULSORY BRIEFING SESSION BY THE DEPARTMENT OF WATER**  
**AND SANITATION IN SOUTH AFRICA**

**Deposit:**                      No Deposit

**Obtainable from:**      Procurement Section  
                                 Zwamadaka Building  
                                 157 Francis Baard Street  
                                 PRETORIA

Tel. (012) 336-7695/6  
                                 (012) 336-8988

Or

Online [www.etender.gov.za](http://www.etender.gov.za)

**Registration time:**

**Date:**                      **Time:**                                      **BID W11034**

**Place/Venue:** National Office, Pretoria

Note: The final venue and dates will be finalised before the advertisement date of the BID.

**BID ADVERTISING DATE:**

**BID CLOSING DATE:**

**ENQUIRIES: DWS Regional Office, Regional Head**

**ENQUIRIES: DWS Head Office, Pretoria**

Mr. F Fourie

Tel. 012 336 7303

Fax (012) 336 6731

Contractor Signature: \_\_\_\_\_ Name: \_\_\_\_\_ Date: \_\_\_\_\_

(1) DWS Signature: \_\_\_\_\_ Name: \_\_\_\_\_ Date: \_\_\_\_\_

(2) DWS Signature: \_\_\_\_\_ Name: \_\_\_\_\_ Date: \_\_\_\_\_

**DEPARTMENT OF WATER AND SANITATION**

**SOUTH AFRICA**

**DIRECTORATE WATER RESOURCE PLANNING  
SYSTEMS**

**DISASTER MANAGEMENT,  
COMMUNITY WATER SUPPLY,  
RESOURCE ASSESSMENT AND  
RESOURCE MANAGEMENT  
OF GROUNDWATER**

**BID NO.: W11034**

**TEST PUMPING OF BOREHOLES IN  
SOUTH AFRICA**

**INDEX – FORMS**

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1. Form SBD1.1 (Invitation to Bid)	2
2. Form SBD2 (Application for Tax Clearance Certificate)	1
3. Form SBD4 (Declaration of Interest)	4
4. Form SBD 6.1 (Preference Points Claim Form in Terms of the Preferential Procurement Regulations, 2011)	6
5. Form SBD7.2 (Rendering of services)	2
7 Form SBD8 (Declaration of Bidders past supply chain management practices)	2
8 Form SBD9 (Certificate of independent BID determination)	4
9 (Form of Bid) (Section 5)	1
10 (Government Procurement: General Conditions of Contract)	17
11 (Bidder's Compulsory Briefing Session)	1

## TAX CLEARANCE CERTIFICATE REQUIREMENTS

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

1. In order to meet this requirement bidders are required to complete in full the attached form TCC 001 –Application for a Tax Clearance Certificate” and submit it to any SARS branch office nationally. The Tax Clearance Certificate Requirements are also applicable to foreign bidders / individuals who wish to submit bids.
2. SARS will then furnish the bidder with a Tax Clearance Certificate that will be valid for a period of 1 (one) year from the date of approval.
3. The original Tax Clearance Certificate must be submitted together with the bid. Failure to submit the original and valid Tax Clearance Certificate will result in the invalidation of the bid. Certified copies of the Tax Clearance Certificate will not be acceptable.
4. In bids where Consortia / Joint Ventures / Sub-contractors are involved, each party must submit a separate Tax Clearance Certificate.
5. Copies of the TCC 001 —Application for a Tax Clearance Certificate” form are available from any SARS branch office nationally or on the website [www.sars.gov.za](http://www.sars.gov.za).
6. Applications for the Tax Clearance Certificates may also be made via eFiling. In order to use this provision, taxpayers will need to register with SARS as eFilers through the website [www.sars.gov.za](http://www.sars.gov.za).

**DEPARTMENT OF WATER AND SANITATION**

**SOUTH AFRICA**

**DIRECTORATE WATER RESOURCE PLANNING SYSTEMS**

**DISASTER MANAGEMENT,  
COMMUNITY WATER SUPPLY,  
RESOURCE ASSESSMENT AND  
RESOURCE MANAGEMENT  
OF GROUNDWATER**

**BID NO.: W**

**TEST PUMPING OF BOREHOLES IN  
SOUTH AFRICA**

**CONTENTS LIST**

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3	Information Submitted by Bidder 3-1 to 3-8
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6	Specification Drawings, Data Recordings & Reporting 6-1 to 6-8

**SECTION 1**  
**INFORMATION PROVIDED  
TO BIDDER**

**DISASTER MANAGEMENT, COMMUNITY WATER SUPPLY,  
RESOURCE ASSESSMENT AND  
RESOURCE MANAGEMENT  
OF GROUNDWATER**

**BID NO.: W**

**TEST PUMPING OF BOREHOLES  
IN SOUTH AFRICA**

**SECTION 1 - INFORMATION PROVIDED TO BIDDER**

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| 1 | Particulars of Bid Enquiry       |
| 2 | Site Inspection/Briefing Session |
| 3 | General Scope of Work            |
| 4 | Terrain Conditions               |
| 5 | Test pumping Conditions          |
| 6 | Facilities Available             |
| 7 | Instructions to Bidder           |

**DISASTER MANAGEMENT, COMMUNITY WATER SUPPLY,  
RESOURCE ASSESSMENT AND  
RESOURCE MANAGEMENT  
OF GROUNDWATER**

**BID NO.: W [REDACTED]**

**TEST PUMPING OF BOREHOLES  
IN SOUTH AFRICA**

**INFORMATION PROVIDED TO BIDDER**

**1. PARTICULARS OF BID ENQUIRY**

Bids are invited for the test pumping of boreholes associated with the requirements for disaster management, community water supply, resource assessment and resource management of the Department of Water and Sanitation in Municipal Areas with several operation and maintenance service centres defined by the following information. Note that the test pumping services are required for a period of three years from the date of award and that no specific quantity of work has been identified. Five (5) Test pumping Contractors may be appointed per provincial service centre for Standard Test pumping Services and five (5) or less for South Africa for Specialized Test pumping Services.

1-1. South Africa: Limpopo Province  
Mpumalanga Province  
Gauteng Province  
North West Province  
Free State Province  
Northern Cape Province  
Western Cape Province  
Eastern Cape Province  
KwaZulu Natal Province

1-2. The 9 Provinces act as service centres because the regional office will manage their projects and the National office will only coordinate the contract. A Locality Map is provided in Section 6. The service centre includes



the following municipal areas:

- Limpopo Province Service Centre (Polokwane)
- Mpumalanga Province Service Centre (Mbombela)
- Gauteng Province Service Centre (Pretoria)
- North West Province Service Centre (Mafikeng)
- Free State Province Service Centre (Bloemfontein)
- Northern Cape Province Service Centre (Kimberley)
- Western Cape Province Service Centre (Bellville)
- Eastern Cape Province Service Centre (East London)
- KwaZulu Natal Province Service Centre (Durban)

1-3 Communities: Project communities are at present not specified but may include various rural communities in the 9 Provinces

1-4 Project names are as follows:

- 1.4.1.A Test pumping of boreholes in South Africa
- 1.4.1.B Specialised Test pumping of boreholes in South Africa

1-5. Bid number: W

1-6. Implementing Authority: Department of Water and Sanitation - National Office, Directorate Water Resource Planning Systems

1-7. Address of Implementing Authority

The Director General  
Private Bag X313  
PRETORIA  
0001

1-8. Contact person – Director Water Resource Planning Systems

Dr. B Mwaka  
Tel: (012) 336 7500  
Fax: (012) 336 6731

Mr. F Fourie  
Tel: (012) 336 7303  
Tel: (012) 336 7303

1-9 Provincial Contact Persons

Limpopo Province (Polokwane Regional Office)

Mr. WH du Toit  
Tel: (015) 290 1262  
Fax: (015) 297 3625

Section 1  
Information provided to Bidder

Mpumalanga Province (Mbombela Regional Office)	Ms. M Ralushi Tel: (015) 290 1262 Fax: (015) 297 3625
Gauteng Province (Pretoria Regional Office)	Mr. A Shibambu Tel: 012) 392 1300 Fax: (012) 392 1304
North West Province (Mafikeng Regional Office)	Ms. R Mpe Tel: (012) 270 9911 Fax: (012) 253 2761
Free State Province (Bloemfontein Regional Office)	Mr. A Jones Tel: (051) 405 9000 Fax: (051) 405 9133
Northern Cape Province (Kimberley Regional Office)	Mr. J Makhetha Tel: (053) 830 8800 Fax: (053) 842 0392
Western Cape Province (Bellville Regional Office)	Mr. M Smart Tel: (021) 941 6000 Fax: (021) 941 6103
Eastern Cape Province (East London Regional Office)	Mr. H Goossens Tel: (043) 701 0376 Fax: (043) 722 6152
KwaZulu Natal Province (Durban Regional Office)	Mr. M Maluleke Tel: (031) 336 2700 Fax: (031) 304 9546

1-10 BID Enquiries

Mr. F Fourie  
Tel: (012) 336 7303  
Fax: (012) 336 6731

1-11. Executive Agencies

Area Consultants

1-12. Validity period of Bid (days) 120 days

1-13. Address for submission of Bid

Director-General  
Private Bag X313, Pretoria,  
0001

To be deposited in the Bid Box in the entrance of Zwamadaka Building  
157 Francis Baard Street, Pretoria

1-14. Closing date and time for submission 11:00

1-15. No submissions by telephone, telex, fax, telegram or e-mail will be accepted.

1-16. Issuing of Documents: One complete set of BID documents, drawings, and of the Schedule of Quantities are issued to a prospective Bidder on a CD. Or download the documents online from [www. www.etender.gov.za](http://www.etender.gov.za). These documents(CD) are obtainable (no deposit required) from:

Assistant Director: Procurement & PSP Admin		
Room 26, Zwamadaka Building	or	Private Bag X313
157 Francis Baard Street		Pretoria
0002		0001
Tel: 012 336-7695/6/8988		

## 2. SITE INSPECTION/BRIEFING SESSION

2-1. Compulsory (yes)

2-2. Date \_\_\_\_\_

2-3. Time \_\_\_\_\_

2-4. Place / venue DWS, National Office, Pretoria

Note: The final venue and dates will be finalised before the advertisement date of the bid.

2-5. For further information contact

Mr. F Fourie  
Tel: (012) 336 7303  
Fax: (012) 336 6731

### 3. GENERAL SCOPE OF WORK

- 3-1. Testing of new boreholes for community water supply, resource and assessment, resource monitoring and management purposes (yes)  
Estimated number Unspecified
- 3-2. Type of testing method to be applied  
Calibration testing (yes)  
Stepped discharge testing (yes)  
Constant discharge testing (yes)  
Recovery testing (yes)  
Slug testing (no)
- 3-3. Type of pump considered appropriate  
Positive displacement (yes)  
Line-shaft turbine (yes)  
Submersible (no)
- 3-4. Testing of existing boreholes  
Estimated total number Unspecified  
Estimated number equipped Unspecified  
Removal of existing equipment required (yes)  
Re-installation of existing equipment required (yes)
- 3-5. Salient Information  
Smallest borehole inside diameter (mm) 165  
Smallest cased inside diameter (mm) 152  
Estimated maximum pump setting (m) 120  
Estimated maximum depth to water level (m) 90  
Estimated maximum discharge line length (m) 500  
Estimated yield range (l/s) 0.2 to 25.0  
Estimated specialised testing yield range 25.0 to 40.0 & >40  
Estimated maximum duration of constant discharge:  
Tests (hrs) 72  
Tests with observation boreholes (yes)

#### **4. TERRAIN CONDITIONS**

- |      |   |                 |
|------|---|-----------------|
| 4-1. | Topography  |                 |
|      | Flat surface, plain                                 | (yes)           |
|      | Gently rolling                                      | (yes)           |
|      | Moderately rolling                                  | (yes)           |
|      | Hilly   | (yes)           |
|      | Mountainous   | (yes – limited) |
| 4-2. | Vehicle accessibility                               |                 |
|      | Dry weather conditions                              | (Fair)          |
|      | Wet weather conditions                              | (Poor)          |
|      | Four- or six-wheel drive required in wet conditions |                 |
| 4-3. | Access to be established                            | (yes)           |
|      | Nature of access:                                   |                 |
|      | Dismantling of borehead superstructure for testing  |                 |
|      | of existing boreholes                               | (yes)           |

#### **5. FACILITIES AVAILABLE**

- |      |                         |      |
|------|-------------------------|------|
| 5-1. | Camping site / depot    | (no) |
| 5-2. | Water supply            | (no) |
| 5-3. | Power supply            | (no) |
| 5-4. | Ablution facilities     | (no) |
| 5-5. | Housing / accommodation | (no) |

#### **6. INSTRUCTIONS TO BIDDER**

Bidders are requested to complete those of the following list of documents as are indicated hereunder.

- |     |  |
|-----|--|
| 6.1 | <u>Section 3</u> (all subsections) of this Document          |
| 6.2 | <u>Section 4</u> (subsection 2-0, Schedule) of this Document |
| 6.3 | <u>SBD1.1</u> (Invitation to Bid)                            |

- 6.4 Form SBD2 (Application for Tax Clearance Certificate)
- 6.5 Form SBD6.1 (Preference Points Claim Form in terms of the Preferential Procurement Regulations, 2011)
- 6.6 Form SBD4 (Declaration of Interest)
- 6.7 Form Annexure 11 (Credit Order Instructions)
- 6.8 Form SBD 8 (Declaration of Bidders past supply chain management practise)
- 6.9 Form SBD 9 (Certificate of independent BID determination)
- 6.10 Certificate of Bidder's Attendance of Briefing session in Section 5 of this Document
- 6.11 Form of Bid in Section 5 of this Document
- 6.12 Appendix to Bid in Section 5 of this Document
- 6.13 Agreement in Section 5 of this Document

**SECTION 2**

**CONDITIONS OF BID,  
CONDITIONS OF CONTRACT AND  
SPECIFICATIONS (TERMS OF REFERENCE)**

**DISASTER MANAGEMENT, COMMUNITY WATER SUPPLY,  
RESOURCE ASSESSMENT AND  
RESOURCE MANAGEMENT  
OF GROUNDWATER**

**BID NO.: W**

**TEST PUMPING OF BOREHOLES  
IN SOUTH AFRICA**

**SECTION 2 – CONDITIONS OF BID, CONDITIONS OF CONTRACT AND  
SPECIFICATIONS**

**INDEX**

- |   |  |
|---|--|
| 1 | Conditions of Bid (Includes Evaluation criteria, Adjudication & Acceptance of Bid) |
| 2 | General Conditions   |
| 3 | Special Conditions   |
| 4 | Project Specifications (Terms of Reference)  |
| 5 | Standard Specifications for the test pumping of boreholes                          |



**DISASTER MANAGEMENT,  
COMMUNITY WATER SUPPLY,  
RESOURCE ASSESSMENT AND  
RESOURCE MANAGEMENT  
OF GROUNDWATER**

**BID NO.: W**

**TEST PUMPING OF BOREHOLES  
IN SOUTH AFRICA**

**CONDITIONS OF BID, CONDITIONS OF CONTRACT AND SPECIFICATIONS**

**1. CONDITIONS OF BID**

**1-1 SITE INSPECTION/BRIEFING SESSION**

A Representative/s from the department will meet prospective Bidders at the time and place stated in Clause 2 of the Information Provided to Bidders (Section 1 of the Bid Documents) to conduct a Briefing Session. The Representative/s will not be available at any other time for the Briefing Session.

Representation of the Bidder at the Site Inspection/Briefing Session must be by a person who is suitably qualified and experienced to comprehend the implications of the work involved. If attendance at the Site Inspection/ Briefing Session is indicated in Sub-Clause 2.1 of the Information Provided to Bidders as being —compulsory” and the Bidder or his representative does not attend the Site Inspection/Briefing Session, the Bid will be disregarded, unless -

- (a) The Bidder has, prior to the time and date set for the Briefing Session, made a written and motivated application to the department for exemption from attendance, and
- (b) The department has, prior to the time and date set for the Site

Section 2

Conditions of Bid, Conditions of Contract and Specifications

Inspection, exempted the Bidder, in writing, from attendance, and

- (c) The department's original exemption certificate is attached to the Certificate of Bidder's Visit to the Site in Section 5 of the Bid Documents.

If attendance at the Site Inspection/Briefing Session is not indicated as —Compulsory” as aforesaid and the Bidder does not attend or is not represented thereat as aforesaid and his Bid is subsequently accepted, it will be deemed that the Bidder has otherwise acquainted himself with all information and data as provided by the department at the Site Inspection/Briefing Session.

Attendance at the Site Inspection, or exemption therefrom, shall not in any way relieve the successful Bidder of his obligations and liabilities in terms of Sub-Clause 3.(2) of the Conditions of Contract.

**1-2 SCHEDULE AND FORMS TO BE COMPLETED**

Bidders must complete the forms indicated in Clause 7 of the Information Provided to Bidders (Section 1 of the Bid Documents) in indelible black ink.

Mistakes made by the Bidder in completing the said forms shall not be erased. A line must be drawn through the incorrect entry, the correct entry must be written above, and corrections must be initialled by the Bidder. Failure to observe this rule may cause the Bid to be disqualified.

Where space is provided for the entry of information other than signatures, such entries must be in clearly legible block letters.

**1-3 RETURN BID DOCUMENTS**

A Bidder who does not submit a Bid must return the Bid Documents (i.e., the Project Document and the Book of Drawings (if applicable) to the Engineer by the closing date of the Bid.

**1-4 ALTERNATIVE BIDS**

Alternative Bids will not be accepted.

**1-5 SIGNING OF BID**

The Bid must be signed by a duly authorised person. A Bid submitted by a joint venture of two or more firms must be accompanied by the document of establishment of the joint venture (duly registered and authenticated by a

notary public or other official deputed to witness sworn statements) defining the conditions under which the joint venture will function, its duration, the persons authorised to represent it and who are obligated thereby, the participation of the several firms forming the joint venture, and any other information necessary to permit a full appraisal of its functioning.

#### **1-6 AMENDMENTS TO OR QUALIFICATIONS OF BID DOCUMENTS**

No unauthorized amendment or addition shall be made to the Forms to be completed in accordance with Clause 7 of the Information Provided to Bidders (Section 1 of the Bid Documents) or any other part of the Bid Documents. If any such amendment, alteration or addition is made, this will be regarded as a qualification of the Bid and will not only be ignored when Bids are compared, but may also cause the Bid to be disqualified. If the Schedule of Rates is not properly completed, the Bid may be rejected.

Bids submitted in accordance with these Bid Documents shall not have any qualifications. Any point of difficulty in their interpretation must be resolved with the department as early as possible during the Bid Period. If a query is found to be of significance, the department will inform all Bidders accordingly as soon as possible.

If the Bidder, notwithstanding the above, wishes to amend or qualify the Bid Documents, such amendment or qualification shall be set out explicitly in a covering letter submitted with his Bid. Any amendment or qualification contained in or appearing in or to be inferred from a programme submitted with a Bid, will be invalid unless the covering letter and the programme are identifiably in the said covering letter.

#### **1-7 CONFIDENTIAL NATURE OF DOCUMENTS**

All recipients of the Bid Documents (whether or not a Bid is submitted) shall treat the details of the documents as private and confidential.

#### **1-8 COSTS INCURRED BY BIDDER**

The department will neither be responsible for nor pay for costs incurred by a Bidder in preparing the Bid or in visiting the Site in this connection.

#### **1-9 EVALUATION CRITERIA, ADJUDICATION AND ACCEPTANCE OF BID**

##### **1-9-1 Evaluation Criteria**

##### **1-9-1-1 Adjudication overview**

Section 2

Conditions of Bid, Conditions of Contract and Specifications

The Department will have the authority to award the BID according to the criteria described below.

The bids will be evaluated according to the following Phase approach. If the Bid does not fully meet the criteria set out in each phase, it shall be regarded as non-responsive.

Phase 1: Administration Compliance

It's compulsory that all bidders comply with the administration requirements of this bid. Omission to complete and/or submit the listed documents will render your bid non responsive and the bid will not be considered for the phase 2 evaluation. The compulsory documents that must be completed and/or attached to the bid include;

1. An original and valid tax clearance certificate
2. Company registration certificate (original or certified copy)
3. Labour and Compensation letters/Certificate
4. Completed and signed standard bidding documents (SBD1.1, SBD2, SBD 4, SBD 6.1, SBD 7.1, SBD 7.2, SBD 8, SBD 9
5. Briefing session attendance

Preference will be given to companies owned by women, youth and disabled people.

Phase 2: Specification Compliance

Bidders must comply with all the technical specifications of this bid. Omission to complete and/or submit the listed documents will render your bid non responsive and the bid will not be considered for the phase 3 evaluation. The following documents must be completed in full by the bidder:

1. Annexure 2 (Schedule of rates)
2. Particulars of the Bidder
3. Statement of Recent Similar Works Completed
4. Statement of Supervisory Personnel to be Deployed
5. Statement of Plant and Equipment to be deployed
6. Schedule of Proposed Sub-Contractors

Phase 3: Evaluation of price and preference points claimed

If Bids qualify after Technical Section Evaluation then Bids will be evaluated in accordance with Financial Section and B-BBEE Status Level of Contribution (form SBD 6.1). These prices will be converted to the 90/10 preference point system as prescribed in the Preferential Procurement Regulations and as indicated in the Terms of Reference. A maximum of 90 points will be awarded to the lowest Bidder of any group of price schedules and preference points claimed for B-BBEE Status Level of Contribution will be awarded out of a total of 10 (See form SBD 6.1).

