

INVITATION TO TENDER



cogta
Department:
Co-operative Governance and Traditional Affairs
PROVINCE OF KWAZULU-NATAL

DESCRIPTION: APPOINTMENT OF A PANEL OF SERVICE PROVIDERS TO PROVIDE SERVICES FOR SITING, DRILLING, PUMP TESTING & WATER SAMPLING, DISCHARGE YIELD TESTING, EQUIPPING OF HAND PUMP TYPE AND PRODUCTION TYPE BOREHOLES, CONNECTION TO WATER TANKS, TESTING, COMMISSIONING AND CONSTRUCTION MONITORING OF BOREHOLE WORKS FOR KZN COGTA FOR A PERIOD OF 36 MONTHS

Tender No: ZNT 2037/2022 LG

COMPANY NAME :

Type of Bidder (Tick One Box)

One-person Business/Sole Trader	
Close corporation	
PTY (Ltd)	
Private Company	
Partnership	
Consortium/Joint Venture	
Co-operative	

Participation Capacity (Tick One Box)

Prime Contractor	
Supplier/Sub-Contractor	

RETURN OF PROPOSAL

Proposal must be deposited in the **tender box situated at Department of Co-operative Governance and Traditional Affairs, Lift Area, 13th floor, North Tower, Natalia Building.**

Closing Date: 30 June 2023
Closing Time: 11:00 am

ZNT 2037/2022 LG

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PART A INVITATION TO TENDER

YOU ARE HEREBY INVITED TO BID FOR REQUIREMENTS OF THE (NAME OF DEPARTMENT/ PUBLIC ENTITY)					
BID NUMBER:	ZNT 2036/2022 LG	CLOSING DATE:	30 JUNE 2023	CLOSING TIME:	11:00 AM
DESCRIPTION	APPOINTMENT OF A PANEL OF SERVICE PROVIDERS TO PROVIDE SERVICES FOR SITING, DRILLING, PUMP TESTING & WATER SAMPLING, DISCHARGE YIELD TESTING, EQUIPPING OF HAND PUMP TYPE AND PRODUCTION TYPE BOREHOLES, CONNECTION TO WATER TANKS, TESTING, COMMISSIONING AND CONSTRUCTION MONITORING OF BOREHOLE WORKS FOR KZN COGTA FOR A PERIOD OF 36 MONTHS				
BID RESPONSE DOCUMENTS MAY BE DEPOSITED IN THE BID BOX SITUATED AT (STREET ADDRESS)					
330 LANGALIBALELE STREET					
NATALIA BUILDING					
13TH FLOOR, LIFT AREA, NORTH TOWER					
PIETERMARITZBURG					
BIDDING PROCEDURE ENQUIRIES MAY BE DIRECTED TO			TECHNICAL ENQUIRIES MAY BE DIRECTED TO:		
CONTACT PERSON	Ms Lindiwe Madlala		CONTACT PERSON	Ms. M Nyathi	
TELEPHONE NUMBER	033 2608194		TELEPHONE NUMBER	033 355 6211	
E-MAIL ADDRESS	Lindiwe.madlala@kzncogta.gov.za		E-MAIL ADDRESS	Mbalenhle.nyathi@kzncogta.gov.za	
SUPPLIER INFORMATION					
NAME OF BIDDER					
POSTAL ADDRESS					
STREET ADDRESS					
TELEPHONE NUMBER	CODE		NUMBER		
CELLPHONE NUMBER					
FACSIMILE NUMBER	CODE		NUMBER		
E-MAIL ADDRESS					
VAT REGISTRATION NUMBER					
SUPPLIER COMPLIANCE STATUS	TAX COMPLIANCE SYSTEM PIN:		OR	CENTRAL SUPPLIER DATABASE No:	MAAA
QUESTIONNAIRE TO BIDDING FOREIGN SUPPLIERS					
IS THE ENTITY A RESIDENT OF THE REPUBLIC OF SOUTH AFRICA (RSA)?					☐
YES ☐ NO					
DOES THE ENTITY HAVE A BRANCH IN THE RSA?					☐
YES ☐ NO					
DOES THE ENTITY HAVE A PERMANENT ESTABLISHMENT IN THE RSA?					
☐ YES ☐ NO					
DOES THE ENTITY HAVE ANY SOURCE OF INCOME IN THE RSA?					☐

YES ☐ NO

IS THE ENTITY LIABLE IN THE RSA FOR ANY FORM OF TAXATION?

☐ YES ☐ NO

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

PART B TERMS AND CONDITIONS FOR BIDDING

1. BID SUBMISSION:
1.1. BIDS MUST BE DELIVERED BY THE STIPULATED TIME TO THE CORRECT ADDRESS. LATE BIDS WILL NOT BE ACCEPTED FOR CONSIDERATION.
1.2. ALL BIDS MUST BE SUBMITTED ON THE OFFICIAL FORMS PROVIDED–(NOT TO BE RE-TYPED) OR IN THE MANNER PRESCRIBED IN THE BID DOCUMENT.
1.3. THIS BID IS SUBJECT TO THE PREFERENTIAL PROCUREMENT POLICY FRAMEWORK ACT, 2000 AND THE PREFERENTIAL PROCUREMENT REGULATIONS, 2017, THE GENERAL CONDITIONS OF CONTRACT (GCC) AND, IF APPLICABLE, ANY OTHER SPECIAL CONDITIONS OF CONTRACT.
1.4. THE SUCCESSFUL BIDDER WILL BE REQUIRED TO FILL IN AND SIGN A WRITTEN CONTRACT FORM (SBD7).
2. TAX COMPLIANCE REQUIREMENTS
2.1 BIDDERS MUST ENSURE COMPLIANCE WITH THEIR TAX OBLIGATIONS.
2.2 BIDDERS ARE REQUIRED TO SUBMIT THEIR UNIQUE PERSONAL IDENTIFICATION NUMBER (PIN) ISSUED BY SARS TO ENABLE THE ORGAN OF STATE TO VERIFY THE TAXPAYER'S PROFILE AND TAX STATUS.
2.3 APPLICATION FOR TAX COMPLIANCE STATUS (TCS) PIN MAY BE MADE VIA E-FILING THROUGH THE SARS WEBSITE WWW.SARS.GOV.ZA.
2.4 BIDDERS MAY ALSO SUBMIT A PRINTED TCS CERTIFICATE TOGETHER WITH THE BID.
2.5 IN BIDS WHERE CONSORTIA / JOINT VENTURES / SUB-CONTRACTORS ARE INVOLVED, EACH PARTY MUST SUBMIT A SEPARATE TCS CERTIFICATE / PIN / CSD NUMBER.
2.6 WHERE NO TCS PIN IS AVAILABLE BUT THE BIDDER IS REGISTERED ON THE CENTRAL SUPPLIER DATABASE (CSD), A CSD NUMBER MUST BE PROVIDED.
2.7 NO BIDS WILL BE CONSIDERED FROM PERSONS IN THE SERVICE OF THE STATE, COMPANIES WITH DIRECTORS WHO ARE PERSONS IN THE SERVICE OF THE STATE, OR CLOSE CORPORATIONS WITH MEMBERS PERSONS IN THE SERVICE OF THE STATE."