1. B-BBEE Points

Bidders should note that points may be claimed for B-BBEE in terms of the Preferential Procurement Regulation, 2011.

Such claims should be accompanied by either an original SANAS accredited certificate or a certified copy of such a certificate to qualify for the points.

2. Financial Proposal

SBD 7.1 Pricing Schedule (Schedule 8.1) must include the total offer.

The contract will be executed on the basis of Schedules of Rates. No specific quantity of work has been identified.

**1-9.2 Acceptance of Bid**

- (a) The Employer is not bound to accept the lowest or any Bid in terms of 1-9-3 (b).

**1-9.3 Basis of Bid Adjudication**

- (a) Assumption of Quantities for Adjudication Purposes

The Contract will be executed on the basis of Schedules of Rates. No specific quantity of work has been identified. No guarantee can be given regarding the expenditure of this contract.

To assist the prospective Bidders in determining their rates to be Bidded typical quantities for the test pumping of 100 boreholes (50 new and 50 existing).

The Bidder shall complete the price schedules for the Province the Bidder attended to bid for.

This Bid will be adjudicated based upon the offers received for each price schedule. The contract will be awarded schedule by schedule.

Only complete offers of price schedules will be considered. Incomplete offers of price schedules will not be adjudicated (see Chapter 1-9-1-1).

For the Standard test pumping contract between twelve (12) and thirty (30) Bidders, with the highest score for South Africa (five (5) bidders per province with a maximum of four (4) provinces per bidder), will be

Section 2

Conditions of Bid, Conditions of Contract and Specifications

awarded a contract according to each bidder's priority list. The capacity of each bidder will also consider when number of provinces been awarded.

For the Specialized test pumping contracts between five (5) and ten (10) Bidders, with the highest score for South Africa, will be awarded a contract.

**NOTE:**

**The various municipalities are not bonded to make use of the contract after the Department of Water and Sanitation transferring the schemes towards the municipalities.**

**The contractor cannot hold the Department of Water and Sanitation liable for any claims when the municipality makes use of the obligation to request the cancellation of the contract.**

(b) Adjudication

Bids shall hold good and remain valid for acceptance for a period of 120 days commencing as from the closing time and date for Bid offers.

The Employer reserves the rights to adjust any arithmetical or other patent errors in the Bid. Any adjustments in this respect made by the Engineer to the Bid will be communicated to the Bidder prior to the acceptance of the Bid.

The Employer does not bind himself to accept the lowest or any Bid nor to assign any reason for the rejection of a Bid and may if he so desires divide the Contract between any two or more Bidders and will not be held liable for any expense incurred in submitting Bids.

Bids, where the prices bidden for erection and site testing are less than  $\frac{2}{3}$  the average of the comparative bidden prices of the remaining Bids for the same item, will be rejected.

The Department may not award any part of the group price schedules to the next Bidder where the Bid price differ more than 40% of the comparative price of the lowest Bidder.

**IMPORTANT CONDITIONS**

**The Department reserves the right to deal with the Contractor and his principals throughout the duration of the contract.**

Section 2

Conditions of Bid, Conditions of Contract and Specifications

**The services are required for a period of three years from the date of award and no specify quantity of work has been identified. This is an Indefinite Delivery Contract (Price Agreement) with Multiple-Vendors. Order will be placed as required by the Regional Office, Agriculture, Environmental, Implementing Agents, Local Government, Health, Public Works, Education and the Municipalities of South Africa over the three-year period.**

**Section 2**

**Conditions of Bid, Conditions of Contract and Specifications**

**Typical quantities for the test pumping of 100 new boreholes  
for exploration, production, monitoring, assessment and management purposes**

Item No. (As per Schedule of Rates, Section 4 of this document)		Unit	Quantity
1-0	ESTABLISHMENT, PLANT SET-UP, INTER-HOLE MOVES AND DE-ESTABLISHMENT.		
1-1	<b>Establishment of Own Facilities on Site</b> – All listed items to be available on each site – according the Occupational Health and Safety specification for Contractual work) – Document will be signed by successful Bidder. <ul style="list-style-type: none"><li>- GPS,</li><li>- Accommodation (Tents, caravans etc.)</li><li>- Dedicated wash area (shower, basin etc.)</li><li>- Dedicated area for food preparation,</li><li>- Demarcated area for fuel, oil etc.</li><li>- Medical kit,</li><li>- Demarcation barrier (Not danger tape)</li><li>- Protection clothing (Hard hat, safety shoe, etc.)</li><li>- Overalls with contractors name and/or logo</li><li>- Contractors will be monitored by Consultants. This will include instructions to improve etc. reporting to the client and actions taken.</li></ul>	Sum	200
1-2	Mobilisation and set-up of plant to/at first borehole	Sum	
1-2-1	0 to 500 km	Sum	200
1-2-2	500 to 1000 km	Sum	200
1-2-3	Greater than 1000 km	Sum	200
1-3	Set-up of plant per boreholes (after first)	No	400
1-4	Inter-hole moves		
1-4-1	For distances up to 10 km	No	400
1-4-2	For distances exceeding 10 km	Km	10 000
1-5	De-establishment from site	Sum	200
1-5-1	0 to 500 km	Sum	200
1-5-2	500 to 1000 km	Sum	200
1-5-3	Greater than 1000 km	Sum	200
2-0	TEST PUMPING –		
2-1	Installation of Test Pump (depth up to 60m)		
2-1-1	For yield up to 10 l/s	No	100
2-1-2	For yield greater than 10 l/s to max 25l/s	No	100
2-2	Installation of Test Pump (per metre over 60m up to 120m)		
2-2-1	For yield up to 10 l/s	m	1500
2-2-2	For yield greater than 10 l/s to max 25l/s	m	1000
2-3	Laying out of Discharge Hose		
2-3-1	Minimum of 100m	No	600
2-3-3	100m to 300m (extra-over 100m)	m	1000



**Section 2**

**Conditions of Bid, Conditions of Contract and Specifications**

Item No. (As per Schedule of Rates, Section 4 of this document)		Unit	Quantity
2-4	Slug Test	No	100
2-6	<b>Stepped Discharge Test (Maximum 120m)</b>		
2-6-1	For yield up to 10 l/s not deeper than 60m	Hr	1000
2-6-2	For yield >10 l/s <25l/s up to 60m	Hr	600
2-6-3	For yields >20l/s but < 40l/s –max depth=60m	Hr	400
2-6-4	For yield up to 10 l/s deeper than 60m <120m	Hr	500
2-6-5	For yields >10 l/s <25l/s deeper than 60m <120m	Hr	600
2-7	<b>Constant Discharge Test (Maximum 120m)</b>		
2-7-1	For yield up to 10 l/s not deeper than 60m	Hr	3 000
2-7-2	For yield >10 l/s <25l/s up to 60m	Hr	1000
2-7-3	For yield up to 10 l/s deeper than 60m <120m	Hr	600
2-7-4	For yields >10 l/s <25l/s deeper than 60m <120m		
2-8	Recovery measurement after paragraph 2-5, 2-6, 2-7	Hr	8000
2-9	Borehole Disinfection (complete per borehole)	No	600
2-10	Obtain & fit Borehole $\phi$ 165 casing lid (obtainable from DWS refer to Drawing No. 1) (Borehole Protection)	No	600
2-11	Borehole Marking (Refer to Drawing No. 2 & 3)	No	400
2-12	Site Finishing (complete per borehole)	No	600
3-0	<b>EQUIPMENT REMOVAL AND RE-INSTALLATION</b>		
3-1	<b>Hand pump, Windmills, Motorized, installations 25 to 65mm pipes</b>		
3-1-1	Removal for 1 <sup>st</sup> 100m depth	No	200
3-1-2	Removal from depths extra-over 100m	m	1000
3-1-3	Re-installation to 100m depth	No	200
3-1-4	Re-installation to depths extra-over 100m	m	1000
3-2	<b>Motorized installations above 65mm pipes</b>		
3-2-1	Removal for 1 <sup>st</sup> 100m depth	No	200
3-2-2	Removal from depths extra-over 100m	m	1000
3-2-3	Re-installation to 100m depth	No	200
3-2-4	Re-installation to depths extra-over 100m	m	1000
3-3	<b>Borehole superstructure</b>		
3-3-1	Dismantling of superstructure	No	200
3-3-2	Re-assembly of superstructure	No	200
3-4	Minor repairs to existing equipment:		
3-4-1	Materials	Sum	150 000
3-4-2	Mark-up on materials less than R50 000	%	50 000
3-4-3	Mark-up on materials above R50 000	%	50 000
	First R50 000 @ 15% & next R50000 @ 10%	%	50 000
	R100 000 utilized for item 3-4-3		
3-4-4	Travelling costs.	Km	5000

**Section 2**

**Conditions of Bid, Conditions of Contract and Specifications**

Item No. (As per Schedule of Rates, Section 4 of this document)		Unit	Quantity
4-0	<b>DATA RECORDING AND REPORTING</b> (Complete per borehole) Including measurements – Before & after installation of test equipment – depth & water level and Casing detection	Per/bh	600
<p><b><u>It is required that all payment certificates be accompanied by proof that the required data recording and reporting was submitted for entry onto the NGDB</u></b></p> <p>The invoices of the contractors will not be certified for payment if it does not comply with the above requirements.</p>			
5-0	<b>WATER LEVEL MONITORING PER OBSERVATION BOREHOLE</b>	Hr	5000
6-0	<b>CHEMICAL ANALYSIS OF WATER SAMPLE</b> (macro-elements only) – TO BE COLLECTED DURING TEST. – Mark-up on submitted invoice	%	-
7-0	<b>STANDING TIME RATE</b>	Hr	250
8-0	<b>CASUAL (DAY) LABOUR SOURCED LOCALLY</b> Per person	Day	250

**Typical quantities for the SPECIALIZED test pumping of 100 new boreholes for exploration, production, monitoring, assessment and management purposes**

Item No. (As per Schedule of Rates, Section 4 of this document)		Unit	Quantity
1-0	<b>ESTABLISHMENT, PLANT SET-UP, INTER-HOLE MOVES AND DE-STABLISHMENT – SPECIALIZED EQUIPMENT</b>		
1-1	<p><b>Establishment of Own Facilities on Site</b> – All listed items to be available on each site – according the <u>Occupational Health and Safety</u> specification for Contractual work) – Document will be signed by successful Bidder.</p> <ul style="list-style-type: none"> <li>- GPS,</li> <li>- Accommodation (Tents, caravans etc.)</li> <li>- Dedicated wash area (shower, basin etc.)</li> <li>- Dedicated area for food preparation,</li> <li>- Demarcated area for fuel, oil etc.</li> <li>- Medical kit,</li> <li>- Demarcation barrier (Not danger tape)</li> <li>- Protection clothing (Hard hat, safety shoe, etc.)</li> <li>- Overalls with contractors name and/or logo</li> </ul> <p>Contractors will be monitored by Consultants. This will include instructions to improve etc. reporting to the client and actions taken.</p>	Sum	200
1-2	Mobilisation and set-up of plant to/at first borehole	Sum	200
1-2-1	0 to 500 km	Sum	200
1-2-2	500 to 1000 km	Sum	200
1-2-3	Greater than 1000 km	Sum	200

**Section 2**

**Conditions of Bid, Conditions of Contract and Specifications**

Item No. (As per Schedule of Rates, Section 4 of this document)		Unit	Quantity
1-3	Set-up of plant per boreholes (after first)	No	400
1-4	Inter-hole moves		
1-4-1	For distances up to 10 km	No	400
1-4-2	For distances exceeding 10 km	Km	10 000
1-5	De-establishment from site	Sum	200
1-5-1	0 to 500 km	Sum	200
1-5-2	500 to 1000 km	Sum	200
1-5-3	Greater than 1000 km	Sum	200
<b>2-0</b>	<b>TEST PUMPING –</b>		
2-1	Installation of Test Pump (depth up to 60m)		
2-1-1	For yields greater than 25l/s up to 40 l/s	Sum	80
2-1-2	For yields greater than 40 l/s	Sum	80
2-2	Installation of Test Pump (per metre over 60m up to 120m)		
2-2-1	For yields greater than 25l/s up to 40 l/s	m	1500
2-2-2	For yield greater than 40 l/s	m	1500
2-2	Installation of Test Pump (per metre over 120m up to 240m max)		
2-2-3	Over & above 120m up to 10l/s max 240m	m	1500
2-2-4	Over & above 120m 10l/s up to 20l/s	m	1500
2-2-5	Over & above 120m above 20l/s up to 40l/s	m	1000
2-3	Laying out of Discharge Hose – above 20l/s maximum 40l/s		
2-3-1	Minimum of 100m yields up to 40l/s	No	600
2-3-2	Minimum of 100m yields above 40l/s	No	600
2-3-3	100m to 300m (extra-over 100m) <40l/s	m	3000
2-3-4	100m to 300m (extra-over 100m) >40l/s	m	3000
2-4	Slug Tests	No	100
2-5	Calibration Test above 25l/s	Hr	600
2-6	Stepped Discharge Test		
2.6.1	For yields >25l/s up to 40l/s to depth of 60m	Hr	1000
2.6.2	For yield greater than 40 l/s up to 60m	Hr	600
2.6.3	For yields up to 40l/s to depths >60m <120m	Hr	1000
2.6.4	For yield greater than 40 l/s >60m <120m	Hr	600
2.6.5	For yields up to 40l/s to depths >120m <240m	Hr	600
2.6.6	For yield greater than 40 l/s >120m <240m	Hr	600
2-7	Constant Discharge Test		
2-7-1	For yields >25l/s up to 40l/s to depth of 60m	Hr	1500
2-7-2	For yield greater than 40 l/s up to 60m	Hr	1500
2-7-3	For yields up to 40l/s to depths >60m <120m	Hr	1500
2-7-4	For yield greater than 40 l/s >60m <120m	Hr	1500
2-7-5	For yields up to 40l/s to depths >120m <240m	Hr	750

**Section 2**

**Conditions of Bid, Conditions of Contract and Specifications**

Item No. (As per Schedule of Rates, Section 4 of this document)		Unit	Quantity
2-7-6	For yield greater than 40 l/s >120m <240m	Hr	750
2-8	Recovery measurement after paragraph 2-5, 2-6 & 2-7	Hr	8000
2-9	Borehole Disinfection (complete per borehole)	No	600
2-10	Obtain & fit Borehole $\phi$ 165 casing lid (obtainable from DWS refer to Drawing No. 1) (Borehole Protection)	No	600
2-11	Borehole Marking (Refer to Drawing No. 2 & 3)	No	400
2-12	Site Finishing (complete per borehole)	No	600
<b>3-0</b>	<b>EQUIPMENT REMOVAL AND RE-INSTALLATION</b>		
3-1	Hand pump, Windmills, Motorized, installations 50 to 80mm pipes		
3-1-1	Removal for 1st 100m depth	No	200
3-1-2	Removal from depths extra-over 100m	m	1000
3-1-3	Re-installation to 100m depth	No	200
3-1-4	Re-installation to depths extra-over 100m	m	1000
3-2	Motorized installations above 80mm pipes		
3-2-1	Removal for 1st 100m depth	No	200
3-2-2	Removal from depths extra-over 100m	m	1000
3-2-3	Re-installation to 100m depth	No	200
3-2-4	Re-installation to depths extra-over 100m	m	1000
3-3	Borehole superstructure		
3-3-1	Dismantling of superstructure	No	200
3-3-2	Re-assembly of superstructure	No	200
3-4	Minor repairs to existing equipment:		
3-4-1	Materials	Sum	150 000
3-4-2	Mark-up on materials less than R50 000	%	50 000
3-4-3	Mark-up on materials above R50 000	%	50 000
	First R50 000 @ 15% & next R50000 @ 10%	%	50 000
	R100 000 utilized for item 3-4-3		
3-4-4	Travelling costs.	Km	5000
<b>4-0</b>	<b>DATA RECORDING AND REPORTING</b> (Complete per borehole) Including measurements – Before & after installation of test equipment – depth & water level and Casing detection	Per/bh	600
	<b><i>It is required that all payment certificates be accompanied by proof that the required data recording and reporting was submitted for entry onto the NGDB</i></b> The invoices of the contractors will not be certified for payment if it does not comply with the above requirements.		
<b>5-0</b>	<b>WATER LEVEL MONITORING PER OBSERVATION BOREHOLE</b>	Hr	5000
<b>6-0</b>	<b>CHEMICAL ANALYSIS OF WATER SAMPLES - TO BE COLLECTED DURING TESTS</b> – Mark-up on submitted invoice from accredited lab will apply – only on request from client	%	-
<b>7-0</b>	<b>STANDING TIME RATE</b>	Hr	250
<b>8-0</b>	<b>CASUAL (DAY) LABOUR SOURCED LOCALLY</b>	Day	250

Should the department decide not to utilize the abovementioned quantities, then the quantities to be used for adjudication of the Bids received will be made available to interested Bidders at the site briefing meeting. These “adjudication quantities” will also be submitted to the Employer as well as the State Bid Board prior to the site-briefing meeting’s date.

#### **1-9.4 Application of Preferences**

Adjudication of Bids will not be carried out on the basis of Bidded rates alone and preferences will be applied in respect of the utilisation of South African manufactured materials as described in the Forms contained in Section 5 of the Bid Documents.

The Employer intends to effect payment for materials provided and/or for services rendered within 30 days of certification.

#### **1-10 WITHDRAWAL, MODIFICATION OR CORRECTION OF BID PRIOR TO CLOSING DATE**

A Bidder is entitled to withdraw, modify or correct his Bid after it has been delivered, provided that the request for such withdrawal, modification or correction, together with full details of such modification or correction is received at the address given for submission of Bids either in writing or by facsimile before the time set on the closing date for Bids. The original Bid, as amended by such written or telegraphic communication, will be considered the Bidder’s offer.

#### **1-11 PERIOD OF VALIDITY OF BIDS AND WITHDRAWAL OF BID AFTER CLOSING DATE**

Bids shall remain valid for the period stated in Clause 1-11 of the Information Provided to Bidder (Section 1 of the Bid Documents) after the time and date set for the submission of Bids, or until the Bidder is relieved of this obligation by the Employer, in writing, at an earlier date.

If a Bidder -

- (a) withdraws his Bid during its period of validity, or
- (b) gives notice of his inability to execute the Contract or fails to commence execution of the Contract, or

Section 2

Conditions of Bid, Conditions of Contract and Specifications

- (c) fails to sign the Contract Agreement or furnish the required security within the period fixed in the Appendix or any extended time agreed to by the Employer, he shall be liable for and pay to the Employer -
  - (i) all expenses incurred in calling for new Bids, if this should be necessary,
  - (ii) the difference between his Bid and a less favourable Bid accepted either from new Bids that were called for or from those already received, and
  - (iii) any additional escalation due to a delay caused by calling for new Bids.

The Employer may exempt a Bidder from these provisions if he is of the opinion that the circumstances justify such an exemption.

**1-12 REPUDIATION OF BID OR INVALIDATION OF CONTRACT**

If the Employer is satisfied that the Bidder or any person, whether an employee, partner, director or shareholder of the Bidder or a person acting on behalf of or with the knowledge of the Bidder --

- (a) has offered, promised or given a bribe or other gift or remuneration to any person in connection with obtaining a contract, or
- (b) has acted in a fraudulent or corrupt manner in obtaining a contract, or
- (c) has approached an officer or employee of the Employer or the Engineer in order to influence the award of a contract in the Bidder's favour, or
- (d) has entered into an agreement or has made an arrangement, whether legally binding or not, with another person, firm or company -
  - (i) to refrain from bidding for this Contract, or
  - (ii) as to the amount of the Bid to be submitted by either party, or
- (e) has disclosed to another person, firm or company other than the Employer, the exact or approximate amount of his proposed Bid, except when the disclosure, in confidence, had been necessary in order to obtain insurance premium quotations required for the preparation of the Bid,

the Employer may, in addition to other legal remedies, repudiate the Bid or declare the Contract invalid.

**1-13 JURISDICTION**

The laws of the Republic of South Africa apply to each Contract created by the acceptance of a Bid. Each Bidder shall indicate a place in the Republic and specify it in his Bid as his *domicilium citandi et executandi*, where legal process may be served on him.

Each Bidder shall accept the jurisdiction of the courts of law of South Africa.

**1-14 SUBMISSION OF BIDS**

Each Bidder is required to return the complete set of Bid Documents (including Drawings) with all the required information and complete in all respects.

Bidders shall not tamper with the Bid Documents, which must be submitted as issued. Bid Documents found to have been unbound and rebound may be deemed unacceptable.

Completed Bid Documents, fully priced and duly signed, must be enclosed in a sealed envelope, endorsed **BID DOCUMENT FOR CONTRACT NO W ■**  
**FOR TEST PUMPING OF BOREHOLES IN SOUTH AFRICA**

and must be placed in the Bid box at the address stated in Clause 1-12 of the Information Provided to Bidder (Section 1 of the Bid Documents) before the closing time and date for the submission of Bids, as specified in Clause 1-13 of the Information Provided to Bidder (Section 1 of the Bid Documents), or posted to the address stated in the said Clause 1-12 (as applicable) to reach the said address before the specified closing time and date for the submission of Bids.

Bids will be opened in public as soon as practicable after the closing time for the submission of Bids and the names of the Bidders announced. Bidded rates and prices will not be announced.

Bidders will not be permitted to alter the Bid Sum after Bids have been opened.

**1-15 ADDITIONAL INFORMATION REQUIRED**

The Employer may ask a Bidder to clarify any aspect of his Bid and also reserves the right to instruct the Department or a public accountant to report on the financial status of the Bidder, and the Bidder must render all reasonable assistance in such an investigation.

The additional information so obtained as well as all written information submitted by the Bidder with and in support of his Bid, will be considered to form the basis on which the Bid has been prepared and submitted.

**1-16 AMENDMENTS TO BID BY EMPLOYER**

The Employer reserves the right to correct arithmetical errors in the Bid but under no circumstances will Bidded rates be adjusted when such errors are corrected. The Bidder will be informed of the effect of such corrections on his Bid prior to the award of the Contract.

If Bidded rates or lump sums are declared unacceptable by the Employer because they are either excessively low or excessively high or not in proper balance with other rates or lump sums, the Bidder may be required to produce evidence and advance arguments in support of these Bidded rates or lump sums. If, after submission of such evidence, the Employer is still not satisfied with these Bidded rates or lump sums, he may request the Bidder to amend these rates and lump sums along certain specified lines.

The Bidder will then have the opportunity to amend the rates and lump sums objected to.

If the Bidder fails to amend his Bid in a manner acceptable to the Employer, this may prejudice his Bid.

**1-17 STAMP DUTIES**

Stamp duties in connection with the award of the Contract shall be paid by the successful Bidder.

**1-18 TAXES AND LEVIES**

Bidded rates and amounts shall include value-added tax (VAT) and shall also include all other, applicable taxes, levies and duties.

**1-19 PAGE NUMBERING AND NUMBER OF PAGES**

The pages in each section of this document are numbered consecutively, starting from one, with the number of the particular section prefixed to the page numbers.

Bidders shall check the number of pages in each section against the number of pages listed in the table of contents of this document. If any pages are found to be missing, or if there are pages where the printing is indistinct or



which contain obvious errors, Bidders must inform the Engineer as soon as possible so that these problems may be rectified.

**1-20 RULING LANGUAGE OF THE CONTRACT**

The Bid Documents have been drafted in English, and the English editions of the General Conditions of Contract and the Standard Specifications shall apply to this Contract. This Contract will be construed in English.

**1-21 INSPECTION OF EQUIPMENT**

The Bidder shall submit details of the equipment that shall be used for the Contract. The Employer reserves the right to inspect such equipment prior to awarding the Contract.

**1-22 GOVERNMENT PROCUREMENT: GENERAL CONDITION OF CONTRACT**

Refer to all the applicable conditions as specified in the contract.

**1-23 GENERAL CONDITIONS OF CONTRACT**

The provisions of the Government Procurement Document (General Conditions of Bid Contract and Order), save to the extent that they are not in conflict with the terms and conditions of this bid document shall apply to the bids and the subsequent Contract resulting from the acceptance of bid.

**2. GENERAL CONDITIONS**

The Contract shall be governed by the —General Conditions of Contract” - 2010”. The only variations from these General Conditions of Contract shall be as given in the Special Conditions of Contract. A copy of these Standard General Conditions of Contract may be obtained from any one of the following:

The South African Association of Civil Engineers  
Kelvin House, 75 Marshall Street, JOHANNESBURG

The South African Association of Consulting Engineers Kelvin House, 75  
Marshall Street, JOHANNESBURG

**3. SPECIAL CONDITIONS OF CONTRACT**

**PREAMBLE**

The General Conditions of Contract specified in Section 1 of this document, excluding all Annexures bound therein and as amended in the manner described hereunder, apply to this Contract subject to the amendments listed.

Unless otherwise stated, clause references appearing herein refer to clause numbers contained in the General Conditions of Contract.

The headings and titles in these Special Conditions shall not be deemed to be part thereof nor be taken into consideration in the interpretation or construction thereof of the Contract.

**3-1. SUB-CLAUSE 1(1) : DEFINITIONS**

**3-1.1 SUB-CLAUSE 1.1(c) : COMMENCEMENT DATE**

—“Commencement Date” means the date of issue of the Letter of Acceptance or any such other date as may be specified in the Letter of Acceptance, whichever is the later, provided always that any such other date so specified shall not be more than TWENTY EIGHT (28) days after the date of the Letter of Acceptance.

**3-1.2 SUB-CLAUSE 1.1(g) : CONTRACT PRICE**

—“Contract Price” means the aggregate amount which shall become due and payable by the Employer to the Contractor in respect of the execution of the Works and the due fulfilment by the Contractor of all its obligations under the Contract, determined in accordance with and in the manner described in the Contract, before the deduction of any penalties and any other amounts which may become due and payable by the Contractor to the Employer in terms of the Contract.

**3-1.3 SUB-CLAUSE 1.1(k) : DUE COMPLETION DATE**

—“Due Completion Date” means the date of expiry of the period allowed to the Contractor for executing and completing each respective Works Segment, as specified by the Engineer in a written instruction to the Contractor instructing the Contractor to commence with the execution of the Works Segment described in the said instruction. The Due Completion Date for each respective Works Segment shall be calculated from the Starting Date of the respective Works Segment and shall be adjusted by such extensions of time (if any) as may be allowed in terms of Clause 45.

**3-1.4 SUB-CLAUSE 1.1(l) : EMPLOYER**

The Employer is the Department of Water and Sanitation – National Office, Directorate Water Resource Planning Systems as represented herein by the Director ; Dr B Mwaka.

**3-1.5 SUB-CLAUSE 1.(1)(m) : ENGINEER**

The Engineer is the Department of Water and Sanitation – National Office, Directorate Water Resource Planning Systems as represented by Mr F Fourie, acting through appointed Area Consultants (geohydrological and/or civil engineering consultants), authorised thereto in writing.

**3-1.6 SUB-CLAUSE 1.(1)(ab) : CONDITIONS OF CONTRACT**

—a(b) —“Conditions of Contract” means the General Conditions of Contract, as amended in these Special Conditions.”

**3-1.7 SUB-CLAUSE 1.(1)(ac) : CONTRACT PERIOD**

—a(c) —“Contract Period” means the period stated in the Appendix, calculated from the Commencement Date, during which all the Works comprised in the Contract are, except only for the rectification of defects in accordance with Clause 56, to be executed and completed by the Contractor.”

**3-1.8 SUB-CLAUSE 1.(1)(ad) : STARTING DATE**

—a(d) —“Starting Date” means the date, as specified by the Engineer in writing, on or before which the Contractor shall commence with the execution of the particular Works Segment referred to in the Engineer’s said instruction.”

**3-1.9 SUB-CLAUSE 1.(1)(ae) : WORKS SEGMENT**

—a(e) —“Works Segment” and “Segment” mean a discrete part or portion of the overall Works comprised in the Contract and as defined in writing by the Engineer from time to time during the currency of the Contract.”

**3-2. SUB-CLAUSE 1.(2) : DELIVERY OF NOTICES**

—a) in the case of electronically transmitted communications delivered to the specific electronic address (if any) provided by the addressee for the respective type of electronic transmission.”

**3-3. SUB-CLAUSE 6.(5) COMPLIANCE WITH APPLICABLE LAWS**

—The Employer and the Contractor hereby agree, in terms of the provisions of Section 37(2) of the Occupational Health and Safety Act 1 993 (Act 85 of

1993, hereinafter referred to as the Act) that the following arrangements and procedures shall apply between them to ensure compliance by the Contractor with the provisions of the Act, namely:

- (i) The Contractor undertakes to acquaint the appropriate officials and employees of the Contractor with all relevant provisions of the Act and the regulations promulgated in terms of the Act; and
- (ii) The Contractor undertakes that all relevant duties, obligations and prohibitions imposed in terms of the Act and Regulations will be fully complied with; and
- (iii) The Contractor hereby accepts sole liability for such due compliance with the relevant duties, obligations and prohibitions imposed by the Act and Regulations and expressly absolves the Employer from himself being obliged to comply with any of the aforesaid duties, obligations and prohibitions;  
  
and
- (iv) The Contractor agrees that any duly authorised officials of the Employer shall be entitled, although not obliged, to take such steps as may be necessary to ensure that the Contractor has complied with his undertakings as set out more fully in paragraphs (i) and (ii) above, which steps may include, but will not be limited to, the right to inspect any appropriate site or premises occupied by the Contractor, or to inspect any appropriate records held by the Contractor ; and
- (v) The Contractor shall be obliged to report forthwith to the Employer and Engineer any investigation, complaint or criminal charge which may arise as a consequence of the provisions of the Act and Regulations, pursuant to work performed in terms of this Contract, and shall, on written demand, provide full details in writing, to the Employer and Engineer, of such investigation, complaint or criminal charge."

### **3-4. CLAUSE 12 COMMENCEMENT OF WORK**

#### **(1) Commencement of the Contract**

The Contract shall come into force and effect and be binding upon the parties on the Commencement Date as defined in Sub-Clause 1.(1 )(c).

#### **(2) Commencement of Works**

The Contractor shall, save as may be otherwise provided in the Contract or be legally or physically impossible, commence executing the portions of the Works comprised in each Works Segment, no later than the Starting Date applicable to the respective Works Segment as specified in writing by the Engineer in an instruction to the Contractor to execute and complete the portion of the Works comprised in the said Works Segment.”

**3-5. CLAUSE 13(1) : ACCESS TO AND POSSESSION OF THE SITE**

**3-5.1 SUB-CLAUSE 13.(1) : GRANTING OF ACCESS AND POSSESSION**

—The Employer, subject to any requirements, if any, as may be stated elsewhere in the Contract :

- (a) on the Starting Date of each Works Segment, give to the Contractor, right of access to the Site of the respective Works Segment, and possession of so much of the Site as may be reasonably required to enable the Contractor to commence and proceed with the execution of the particular Works Segment in accordance with the programme referred to in Clause 15, or otherwise in accordance with such reasonable proposals of the Contractor as he shall make in writing to the Engineer: and
- (b) from time to time as the Works Segment proceeds, and/or as each new Works Segment is instructed by the Engineer in terms of Sub-Clause 12.(2) (as applicable), give to the Contractor possession of further portions of the Site as may be required to enable the Contractor to proceed with the execution of the particular Works Segment with due despatch in accordance with the Engineer’s said instruction and the said programme, as the case may be.”

**3-6. CLAUSE 14 SURVEY REFERENCES AND SETTING OUT**

**3-6.1 SUB-CLAUSE 14.(1) BASIC SURVEY REFERENCES**

—The Engineer shall instruct the Contractor in writing and where appropriate, by direction on Site, as to the location and other details necessary for the Works to proceed.”

**3-6.2 SUB-CLAUSE 14.(4) : PROPERTY AND TRIGONOMETRICAL BEACONS**

—4) Property beacons, trigonometrical survey beacons and all beacons and marks which are subject to the Land Survey Act (Act No. 5 of 1927, as

amended) and which are disturbed or destroyed in the course of the Contract shall, subject to any further provisions as may be set out in the Contract, be replaced and certified by a Registered Land Surveyor in accordance with the said Act at the Contractor's cost."

### **3-7. CLAUSE 15 : ORDER OF WORKS AND PROGRAMME**

#### **3-7.1 SUB-CLAUSE 15.(1) ORDER OF WORKS**

The sequence and times when each of the Works Segments are to be executed shall be determined by the Engineer at his sole discretion and advised to the Contractor in writing from time to time during the course of the Contract, provided always that

- (a) the Engineer shall be entitled, before instructing the Contractor in terms of Sub-Clause 12.(2) to commence with the execution of any specific Works Segment, to consult with both the Employer and the Contractor regarding mutually suitable Starting Dates for the respective Works Segments ; and
- (b) the Engineer shall not order the simultaneous execution of multiple Works Segments where such simultaneous execution will result in the necessary deployment by the Contractor of plant levels in excess of those plant levels which are specified in, or as may be reasonably inferred from the Contract as to be provided by the Contractor, except only where the deployment of such excessive plant levels is the result of failure on the part of the Contractor to maintain the specified rates of progress of the Works Segments and/or any other default or breach by the Contractor; and
- (c) no guarantee or warranty is given, offered or implied by the Employer in this Contract, that the Works shall be carried out in a continuous and uninterrupted manner for the duration of this Contract nor that the Contractor will not experience periods during which no work has been ordered by the Engineer on Works Segments, and the Contractor shall have no claim against the Employer in respect of any period during which no work is executed under the Contract in consequence of the Engineer having failed to instruct the Contractor in accordance with Sub-Clause 12.(2)."

### **3-8.CLAUSE 24 : COMPETENT EMPLOYEES**

—2) The Contractor shall employ on the Site, those employees whose curriculum vitae (if any) were provided by the Contractor in his Bid and as were accepted by the Employer, either specifically or by silence, in the Letter of Acceptance. Should any of the Contractor's employees whose curriculum vitae have been provided by the Contractor and accepted by the Employer:

- (a) not be employed by the Contractor on the Site whenever reasonably required by the Engineer ; or
- (b) leave the employ of the Contractor or otherwise at any time become unavailable for deployment on the Works for any reason;

then the Contractor shall, at his own expense provide on the Works another employee whose curriculum vitae is, in the opinion of the Engineer, equal to or better than that of the employee who has become no longer available. The provisions of this Sub-Clause 24.(2) shall also apply in respect of any employee who is removed from Site in accordance with the Engineer's instructions in terms of Sub-Clause 24.(1) above."

### **3-9. SUB-CLAUSE 26.(2) QUALITY OF PLANT**

—AllConstructional Plant listed in the Contract, or Constructional Plant equivalent thereto shall be on the Site at all times when reasonably required. The Contractor shall further bring onto the Site, without additional costs to the Employer, any additional Constructional Plant which, in the opinion of the Engineer, is necessary for completing the Contract on the Due Completion Date." Bad weather clause. (standard clause and rainfall data table)

### **3.10 CLAUSE 39 : VARIATIONS**

#### **3-10.1 SUB-CLAUSE 39.(3) : CHANGES IN SCHEDULED QUANTITIES**

No increase or decrease in the quantity of any work specified in or as may reasonably be inferred from the Engineer's instruction in terms of Sub-Clause 1 2.(2) to commence with the execution of any Works Segment, where changes are not the result of a Variation given under this Clause but are a result of

- (a) differences between number of dry holes actually encountered and those originally anticipated by the Engineer; and
- (b) differences between the average depths to which it was originally anticipated by the Engineer that test pumping be carried out and the yield at which a hole proves successful

shall be deemed to be a Variation Order to which this Clause applies, and unless otherwise instructed by the Engineer, no order in writing shall be required therefore.”

**3-11. SUB-CLAUSE 43.(1) : RATE OF PROGRESS**

—Subject to the provisions of Clause 44, no instruction by the Engineer to the Contractor in terms of this sub-clause to expedite progress shall be the subject of additional compensation to the Contractor unless the instruction explicitly states that the Contractor is entitled to additional compensation and cites the amount of such compensation or the basis on which it is to be determined.”

**3-12 CLAUSE 45 : EXTENSION OF TIME**

**3-12.1 SUB-CLAUSE 45.(1) : TIME FOR COMPLETION**

—Subject to any requirement in the Specifications as to the completion of any portion of the Works comprised in any Works Segment prior to the whole of the Works Segment, each Works Segment shall be completed by the Contractor within the time stated by the Engineer in his instruction in terms of Sub-Clause 1 2.(2), calculated from the Starting Date of the respective Works Segment.”

**3-12.2 EXTENSION OF TIME DUE TO ABNORMAL RAINFALL**

If abnormal rainfall or wet conditions occur during the course of the Contract, the Employer may grant an extension of time in accordance with Clause 45 of the General Conditions of Contract, calculated in accordance with the formula given below for each calendar month or part thereof:

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

If V is negative and its absolute value exceeds Nn, then V shall be taken as equal to minutes Nn.

The symbols shall have the following meanings:

V = Extension of time in calendar days for the calendar month under consideration. When the value of V for any month exceeds the number of days in the particular month. V will be the number of days in the month.

Nw = Actual number of days in the calendar month on which a rainfall of Y mm or more were recorded.

Nn = Average number of days, derived from existing rainfall records, on



which a rainfall of Y mm or more were recorded for the calendar month.

Rw = Actual rainfall in mm recorded on the site in an approved rain gauge for the calendar month under consideration.

Rn = Average rainfall in mm for the calendar month, derived from existing rainfall records.

X = Refer to Section 5. Contract Price Adjustment Schedule.

The total extension of time is the algebraic sum of all the monthly totals for the period under consideration, but if the total is negative, the time for completion will not be reduced on account of subnormal rainfall. Extensions of time for part of a month will be calculated by using pro rata values for Nn and Rn.

The factor  $(Nw - Nn)$  is considered a fair allowance for variations from the average number of days during which the rainfall exceeds Y mm.

The factor  $(Rw - Rn)/X$  is considered a fair allowance for variations from the average number of days during which the rainfall did not exceed Y mm but wet conditions prevented or disrupted work.

Rainfall records for relevant rainfall stations will be provided during the contract. The extension of time V will be calculated for each area for the applicable period.

### **3-13 CLAUSE 46 : PENALTIES**

#### **3-13.1 SUB-CLAUSE 46.(1) PENALTY FOR DELAY**

—1) If the Contractor shall, by the due Completion Date of a particular Works Segment, fail to complete the whole of any Works Segment to the extent which entitles him to receive a Certificate of Practical Completion in respect of the particular Works Segment in accordance with Sub-Clause 54.(2), then the Contractor shall be liable to the Employer for the sum stated in the Appendix as a penalty for each and every day which shall elapse between the Due Completion Date of the particular Works Segment and the actual date of Practical Completion of the said Works Segment.

The imposition of the said penalty shall

(a) apply independently in respect of each separate Works Segment; and

- (b) be accumulative in respect of all Works Segments; and
- (c) apply independently and in addition to any other penalty for which the Contractor may become liable in terms of the Contract; and
- (d) not relieve the Contractor from his obligation to complete the Works Segment concerned and any other part of the Works or from any of his obligations and liabilities under the Contract ; and
- (e) not in any way diminish the rights of the Employer in respect of any other remedies which it may have under the Contract or in Law.”

**3-13.3 SUB-CLAUSE 46.(3) : PENALTY FOR LATE COMMENCEMENT**

If the Contractor shall, by the due Starting Date of any particular Works Segment, fail to commence with the execution of the Works Segment, then the Contractor shall be liable to the Employer for the sum stated in the Appendix as a penalty for each and every day which shall elapse between the specified Starting Date of the particular Works Segment and the actual date of commencement of the work by the Contractor.

The provisions of this Sub-Clause 46.(3) shall apply separately, mutatis mutandis in accordance with the provisions of Sub-Clauses 46.(1) and 46.(2).”

**4. PROJECT SPECIFICATIONS**

**4.1 Application and Status**

These Project Specifications describe the Works to be executed by the Contractor under the Contract and set out the requirements for the Works as well as the minimum standards to be achieved by the Contractor.

These Project Specifications are supplementary to the Standard Specifications for Test Pumping of Boreholes (hereinafter referred to as the —Standard Specifications”) and set out variations, additions and omissions to the Standard Specifications and as such, shall be construed and interpreted in conjunction with such Standard Specifications.

These Project Specifications set out the variations, additions and omissions which shall be applicable in the Contract to the Standard Specifications and

should there be any discrepancy, conflict or inconsistency between any part of the Standard Specifications and any part of these Project Specifications, the provisions of these Project Specifications shall take precedence and prevail in the Contract.

#### **4-2 Interpretation**

Wherever reference is made within the Standard Specifications and/or these Project Specifications to the ~~—Geohydrological Consultant~~ and/or the ~~—geohydrologist~~ and/or the ~~—Consultant~~, it shall be deemed to mean the ~~—Engineer~~ as defined in the Conditions of Contract.

Wherever reference (if any) is made within the Standard Specifications and/or these Project Specifications to the ~~—Implementing Agent~~, the ~~—Department of Water and Sanitation~~, ~~—DWS~~ or any party not being the ~~—Employer~~, the Contractor, the Engineer, the Geohydrological Consultant or the Consultant, it shall be deemed to mean the Employer.

#### **4-3. Purpose and Scope**

The Contract is for the test pumping of community water supply boreholes for Community Water Supply, Resource Assessment, Resource Management, and Disaster Management purposes and all Works associated therewith in accordance with:

- (1) the Information Provided to Bidder as per Section 1 of this document,
- (2) any further detailed instructions as may be ordered by the Employer or the Hydrogeological Consultant.

The borehole test pumping services are required for a period of three years (1095 days) from the date of award and no specific quantity of work has been identified. The Contract is based on a Schedule of Rates with payment to be made on the basis of measured quantities and the Bidded rates.

The Scope of Work to be actually executed by the Contractor will be as decided by the Engineer in consultation with the Employer, as provided for in the Conditions of Contract. The work to be carried out during the currency of the contract may be given as separate batches (referred to in the Conditions of Contract as ~~Works Segments~~). Each Works Segment to be executed by

the Contractor will, from time to time during the currency of the Contract, be detailed in a written instruction by the Consulting Hydrogeologist as provided for in the Conditions of Contract.

#### **4-4 Test Pumping Equipment and Materials**

The Contractor shall provide all labour, transport, plant, tools, materials and appurtenances, and shall perform all work necessary to satisfactorily complete the Works in accordance with the Standard Specifications.