NB: FAILURE TO PROVIDE / OR COMPLY WITH ANY OF THE ABOVE PARTICULARS MAY RENDER THE BID INVALID.

SIGNATURE OF BIDDER:

CAPACITY UNDER WHICH THIS BID IS SIGNED:
(Proof of authority must be submitted e.g. company resolution)

DATE:

SECTION A

SPECIAL INSTRUCTIONS AND NOTICES TO BIDDERS REGARDING THE COMPLETION OF BIDDING FORMS

PLEASE NOTE THAT THIS BID IS SUBJECT TO TREASURY REGULATIONS 16A ISSUED IN TERMS OF THE PUBLIC FINANCE MANAGEMENT ACT, 1999, THE KWAZULU-NATAL SUPPLY CHAIN MANAGEMENT POLICY FRAMEWORK AND THE GENERAL CONDITIONS OF CONTRACT.

1. Unless inconsistent with or expressly indicated otherwise by the context, the singular shall include the plural and vice versa and with words importing the masculine gender shall include the feminine and the neuter.
2. Under no circumstances whatsoever may the bid forms be retyped or redrafted. Photocopies of the original bid documentation may be used, but an original signature must appear on such photocopies.
3. The bidder is advised to check the number of pages and to satisfy himself that none are missing or duplicated.
4. Bids submitted must be complete in all respects.
5. Bids shall be lodged at the address indicated not later than the closing time specified for their receipt, and in accordance with the directives in the bid documents.
6. Each bid shall be addressed in accordance with the directives in the bid documents and shall be lodged in a separate sealed envelope, with the name and address of the bidder, the bid number and closing date indicated on the envelope. The envelope shall not contain documents relating to any bid other than that shown on the envelope. If this provision is not complied with, such bids may be rejected as being invalid.
7. All bids received in sealed envelopes with the relevant bid numbers on the envelopes are kept unopened in safe custody until the closing time of the bids. Where, however, a bid is received open, it shall be sealed. If it is received without a bid number on the envelope, it shall be opened, the bid number ascertained, the envelope sealed and the bid number written on the envelope.
8. A specific box is provided for the receipt of bids, and no bid found in any other box or elsewhere subsequent to the closing date and time of bid will be considered.
9. No bid sent through the post will be considered if it is received after the closing date and time stipulated in the bid documentation, and proof of posting will not be accepted as proof of delivery.
10. No bid submitted by telefax, telegraphic or other electronic means will be considered.
11. Bidding documents must not be included in packages containing samples. Such bids may be rejected as being invalid.
12. Any alteration made by the bidder must be initialled.
13. Use of correcting fluid is prohibited
14. Bids will be opened in public as soon as practicable after the closing time of bid.
15. Where practical, prices are made public at the time of opening bids.
16. If it is desired to make more than one offer against any individual item, such offers should be given on a photocopy of the page in question. Clear indication thereof must be stated on the schedules attached.
17. The bidder must initial each and every page of the document.

ANY ENQUIRIES REGARDING THE BIDDING PROCEDURE MAY BE DIRECTED TO:

Department: Co-operative Governance and Traditional Affairs

Contact Person: Ms Lindiwe Madlala

Tel: 033 260 8194

Fax: 086 642 8873/ 033 342 8830

Email: lindiwe.madlala@kzncogta.gov.za

ANY ENQUIRIES REGARDING SPECIFICATION INFORMATION MAY BE DIRECTED TO:

Name : Ms. M Nyathi

Unit : Municipal Infrastructure

Tel : 033 355 6211

Mobile : 0716829260

Email : Mbalenhle.nyathi@kzncogta.gov.za

SECTION B

REGISTRATION ON THE CENTRAL SUPPLIERS DATABASE

1. In terms of the KwaZulu-Natal Supply Chain Management Policy Framework, all suppliers of goods and services are required to register on the Central Suppliers Database.

2. If you wish to apply for Central Supplier Database (CSD) registration, suppliers may go to www.csd.gov.za to register or call 033 897 4223/4676/4509 for assistance.

3. If a business is registered on the Database and it is found subsequently that false or incorrect information has been supplied, then the Department may, without prejudice to any other legal rights or remedies it may;

3.1 de-register the supplier from the Database,

3.2 cancel a bid or a contract awarded to such supplier, and the supplier would become liable for any damages if a less favourable bid is accepted or less favourable arrangements are made.

4. The same principles as set out in paragraph 3 above are applicable should the supplier fail to update its information on the Central Suppliers Database, relating to changed particulars or circumstances.

SECTION C

**DECLARATION THAT INFORMATION ON CENTRAL SUPPLIER DATABASE (CSD) IS
CORRECT AND UP TO DATE**
(To be completed by bidder)

THIS IS TO CERTIFY THAT I (name of bidder/authorised representative)

.....

WHO REPRESENTS (state name of bidder)

.....

I AM AWARE OF THE CONTENTS OF THE CENTRAL SUPPLIER DATABASE WITH RESPECT TO THE BIDDER'S DETAILS AND REGISTRATION INFORMATION, AND THAT THE SAID INFORMATION IS CORRECT AND UP TO DATE AS ON THE DATE OF SUBMITTING THIS BID.

AND I AM AWARE THAT INCORRECT OR OUTDATED INFORMATION MAY BE A CAUSE FOR DISQUALIFICATION OF THIS BID FROM THE BIDDING PROCESS, AND/OR POSSIBLE CANCELLATION OF THE CONTRACT THAT MAY BE AWARDED ON THE BASIS OF THIS BID.

.....

SIGNATURE OF BIDDER OR AUTHORISED REPRESENTATIVE

DATE:.....

SECTION D

SBD 4

BIDDER'S DISCLOSURE

1. PURPOSE OF THE FORM

Any person (natural or juristic) may make an offer or offers in terms of this invitation to bid. In line with the principles of transparency, accountability, impartiality, and ethics as enshrined in the Constitution of the Republic of South Africa and further expressed in various pieces of legislation, it is required for the bidder to make this declaration in respect of the details required hereunder.

Where a person/s are listed in the Register for Defaulters and / or the List of Restricted Suppliers, that person will automatically be disqualified from the bid process.

2. Bidder's declaration

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

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

Full Name	Identity Number	Name of State institution

- 2.2 Do you, or any person connected with the bidder, have a relationship with any

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

person who is employed by the procuring institution? **YES/NO**

2.2.1 If so, furnish particulars:

.....
.....

SBD 4

2.3 Does the bidder or any of its directors / trustees / shareholders / members / partners or any person having a controlling interest in the enterprise have any interest in any other related enterprise whether or not they are bidding for this contract? **YES/NO**

2.3.1 If so, furnish particulars:

.....
.....

3 DECLARATION

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

- 3.1 I have read and I understand the contents of this disclosure;
- 3.2 I understand that the accompanying bid will be disqualified if this disclosure is found not to be true and complete in every respect;
- 3.3 The bidder has arrived at the accompanying bid independently from, and without consultation, communication, agreement or arrangement with any competitor. However, communication between partners in a joint venture or consortium² will not be construed as collusive bidding.
- 3.4 In addition, there have been no consultations, communications, agreements or arrangements with any competitor regarding the quality, quantity, specifications, prices, including methods, factors or formulas used to calculate prices, market allocation, the intention or decision to submit or not to submit the bid, bidding with the intention not to win the bid and conditions or delivery particulars of the products or services to which this bid invitation relates.
- 3.4 The terms of the accompanying bid have not been, and will not be, disclosed by the bidder, directly or indirectly, to any competitor, prior to the date and time of the official bid opening or of the awarding of the contract.
- 3.5 There have been no consultations, communications, agreements or arrangements made by the bidder with any official of the procuring institution in relation to this procurement process prior to and during the bidding process except to provide

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

clarification on the bid submitted where so required by the institution; and the bidder was not involved in the drafting of the specifications or terms of reference for this bid.

- 3.6 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

SBD 4

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.

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

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

.....	
Signature	Date
.....	
Position	Name of bidder

SECTION E

SBD 6.1

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

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

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

1. GENERAL CONDITIONS

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

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

1.2 Points for this tender (even in the case of a tender for income-generating contracts) shall be awarded for:

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

1.3 To be completed by the organ of state:

The maximum points for this tender are allocated as follows:

	POINTS
PRICE	N/A
SPECIFIC GOALS	N/A
Total points for Price and SPECIFIC GOALS	N/A

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

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

2. DEFINITIONS

- (a) **“tender”** means a written offer in the form determined by an organ of state in response to an invitation to provide goods or services through price quotations, competitive tendering process or any other method envisaged in legislation;
- (b) **“price”** means an amount of money tendered for goods or services, and includes all applicable taxes less all unconditional discounts;
- (c) **“rand value”** means the total estimated value of a contract in Rand, calculated at the time of bid invitation, and includes all applicable taxes;
- (d) **“tender for income-generating contracts”** means a written offer in the form determined by an organ of state in response to an invitation for the origination of income-generating contracts through any method envisaged in legislation that will result in a legal agreement between the organ of state and a third party that produces revenue for the organ of state, and includes, but is not limited to, leasing and disposal of assets and concession contracts, excluding direct sales and disposal of assets through public auctions; and
- (e) **“the Act”** means the Preferential Procurement Policy Framework Act, 2000 (Act No. 5 of 2000).

3. FORMULAE FOR PROCUREMENT OF GOODS AND SERVICES

3.1. POINTS AWARDED FOR PRICE

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

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

$$\begin{array}{ccc} \text{80/20} & \text{or} & \text{90/10} \\ \\ Ps = 80 \left(1 - \frac{Pt - P_{min}}{P_{min}} \right) & \text{or} & Ps = 90 \left(1 - \frac{Pt - P_{min}}{P_{min}} \right) \end{array}$$

Where

- Ps = Points scored for price of tender under consideration
- Pt = Price of tender under consideration
- Pmin = Price of lowest acceptable tender

3.2. FORMULAE FOR DISPOSAL OR LEASING OF STATE ASSETS AND INCOME GENERATING PROCUREMENT

3.2.1. POINTS AWARDED FOR PRICE

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

$$\begin{array}{ccc} \text{80/20} & \text{or} & \text{90/10} \\ P_s = 80 \left(1 + \frac{P_t - P_{max}}{P_{max}} \right) & \text{or} & P_s = 90 \left(1 + \frac{P_t - P_{max}}{P_{max}} \right) \end{array}$$

Where

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

4. POINTS AWARDED FOR SPECIFIC GOALS

- 4.1. In terms of Regulation 4(2); 5(2); 6(2) and 7(2) of the Preferential Procurement Regulations, preference points must be awarded for specific goals stated in the tender. For the purposes of this tender the tenderer will be allocated points based on the goals stated in table 1 below as may be supported by proof/ documentation stated in the conditions of this tender:
- 4.2. In cases where organs of state intend to use Regulation 3(2) of the Regulations, which states that, if it is unclear whether the 80/20 or 90/10 preference point system applies, an organ of state must, in the tender documents, stipulate in the case of—
- (a) an invitation for tender for income-generating contracts, that either the 80/20 or 90/10 preference point system will apply and that the highest acceptable tender will be used to determine the applicable preference point system; or
 - (b) any other invitation for tender, that either the 80/20 or 90/10 preference point system will apply and that the lowest acceptable tender will be used to determine the applicable preference point system,
- then the organ of state must indicate the points allocated for specific goals for both the 90/10 and 80/20 preference point system.