The Contractor shall furnish all the particulars requested in Section 3-0 (Sub-section 5-0) of this document. The capacity shall be sufficient to cope with the work as specified for the project. It shall be kept at all times in full working order and good repair. The Hydrogeological Consultant and / or the Client will have the right to inspect the equipment to be used prior to the commencement of the Works. If the Hydrogeological Consultant and / or Employer considers that the plant in use on the site of the Works is in any way inefficient or inadequate in capacity, he shall have the right to instruct the Contractor to put such equipment in order within seven days or, alternatively, to remove such plant and replace it with other plant or equipment which he considers necessary to meet the requirements of the Contract.

In the event of breach by the Contractor of this requirement, the Hydrogeological Consultant reserves the right to recommend to the Client to terminate the Contract in accordance with the Conditions of Contract.

Equipment brought onto the site may not be removed there from without the written permission of the Hydrogeological Consultant. It will be the responsibility of the Contractor to arrive on site with all staff, equipment, materials and chemicals required to complete the work without interruption.

Where existing equipped boreholes are to be tested, the Contractor must provide suitable plant to enable the installed pumping equipment to be removed and reinstalled. This includes the removal and reinstallation of hand pumps, wind pumps and motorised pumps and may also include the recovery of existing pumping equipment that was previously dropped into a borehole.

#### **4-5 Data Recording and Reporting**

In addition to a site diary stating daily activities, borehole and pump test data as well as installed borehole equipment is to be recorded on the relevant forms included in Section 6 of the Contract Documents.

#### **4-6 Measurement and Payment**

The Contractor appointed under this contract is considered to be an expert in his field and is expected to organise and carry out the required duties in an expert manner. Problems encountered during test pumping will be overcome entirely within the framework of these Specifications and the Schedule of Rates, and no claims for extra payments will be entertained for problems foreshadowed in the Specification or due to limitations imposed by this Specification.

The measurement of and payment for all materials and work provided by the Contractor in the course of the project will be according to the criteria as set out and are applicable in respect of such as are variously specified in the Standard Specifications and hereunder:

##### **4-6-1 Standing Time**

This will cover periods when the test pumping rig and crew or, if more than one rig and crew are fielded, when all rigs and crews are idle waiting for decisions by the Consultant where those decisions or whose presence is required before the commencement or continuation of the work. Under no circumstances will standing time be payable for any delays other than those incurred by the Hydrogeological Consultant's decisions. Except only for abnormal weather conditions as provided for in Sub-Clause 47.(2) of the Conditions of Contract, no standing time will be payable due to inclement weather or prevention of access to a site by the Contractor or Hydrogeological Consultant due to inclement weather. Further, no standing time will be payable to the Contractor in respect of any periods where the Contractor is not engaged in the execution of the Works as a result of the Consultant having failed to issue an instruction to commence with the works of any Works Segment and there being no other Contract Works on which the Contractor is required to carry out work.

##### **4-6-2. Inter-hole Moves**

Payment for inter-hole moves up to a distance of ten kilometres shall be made at the unit rate Bidded for in the Schedule of Rates. Inter-hole moves in excess of ten kilometres shall be remunerated for the first ten kilometres at

the Bidded unit rate and, for each full kilometre thereafter, at the rate per kilometre Bidded in the Schedule of Rates.

**4-6-3. Removal of Existing Pumping Equipment**

This rate shall cover the removal of existing pumping equipment in a borehole to be tested. Payment for removal up to an installed depth of 50 m shall be made at the unit rate Bidded for in the Schedule of Rates. Installed depths in excess of 50 m shall be remunerated for the first 50 m at the Bidded unit rate and, for each full metre thereafter, at the rate per metre Bidded in the Schedule of Rates.

**4-6-4. Re-installation of Existing Pumping Equipment**

This rate shall cover the re-installation of existing pumping equipment in a borehole following test pumping of the borehole. Payment for installation up to a depth of 50 m shall be made at the unit rate Bidded for in the Schedule of Rates. Re-installation depths in excess of 50 m shall be remunerated for the first 50 m at the Bidded unit rate and, for each full metre thereafter, at the rate per metre Bidded in the Schedule of Rates. The existing pumping equipment shall be reinstalled and left in working condition as it was found before removal unless the Contractor is instructed otherwise by the Hydrogeological Consultant.

**5. STANDARD SPECIFICATIONS FOR THE TEST PUMPING OF BOREHOLES**

**5-1 Purpose and Scope**

The efficient operation and utilisation of a borehole requires insight into and an awareness of its productivity and that of the groundwater resource from which it draws water. Such insight and awareness is provided by borehole testing. This activity, which is also known as test pumping, provides a means of identifying potential constraints on the performance of a borehole and on the exploitation of the groundwater resource. The recognition and understanding of these constraints promotes the proper, judicious and optimum exploitation of the groundwater resource. Ignorance and disregard of these constraints can lead, at best, to the uneconomical operation of the borehole and, at worst, to over-exploitation of the resource.

The Test Pumping Contractor (Test pumping Contractor) may be required to test either:

(1) newly drilled boreholes which have not yet been equipped, (2) existing —old— boreholes which may or may not already be equipped with pumping

installations, or (3) a mixture of the aforementioned.

Test pumping serves two primary objectives. The first of these is an assessment of the productive capacity (yield potential) of the borehole. The second objective addresses the productivity of the groundwater resource. These objectives are met by various types of borehole tests performed separately and often sequentially. These are identified as:

(1) the slug test, (2) the calibration test, (3) the stepped discharge test, (4) the constant discharge test and (5) the recovery test. Factors determining which of these tests must be performed include: (1) the potential yield of the borehole and (2) the amount of water which it will be required to supply.

(a) The Slug Test

The slug test provides a rapid means of assessing the potential yield of especially low yielding (less than 0.5 l/s) boreholes (Vivier *et. al*, 1995). The results may indicate whether it is feasible and warranted to perform other tests on the borehole. As with any of the other tests, a slug test can be executed in any borehole and not necessarily only newly drilled boreholes.

The test involves measuring the water level response in a borehole to the rapid displacement of water therein. This displacement might cause either: (1) a rise in water level as would result from the introduction of a slug below the rest water level or (2) a drop in water level, as would be caused by the removal of a quantity of water from the borehole.

In instances where a slug is introduced, the water level will recede to its original level. The sudden removal of a quantity of water from the borehole will cause the water level to rise to its original level. The rate of recession or rise provides an indication of the yield of the borehole. In qualitative terms the more rapid this is, the higher the potential yield of the borehole.

(b) The Calibration Test

A calibration test requires that water be pumped from the borehole at three or more different rates over short (15 minutes), sequential periods of time. The response of the water level to each known pumping rate is measured and recorded. The calibration test provides a means of assessing the yield potential of borehole according to the magnitude of the water level decline associated with each pumping rate. This information is used to select appropriate pumping rates at which to perform a stepped discharge test or a pumping rate at which to perform a constant discharge test.

(c) The Stepped Discharge Test

Also known as a step drawdown test, it is performed to assess the productivity of a borehole. It also serves to more clearly define the optimum yield at which the borehole can be subjected to constant discharge testing if required. The test involves pumping the borehole at three or more sequentially higher pumping rates each maintained for an equal length of time, generally not less than 60 minutes and seldom longer than 120 minutes. The magnitude of the water level drawdown in the borehole in response to each of these pumping rates must be measured and recorded in accordance with a prescribed time schedule. The actual pumping rate maintained during each “step” must also be measured and recorded. As a rule, the rate of water level recovery for a period of time immediately following the period of pumping should also be monitored according to the same time schedule as during pumping.

(d) The Constant Discharge Test

A constant discharge test is performed to assess the productivity of the aquifer according to its response to the abstraction of water. This response can be analysed to provide information in regard to the hydraulic properties of the groundwater system and arrive at an optimum yield for the medium to long-term utilisation of the borehole. This test entails pumping the borehole at a single pumping rate, which is kept constant for an extended period of time. The test duration shall not be less than 12 hours and, in some instances, might last up to 72 hours or more. The duration is generally determined by the importance, which is attached to the borehole and groundwater resource not only in terms of its yield potential but also in terms of its intended application.

The pumping rate is set at a yield, which it is considered the borehole and groundwater system will be able to maintain for the entire planned duration of the test and, in the process, utilising better than 70 per cent but not exhausting the available drawdown. It is critical that the pumping rate during the entire duration of the test be kept as constant as possible. The drawdown in water level in the borehole during the course of the test is again measured and recorded according to a prescribed time schedule. In the case of this type of test, it is imperative that water level measurements be made during the recovery period following the end of pumping.

(e) The Recovery Test

This test provides an indication of the ability of a borehole and groundwater system to recover from the stress of abstraction. This ability can again be analysed to provide information with regard to the



hydraulic properties of the groundwater system and arrive at an optimum yield for the medium to long-term utilisation of the borehole. Although referred to as a test, it rather represents a period of monitoring activity following a period of pumping. The rate at which the water level in the tested borehole (or any other borehole affected by the abstraction) recovers towards its starting level (the groundwater rest level before pumping started) is monitored in this period. The duration of this monitoring is generally equal to that of the preceding period of pumping unless the rate of recovery is sufficiently rapid so that the starting water level is reached in a shorter period of time.

## **5-2 General Approach and Methodology**

As mentioned in subsection 4-I, various factors determine which type of pumping test (or tests) might need to be performed. It is the responsibility of the Hydrogeological Consultant to formulate a test pumping schedule for each successful borehole.

All project-related test pumping activities will also be carried out under the direct supervision of the Hydrogeological Consultant. The execution of a pumping test in accordance with established scientific protocols must be undertaken by a suitably experienced and equipped Test pumping Contractor. It will be the task of the Hydrogeological Consultant to evaluate and analyse the data, draw conclusions with regard to the productivity of the borehole and the aquifer, and make recommendations with regard to a suitable operating schedule for the borehole and the optimum exploitation of the groundwater resource.

Both the practical and analytical aspects of test pumping benefit greatly from prior information regarding the borehole and the aquifer which it taps into. This information is gleaned during the drilling and the construction of the borehole. It includes knowledge of: (1) the amount of water blown out of the borehole during drilling operations, (2) the depth(s) at which water was struck in the borehole, (3) the construction of the borehole in terms of the setting of especially perforated (slotted) casing and (4) the nature of the rock formation at the depth(s) where water was struck. This information should be communicated to the Test pumping Contractor by the Hydrogeological Consultant. If not, the contractor has the right to request and expect to receive this information from the Hydrogeological Consultant prior to the testing of any borehole.

The Test pumping Contractor must keep a full record of the test pumping which was undertaken and provide this on completion of the test. This record must include the following basic information: (1) the depth to water level before the start of testing, (2) the depth at which the test pump was installed, (3) the type, make and model of the test pump used, (4) the pumping rate as

measured at regular intervals during the test and (5) the water level in the borehole as measured according to a prescribed time schedule both during and after pumping, (6) the depth to which steel casing was installed in the borehole. The contractor must be sufficiently well equipped to gather this information with acceptable accuracy.

### **5-3 Equipment and Materials**

These represent the test unit and all ancillary equipment and materials needed to accurately and efficiently perform borehole testing. Details are provided as follows.

(a) Test Unit

The test unit must comprise a positive displacement (PD) type pump element and a pump head driven by a motor fitted with an accelerator, gearbox and clutch. The unit must be in good working order and capable of maintaining a minimum of 72 hours of continuous operation.

The unit must be capable of delivering water at a rate in excess of the expected maximum yield of the borehole to be tested.

(b) Discharge Piping

This comprises both the pipe (rising main or pump column) which brings the water to surface and the pipe (discharge hose) used to lead the pumped water away from the borehole being tested. The Test pumping Contractor must supply sufficient rising main to set the test pump at a depth of at least 100 m below the surface. It may, however, be required under certain circumstances to set the test pump at a greater depth in the borehole. The pump column must be of uniform diameter throughout. The contractor must also provide discharge piping in the amount of at least 50 m. This must be free of leaks for its entire length. It may again, under certain circumstances, be required to discharge the pumped water at a point further away than 50 m (possibly in excess of 300 m) from the borehole being tested. In such instances, a similar procedure to that discussed above in regard to the rising main must be followed.

(c) Discharge Measuring Equipment/Instrumentation

This must be adequate to accurately measure the pumping rate within the range of yields expected from successful project boreholes. If

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volumetric methods are used, a stopwatch for measuring time to an accuracy of at least one-tenth of a second is required. The full capacity of each container must be determined accurately. The contractor must also ensure that a container stands level when it is being used for discharge measurements. Guidelines regarding the use of different size containers for volumetric discharge rate measurements in specific yield ranges are given below:

YIELD RANGE	CONTAINER SIZE
Less than 2 l/s	20 l
2 l/s to 5 l/s	50 l
5 l/s to 20 l/s	210 l
20 l/s 30 l/s	500 l

It is recognized that some water leakage will generally occur especially at the borehead during pumping. This is acceptable provided that: (1) such leakage does not interfere with any water level monitoring and (2) the total amount of leakage to the end of the discharge pipeline does not exceed one per cent of the pumping rate as measured at the end of this pipeline.

(d) Water Level Measuring Equipment/Instrumentation

The contractor must provide at least three water level measuring devices which are each capable of providing an accuracy of at least 0,01 m (10 mm) and are of sufficient length to match the pump installation depth. If ungraduated electrical contact meters (dipmeters) are used for this purpose, each such instrument must be equipped with a measuring tape of an acceptable length and approved standard and which is graduated to an accuracy of at least 0,01 m (10 mm). These instruments must be in good working order and number at least one spare for each two on site

The contractor must further provide conduit tubing of sufficient length to match the pump installation depth. The diameter of this tube must be large enough (minimum 15 mm) to allow free movement of the dipmeter probe and cable therein. The tubing must be made of material strong enough to withstand reasonable pressure on its sidewall which might cause a constriction. The tube must be open at its lower end to allow the free entrance of water into the tube. This is facilitated by perforating the bottom section of the conduit tube sidewall. Precautions should also be taken to prevent the dipmeter probe from passing beyond the bottom end of the conduit tube and, as a result of entanglement, not able to be withdrawn.

(e) Other Materials

No pumping test should commence without field data sheets on which to record all data and information relevant to the test pumping activities in an acceptable format. The examples provided in Section 6 of the Contract Documents indicate the format and level of detail which is required of these data sheets. The contractor must also provide backup measuring equipment and instrumentation which is immediately available to replace any similar item which may become damaged or broken during the course of the test such that measurements are no longer accurate or reliable.

#### **5-4 Arrival-on-site Actions**

The contractor must firstly establish whether the borehole is equipped or not. If so, the contractor will be required to: (1) remove the equipment taking care not to damage either it or the installation, (2) inspect the equipment for defects and (3) note down all particulars regarding the equipment and the installation. The latter includes but should not be limited to the manufacture and type of pump (and motor if motorised), the depth to which the pump was installed, the power rating of the motor and the diameter, length and quantity of pump column sections. The contractor must next establish whether there are any other boreholes in the vicinity of that to be tested. If so, then the following information must be gathered and recorded for each: (1) the straight-line distance (in metres) between each such borehole and that to be tested, (2) whether the borehole is equipped, open or sealed and, if equipped (3) whether the installation is operational or not. Depending on the degree of access allowed by such a borehole, the contractor must establish whether there is water in the borehole and if so, measure and record: (1) the depth to the groundwater rest level, (2) the height of the borehole collar above ground level and where possible also (3) the depth of the borehole.

The final activities to be carried out prior to the actual installation of the test pump into the borehole to be tested must involve measuring and recording: (1) the diameter of the borehole, (2) the depth of the borehole as determined by means of a weighted line or plumb bob and (3) the depth to the groundwater rest level in the borehole, again referenced to a date.

An example of a field data sheet for recording the above information is presented in Section 6 of the Contract Documents. Payment for this work shall be incorporated into that for data recording.

#### **5-5 Test Pump Installation**

The conduit tube should be attached and secured to the first section of pump column behind the pump element and the test pump installed to the required depth, attaching and securing the conduit tube to the riser main every 2 to 3 m.

The Test pumping Contractor will be remunerated for the installation of a test pump per linear metre of depth installed at the rate Bidded as set out in the Schedule of Rates. The rate Bidded for this activity shall also apply to the withdrawal of the test pump from the borehole on completion of all testing activities.

## **5-6 Equipment Set-up and pre-test Actions**

Where possible, the discharge pipe must be laid out in a downhill direction from the borehole to be tested unless this will take it in the direction of or past another borehole located in the vicinity of that to be tested. In such instances, lay the discharge pipe out in a downhill direction which will take its furthest end as far as possible away from any other borehole in the vicinity.

In field situations where the terrain is extremely flat, the length of the discharge pipe must be extended from 50 m to at least 300 m if any possibility exists that the discharged water may infiltrate to the groundwater resource within the radius of influence of the test. A final decision in this regard must be made by the Hydrogeological Consultant and communicated to the contractor. The dipmeter should be inserted into the installed conduit tube and run down this tube to the bottom to make sure that it passes freely along the full length of the tube. If the dipmeter used is not graduated to an accuracy of 0,01 m, mark the position on the dipmeter cable where it indicates the depth to the groundwater rest level and attach the end of the graduated tape at this position on the cable ensuring that the zero mark of the graduated tape corresponds exactly to this mark. Slowly lower the dipmeter and graduated tape down the conduit tube, in the process securing the tape to the dipmeter cable every 2 to 3 m. Ensure that there is no slack between each point where the tape is secured to the dipmeter cable. Also make sure that the dipmeter cable and graduated tape combination passes freely along the full length of the conduit tube.

The Test pumping Contractor shall be remunerated for this work per set-up at the rate Bidded for one such activity as set out in the Schedule of Rates.

## **5-7 Final pre-test Measurements**

The Contractor shall ensure that all the basic information required on the field data sheet has been collected and recorded as completely as possible. The basic information data entry fields can be used as a checklist for information to be measured/collected and recorded. The Contractor shall not guess at any information which has not been measured.

Payment for this work shall be incorporated into that for data recording and reporting.

## **5-8 Data Recording**

### **(a) Discharge Measurements**

The measurement of discharge (yield or pumping rate) must be consistently accurate and reliable. The method of measurement must be appropriate to meet this requirement. Where volumetric calculation methods are applied, time will be measured using a stopwatch and the container volume must be accurately known. The volumetrically measured yields recorded on the field data sheets must be based on the average obtained from a set of three sequential measurements.

### **(b) Water Level Measurements**

The periodicity of water level measurements for each type of test are given in the data recording forms in Section 6 of this document. This information must be filled in as a record of all data collection activities carried out for a pumping test. The type of water level measurement values required to be recorded on the field data sheet are the actual (or true) drawdown values. These represent measurements which reflect the depth of the water level below the groundwater rest level depth, i.e. which already take into account the groundwater rest level depth below the reference measuring point. It should be noted that the more basic type of measurement which reports the depth of the dynamic water level as a distance below the reference measuring point, ie which combines the depth of the water level below the groundwater rest level depth and the depth of the groundwater rest level below the reference measuring point, gives only an apparent (or false) drawdown value. All water level measurements must be measured to an accuracy of at least 0,01 m (10 mm). The water level data must be plotted on the semi-logarithmic graph paper provided with each set of field data sheets. The plotting of these data must take place as the test proceeds, i.e. each water level measurement must be plotted on the graph as soon as possible after it was measured. The field data sheets and accompanying water level graphs must be shown to any authorised supervisory personnel at request and will be up-to-date at the time of such request.

### **(c) Other Information**

The Test pumping Contractor must also record any extraordinary observations made during the test. These may include: (1) changes in the colour of the discharged water, (2) changes in the turbidity of the discharged water, (3) the presence of air in the discharged water, and (4) rainfall events which occur during a test. Remuneration for all data collection and recording activities by the Contractor in the course of a

pumping test shall be incorporated into an hourly rate as set out in the Schedule of Rates.

## **5-9 Groundwater Sampling**

### Sampling for Macro-element Analysis

A water sample should be collected from the end of the discharge pipeline no sooner than 15 minutes before the scheduled end of a pumping test whether this be of a calibration, stepped discharge or constant discharge nature. This will ensure that a water sample is collected in case testing does not proceed to include either one or both of the latter two types of test. The standard amount of sample normally collected is in a clean, sterilised plastic bottle of capacity 240 millilitre or greater and equipped with a watertight screw-on cap. This is the standard issue sample bottle provided by the DWS. Depending on the analysing laboratory's requirements, however, a sample of up to two litres in volume may have to be collected. The Hydrogeological Consultant will advise on this matter in instances where the contractor is required to collect samples, in which case the consultant will provide ampoules containing preservative chemicals if required. All other materials such as sample bottles, tie-on labels and sample custody are to be provided by the contractor.

#### (a) Sampling Procedure

Wash hands thoroughly and rinse the sample bottle three times with the water to be sampled, i.e. that being pumped from the borehole. Fill the bottle so that a space of five to ten millimetres is left at the top. Add the preservative as instructed in (b).

#### (b) Sample Preservation

Gently tap the bottom of an ampoule of preservative on a firm surface so that all the chemical flows to below the constriction. Hold the ampoule firmly upright with thumbs placed either side of the constriction, flex off the neck, turn the ampoule upside down and place it in the bottle together with the broken-off neckpiece. Firmly screw on the cap of the sample bottle after rinsing it well with water from the borehole. Shake the capped sampled bottle well. Caution should be exercised when handling the preservative since this chemical is poisonous.

#### (c) Sample Custody

Place the sample bottle in a cooler or icebox and keep it stored under chilled conditions. The water sample will be collected by the Hydrogeological Consultant.

## **5-10 Aborted Tests and Breakdowns**

The Hydrogeological Consultant may at any stage during the execution of a pumping test request the Test pumping Contractor to abort a test if, in the opinion of the consultant, continuation of the test is not in the interests of the project. Factors which might contribute to such a decision by the Hydrogeological Consultant are: (1) sufficient data having been collected for an adequate scientific evaluation thereof, (2) the execution of the test not meeting project criteria and requirements (such as for constancy of yield, accuracy of yield measurements or accuracy of water level measurements, sufficiency of discharge line length, etc) or (3) a mechanical breakdown occurring during pumping which causes a test to be interrupted or aborted.

(a) Tests aborted due to sufficiency off data

In such instances, the Test pumping Contractor will be remunerated for the actual duration of testing (including recovery testing) at the hourly rates set out in the Schedule of Rates.

(b) Tests aborted due to incorrect execution

The Test pumping Contractor will be required to remedy the cause(s) for an abort decision by the Hydrogeological Consultant. The test shall be restarted, as if it were the first attempt, after the water level has recovered to within five per cent of the pre-test rest water level or the contractor is instructed thereto by the Hydrogeological Consultant. The Test pumping Contractor shall not be entitled to remuneration for any test which is aborted under these circumstances irrespective of the time elapsed up to receipt of the instruction to abort.

(c) Tests aborted due to breakdowns

The following procedures are recommended when a mechanical breakdown occurs during pumping which causes a test to be interrupted or aborted.

Calibration Test:

Start immediately with the measurement and recording of the water level recovery rate according to the periodicity given in reporting forms. Irrespective of how long after the start of pumping the breakdown occurs or how rapidly the breakdown can be fixed, continue with water level recovery measurements until the water level is within five per cent of the pre-test rest water level or, at the discretion of the Hydrogeological Consultant, may be discontinued. Restart the calibration test as if it is the first attempt. The Test pumping Contractor shall not be entitled to remuneration for a calibration test which is aborted under such circumstances.



Stepped discharge test:

Record the time of the breakdown and start immediately with the measurement and recording of the water level recovery according to the periodicity given in reporting forms. If the breakdown occurs during the first or second steps of the test, continue with water level recovery measurements until the water level is within five per cent of the start rest water level and then restart the stepped discharge test as if it is the first attempt. If the breakdown occurs during the third step of the test, can be fixed and the pump restarted to produce the same yield (as before the breakdown) within five minutes of the breakdown occurring, continue with the test at this yield after measuring and recording the water level immediately before restarting the pump. Only one such breakdown event is allowed.

If a second breakdown occurs, proceed as described for a first step breakdown. If the breakdown occurs during the fourth or later step of the test, can be fixed and the pump restarted to produce the same yield (as before the breakdown) within five minutes of the breakdown occurring, continue with the test and complete it at this yield after measuring and recording the water level immediately before restarting the pump. If a breakdown at this stage cannot be fixed within five minutes, continue with water level recovery measurements as if the test has been fully completed. The Contractor shall not be entitled to remuneration for a stepped discharge test, which is aborted:

- (1) within the first or second step, or (2) within the third step and can not be restarted within the time allowed for repair.

Constant discharge test:

Note the time of the breakdown and start immediately with the measurement and recording of the water level recovery according to the periodicity given in reporting forms. If the breakdown occurs within the first two hours after the start of pumping, continue with water level recovery measurements until the water level is within five per cent of the pre-test (start) rest water level and then restart the test. If the breakdown occurs later than two hours into the test, can be fixed and the pump restarted to produce the same yield as before the breakdown within the time periods (after the breakdown occurring) given in Table 5-10-1, continue with the test at this yield after measuring and recording the water level immediately before restarting the pump.

If the breakdown can not be fixed and the pump started within one hour of the breakdown occurring, continue with water level recovery measurements until the water level is within five per cent of the pre-test rest water level and then restart the constant discharge test as if it is the first attempt unless the following condition has been met. If the

Section 2

Conditions of Bid, Conditions of Contract and Specifications

breakdown occurs after approximately 80 per cent of the planned duration of the constant discharge test has been successfully completed, continue with water level recovery measurements as if the test has been fully completed. The allowable elapsed time (in hours) in regard to selected constant discharge test total durations in order for this specification to be acceptable is given in Table 5-10-2.

**Table 5-10-1 Period allowed for breakdown repair and continuation of testing**

TIME BREAKDOWN AFTER START PERIOD ALLOWED FOR REPAIR OF TEST	
2 hours to 4 hours	6 minutes
4 hours to 6 hours	12 minutes
6 hours to 8 hrs hours	18 minutes
8 hours to 10 hours	24 minutes
10 hours to 12 hours	30 minutes
12 hours to 14 hours	36 minutes
14 hours to 16 hours	42 minutes
16 hours to 18 hours	48 minutes
18 hours to 20 hours	60 minutes
Longer than 20hrs	60 minutes

**Table 5-10-2      Period after which a constant discharge test may be considered completed in the event of a breakdown**

CONSTANT DISCHARGE TEST	ALLOWABLE TIME ELAPSED TO BREAKDOWN
24 hours	20 hours (equivalent to 80% of total time)
36 hours	30 hours (equivalent to 83% of total time)
48 hours	38 hours (equivalent to 79% of total time)
72 hours	60 hours (equivalent to 77% of total time)

The Test pumping Contractor shall not be entitled to remuneration for a constant discharge test, which is aborted under circumstances, which preclude its restart within the time allowable for repair and continuation. The contractor will, however, be entitled to remuneration for a constant discharge test which is aborted after approximately 80 per cent of the planned duration of the constant discharge test (refer to Table 5-10-1) has been successfully completed, payment being made for the actual duration of the test (including the recovery test) at the hourly rates set out in the Schedule of Rates.

**SECTION 3**

**INFORMATION SUBMITTED  
BY BIDDER**

**DISASTER MANAGEMENT, COMMUNITY WATER SUPPLY,  
RESOURCE ASSESSMENT AND  
RESOURCE MANAGEMENT  
OF GROUNDWATER**

**BID NO.: W**

**TEST PUMPING OF BOREHOLES IN  
SOUTH AFRICA**

**SECTION 3 - INFORMATION SUBMITTED BY BIDDER**

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1. Particulars of Bidder
2. Alterations by Bidder
3. Statement of Recent Similar Works Completed
4. Statement of Supervisory Personnel to be Deployed
5. Statement of Plant and Equipment to be deployed
6. Schedule of Proposed Sub-Contractors

**DISASTER MANAGEMENT, COMMUNITY WATER SUPPLY,  
RESOURCE ASSESSMENT AND  
RESOURCE MANAGEMENT  
OF GROUNDWATER**

**BID NO.: W**

**TEST PUMPING OF BOREHOLES IN  
SOUTH AFRICA**

**INFORMATION SUBMITTED BY BIDDER**

**1-0. PARTICULARS OF BIDDER**

1-1. Name of Bidder .....

1-2. Address of Bidder .....

1-3. Authorised signatory .....  
Position held .....

1-4. Does Bidder has an office in the Province: ☐ (Yes) ☐ (No)

City / town .....  
Address .....  
.....  
.....

Contact person .....

Telephone .....

Fax .....

e-mail .....

**2-0. ALTERATIONS BY BIDDER**

Should the Bidder wish to make any departures from or modifications to any part of this document or wish to qualify the Bid in any way, these shall be

clearly set out hereunder or alternatively stated in a covering letter attached to this Bid.

2-1. Section: ..... Subsection: ..... Page: .....

Alteration: .....  
.....  
.....

2-2. Section: ..... Subsection: ..... Page: .....

Alteration: .....  
.....  
.....

2-3. Section: ..... Subsection: ..... Page: .....

Alteration: .....  
.....  
.....

**3-0. STATEMENT OF RECENT SIMILAR WORKS COMPLETED**

- 3-1. Client organization .....  
Reference organisation: .....  
Telephone number: .....  
Value of work: .....  
Year completed: .....  
Nature of work: .....
- 3-2. Client organization .....  
Reference organisation: .....  
Telephone number: .....  
Value of work: .....  
Year completed: .....  
Nature of work: .....
- 3-3. Client organization .....  
Reference organisation: .....  
Telephone number: .....  
Value of work: .....  
Year completed: .....  
Nature of work: .....

**4-0. STATEMENT OF SUPERVISORY PERSONNEL TO BE DEPLOYED**

**4-1. Project representative**

Name: .....  
Current position held: .....  
Length of current employment (years): .....  
Previous relevant experience: .....  
Project name: .....  
Value of work: .....  
Year completed: .....  
Position held on project: .....

**4-2. Testing foreman 1**

Name: .....  
Current position held: .....  
Length of current employment (years): .....  
Previous relevant experience: .....  
Project name: .....  
Value of work: .....  
Year completed: .....  
Position held on project: .....

**4-3. Testing foreman 2**

Name: .....  
Current position held: .....  
Length of current employment (years): .....  
Previous relevant experience: .....  
Project name: .....  
Value of work: .....  
Year completed: .....  
Position held on project: .....

**5-0. STATEMENT OF PLANT AND EQUIPMENT TO BE DEPLOYED**

**5-1. Testing unit 1 (If Specialized test pumping Indicate)**

Make and model of engine .....  
Age (years) ..... Years with company: .....  
Condition ☐ (excellent) ☐ (good) ☐ (fair)  
Make and model of pump .....  
Age (years) ..... Years with company .....  
Condition ☐ (excellent) ☐ (good) ☐ (fair)  
Discharge range (l/s): ..... to .....  
Pump outlet diameter (mm) .....  
Rising main diameter (mm) .....

5-2. Testing unit 2

Make and model of engine .....

Age (years) ..... Years with company: .....

Condition ☐ (excellent) ☐ (good) ☐ (fair)

Make and model of pump .....

Age (years) ..... Years with company .....

Condition ☐ (excellent) ☐ (good) ☐ (fair)

Discharge range (l/s): ..... to .....

Pump outlet diameter (mm) .....

Rising main diameter (mm) .....

5-3. Testing unit 3

Make and model of engine .....

Age (years) ..... Years with company: .....

Condition ☐ (excellent) ☐ (good) ☐ (fair)

Make and model of pump .....

Age (years) ..... Years with company .....

Condition ☐ (excellent) ☐ (good) ☐ (fair)

Discharge range (l/s): ..... to .....

Pump outlet diameter (mm) .....

Rising main diameter (mm) .....

5-4. Ancillary plant and equipment

Vehicles .....

.....

.....

.....

.....

Water level measuring devices

- a. Type .....  
Number .....  
Depth limit (m) .....
- b. Type .....  
Number .....  
Depth limit (m) .....
- c. Type .....  
Number .....  
Depth limit (m) .....

Discharge measuring devices

- a. Type .....  
Number .....



- Measurement limit (m) .....
- b. Type .....
- Number .....
- Measurement limit (m) .....
- c. Type .....
- Number .....
- Measurement limit (m) .....

## 6. SCHEDULE OF PROPOSED SUB-CONTRACTORS

In accordance with the General Conditions of Contract and Special Conditions of Contract the Bidder shall state hereunder the names of sub-contractors he proposes to employ for the execution of certain sections of the Works.

[illegible]

**SECTION 4**  
**SCHEDULE OF RATES**

**DISASTER MANAGEMENT, COMMUNITY WATER SUPPLY,  
RESOURCE ASSESSMENT AND  
RESOURCE MANAGEMENT  
OF GROUNDWATER**

**BID NO.: W**

**TEST PUMPING OF BOREHOLES IN  
SOUTH AFRICA**

**SECTION 4 - SCHEDULE OF RATES**

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1. Preamble
2. Schedule
3. Summary of Schedules
4. Priority of Provinces interested for Standard Test Pumping

**DISASTER MANAGEMENT, COMMUNITY WATER SUPPLY,  
RESOURCE ASSESSMENT AND  
RESOURCE MANAGEMENT  
OF GROUNDWATER**

**BID NO.:**

**TEST PUMPING OF BOREHOLES IN THE  
SOUTH AFRICA**

**SCHEDULE OF RATES**

**1.0. PREAMBLE**

- 1-1. The Schedule of Rates (SoR) forms an integral part of this Bid and shall be read in conjunction with: (1) subsection 4-4 of Section 4 of Part 1 and (2) Document 3 of Part 3 of the Minimum Standards and Guidelines Document (DWS, April 1997).
- 1-2. The following words in the SoR have the meanings hereby assigned to them.
- |            |  |
|------------|--|
| Unit :     | The metric unit of measurement for each item of work as defined in the guidelines.   |
| Quantity : | The number of units of work for each item.   |
| Rate :     | The rate per unit Bidded for an item.  |
| Amount:    | The product of the quantity and the rate Bidded for an item.   |
| Sum :      | The amount Bidded for an item of which the extent is described in the SoR, the Specifications or elsewhere in the Minimum Standards and Guidelines Document (DWS, April 1997). |
- 1-3. The short description of the items in the SoR are for identification purposes only, the work covered by the items being fully described in subsection 4-4 of Section 4 (Part 1) of the Minimum Standards and Guidelines Document (DWS, April 1 997) and/or in Section 2 of this document.
- 1-4. Unless stated otherwise, items are measured net and Bidders must

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Schedule of Rates

allow for waste in their Bidded rates.

- 1-5. All rates and sums of money quoted in the SoR shall be in Rands and whole Cents. Fractions of a cent shall be discounted.
- 1-6. No quantities are set out in the SoR. The quantities of work accepted and certified for payment shall be used for determining payments to Appointees.
- 1-7. Except where Provisional Sums have been indicated, Bidders shall enter an applicable rate in the Rate Column of the SoR for each scheduled item. Appointees will not be paid for items against which no rate has been entered on the presumption that they do not wish to receive payment for any such work.

Should Bidders group a number of items and Bid one lump sum rate for such group of items, this single lump sum rate shall apply to that group of items and not to each individual item. Should Bidders indicate against any item that compensation for such item is included in another item, the rate for the item included in another shall be deemed nil.

Bids may be rejected if any rates in the SoR are, in the opinion of the Implementing Authority, deemed unreasonable or out of proportion.

- 1-8. Bidders are at liberty to insert a rate of their own choosing for each item in the SoR and in this regard their attention is drawn to the fact that Appointees have the right, under various circumstances, to payment for additional works carried out and that the Executive Agency is obliged to base its assessment of the rates to be paid for such additional work on the rates inserted in the SoR by the Appointee(s).
- 1-9. Payment based on the rates Bidded in the SoR shall cover all the services and incidentals included in the works covered by the Appointment and shall be made in accordance with the Conditions of Bid (Section 2 of this document).
- 1-10. The Contract Price for the completed Contract shall be computed from the actual quantities of authorised work done as certified by the Executive Agency valued at rates Bidded against the respective items in the SoR and shall include such authorised provisional sums and items of extra work as become payable in terms of the Contract.
- 1-11. Where Appointees are required to furnish detailed drawings and

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Schedule of Rates

designs or other information in terms of the Contract Documents, all costs thereof shall be deemed to have been provided for and included in the unit rates and amounts Bidded for the items in the SoR and separate additional payments will not be made.

1-12. Bidders must price each item in the SoR in BLACK INK.

1-13. The individual rates Bidded for all work to be done or material to be supplied shall not be adjusted if the actual contract price for the completed Contract is different from the approximate expected value of the works, but shall remain fixed for the period of the Contract.

1-14. The abbreviations used in the SoR are defined as follows:

mm	=	millimetre	m	=	metre
km	=	kilometre	m <sup>2</sup>	=	square metre
ha	=	hectare	m <sup>3</sup>	=	cubic metre
ha	=	hectare m <sup>3</sup>			
m <sup>3</sup> /km	=	cubic metre per km			
l	=	litre			
kl	=	kilolitre			
kg	=	kilogram			
t	=	ton (1000 kg)			
No	=	number			
%	=	percent			
kW	=	kilowatt			
PC sum	=	prime cost sum			
P sum	=	provisional sum			
kPa	=	kilopascal			
R/only	=	Rate only			
W/day	=	Work day			

## 2. SCHEDULE OF RATES (Annexure 2)

<b>2-1 Test pumping of boreholes for SOUTH AFRICA</b>					
<b>Item No.</b>	<b>Description</b>	<b>Unit</b>	<b>Qty</b>	<b>Rate</b>	<b>Amount R / c</b>
<b>1-0</b>	<b>ESTABLISHMENT, PLANT SET-UP, INTER-HOLE MOVES AND DE-ESTABLISHMENT.</b>				
1-1	<b>Establishment of Own Facilities on Site</b> – All listed items to be available on each site – according the Occupational Health and Safety specification for Contractual work) – Document will be signed by successful tenderer. <ul style="list-style-type: none"> <li>- GPS,</li> <li>- Accommodation (Tents, caravans etc.)</li> <li>- Dedicated wash area (shower, basin etc.)</li> <li>- Dedicated area for food preparation,</li> <li>- Demarcated area for fuel, oil etc.</li> <li>- Medical kit,</li> <li>- Demarcation barrier (Not danger tape)</li> <li>- Protection clothing (Hard hat, safety shoe, etc.)</li> <li>- Overalls with contractors name and/or logo</li> <li>- Contractors will be monitored by Consultants. This will include instructions to improve etc. reporting to the client and actions taken.</li> </ul>	Sum	200		
1-2	<b>Mobilisation and set-up</b> of plant to/at first borehole				
1-2-1	0 to 500 km	Sum	200		
1-2-2	500 to 1000 km	Sum	200		
1-2-3	Greater than 1000 km	Sum	200		
1-3	<b>Set-up of plant</b> per boreholes (after first)	No	400		
1-4	<b>Inter-hole moves</b>				
1-4-1	For distances up to 10 km	No	400		
1-4-2	For distances exceeding 10 km	Km	10 000		
1-5	<b>De-establishment</b> from site				
1-5-1	0 to 500 km	Sum	200		
1-5-2	500 to 1000 km	Sum	200		
1-5-3	Greater than 1000 km	Sum	200		
<b>2-0</b>	<b>TEST PUMPING –</b>				
2-1	<b>Installation of Test Pump (depth up to 60m)</b>				
2-1-1	For yield up to 10 l/s	No	100		
2-1-2	For yield greater than 10 l/s to max 25l/s	No	100		
2-2	<b>Installation of Test Pump (per metre over 60m up to 120m)</b>				
2-2-1	For yield up to 10 l/s	m	1500		
2-2-2	For yield greater than 10 l/s to max 25l/s	m	1000		
		<b>Sub-total carried over</b>			



Section 4  
Schedule of Rates

2-1 Test pumping of boreholes for SOUTH AFRICA					
Item No.	Description	Unit	Qty	Rate	Amount R / c
Sub-total brought forward					
2-3	<b>Laying out of Discharge Hose</b>				
2-3-1	Minimum of 100m	No	600		
2-3-3	100m to 300m (extra-over 100m)	m	1000		
2-4	<b>Slug Test</b>	No	100		
2-5	<b>Calibration Test up to 25l/s</b>	Hr	600		
2-6	<b>Stepped Discharge Test (Maximum 120m)</b>				
2-6-1	For yield up to 10 l/s not deeper than 60m	Hr	1000		
2-6-2	For yield >10 l/s <25l/s up to 60m	Hr	600		
2-6-3	For yields >20l/s but < 40l/s –max depth=60m	Hr	400		
2-6-4	For yield up to 10 l/s deeper than 60m <120m	Hr	500		
2-6-5	For yields >10 l/s <25l/s deeper than 60m <120m	Hr	600		
2-7	<b>Constant Discharge Test (Maximum 120m)</b>				
2-7-1	For yield up to 10 l/s not deeper than 60m	Hr	3 000		
2-7-2	For yield >10 l/s <25l/s up to 60m	Hr	1000		
2-7-3	For yield up to 10 l/s deeper than 60m <120m	Hr	600		
2-7-4	For yields >10 l/s <25l/s deeper than 60m <120m				
2-8	<b>Recovery measurement</b> after paragraph 2-5, 2-6, 2-7	Hr	8000		
2-9	<b>Borehole Disinfection</b> (complete per borehole)	No	600		
2-10	<b>Obtain &amp; fit Borehole <math>\phi</math> 165 casing lid</b> (obtainable from DWS refer to Drawing No. 1) (Borehole Protection)	No	600		
2-11	Borehole Marking (Refer to Drawing No. 2 & 3)	No	400		
2-12	Site Finishing (complete per borehole)	No	600		
3-0	<b>EQUIPMENT REMOVAL AND RE-INSTALLATION</b>				
3-1	<b>Hand pump, Windmills, Motorized, installations 25 to 65mm pipes</b>				
3-1-1	Removal for 1 <sup>st</sup> 100m depth	No	200		
3-1-2	Removal from depths extra-over 100m	m	1000		
3-1-3	Re-installation to 100m depth	No	200		
3-1-4	Re-installation to depths extra-over 100m	m	1000		
3-2	<b>Motorized installations above 65mm pipes</b>				
3-2-1	Removal for 1 <sup>st</sup> 100m depth	No	200		
3-2-2	Removal from depths extra-over 100m	m	1000		
3-2-3	Re-installation to 100m depth	No	200		
3-2-4	Re-installation to depths extra-over 100m	m	1000		
3-3	<b>Borehole superstructure</b>				
3-3-1	Dismantling of superstructure	No	200		
3-3-2	Re-assembly of superstructure	No	200		
Sub-total carried over					