DECLARATION WITH REGARD TO COMPANY/FIRM

4.3. Name of company/firm.....

4.4. Company registration number:

4.5. TYPE OF COMPANY/ FIRM

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

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

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

.....
SIGNATURE(S) OF TENDERER(S)

SURNAME AND NAME:

.....

DATE:

ADDRESS:

.....

SECTION F

CONDITIONS OF BID

1. I/We hereby bid to supply all or any of the supplies and/or to render all or any of the services described in the attached documents to the KwaZulu-Natal Provincial Administration (hereinafter called the "Province") on the terms and conditions and be in accordance with the specifications stipulated in the bid documents (and which shall be taken as part of and be incorporated into this bid) at the prices and on the terms regarding time for delivery and/or execution inserted therein.
2. I/we agree that:
 - (a) the offer herein shall remain binding upon me and open for acceptance by the Province during the validity period indicated and calculated from the closing time of the bid;
 - (b) this bid and its acceptance shall be subject to Treasury Regulations 16A issued in terms of the Public Finance Management Act, 1999, the National Treasury General Conditions of Contract and Standard Bidding Documents, the KwaZulu-Natal Supply Chain Management Policy Framework, the Provincial Treasury issued Practice Notes, and the KwaZulu-Natal Conditions of Contract, with which I/we am fully acquainted;
 - (c) if I/we withdraw my bid within the period for which I/we have agreed that the bid shall remain open for acceptance, or fail to fulfil the contract when called upon to do so, the Province may, without prejudice to its other rights, agree to the withdrawal of my bid or cancel the contract that may have been entered into between me and the Province. I/we will then pay to the Province any additional expenses incurred by the Province having either to accept any less favourable bid or, if fresh bids have to be invited, the additional expenditure incurred by the invitation of fresh bids and by the subsequent acceptance of any less favourable bid. The Province shall have the right to recover such additional expenditure by set-off against monies which may be due to me under this or any other bid or contract or against any guarantee or deposit that may have been furnished by me or on my behalf for the due fulfilment of this or any other bid or contract and pending the ascertainment of the amount of such additional expenditure to retain such monies, guarantee or deposit as security for any loss the Province may sustain by reason of my default;
 - (d) if my bid is accepted, the acceptance may be communicated to me by registered post, and that the South African Post Office Limited shall be treated as delivery agent to me;
 - (e) the law of the Republic of South Africa shall govern the contract created by the acceptance of my bid and I choose *domicilium citandi et executandi* in the Republic at (full physical address) :
.....
.....
3. I/we furthermore confirm that I/we have satisfied myself as to the correctness and validity of my bid: that the price(s), rate(s) and preference quoted cover all of the work/item(s) and my obligations under a resulting contract, and I accept that any mistakes regarding the price(s) and calculations will be at my risk.
4. I/we hereby accept full responsibility for the proper execution and fulfilment of all obligations and conditions devolving on me under this agreement, as the Principal(s) liable for the due fulfilment of this contract.

5. I/we agree that any action arising from this contract may in all respects be instituted against me and I/we hereby undertake to satisfy fully any sentence or judgement which may be pronounced against me as a result of such action.
6. I/we confirm that I/we have declared all and any interest that I or any persons related to my business has with regard to this bid or any related bids by completion of the Declaration of Interest Section.

7.CERTIFICATION OF CORRECTNESS OF INFORMATION SUPPLIED IN THIS DOCUMENT

I/we, THE UNDERSIGNED, WHO WARRANT THAT I AM DULY AUTHORISED TO DO SO ON BEHALF OF THE BIDDER, CERTIFY THAT THE INFORMATION SUPPLIED IN TERMS OF THIS DOCUMENT IS CORRECT AND TRUE, THAT THE SIGNATORY TO THIS DOCUMENT IS DULY AUTHORISED AND ACKNOWLEDGE THAT:

- (1) The bidder will furnish documentary proof regarding any bidding issue to the satisfaction of the Province, if requested to do so.
- (2) If the information supplied is found to be incorrect and/or false then the Province, in addition to any remedies it may have, may:-
 - (a) Recover from the contractor all costs, losses or damages incurred or sustained by the Province as a result of the award of the contract, and/or
 - (b) Cancel the contract and claim any damages which the Province may suffer by having to make less favourable arrangements after such cancellation.

SIGNED ON THIS DAY OF 20 AT

.....
SIGNATURE OF BIDDER OR DULY
AUTHORISED REPRESENTATIVE

.....
NAME IN BLOCK LETTERS

ON BEHALF OF (BIDDER'S NAME)

CAPACITY OF SIGNATORY

NAME OF CONTACT PERSON (IN BLOCK LETTERS, PLEASE)

.....
POSTAL ADDRESS

.....
TELEPHONE NUMBER:

FAX NUMBER:

CELLULAR PHONE NUMBER:

E-MAIL ADDRESS:

AUTHORITY TO SIGN A BID

A. COMPANIES

If a Bidder is a company, a certified copy of the resolution by the board of directors, personally signed by the chairperson of the board, authorising the person who signs this bid to do so, as well as to sign any contract resulting from this bid and any other documents and correspondence in connection with this bid and/or contract on behalf of the company must be submitted with this bid, that is before the closing time and date of the bid

AUTHORITY BY BOARD OF DIRECTORS

By resolution passed by the Board of Directors on20.....,

Mr/Mrs/Ms.....

(whose signature appears below) has been duly authorised to sign all documents in connection with this bid on behalf of

(Name of Company)

IN HIS/HER CAPACITY AS:

SIGNED ON BEHALF OF COMPANY:

.....
(PRINT NAME)

SIGNATURE OF SIGNATORY: **DATE:**

WITNESSES: 1.....

2.....

B. SOLE PROPRIETOR (ONE - PERSON BUSINESS)

I, the undersigned..... hereby confirm that I am the sole owner of the business trading as.....

.....

SIGNATURE.....

DATE.....

C. PARTNERSHIP

The following particulars in respect of every partner must be furnished and signed by every Partner :

Full name of partner

Residential address

Signature

.....

.....

.....

.....

.....

.....

.....

.....

.....

We, the undersigned partners in the business trading as
hereby authoriseto sign this bid as well as any contract
resulting from the bid and any other documents and correspondence in connection with this bid and /or
contract on behalf of

.....
SIGNATURE

.....
SIGNATURE

.....
SIGNATURE

.....
DATE

.....
DATE

.....
DATE

D. CLOSE CORPORATION

In the case of a close corporation submitting a bid, a certified copy of the Founding Statement of such corporation shall be included with the bid, together with the resolution by its members authorising a member or other official of the corporation to sign the documents on their behalf.

By resolution of members at a meeting on 20.....

at..... Mr/Mrs/Ms....., whose signature
appears below, has been authorised to sign all documents in connection with this bid on behalf of

(Name of Close Corporation)

.....
SIGNED ON BEHALF OF CLOSE CORPORATION :

.....
(PRINT NAME)

IN HIS/HER CAPACITY AS **DATE:**

SIGNATURE OF SIGNATORY:

WITNESSES: 1.....

2.....

E. CO-OPERATIVE

A certified copy of the Constitution of the co-operative must be included with the bid, together with the resolution by its members authoring a member or other official of the co-operative to sign the bid documents on their behalf.

By resolution of members at a meeting on 20.....

at.....

Mr/Mrs/Ms....., whose signature appears below, has
been authorised to sign all documents in connection with this bid on behalf of (Name of cooperative)

.....

SIGNATURE OF AUTHORISED REPRESENTATIVE/SIGNATORY:

IN HIS/HER CAPACITY AS:

DATE:

SIGNED ON BEHALF OF CO-OPERATIVE:

NAME IN BLOCK LETTERS:

WITNESSES: 1.....

2.....

F. JOINT VENTURE

If a bidder is a joint venture, a certified copy of the resolution/agreement passed/reached signed by the duly authorised representatives of the enterprises, authorising the representatives who sign this bid to do so, as well as to sign any contract resulting from this bid and any other documents and correspondence in connection with this bid and/or contract on behalf of the joint venture must be submitted with this bid, before the closing time and date of the bid.

AUTHORITY TO SIGN ON BEHALF OF THE JOINT VENTURE

By resolution/agreement passed/reached by the joint venture partners on.....20.....

Mr/Mrs/Ms.....,Mr/Mrs/Ms.....

Mr/Mrs/Ms.....and Mr/Mrs/Ms.....

(whose signatures appear below) have been duly authorised to sign all documents in connection with this bid on behalf of:(Name of Joint Venture)

IN HIS/HER CAPACITY AS:

SIGNED ON BEHALF OF (COMPANY NAME):

(PRINT NAME)

SIGNATURE: DATE:

IN HIS/HER CAPACITY AS:

SIGNED ON BEHALF OF (COMPANY NAME):

(PRINT NAME).....

SIGNATURE: DATE:

IN HIS/HER CAPACITY AS:

SIGNED ON BEHALF OF (COMPANY NAME):

(PRINT NAME)

SIGNATURE: DATE:

IN HIS/HER CAPACITY AS:

G. CONSORTIUM

If a bidder is a consortium, a certified copy of the resolution/agreement passed/reached signed by the duly authorised representatives of concerned enterprises, authorising the representatives who sign this bid to do so, as well as to sign any contract resulting from this bid and any other documents and correspondence in connection with this bid and/or contract on behalf of the consortium must be submitted with this bid, before the closing time and date of the bid.

AUTHORITY TO SIGN ON BEHALF OF THE CONSORTIUM

By resolution/agreement passed/reached by the consortium on.....20.....

Mr/Mrs/Ms.....

(whose signature appear below) have been duly authorised to sign all documents in connection with this

bid on behalf of:

(Name of Consortium)

IN HIS/HER CAPACITY AS:

SIGNATURE: DATE:

SECTION G

SPECIAL CONDITIONS OF CONTRACT

SECTION 1: DEFINITION OF TERMS

1.1 SERVICE

The services to be rendered by professional service providers must be rendered in terms of this contract.

1.2 CONTRACTOR

The person or persons, partnership, close corporation, firm or company, whose bid for this service was accepted.

1.3 AGREEMENT

This comprises the agreement signed by parties, the conditions of bid, the bid and the specifications.

1.4 AGREEMENT PERIOD

The period during which the service is to be rendered and originally determined in the agreement, or as amended, extended or renewed in accordance with stipulations of the agreement.

1.5 PARTIES

The parties to this contract are The Head of Co-operative Governance and Traditional Affairs in the KwaZulu-Natal Provincial Administration and Contractor.

1.8 DEPARTMENT

KwaZulu-Natal department of Co-operative Governance and Traditional Affairs.

1.9 CURTAILMENT OF SERVICE

The Department reserves the right to withdraw from the service any part/s of the contract as a whole, with one month's written notification to the contractor. In a case such as this, the contract sum will be adjusted *pro rata* from the date of withdrawal.

SECTION 2: IMPORTANT INFORMATION TO NOTE

2.1 This bid is invited and will be awarded and administered in terms of the following:-

- 2.1 KwaZulu-Natal Supply Chain Management Policy Framework,
- 2.2 Section 217 of the Constitution,
- 2.3 The PFMA and its Regulations in general,
- 2.4 The Preferential Procurement Policy Framework Act,
- 2.5 National Treasury guidelines, and
- 2.6 Provincial Treasury's Supply Chain Management Practice Notes and guidelines

2.2

REQUIRED COMPULSORY INFORMATION

2.2.1 The bidder shall ensure that all the required information is furnished; viz:-

- 2.2.1 Bidders Disclosure (SECTION F)
- 2.2.2 Declaration certificate for local production and content for designated sectors (SECTION I)
- 2.2.3 Conditions of Bid (SECTION M)
- 2.2.4 Each party to a Consortium/Group of sub-contractors must obtain separate Tax Clearance Certificate(s) and also be registered on the Suppliers Database.

NOTE: Failure to submit the required information may invalidate the entire proposal.