Section 4  
Schedule of Rates

<b>2-1 Test pumping of boreholes for SOUTH AFRICA</b>					
<b>Item No.</b>	<b>Description</b>	<b>Unit</b>	<b>Qty</b>	<b>Rate</b>	<b>Amount R / c</b>
<b>Sub-total brought forward</b>					
<b>3-4</b>	<b>Minor repairs to existing equipment:</b>				
3-4-1	Materials	<b>Sum</b>	<b>150 000</b>		
3-4-2	Mark-up on materials less than R50 000	%	50 000	15	<b>R7 500.00</b>
3-4-3	Mark-up on materials above R50 000	%	50 000	15	<b>R7 500.00</b>
	First R50 000 @ 15% & next R50000 @ 10%	%	50 000	10	<b>R5 000.00</b>
	R100 000 utilized for item 3-4-3				
3-4-4	Travelling costs.	Km	5000		
<b>4-0</b>	<b>DATA RECORDING AND REPORTING</b> (Complete per borehole) Including measurements – Before & after installation of test equipment – depth & water level and Casing detection	Per/bh	600		
	<b><u>It is required that all payment certificates be accompanied by proof that the required data recording and reporting was submitted for entry onto the NGA</u></b> The invoices of the contractors will not be certified for payment if it does not comply with the above requirements.				
<b>5-0</b>	<b>WATER LEVEL MONITORING PER OBSERVATION BOREHOLE</b>	Hr	5000		
<b>6-0</b>	<b>CHEMICAL ANALYSIS OF WATER SAMPLE</b> (macro-elements only) – TO BE COLLECTED DURING TEST. – Mark-up on submitted invoice	%	-	15%	-----
<b>7-0</b>	<b>STANDING TIME RATE</b>	Hr	250		
<b>8-0</b>	<b>CASUAL (DAY) LABOUR SOURCED LOCALLY</b> Per person	Day	250		
<b>2-1 STANDARD TOTAL CARRIED FORWARD TO SUMMARY (VAT incl)</b>					

Section 4  
Schedule of Rates

<b>2-2 SPECIALIZED Test pumping of boreholes for SOUTH AFRICA</b>					
<b>Item No.</b>	<b>Description</b>	<b>Unit</b>	<b>Qty</b>	<b>Rate</b>	<b>Amount R / c</b>
<b>1-0</b>	<b>ESTABLISHMENT, PLANT SET-UP, INTER-HOLE MOVES AND DE-STABLISHMENT – SPECIALIZED EQUIPMENT</b>				
<b>1-1</b>	<b>Establishment of Own Facilities on Site</b> – All listed items to be available on each site – according the Occupational Health and Safety specification for Contractual work) – Document will be signed by successful tenderer. <ul style="list-style-type: none"> <li>- GPS,</li> <li>- Accommodation (Tents, caravans etc.)</li> <li>- Dedicated wash area (shower, basin etc.)</li> <li>- Dedicated area for food preparation,</li> <li>- Demarcated area for fuel, oil etc.</li> <li>- Medical kit,</li> <li>- Demarcation barrier (Not danger tape)</li> <li>- Protection clothing (Hard hat, safety shoe, etc.)</li> <li>- Overalls with contractors name and/or logo</li> </ul> Contractors will be monitored by Consultants. This will include instructions to improve etc. reporting to the client and actions taken.	Sum	200		
<b>1-2</b>	<b>Mobilisation and set-up</b> of plant to/at first borehole				
1-2-1	0 to 500 km	Sum	200		
1-2-2	500 to 1000 km	Sum	200		
1-2-3	Greater than 1000 km	Sum	200		
<b>1-3</b>	<b>Set-up of plant</b> per boreholes (after first)	No	400		
<b>1-4</b>	Inter-hole moves				
1-4-1	For distances up to 10 km	No	400		
1-4-2	For distances exceeding 10 km	Km	10 000		
<b>1-5</b>	<b>De-establishment</b> from site				
1-5-1	0 to 500 km	Sum	200		
1-5-2	500 to 1000 km	Sum	200		
1-5-3	Greater than 1000 km	Sum	200		
<b>2-0</b>	<b>TEST PUMPING –</b>				
<b>2-1</b>	<b>Installation of Test Pump</b> (depth up to 60m)				
2-1-1	For yields greater than 25l/s up to 40 l/s	Sum	80		
2-1-2	For yields greater than 40 l/s	Sum	80		
<b>2-2</b>	<b>Installation of Test Pump</b> (per metre over 60m up to 120m)				
2-2-1	For yields greater than 25l/s up to 40 l/s	m	1500		
2-2-2	For yield greater than 40 l/s	m	1500		
		<b>Sub-total carried over</b>			

Section 4  
Schedule of Rates

<b>2-2 SPECIALIZED Test pumping of boreholes for SOUTH AFRICA</b>					
<b>Item No.</b>	<b>Description</b>	<b>Unit</b>	<b>Qty</b>	<b>Rate</b>	<b>Amount R / c</b>
<b>Sub-total brought forward</b>					
<b>2-2</b>	<b>Installation of Test Pump</b> (per metre over 120m up to 240m max)				
2-2-3	Over & above 120m up to 10l/s max 240m	m	1500		
2-2-4	Over & above 120m 10l/s up to 20l/s	m	1500		
2-2-5	Over & above 120m above 20l/s up to 40l/s	m	1000		
<b>2-3</b>	<b>Laying out of Discharge Hose</b> – above 20l/s maximum 40l/s				
2-3-1	Minimum of 100m yields up to 40l/s	No	600		
2-3-2	Minimum of 100m yields above 40l/s	No	600		
2-3-3	100m to 300m (extra-over 100m) <40l/s	m	3000		
2-3-4	100m to 300m (extra-over 100m) >40l/s	m	3000		
<b>2-4</b>	<b>Slug Tests</b>	No	100		
<b>2-5</b>	<b>Calibration Test</b> above 25l/s	Hr	600		
<b>2-6</b>	<b>Stepped Discharge Test</b>				
2.6.1	For yields >25l/s up to 40l/s to depth of 60m	Hr	1000		
2.6.2	For yield greater than 40 l/s up to 60m	Hr	600		
2.6.3	For yields up to 40l/s to depths >60m <120m	Hr	1000		
2.6.4	For yield greater than 40 l/s >60m <120m	Hr	600		
2.6.5	For yields up to 40l/s to depths >120m <240m	Hr	600		
2.6.6	For yield greater than 40 l/s >120m <240m	Hr	600		
<b>2-7</b>	<b>Constant Discharge Test</b>				
2-7-1	For yields >25l/s up to 40l/s to depth of 60m	Hr	1500		
2-7-2	For yield greater than 40 l/s up to 60m	Hr	1500		
2-7-3	For yields up to 40l/s to depths >60m <120m	Hr	1500		
2-7-4	For yield greater than 40 l/s >60m <120m	Hr	1500		
2-7-5	For yields up to 40l/s to depths >120m <240m	Hr	750		
2-7-6	For yield greater than 40 l/s >120m <240m	Hr	750		
<b>2-8</b>	<b>Recovery measurement</b> after paragraph 2-5,2-6, 2-7	Hr	8000		
<b>2-9</b>	<b>Borehole Disinfection</b> (complete per borehole)	No	600		
<b>2-10</b>	<b>Obtain &amp; fit Borehole <math>\phi</math> 165 casing lid</b> (obtainable from DWS refer to Drawing No. 1) (Borehole Protection)	No	600		
2-11	Borehole Marking (Refer to Drawing No. 2 & 3)	No	400		
2-12	Site Finishing (complete per borehole)	No	600		
<b>3-0</b>	<b>EQUIPMENT REMOVAL AND RE-INSTALLATION</b>				
<b>3-1</b>	<b>Hand pump, Windmills, Motorized, installations 50 to 80mm pipes</b>				
3-1-1	Removal for 1 <sup>st</sup> 100m depth	No	200		
3-1-2	Removal from depths extra-over 100m	m	1000		
<b>Sub-total carried over</b>					

Section 4  
Schedule of Rates

2-2 SPECIALIZED Test pumping of boreholes for SOUTH AFRICA					
Item No.	Description	Unit	Qty	Rate	Amount R / c
Sub-total brought forward					
3-1-3	Re-installation to 100m depth	No	200		
3-1-4	Re-installation to depths extra-over 100m	m	1000		
3-2	<b>Motorized installations above 80mm pipes</b>			3-2	
3-2-1	Removal for 1 <sup>st</sup> 100m depth	No	200	3-2-1	
3-2-2	Removal from depths extra-over 100m	m	1000	3-2-2	
3-2-3	Re-installation to 100m depth	No	200	3-2-3	
3-2-4	Re-installation to depths extra-over 100m	m	1000		
3-3	<b>Borehole superstructure</b>				
3-3-1	Dismantling of superstructure	No	200		
3-3-2	Re-assembly of superstructure	No	200		
3-4	<b>Minor repairs to existing equipment:</b>				
3-4-1	Materials	Sum	150 000		
3-4-2	Mark-up on materials less than R50 000	%	50 000	15	R7 500.00
3-4-3	Mark-up on materials above R50 000	%	50 000	15	R7 500.00
	First R50 000 @ 15% & next R50000 @ 10%	%	50 000	10	R5 000.00
	R100 000 utilized for item 3-4-3				
3-4-4	Travelling costs.	Km	5000		
4-0	<b>DATA RECORDING AND REPORTING</b> (Complete per borehole) Including measurements – Before & after installation of test equipment – depth & water level and Casing detection	Per/bh	600		
	<u><b>It is required that all payment certificates be accompanied by proof that the required data recording and reporting was submitted for entry onto the NGA</b></u> The invoices of the contractors will not be certified for payment if it does not comply with the above requirements.				
5-0	<b>WATER LEVEL MONITORING PER OBSERVATION BOREHOLE</b>	Hr	5000		
6-0	<b>CHEMICAL ANALYSIS OF WATER SAMPLES - TO BE COLLECTED DURING TESTS</b> – Mark-up on submitted invoice from accredited lab will apply – only on request from client	%	-	15%	-----
7-0	<b>STANDING TIME RATE</b>	Hr	250		
8-0	<b>CASUAL (DAY) LABOUR SOURCED LOCALLY</b>	Day	250		
2-2 SPECIALIZED TOTAL CARRIED FORWARD TO SUMMARY (VAT incl)					

**BID NO: W**

**3. SUMMARY OF BIDDED PRICES IN SOUTH AFRICA (SCHEDULE 8.1)**

<b>SCHEDULES</b>	<b>AMOUNT BIDDED</b>
2-1. Standard Test pumping: South Africa	R
2-2. Specialised Test pumping: South Africa	R
<b>TOTAL AMOUNT BIDDED (VAT incl) carried forward to form of Bid Section 5</b>	<b>R</b>

.....  
**BIDDER NAME**

.....  
**SIGNATURE**

\_\_\_\_\_  
**TELEPHONE NO.**

\_\_\_\_\_  
**DATE:**

\_\_\_\_\_  
**FAX NO.**

\_\_\_\_\_  
**CELLPHONE NO.**

**SBD 7.1**

## CONTRACT FORM - PURCHASE OF GOODS/WORKS

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

### PART 1 (TO BE FILLED IN BY THE BIDDER)

1. I hereby undertake to supply all or any of the goods and/or works described in the attached bidding documents to (name of institution)..... in accordance with the requirements and specifications stipulated in bid number..... at the price/s quoted. My offer/s remain binding upon me and open for acceptance by the purchaser during the validity period indicated and calculated from the closing time of bid.
2. The following documents shall be deemed to form and be read and construed as part of this agreement:
  - (i) Bidding documents, viz
    - Invitation to bid;
    - Tax clearance certificate;
    - Pricing schedule(s);
    - Technical Specification(s);
    - Preference claims for Broad Based Black Economic Empowerment Status Level of Contribution in terms of the Preferential Procurement Regulations 2011;
    - Declaration of interest;
    - Declaration of bidder's past SCM practices;
    - Certificate of Independent Bid Determination
    - Special Conditions of Contract;
  - (ii) General Conditions of Contract; and
  - (iii) Other (specify)
3. I confirm that I have satisfied myself as to the correctness and validity of my bid; that the price(s) and rate(s) quoted cover all the goods and/or works specified in the bidding documents; that the price(s) and rate(s) cover all my obligations and I accept that any mistakes regarding price(s) and rate(s) and calculations will be at my own risk.
4. I accept full responsibility for the proper execution and fulfilment of all obligations and conditions devolving on me under this agreement as the principal liable for the due fulfillment of this contract.
5. I declare that I have no participation in any collusive practices with any bidder or any other person regarding this or any other bid.
6. I confirm that I am duly authorised to sign this contract.

NAME (PRINT) .....

CAPACITY .....

SIGNATURE .....

NAME OF FIRM .....

DATE .....

WITNESSES	
1	.....
2.	.....
DATE: .....	

**CONTRACT FORM - PURCHASE OF GOODS/WORKS**

**PART 2 (TO BE FILLED IN BY THE PURCHASER)**

1. I ..... in my capacity as .....  
accept your bid under reference number .....dated.....for the supply of  
goods/works indicated hereunder and/or further specified in the annexure(s).
2. An official order indicating delivery instructions is forthcoming.
3. I undertake to make payment for the goods/works delivered in accordance with the terms and  
conditions of the contract, within 30 (thirty) days after receipt of an invoice accompanied by the  
delivery note.

<b>SCHEDULE NO</b>	<b>PRICE (ALL APPLICABLE TAXES INCLUDED</b>		<b>DELIVERY PERIOD</b>	<b>B-BBEE STATUS LEVEL OF CONTRIBUTI ON</b>	<b>MINIMUM THRESHOLD FOR LOCAL PRODUCTION AND CONTENT (if applicable)</b>
<b>2-1</b>					
<b>2-2</b>					

4

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

SIGNED AT .....ON.....

NAME (PRINT) .....

SIGNATURE .....

OFFICIAL STAMP

WITNESSES

1. ....

2. ....

DATE .....



**BID W**

**4.Priority of Provinces interested for Standard Drilling**

<b>Provinces.</b>	<b>Priority (1-9)</b>
Limpopo Province	
Mpumalanga Province	
Gauteng Province	
North West Province	
Free State Province	
Northern Cape Province	
Western Cape Province	
Eastern Cape Province	
KwaZulu Natal Province	

\_\_\_\_\_  
BIDDER NAME

\_\_\_\_\_  
SIGNATURE

\_\_\_\_\_  
COMPANY NAME

\_\_\_\_\_  
DATE:

.....  
**Telephone Number**

.....  
**Fax Number**

.....  
**Cell phone Number**

**SECTION 5**

**ADDITIONAL BID /  
CONTRACT DOCUMENTATION**

**DISASTER MANAGEMENT, COMMUNITY WATER SUPPLY,  
RESOURCE ASSESSMENT AND  
RESOURCE MANAGEMENT  
OF GROUNDWATER**

**BID NO.: W**

**TEST PUMPING OF BOREHOLES IN  
SOUTH AFRICA**

**SECTION 5 – ADDITIONAL BID / CONTRACT DOCUMENTATION**

**INDEX**

1. Certificate of Bidder's Attendance of Briefing Session
2. Form of Bid
3. Appendix
4. Memorandum of Agreement

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**9. CERTIFICATE OF BIDDER’S ATTENDANCE OF BRIEFING SESSION**

BID / CONTRACT No **W**

This is to certify that I .....

Representative of (Bidder) .....

Of address .....  
.....  
.....

telephone no. ....

attended the briefing session on (date) .....

Held by of (Employer’s representative) .....

Having previously studies the Bid Document, I Certify that I am satisfied with the description of the Work and the explanation given by the said Employer’s representative and that I understand perfectly the work to be done, as specified and implied, in the execution of this Contract.

BIDDER’S REPRESENTATIVE .....

EMPLOYER’S REPRESENTATIVE .....

**10. FORM OF BID**

(Note: The Appendix forms part of the Bid)

BID / CONTRACT NO: **W**

AREA .....

SHORT DESCRIPTION OF WORKS: .....

.....

.....

TO THE IMPLEMENTING AUTHORITY: .....

Gentlemen,

Having examined the General and the Special Conditions of Contract and the Project Specifications and Schedule of Rates for the construction of the abovenamed Works, I/we offer to construct, complete and maintain the whole of the said Works in conformity with the General and Special Conditions of Contract, the Project Specifications and the Schedule of Rates, save as amended by the —~~A~~erations by Bidder” (if any) attached hereto, for the rates as set out in the Schedule of Rates or for such other sum as may be ascertained in accordance with the Contract.

In the event of there being any errors of extension or addition in the priced Schedule of Rates, I/We agree to their being corrected by you or your appointed representative, the rates being taken as correct.

I/We undertake to complete and deliver the various parts and the whole of the Works comprised in the Contract within the time(s) stated in the Appendix to Bid attached hereto.

If my/our Bid is accepted, I/we will, when required and within the time stipulated, provide a guarantee of a Bank or Insurance Company (to be approved by you) to be jointly and severally bound with me/us in a sum not exceeding ten percent (10%) of the estimated contract value, for the due performance of the Contract under the terms of a Bond in the form annexed hereto. The surety I/we propose is

.....  
of .....

I/we have studied the Conditions of Bid issued herewith and agree to be bound by same for the period of validity set out in the Appendix to Bid attached hereto.

Unless and until a formal Agreement is prepared and executed this Bid, together with the written acceptance thereof by yourselves or the Consultant acting on your behalf, shall constitute a binding Contract between us.

I/we understand that you are not bound to accept the lowest or any Bid you may receive.

Yours faithfully

Name (please print) .....

On behalf of .....

Address .....

.....

Date .....

Tel. &amp; Fax No. ....

Signature .....

## 11. APPENDIX

*Note: Clause numbers (CL NO) refer to the General Conditions of Contract 1990, issued by the South African Institution of Civil Engineering.*

	<u>CL NO</u>	
Validity Period of Bid		HUNDRED AND TWENTY (120) days from Closing of Bids
Contract Period	1.(1)(ac)	36 months from date of appointment
Employer's address		See Form of Bid
Engineer's contact details	1.(2)	Dept of Water and Sanitation Directorate Water Resource Planning Systems Private Bag X313 PRETORIA, 0001 Tel: (012) 336-7500 Fax: (012) 336-6731
Contractor's address & phone number		See Form of Bid
Time within which Agreement must be signed		Within FOURTEEN (14) days of receipt of written notice from the Employer or Engineer to do so
Time when Contract comes into force and effect	12.(1)	On the Commencement Date
Time within which Works Segments must be commenced	12.(2)	Within 14 days of Engineer's instruction
Time within which works programme must be submitted	15	Within SEVEN (7) days of date of receipt of Engineer's instruction in terms of Sub-Clause 12.(2)
Insurance to be arranged by		Contractor
Minimum amount of Liability Insurance		ONE MILLION RANDS (R1,000,000.00) for any single claim – the number of claims to be unlimited during Construction and Defects Liability Periods
Time for Completion of Works Segments	45.(1)	As specified by the Engineer in his instruction in terms of Sub-Clause 12.(2)
Amount of penalty for delay	46.(1)	ONE THOUSAND RANDS (R1,000.00) per calendar day or part thereof
Amount of penalty for late commencement of Works Segments	45.(3)	ONE THOUSAND RANDS (R1,000.00) per calendar day or part thereof

**12. MEMORANDUM OF AGREEMENT**

Bid / Contract no: **W**

For the pump testing of boreholes to be rendered in regard to Disaster Management, Community Water Supply, Resource Assessment, and Resource Management for the Implementing Authority

.....  
hereafter referred to as the —~~Contract~~”.

This Agreement signifies acceptance of the Bid submitted by

.....  
hereafter referred to as the —~~Contractor~~” and witnesses as follows:

1. Words and expressions used in this Agreement shall have the same meanings as are respectively assigned to them in the Conditions of Contract.
2. The documents listed in the Conditions of Bid / Contract which forms section 2 of the bid documents shall be deemed to form and be read and construed as part of this Agreement.
3. In consideration of the payments to be made by the Employer to the Contractor as hereafter mentioned, the Contractor covenants with the Employer to construct, complete and maintain the Works in conformity in all respects with the provisions of the Contract.
4. The Employer hereby covenants to pay to the Contractor, in consideration of the construction, completion and maintenance of the Works, the Contract Price at the times and in the manner prescribed by the Contract.

In witness whereof this Agreement is signed on behalf of the Employer at  
..... on this the ..... day of ..... 20 .....

By ..... (for and on behalf of the Employer)

Section 5  
Additional Bid/Contract Documentation

In the presence of the subscribing witnesses

1. ....

2. ....

and is signed on behalf of the Contractor .....

..... on this the ..... day of ..... 20 .....

By ..... (for and on behalf of the Contractor)

In the presence of the subscribing witnesses

1. ....

2. ....