SECTION 3: SPECIAL CONDITIONS OF CONTRACT

3.1 ACCEPTANCE OF BID

- 3.1.1 This bid has been invited, and will be adjudicated in terms of the KwaZulu-Natal Supply Chain Management Policy Framework and the KwaZulu-Natal Provincial Treasury's Practice Notes. Co-operative Governance and Traditional Affairs' Bid Adjudication Committee is under no obligation to accept the lowest or any bid.
- 3.1.2 The financial standing of bidders and their ability to manufacture or to supply goods or render services may be examined before their bids are considered for acceptance.

3.2 APPEALS

- 3.2.1 Entities aggrieved by a decision of a departmental Bid Adjudication Committee or a delegate of an accounting officer, may appeal to the Bid Appeals Tribunal in the prescribed manner by the Supply Chain Management Policy Framework

3.3 AMENDMENT OF CONTRACT

- 3.3.1 Any amendment to or renunciation of the provisions of the contract shall at all times be done in writing and shall be signed by both parties subject to the Legal Services screening the amendment before it is signed.

3.4 CHANGE OF ADDRESS

- 3.4.1 Bidders must advise the Department should their address (*domicilium citandi et executandi*) details change from the time of bidding to the expiry of the contract.

3.5 COMMUNICATION

3.5.1 All correspondence with regard to this bid must be addressed or hand delivered to the:
The Head SCM Unit,
Department Co-operative Governance and Traditional Affairs,
Private Bag X9078,
Pietermaritzburg
3200

ENQUIRIES: **Ms Lindiwe Madlala TEL.: 033-2608194**

3.6 COMPLETENESS OF BID

- 3.6.1 Bids will only be considered if correctly completed and accompanied by all relevant certificates and other necessary applicable information.

3.7 COMPLETION OF SPECIFICATION

- 3.7.1 Where specifications are designed in such a way that responses would be required from bidders, these forms must be completed and submitted as part of the bid document.

3.8 CONDITIONS OF BID

- 3.8.1 The successful Contractor must be in a position to assume duty on the date stipulated in the letter of acceptance.
- 3.8.2 No bid received by telegram, telex, or facsimile will be considered.
- 3.8.3 It shall be noted that the Department is under no obligation to accept the lowest or any bid.
- 3.8.4 The offer shall be made strictly according to the specification. No alternative offers will be considered.
- 3.8.5 Bidders must provide the following particulars about themselves as part of the bid:
- 3.8.5.1 Where they have their Headquarters
- 3.8.5.2 Where they have their Regional Office.
- 3.8.5.3 Name, address and telephone number of bankers together with their bank account number.
- 3.8.5.4 The names, identity numbers and street addresses of all partners in cases where persons, a partnership, or a firm consists of a partnership.

3.9 In cases where a person or persons, a partnership, close corporation, firm or company enters business for the very first time, the following particulars shall be provided:

- 3.9.1 By whom, or with whose assistance, was the business plan drafted?
- 3.9.2 By whom, or with whose assistance, were the bid prices calculated?
- 3.9.3 Whose advice is relied on?
- 3.9.4 Who will provide financial support?

3.10 A list of references must accompany this bid. Particulars shall be submitted regarding similar agreements completed successfully or of projects which the bidder is engaged in.

3.11 CONFIDENTIALITY

The contractor's staff that comes into contact with the Department's confidential information and documents may be required to sign confidentiality agreements so as to protect the Department's information.

3.12 CONTRACT PERIOD

3.12.1 There contract period shall remain in force for a period of 36 months from date of signing off the official contract.

3.12.2 The Department of Co-operative Governance and Traditional Affairs reserves the right to terminate the contract with any contractor should the contractor fail to fulfil his/her contractual obligations in terms of the contract.

3.13 EQUAL BIDS

3.13.1 In the event that two or more bids have equal total points, the successful bid will be the one scoring the highest number of preference points for specified goals. Should two or more bids be equal in all respects, the Adjudication shall be decided by the drawing of lots.

3.14 EXECUTION CAPACITY

3.14.1 The bidder will be required to provide an efficient and effective service. Therefore, the bidder is required to submit proof that he/she has the required capacity to execute the contract ed

for successfully. The bidder must supply references or state his/her experience as a company to undertake the contract. References of past experience of owners/employees of new entities must accompany the bid document.

3.15 EXTENSION OF CONTRACT

3.15.1 An extension of contract may be considered. It is the normal policy that contracts are not extended. However, circumstances may arise whereby a contract cannot be renewed in time. If this is found to be the case, the right is reserved to approach existing contractor(s) to extend the contract for such period agreed to.

3.16 GENERAL EVALUATION CRITERIA

The Bid Evaluation Committee will assess offers and adhere to the following basic guidelines when evaluating.

- a. Whether all the required information called for in the bid document has been submitted by the bidder.

- b. Has the bidder supplied references or stated his/her experience as a Company to undertake the contract. References of past experience must accompany the bid document.
- c. The financial standing of the bidder and ability to render a service may be examined before an award of bid take place.
- d. Documented reports received from an institution/s pertaining to past bad performance by a company who is ing, may be taken into consideration.
- e. Did the bidder attend the site inspection/ briefing?
- f. Will the bidder be in a position to successfully execute the contract?

3.17 IRREGULARITIES

- 2.17.1 Companies are encouraged to advise the Department timeously of any possible irregularities which might come to their notice in connection with this or other contracts.

3.18 JOINT VENTURES

- 3.18.1 In terms of the Supply Chain Management Policy Framework, a consortium or joint venture may, based on the percentage of the contract value managed or executed by respective members.
- 3.18.2 Should this bid be submitted by a joint venture, a certified copy of the joint venture agreement **must** accompany the bid document before the closing date and time of bid. The joint venture agreement must clearly specify the percentage of the contract to be undertaken by each company participating therein.
- 3.18.3 A trust, consortium or joint-venture must obtain and submit **a consolidated B-BBEE Status Level Verification Certificate**. The non-submission of a consolidated B-BBEE Certificate by a company will result in preference points not being allocated to such company. Failure to submit the joint venture Agreement will result in preference points not being allocated to all companies participating in the joint venture.

3.19 LATE BIDS

- 3.19.1 Bids are late if they are received at the address indicated in the bid documents after the closing date and time.
- 3.19.2 A late bid shall not be considered and, where practicable, shall be returned unopened to the Bidder, accompanied by an explanation.

3.20 NOTIFICATION OF ADJUDICATION OF BIDDER & ADVERTISING OF RESULTS

- 3.20.1 Notification of the Adjudication of bid shall be in writing by a duly authorized official of Co-operative Governance and Tradition Affairs' Supply Chain Management unit.

3.21 PRO RATA DECREASE OF COMPENSATION

- 3.21.1 Should the services not be rendered to the satisfaction of the Department and unsatisfactory items/ aspects/ events have already, in writing, been brought to the attention of the Contractor, the Department reserves the right in terms of paragraph **3.27** hereunder, to retain payment to the Contractor for as long as the unsatisfactory service continues.

3.23 CENTRAL SUPPLIERS DATABASE

- 2.23.1 A bidder submitting an offer must be registered on the Central Suppliers Database. A bidder who has submitted an offer and is not registered on the Central Suppliers Database will not be considered.
- 3.23.2 Each party to a Joint Venture/Consortium must be registered on the Central Suppliers Database at the time of submitting the bid.

3.24 SUBMISSIONS AND COMPLETION OF SBD 6.1

- 3.24.1 Bidders are to complete SBD 6.1 document where applicable. Failure by the bidder to submit a valid B-BBEE status level verification certificate will result in the bidder not being considered for preference points allocation. If the information required is not applicable to the business, clearly insert the symbols "N/A" in the appropriate space. If the space provided is left blank, it will be regarded as information that is still outstanding and the SBD 6.1 will not be processed further.

3.25 TERMINATION OF SERVICES

- 3.25.1 Should the Contractor fail to meet the conditions of this contract, or continue rendering unsatisfactory service, the Employer reserves the right to terminate the contract, after written notification has been served on the Contractor, with retention of the right to recover from the Contractor any losses which the Employer may suffer/ incur as a result of the failure, without prejudicing any other rights it may have.

3.26 TAX CLEARANCE CERTIFICATE

- 3.26.1 The central supplier database and the tax compliance status pin are the approved methods that will be utilised to verify Tax Clearance compliance.

3.27 UNSATISFACTORY PERFORMANCE

- 3.27.1 Unsatisfactory performance occurs when performance is not in accordance with the contract conditions.
- (i) Before any action is taken, the Department shall warn the contractor by registered/certified mail that action will be taken in accordance with the contract conditions unless the contractor complies with the contract conditions and delivers satisfactory supplies or services within a specified reasonable time (7 days minimum). If the contractor does not perform satisfactorily despite the warning the Department will:
- (a) take action in terms of its delegated powers
 - (b) make a recommendation for cancellation of the contract concerned.

3.28 VALIDITY PERIOD AND EXTENSION THEREOF

3.28.1 The validity (binding) period for the bid must be 90 days from close of bid. However, circumstances may arise whereby this Department may request the bidder to extend the validity (binding) period. Should this occur, the Department will request bidders to extend the

validity (binding) period under the same terms and conditions as originally ed for by bidders. This request will be done before the expiry of the original validity (binding) period.

3.29 VAT

2.29.1 Bid prices must be inclusive of VAT.

2.29.2 A tax invoice shall be in the currency of the Republic of South Africa and shall contain the following particulars:

- (a) The name, address and registration number of the supplier;
- (b) the name and address of the recipient;
- (c) an individual serialized number and the date upon which the tax invoice is issued;
- (d) a description of the goods or services supplied;
- (e) the quantity or volume of the goods or services supplied;
- (f) either :–
 - (i) the value of the supply, the amount of tax charged and the consideration for the supply; **or**
 - (ii) where the amount of tax charged is calculated by applying the tax fraction to the consideration, the consideration for the supply and either the amount of the tax charged, or a statement that it includes a charge in respect of the tax and the rate at which the tax was charged.

3.30 REGISTERED ADDRESS

The Department provides the following:

Street address as it's *domicillium citandi et executandi* in respect of any lawsuit which might result from or bears relevance to this contract, as well as for purposes of notice to :
The Head SCM Unit, KwaZulu-Natal Co-operative Governance and Traditional Affairs

13 th floor, South Tower, Natalia Building. 330 Langalibalele Street PIETERMARITZBURG 3200	Private Bag X9078, PIETERMARITZBURG 3200
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TERMS OF REFERENCE

BID NO: ZNT 2037/2022 LG

APPOINTMENT OF A PANEL OF SERVICE PROVIDERS TO PROVIDE SERVICES FOR SITING, DRILLING, PUMP TESTING & WATER SAMPLING, DISCHARGE YIELD TESTING, EQUIPPING OF HAND PUMP TYPE AND PRODUCTION TYPE BOREHOLES, CONNECTION TO WATER TANKS, TESTING, COMMISSIONING AND CONSTRUCTION MONITORING OF BOREHOLE WORKS FOR KZN COGTA FOR A PERIOD OF 36 MONTHS

APPOINTMENT OF A PANEL OF SERVICE PROVIDERS TO PROVIDE SERVICES FOR SITING, DRILLING, PUMP TESTING & WATER SAMPLING, DISCHARGE YIELD TESTING, EQUIPPING OF HAND PUMP TYPE OR PRODUCTION TYPE BOREHOLES, CONNECTION TO WATER TANKS, TESTING, COMMISSIONING AND CONSTRUCTION MONITORING OF BOREHOLE WORKS

BACKGROUND

- a) In October 2019, COGTA developed the Drought Relief programme in support of the implementation of the Provincial Water Master Plan (PMWP) spanning across the 14 Water service Authorities in KZN.
- b) After thorough consultation, COGTA discovered the existence of the communities in need of basic water services. Consequently, the department embarked on a program to provide short-term relief to water scarce areas throughout the Kwa-Zulu-Natal region by drilling and installing new boreholes.
- c) The Service Provider will be required to provide services for siting, drilling, pump testing & water sampling, discharge yield testing, equipping borehole of hand pump type and production type boreholes, connection to water tanks on steel stand, commissioning and construction monitoring of borehole works.