## **SECTION 6**

# **SPECIFICATION DRAWINGS, DATA RECORDINGS AND REPORTING**

**DISASTER MANAGEMENT, COMMUNITY WATER SUPPLY,  
RESOURCE ASSESSMENT AND  
RESOURCE MANAGEMENT  
OF GROUNDWATER**

**BID NO.: W**

**TEST PUMPING OF BOREHOLES IN  
SOUTH AFRICA**

**SECTION 6 – SPECIFICATION DRAWINGS, DATA RECORDINGS AND  
REPORTING**

**INDEX**

Locality Map :        South Africa and Regional Offices

Commissioning Certificate

Appendix 1:        Questionnaire and Evaluation Criteria

Form 1:        Borehole test record  
Form 2:        Borehole test control sheet  
Form 3:        Slug test and Casing Detection  
Form 4:        Calibration test and recovery  
Form 5:        Step and recovery test  
Form 6:        Constant Rate Discharge Test  
Form 7        Summary of existing equipment on boreholes.  
Form 8        Field testing

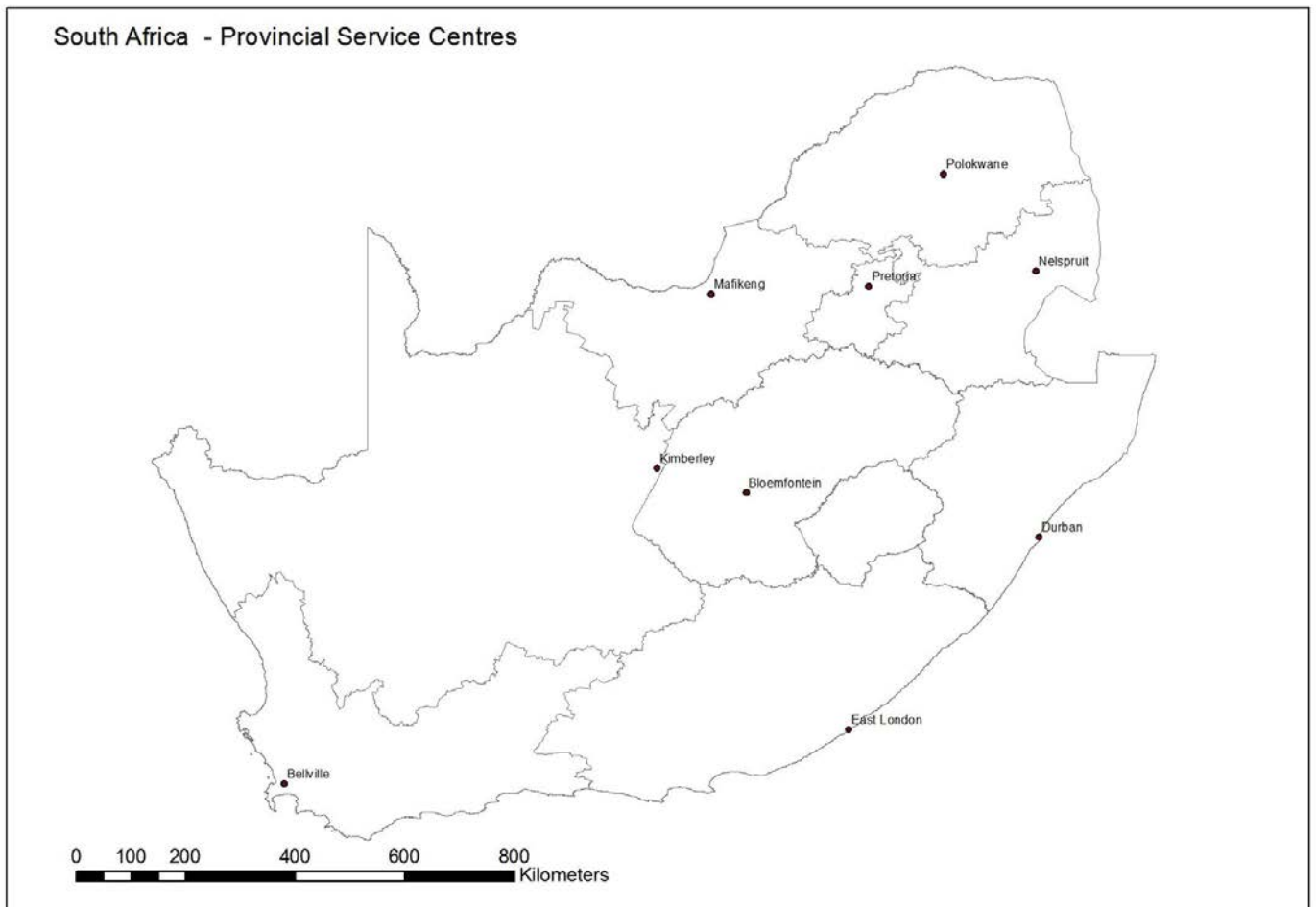
Drawing No. 1        Prescribed  $\phi$  165 Casing lid (borehole protection)

Drawing No. 2        Borehole Number – Pole Planting Approach

Drawing No. 3        Completed numbering pole

**Note:**        **IT IS A REQUIREMENT THAT ALL PAYMENT CERTIFICATES BE  
ACCOMPANIED BY PROOF THAT THE REQUIRED DATA RECORDING AND  
REPORTING WAS SUBMITTED FOR ENTRY ONTO THE GRIP DATABASE AND  
NGA**

**LOCALITY MAP:     DWS SOUTH AFRICA Service Centres and District Municipalities**





**water & sanitation**

Department:  
Water and Sanitation  
**REPUBLIC OF SOUTH AFRICA**

DEPARTMENT OF WATER AND SANITATION

COMMISSIONING CERTIFICATE  
WORK DONE UNDER THE BID DOCUMENT, SECTION A  
TO BE COMPLETED BY **PROVINCIAL SERVICE CENTRE**

**DATA DELIVERED TO DWS, PROVINCIAL SERVICE CENTRE**

**YES/NO**

**WORK COMPLETED ACCORDING TO BID DOCUMENT, SECTION A**

**YES/NO**

\_\_\_\_\_  
Consultant

\_\_\_\_\_  
DWS, WRIM

\_\_\_\_\_  
**Print Name**

\_\_\_\_\_  
**Print Name**

**APPENDIX 1**

**QUESTIONNAIRE AND EVALUATION  
CRITERIA**

**DISASTER MANAGEMENT,  
COMMUNITY WATER SUPPLY,  
RESOURCE ASSESSMENT AND  
RESOURCE MANAGEMENT OF GROUNDWATER**

**BID NO: W11034**

**TEST PUMPING OF BOREHOLES IN SOUTH AFRICA**

**APPENDIX 1**

**QUESTIONNAIRE AND EVALUATION CRITERIA**

**INDEX**

QUESTIONNAIRE AND EVALUATION CRITERIA

Questionnaire  
Evaluation criteria

**COMPULSORY DOCUMENTS – QUESTIONNAIRE**

**W11034**

**Note: None compliance to the criteria set out in Evaluation Phase 1, 2 and 3 shall render your Bid or Offer non-responsive**

DOCUMENTS TO BE COMPLETED IN FULL, SIGNED AND SUBMITTED WITH BID	YES(√)	NO(√)	SIGNATURE
Did you read and understand the entire bid document?			
<b>PHASE 1</b>			
Compulsory Documents to be completed by Bidder			
SBD.1.1 Completed and signed			
SBD.2 Completed and signed			
SBD.4 Completed and signed			
SBD.6.1 Completed and signed			
SBD 7.2 Completed and signed			
SBD 8 Completed and signed			
SBD.9 Completed and signed			
Did you attach an Original and Valid TAX clearance certificate?			
Did you attach an original or certified copy of your Company registration certificate?			
Letter of Good Standing with the Compensation Commissioner?			
Valid Certificate of Compliance with Labour (Unemployment Fund) or Letter of Good Standing with Labour?			
Are you in a joint venture?			
If YES, attach signed agreement.			
Also submit both (all) relevant TAX clearance certificates if you are a joint venture.			
<b>PHASE 2</b>			
Annexure 2 Completed and signed?			
Did you fill in Schedule 2-1 Standard Test pumping?			
Did you fill in Schedule 2-2 Specialize Test pumping?			
Is your offer to specification?			
Did you fully complete Section 4 –“Priority of Provinces interested”?			
<b>PHASE 3</b>			
Did you attach an original or certified copy of B-BBEE Rating Certification with bid? (Refer to SBD 6.1)			
Did you complete Schedule of Rates in full?			

NAME OF BIDDER: \_\_\_\_\_ NAME OF COMPANY: \_\_\_\_\_

SIGNATURE OF BIDDER: \_\_\_\_\_ DATE: \_\_\_\_\_

## Section 6

### Specification Drawings, Data Recordings and Reporting

#### **EVALUATION CRITERIA**

**W11034**

The bids will be evaluated according to the following Phase approach. If your Bid does not fully meet the criteria set out in each phase, it shall be regarded as non-responsive.

#### Phase 1: Administration Compliance

It's compulsory that all bidders comply with the administration requirements of this bid. Omission to complete and/or submit the listed documents will render your bid non responsive and the bid will not be considered for the phase 2 evaluation. The compulsory documents that must be completed and/or attached to the bid include;

1. An original and valid tax clearance certificate
2. Company registration certificate (original or certified copy)
3. Completed and signed standard bidding documents (SBD1.1, SBD2, SBD 4, SBD 6.1, SBD 7.2, SBD 8, SBD 9)
4. Letter of Good Standing with the Compensation Commissioner
5. Valid Certificate of Compliance with Labour (Unemployment Fund) or Letter of Good Standing with Labour

#### Phase 2: Specification Compliance

Bidders must comply with all the technical specifications of this bid. Omission to complete and/or submit the listed documents will render your bid non responsive and the bid will not be considered for the phase 3 evaluation. The following documents must be completed in full by the bidder

7. Annexure 2 (Schedule of rates)

#### Phase 3: Evaluation of price and preference points claimed

6. B-BBEE Points

Bidders should note that points may be claimed for B-BBEE in terms of the Preferential Procurement Regulation, 2011.

Such claims should be accompanied by either an original SANAS accredited certificate or a certified copy of such a certificate to qualify for the points.

7. Financial Proposal

Pricing Schedule must include the total offer.



# FORM 1: BOREHOLE TEST RECORD

I \_\_\_\_\_ accept this test and water sample

## BOREHOLE TEST RECORD (OFFICE ATTACHMENT)

Project Name: \_\_\_\_\_

Project number: \_\_\_\_\_

Region: \_\_\_\_\_

District: \_\_\_\_\_

Area: \_\_\_\_\_

Municipality: \_\_\_\_\_

Map Reference: \_\_\_\_\_

Drainage region: \_\_\_\_\_

Consumer: No information: D, N, U,

Status: D, G, U

Purpose: D, E, M, O, P, R, S, W, Z

Topo. Set. : A, B, D, E, F, H, I, L, M, O, P, R, S, T, V, W

Application: AD, AI, AS, DA, DG, E, P, TC, TE, TI, TM, TP

Location: Village / School / Clinic / Hospital / Garden / etc.

Village name: \_\_\_\_\_

Farm name & no: \_\_\_\_\_

Coordinates: Lat : \_\_\_\_\_<sup>0</sup> \_\_\_\_\_' \_\_\_\_\_" Lat : \_\_\_\_\_<sup>0</sup> \_\_\_\_\_' \_\_\_\_\_"

Long: \_\_\_\_\_<sup>0</sup> \_\_\_\_\_' \_\_\_\_\_" Long: \_\_\_\_\_<sup>0</sup> \_\_\_\_\_' \_\_\_\_\_"

Borehole Number: H \_\_\_\_\_

Old Borehole Number: \_\_\_\_\_

Last Date of Test: \_\_\_\_\_

Borehole depth: \_\_\_\_\_m

Static water level: \_\_\_\_\_ (mbgl) Altitude (m.a.m.s.l.): \_\_\_\_\_m

## **RECOMMENDATION:**

**FC Recommendation only**

## FORM 2: BOREHOLE TEST CONTROL SHEET

Page 2 - BOREHOLE TEST SUMMARY (To be completed by Contractor)						
Borehole Number : H-			Contractor :			
Subcontractor :			VSA Supervisor's Name :			
Foreman on site :			Test Rig Number :			
EXISTING EQUIPMENT						
Type of Pump & Model	Depth installed	Condition	Drive Unit	Condition	Pumphouse type	Condition
TESTING EQUIPMENT						
Type of Pump & Model:			Test pipes diam:		Depth Installed:	
STEP TEST & CALIBRATION TEST SUMMARY						
Type of Pump & Model	Depth Installed		Date(Start)	Time (Start)	Date(Compl.)	Time (Compl.)
	Duration (min)	Yield (l/s)	Water level after step	Recovery (min)	Comments:	
Calibration					Only done on instruction!!!	
STEP 1.						
STEP 2.						
STEP 3.						
STEP 4.						
STEP 5.						
RECOVERY						
CONSTANT DISCHARGE TEST						
Type of Pump & Model	Depth Installed		Date(Start)	Time (Start)	Date(Compl.)	Time (Compl.)
	Duration (min)	Yield (l/s)	Water level after constant	Recovery (min)	Monitoring	
CONSTANT						
List of boreholes monitored:						
MAINTENANCE						
Work time: hour		Transport existing equipm. Km			Travelling(To fix): Km	
List of parts replaced or repaired (Attached invoice):						
GENERAL						
Establishment (On different projects)	From :			Distance : Km		
	To :			From Project(Name):		
Site Move (On same project)	From :			Distance : Km		
	To :			This project(Name):		

Water level Before installing test pump : m		Casing depth:	Water sampled : YES / NO		
Water level after test pump was removed : m					
Depth before installing test pump : m		Lay Flat Discharge point distance: m	Date sampled :		
Depth after test pump was removed : m			Borehole numbering pole : EXISTING / NEW		
Testpump installed	Ones / Twice	Reason if not ones:			
Installed Testpump	<10l/s / >10l/s	Reason when >10l/s:			
List any Borehole problems ?:					
Signed for Contractor	VILLAGE NAME:		Signed for Consultant		

### FORM 3: SLUG TEST AND CASING DETECTION

BOREHOLE NO:		<h2 style="text-align: center;">SLUG TEST AND CASING DETECTION</h2>				
ALT. BH. NO:					Village name:	
ALT. BH. NO:					ALT.Village name:	
BOREHOLE DEPTH : m			Existing installation type.:		CONTRACTOR :	
WATER LEVEL(as measured): m			Thickness of casing :   1   2   4   6   8   mm		FOREMAN :	
<b>SLUG TEST</b>					<b>Borehole diameter&amp; Casing depth</b>	
Weight of Slug : Kg					CASING DEPTH : m	
TEST STARTED			DURATION ( min ):		Inside diameter at opening of casing must be measured	
DATE:		TIME:		Borehole diameter < mm > ID Measured at Opening		
<b>SLUG IN</b>					Casing height	^
Time(Seconds)	Actual Time	Displacement	Water level		V	m
0				Concrete	^	
5				plinth	V	m
10				Concrete	^	
15				floor	V	m
20				Ground level	^	
30				<b>DEPTH (m)</b>		<b>INSIDE DIAMETER</b>
40				5		mm
60				10		mm
80				15		mm
100				20		mm
120				25		mm
150				30		mm
300				35		mm
400				40		mm
500				45		mm
600				50		mm
800				55		mm
1000				60		mm
1200				65		mm
1500				70		mm
1800				75		mm
2500				80		mm
<b>SLUG OUT</b>					85	
Time(Seconds)	Actual Time	Displacement	Water level		90	mm
0					95	mm
5					100	mm
10					105	mm
15					110	mm
20					115	mm
30					120	mm
40					125	mm
60					130	mm
80					135	mm
100					140	mm
120					145	mm
150					150	mm
300					155	mm
400					160	mm

500					165	Indicate the Casing depth and the depth of the borehole	mm
600					170		mm
800					175		mm
1000					180		mm
1200					185		mm
1500					190		mm
1800					195		mm
COMMENTS:1)							

# FORM 4: CALIBRATION AND RECOVERY TESTS

BOREHOLE NO : H				<h2 style="text-align: center;">CALIBRATION TEST &amp; RECOVERY</h2>						
ALT. BH. NO :								VILLAGE NAME :		
ALT. BH. NO :								ALT. VILLAGE NAME:		
BOREHOLE DEPTH(Before installation of test pump) : m							DATUM LEVEL ABOVE CASING : m			
WATER LEVEL (Measured at datum point) : m							CONTRACTOR:			
INSTALLATION DEPTH OF TESTPUMP : m							FOREMAN :			
DATE STARTED :				TIME STARTED :				<h3 style="text-align: center;">RECOVERY</h3>		
<h4 style="text-align: center;">DISCHARGE RATE 1</h4>				<h4 style="text-align: center;">DISCHARGE RATE 2</h4>						
TIME	ACTUAL TIME	Water level	YIELD	TIME	ACTUAL TIME	Water level	YIELD	TIME:	Actual time	RECOVERY:
(min)	(Hour : Min)	(m)	(l/s)	(min)	(Hour : Min)	(m)	(l/s)	(min)	(Hour : Min)	(m)
1				1				1		
2				2				2		
3				3				3		
5				5				5		
7				7				7		
10				10				10		
15				15				15		
20				20				20		
30				30				30		
Was the water dirty and from when to when .? Yes / No From min To min				Was the water dirty and from when to when .? Yes / No From min To min						
<h4 style="text-align: center;">DISCHARGE RATE 3</h4>				<h4 style="text-align: center;">DISCHARGE RATE 4</h4>						
TIME	ACTUAL TIME	Water level	YIELD	TIME	ACTUAL TIME	Water level	YIELD			
(min)	(Hour : Min)	(m)	(l/s)	(min)	(Hour : Min)	(m)	(l/s)			
1				1						
2				2						
3				3						
5				5						
7				7						
10				10						
15				15						
20				20						
30				30						
Was the water dirty and from when to when .? Yes / No From min To min				Was the water dirty and from when to when .? Yes / No From min To min						
<h4 style="text-align: center;">DISCHARGE RATE 5</h4>				<h4 style="text-align: center;">DISCHARGE RATE 6</h4>				<h3 style="text-align: center;">COMMENTS:</h3> <p style="text-align: center;">INSTRUCTIONS BY CONSULTANT</p> <p>1)Recovery must always be taken to a minimum of pump time period or to a drawdown of 0.00 m.</p> <p>2)Any instructions or extensions must be in writing and signed by both</p>		
TIME	ACTUAL TIME	Water level	YIELD	TIME	ACTUAL TIME	Water level	YIELD			
(min)	(Hour : Min)	(m)	(l/s)	(min)	(Hour : Min)	(m)	(l/s)			
1				1						
2				2						
3				3						

5				5				parties.
7				7				
10				10				
15				15				
20				20				
30				30				
Was the water dirty and from when to when .? Yes / No      From                      min To min				Was the water dirty and from when to when .? Yes / No      From                      min To min				Latitude:
COMMENTS:(Additional information from contractor)								
								Longitude:

## FORM 5: STEP AND RECOVERY TESTS

BOREHOLE NO : H				<b>STEP TEST</b>												
ALT.BH. NO :				<b>&amp;</b>												
ALT.BH. NO :				<b>RECOVERY</b>												
BOREHOLE DEPTH (Before installation of test pump) :								m		DATUM LEVEL ABOVE CASING :					m	
WATER LEVEL (Measured at datum point before Steps)								m		CONTRACTOR :						
INSTALLATION DEPTH OF TESTPUMP:								m		FOREMAN :						
Latitude:				Longitude:				Date :				Time :				

DISCHARGE RATE 1				DISCHARGE RATE 2				DISCHARGE RATE 3				RECOVERY		
TIME	ACTUAL	Water level	YIELD	TIME	ACTUAL	Water level	YIELD	TIME	ACTUAL	Water level	YIELD	TIME	ACTUAL	RECOVERY
(min)	TIME	(m)	(l/s)	(min)	TIME	(m)	(l/s)	(min)	TIME	(m)	(l/s)	(min)	TIME	(m)
1				1				1				1		
2				2				2				2		
3				3				3				3		
5				5				5				5		
7				7				7				7		
10				10				10				10		
15				15				15				15		
20				20				20				20		
30				30				30				30		
40				40				40				40		
50				50				50				60		
60				60				60				90		
70				70				70				120		
80				80				80				150		
90				90				90				180		
100				100				100				210		



110				110				110				240		
120				120				120				300		
												360		
												420		
TIME	ACTUAL	Water level	YIELD	TIME	ACTUAL	Water level	YIELD	TIME	ACTUAL	Water level	YIELD	480		
(min)	TIME	(m)	(l/s)	(min)	TIME	(m)	(l/s)	(min)	TIME	(m)	(l/s)	600		
1				1				1				720		
2				2				2				840		
3				3				3				960		
5				5				5				1080		
7				7				7				1200		
10				10				10				1320		
15				15				15				1440		
20				20				20				1560		
30				30				30				1680		
40				40				40				1800		
50				50				50				1920		
60				60				60				2040		
70				70				70				2160		
80				80				80				2280		
90				90				90				2400		
100				100				100				2520		
110				110				110				2640		
120				120				120				2760		
												2880		

**QUESTIONS TO BE ANSWERED BY CONTRACTOR!!!.**

WAS THE WATER DIRTY DURING ANY STAGE OF THE TEST ?.

IF YES !!!!!. DURING WHICH STEPS AND WHAT TIME OF THE STEPS .

DID THE WATER STAY DIRTY AND TO WHAT EXTENT ?.

\_\_\_\_\_

--

IF NOT DURING WHAT TIME DID IT BECOME CLEAN !!!!!!!.

NB!!!!!!Recovery must be taken to a minimum of pumping time or to a drawdown of 0.00 m.Should this not be done the consultant will ask the contractor to redo the STEPS from the original recovery position and will also be liable for the extra consulting cost.Any extensions of recovery etc. must be in writing and signed by both parties.

## FORM 6: CONSTATNT RATE DISCHARGE TEST

BOREHOLE NO : H				<b>CONSTANT RATE DISCHARGE TEST &amp; RECOVERY (0 to 48 Hr)</b>									
ALT. BH. NO.:								VILLAGE NAME:					
ALT. BH. NO.:								ALT.VILLAGE NAME :					
BOREHOLE DEPTH (BEFORE INSTALLATION OF TESTPUMP): m								Datum Level Above Casing : m					
WATER LEVEL (Measured at datum point before the Constant) m								CONTRACTOR :					
INSTALLATION DEPTH OF TESTPUMP : m								FOREMAN :					
Date started:				Time started:				Latitude:		Longitude:			
Drawdown still outstanding when constant rate was started: m								OBSERVATION HOLE 1		OBSERVATION HOLE 2		OBSERVATION HOLE 3	
TOTAL DURATION OF TEST : (Pump time + Recovery): min								Bh NO':		Bh NO':		Bh NO':	
* NOTE Distance between discharge and observation holes in (m) >								Distance:		Distance:		Distance:	
TIME (min)	ACTUAL TIME	Water level (m)	YIELD (l/s)	TIME (min)	ACTUAL TIME	RECOVERY (m)	Water level:		Water level:		Water level:		
	(Hour : Min)				(Hour : Min)		TIME (min)	Water level (m)	TIME (min)	Water level (m)	TIME (min)	Water level (m)	
1				1			1		1		1		
2				2			2		2		2		
3				3			3		3		3		
5				5			5		5		5		
7				7			7		7		7		
10				10			10		10		10		
15				15			15		15		15		
20				20			20		20		20		
30				30			30		30		30		
40				40			40		40		40		
60				60			60		60		60		
90				90			90		90		90		
120				120			120		120		120		
150				150			150		150		150		

180				180			180		180		180	
210				210			210		210		210	
240				240			240		240		240	
300				300			300		300		300	
360				360			360		360		360	
420				420			420		420		420	
480				480			480		480		480	
540				540			540		540		540	
600				600			600		600		600	
720				720			720		720		720	
840				840			840		840		840	
960				960			960		960		960	
1080				1080			1080		1080		1080	
1200				1200			1200		1200		1200	
1320				1320			1320		1320		1320	
1440				1440			1440		1440		1440	
1560				1560			1560		1560		1560	
1680				1680			1680		1680		1680	
1800				1800			1800		1800		1800	
1920				1920			1920		1920		1920	
2040				2040			2040		2040		2040	
2160				2160			2160		2160		2160	
2280				2280			2280		2280		2280	
2400				2400			2400		2400		2400	
2520				2520			2520		2520		2520	
2640				2640			2640		2640		2640	
2760				2760			2760		2760		2760	
2880				2880			2880		2880		2880	
TOTAL TIME PUMPED (min)				:				t' = total time since pumping started.				
AVERAGE YIELD (l/s)				:				t'' = time since pumping stopped.				
COMMENTS: 1) <b>The Contractor must request the extended sheet when testing longer than 48 hours</b>												

BOREHOLE NO : H	<div>CONSTANT RATE</div> <div>DISCHARGE TEST</div> <div>&amp; RECOVERY (from 48 Hr)</div>	VSA Leboa Consulting
ALT. BH. NO.:		VILLAGE NAME:
ALT. BH. NO.:		ALT.VILLAGE NAME :

CONSTANT (CONTINUE)

							OBSERVATION HOLE 1		OBSERVATION HOLE 2		OBSERVATION HOLE 3	
TOTAL DURATION OF TEST : (Pump time + Recovery): min							Bh NO':		Bh NO':		Bh NO':	
* NOTE Distance between discharge and observation holes in (m) >							Distance:		Distance:		Distance:	
TIME (min)	ACTUAL TIME	Water level (m)	YIELD (l/s)	TIME (min)	ACTUAL TIME	RECOVERY (m)	Water level:		Water level:		Water level:	
	TIME				TIME		TIME	Water level	TIME	Water level	TIME	Water level
	(Hour : Min)	(m)	(l/s)	(min)	(Hour : Min)	(m)	(min)	(m)	(min)	(m)	(min)	(m)
3000				3000			3000		3000		3000	
3120				3120			3120		3120		3120	
3240				3240			3240		3240		3240	
3360				3360			3360		3360		3360	
3480				3480			3480		3480		3480	
3600				3600			3600		3600		3600	
3720				3720			3720		3720		3720	
3840				3840			3840		3840		3840	
3960				3960			3960		3960		3960	
4080				4080			4080		4080		4080	
4200				4200			4200		4200		4200	
4320				4320			4320		4320		4320	
4440				4440			4440		4440		4440	
4560				4560			4560		4560		4560	
4680				4680			4680		4680		4680	
4800				4800			4800		4800		4800	
4920				4920			4920		4920		4920	

5040				5040			5040		5040		5040	
5160				5160			5160		5160		5160	
5280				5280			5280		5280		5280	
5400				5400			5400		5400		5400	
5520				5520			5520		5520		5520	
5640				5640			5640		5640		5640	
5760				5760			5760		5760		5760	

COMMENTS: 1)

AREA DRAWING

<i>SUMMARY FOR EXISTING EQUIPMENT AT BOREHOLE</i>

<b>Borehole Number:</b>	<b>Date:</b>
<b>District:</b>	<b>Information Supplied By:</b>
<b>Village / Farm</b>	<b>Signature:</b>

## HAND PUMP

Installation depth = (element + collumns) (mbgl):										+	+	=	m
Suction type pump:		Self made	Afridev	President	Bushbuck		Climax	Nimric	Donkey				
Play pump		Model:			Condition:			GOOD	FAIR	BAD			
Cylinder diameter (mm) :				Cylinder length (mm) :									
Mono type hand pumps			Play pump	Orbit	Mono	Cemo		OTHER.....					
Drive: Direct / Geared		Model:			Condition:			GOOD	FAIR	BAD			

### **MOTORIZED PUMPS**

Diesel engine			LISTER	HATZ	YANMAR	OTHER:.....			
Serial nr:		Model:			Condition:		GOOD	FAIR	BAD
Electric motor name:			SIEMENS	FRANKLIN	WEG	OTHER:.....			
Serial nr:		Model:			Condition:		GOOD	FAIR	BAD
Pully Dia. at drive unit (mm):				Pulley dia. at pump head:					
Mono pump name:		CeeMo	Orbit	Mono		Pump model:			
Pump head name:				Size or Serial nr.:					

## PIPES AND SHAFTS

General condition:	Pipe Diameter (mm) :
NEW	Length of Pipes (m) :
GOOD	Quantity :
FAIR	Pipe Material :
BAD	Shaft Diameter (m) :

<b>PUMPHOUSE</b>								
Type : / BRICK / ZINK / CAGE / MANHOLE	Locked?	YES	NO	Condition:		GOOD	FAIR	BAD

<b>WINDMILLS</b>							
Name :				Tower Height (m)			
Wheel Diameter (m):			Condition:		GOOD	FAIR	BAD

<b>SOLAR PANNELS</b>		
Panels:	Watts per Panel:	Number:

<b>STORAGE (TANKS &amp; RESERVOIRS)</b>						
PVC TANKS	Quantity:	Condition:		GOOD	FAIR	BAD
	Stand Height (m)	Condition:		GOOD	FAIR	BAD
	Volume per tank (m3)	Tank material:				
CONCRETE	Quantity:	Condition:		GOOD	FAIR	BAD
	Distance from borehole:	Volume per reservoir (m3)				

<b>WATER METER &amp; ACCESSORIES</b>								
Water Meter name:	Water meter model:				Serial nr:			
Flow meter reading:	Working?	YES	NO	Condition:		GOOD	FAIR	BAD
Mark any item present:	Pressure release valve	Pressure gauge			Monitor facility		No flow cut off	





## FORM 8: FIELD SITE DIARY FOR TESTING

## Field Site Diary (TEST PUMPING)

[illegible]

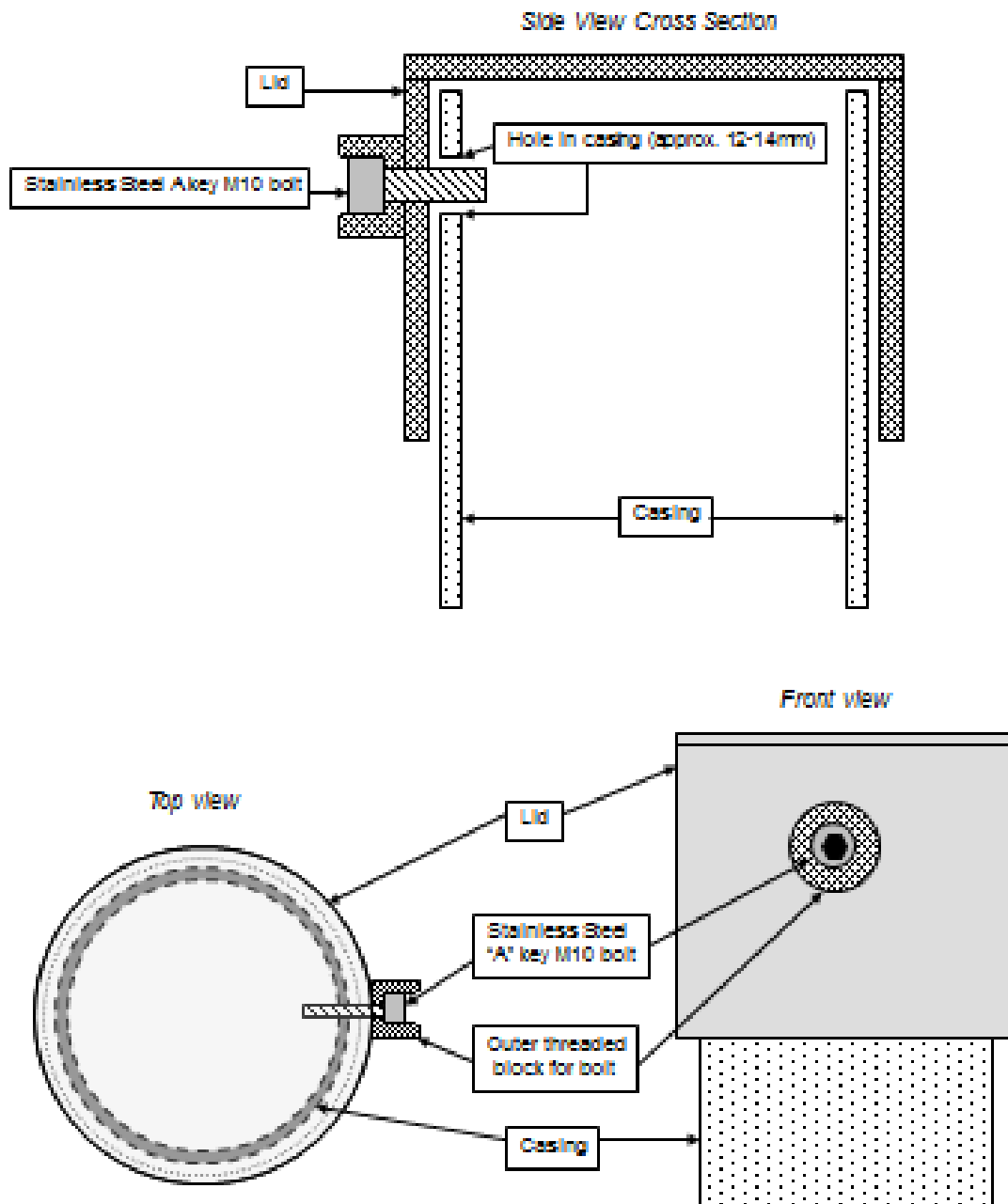
Date:																								
Date:																								
Date:																								
<b>Activity Codes</b>	<b>Travelling</b>									Taking Water Sample								17						
(Use these codes where possible when completing the above)	Travel from site to site or establishment									1	Recovery Test								18					
	Travel for verification									2	<b>Work on existing equipment &amp; Marking</b>													
	Searching for Village / Water committee/etc.									3	Repair existing equipment								19					
	Bush Clearing & access problems									4	Fetch / Buy Broken or worn spares								20					
	<b>Activities before testing</b>										Numbering the borehole (H-Number pole)								21					
	Open casing lid.									5	<b>After test activities</b>													
	Removal/Opening of Pumphouse									6	Removal of test pump equipment								22					
	Removal of Existing Equipment									7	Disinfecting borehole water								23					
	Measure depth & Water level									8	Sealing of Borehole								24					
	Casing detection & OR Slug test									9	Re-Installation of Existing Equipment								25					
	Measure Inside Diameter of borehole									10	Fixing / Closing of Pumphouse								26					
	Verticality / Straightness test									11	<b>Delays</b>													
	<b>Testing activities</b>										Waiting for Consultant/Contractor								27					
	Installation of testpump equipment									12	Weather delays								28					
	Level & Set up Test-rig									13	Maintenance on Testing equipment								29					
	Calibration Test									14	<b>Completion &amp; Other activities</b>													
	Step/Multi rate Test									15	Finishing & Cleaning of site								30					
	Constant Rate Test									16	Other								31					
<b>Equipment</b>	Truck on site : _____									Extra:	LDV _____ 4x4 Truck _____ 6x4 Truck _____ 6x6 Truck _____ Other.: _____													
	Test Pump Model: _____										2x4 _____													
	Test Rig No.: _____										4x4 _____													
	Caravan / Tents :																							
<b>Personnel</b>	Name of Foreman: _____																							
	Name of Artisan: _____																							
	No. of Untrained Personnel: _____																							
	No. of Semi-Skilled Personnel _____																							

No. of Skilled Personnel	
Comments	

Signature Contractor:

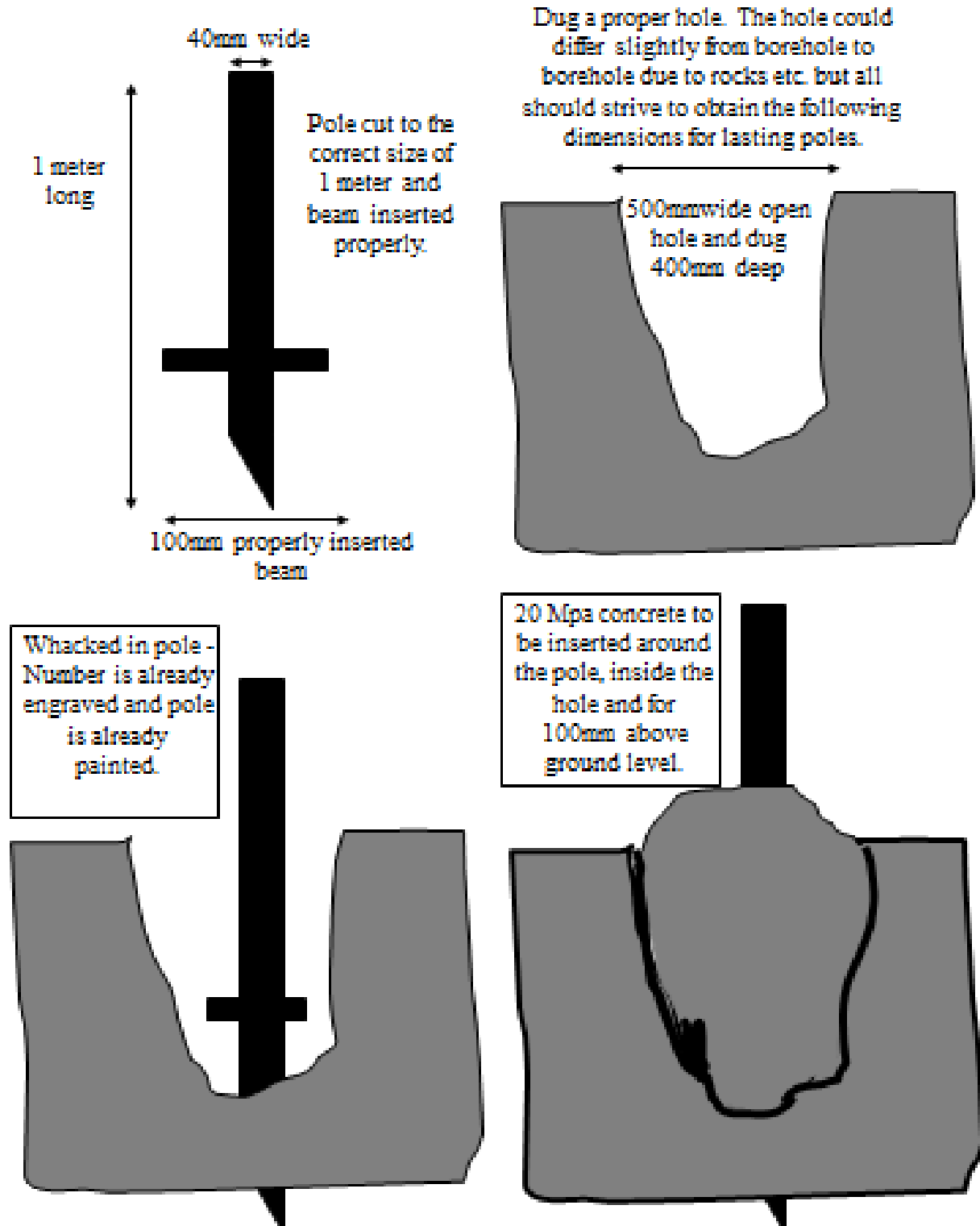
Signature Consultant:

## DWA APPROVED BOREHOLE LID



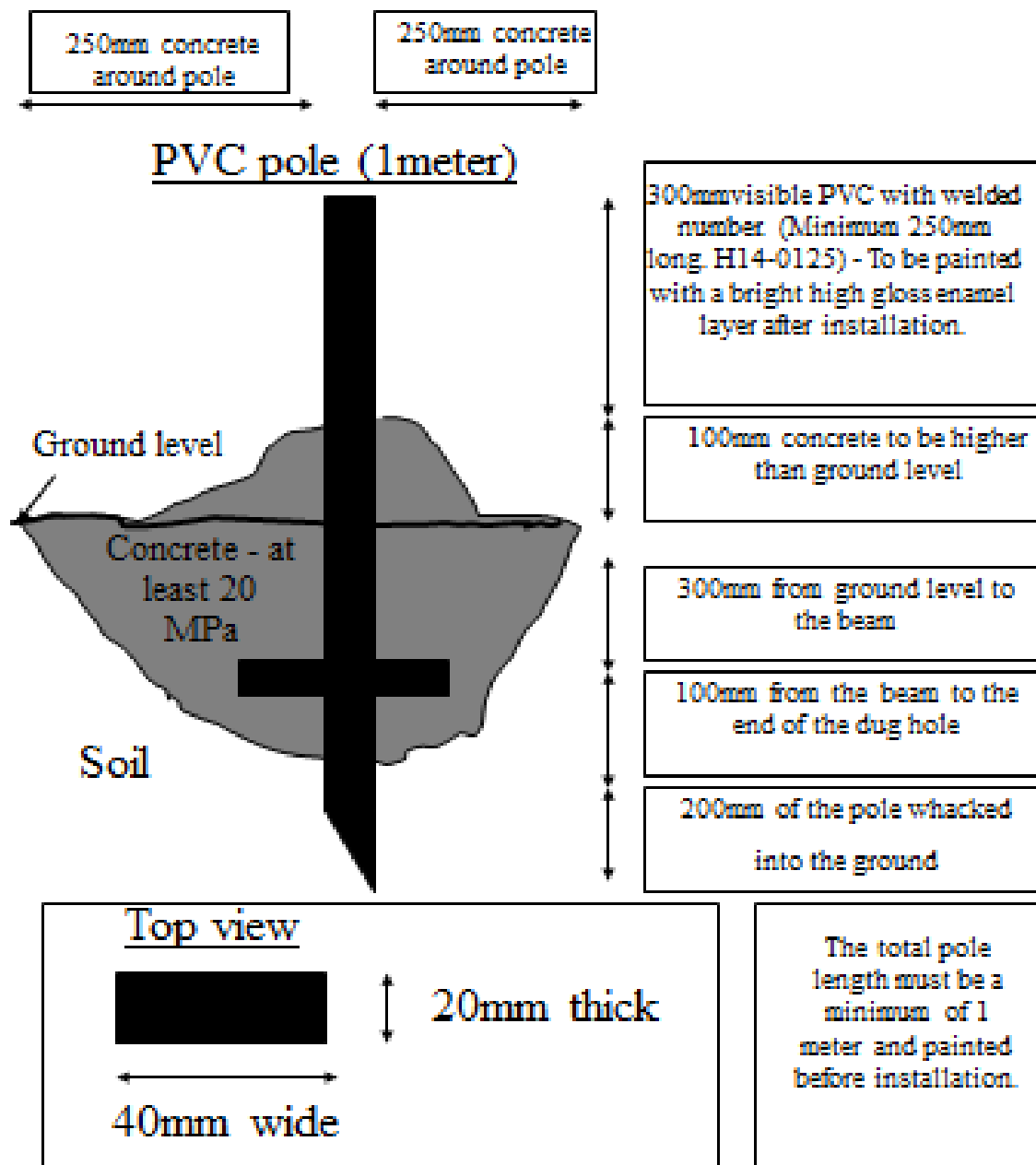
Drawing 1: Prescribed borehole lid to use

## THE APPROUCH



Drawing 2: Borehole number – Pole planting approach

## COMPLETED NUMBERING POLE - DWA PROJECTS



Drawing 3: Completed numbering pole – DWS projects