1. SCOPE OF WORK

1.1 DESCRIPTION OF THE WORKS

DEFINITIONS

So as to provide clear definitions and parameters for the anticipated works that would need to be undertaken and fulfilled in this scope of work, the following is provided as a means to ensure understanding to enhance implementation:

1.1.1 Borehole Siting: This activity entails the scientific search for and location of a drilling target which is assessed to have the greatest chance for success. The responsibility for this task must fall to a team of qualified and experienced personnel. This team / individual / professional must be capable of successfully integrating the earth sciences of geophysics, geology and hydrogeology.

1.1.2 Borehole Drilling: This activity entails the drilling of a water supply borehole and its proper construction and development. It must be accomplished by a suitably experienced Professional Service Provider functioning under the direct supervision of the team responsible for the siting of the borehole.

1.1.3 Borehole Testing: This activity provides data for an evaluation of the yield potential of the borehole and the groundwater resource from which it draws its water. The testing must be accomplished by a suitably experienced testing Professional Service Provider again functioning under the direct supervision of the team responsible for the siting of the borehole and the supervision of its drilling and construction.

1.1.4 Borehole Utilisation Recommendations: This must be based primarily, but not exclusively, on an analysis and evaluation of the borehole testing data and a quality assessment of the groundwater. The responsibility for this activity must fall to the same team involved with the borehole siting, drilling and

testing activities.

1.1.5 Reporting: All aspects pertaining to the development of groundwater resources for community water supply purposes must be documented in a technical report. The compilation of this report must be the responsibility of the professional team responsible for the testing and siting of such borehole and water testing.

1.2 PROJECT PARTICULARS

PROJECT DESCRIPTION

The contract shall comprise the provide services for siting, drilling, pump testing & water sampling, discharge yield testing, equipping borehole of hand pump type and production type boreholes, connection to water tanks on steel stand, testing, commissioning and construction monitoring of borehole works at various locations within the KwaZulu Natal Province. The project includes the supply of all labour, materials, workmanship, machinery, equipment, transport, attendance on others and everything stated or implied which is, or may be, necessary in and for the entire completion of all the following works:

- Siting drilling, developing and equipping new boreholes
- Site establishment and de-establishment
- Refurbishment of existing boreholes (where required)
- Supply and install hand pump / production type boreholes complete with pump, starter and necessary accessories as per the design (designs approved by Employer's Agent)
- Trenching, supply of pipe material and pipe laying as per designs and specifications.
- Supply and installation of storage tanks (10 000Litres) plastic type on 6m steel stands.
- Supply and construct steel palisade fencing for all boreholes with locked gates.
- Provide security of the project site during the construction until site hand over.
- Provide supervision and commission the project to the Client and site hand over

2. EXPECTED DELIVERABLES:

2.1 General Requirements

The scope of works of this contract includes rehabilitating of existing borehole / Siting of a New borehole at the above mentioned location.

2.2 Specifications for Borehole Rehabilitating of existing boreholes / Siting of new boreholes.

The specifications for borehole siting should be as per Terms of Reference, which includes, among others, water testing, drilling, supervision and siting / rehabilitating of borehole at the site as determined to enable the realisation of the old borehole.

2.3 Equipment Required

The equipment required for borehole rehabilitation of existing boreholes/ siting of new boreholes should be as per Terms of Reference in Bid Number ZNT2036/2022LG: **APPOINTMENT OF A PANEL OF SERVICE PROVIDERS TO PROVIDE SERVICES FOR SITING, DRILLING, PUMP TESTING & WATER SAMPLING, DISCHARGE YIELD TESTING, EQUIPPING OF HAND PUMP TYPE AND PRODUCTION TYPE BOREHOLES, CONNECTION TO WATER TANKS, TESTING, COMMISSIONING AND CONSTRUCTION MONITORING OF BOREHOLE WORKS FOR KZN COGTA FOR A PERIOD OF 36 MONTHS**

2.3 Labour

Where possible, it is expected that the service provider employs labour from the local community within which the service is to be rendered for all non-specialised works.

2.5 Nature of Work

Siting of boreholes is specialised work, requiring specialised service providers with specific skills and equipment as selected and appointed under the respective bid.

2.6 Completion Period

It is expected that the successful service provider should be able to complete the work under this contract over a period of two months after receiving an official purchase order. Time is however very much of the essence and service providers are encouraged to offer a reduced completion period, if they are capable and equipped to do so.

2.7 Reporting

The service provider must report and make available all siting results of a particular site within 2 days of its completion under this contract to the contract PM as per appointment.

2.8 Payments

All payment claims are to be certified by Cooperative Governance and Traditional Affairs before payment can be effected.

It is the intention of the Department of Cooperative Governance and Traditional Affairs to retain 10% as retention so as to undertake necessary servicing and maintenance for a 1 (one) year period at 3 month intervals.

The Professional Service Provider is to provide support training required prior to the close out and handover close out phase of the works. All operating manuals and training guideline with and including warranties and guarantees must be made available by the Professional Service Provider and handed over to the Project Manager.

Post the Practical Completion period the works is handed over to the municipality and the responsibility of planned maintenance is the responsibility of the Municipality once the maintenance period of the Professional Service Provider has ceased.

All reactive maintenance will be undertaken by the end-user.

3. STANDARD SPECIFICATIONS

The Professional Service Provider is referred to the latest edition of:

1. National Norms and Standards for Domestic Water and Sanitation Services
2. Applicable SANS 2001 Standards for Construction Works.
3. Standard and Model Preambles to All Trades.
4. Supplementary Preambles to the Bills of Quantities including electrical and mechanical installation specifications.
5. Occupational Health and Safety Specifications.
6. General Conditions of Contract GCC 2015.
7. Sabs 1200 Standard Specifications for Civil Engineering.
8. The ASAQS (Association of South African Quantity Surveyors) Preliminaries: November 2007 as amended in the Special Conditions of Contract.

Legislative Requirements

The Professional Service Provider must conduct due diligence and will be responsible and will be responsible to obtain all the required authorizations from the relevant authorities, including but not limited to:

- General Authorization (DWS)
- Environmental Impact Assessment (if Required)
- Any 'wayleaves' required (Local Municipality, Sanral, etc)
- Compliance with the OHS Act Regulations (All Rates are to include for risk

assessment and conditions specific to the COVID 19 Epidemic and other adjustments to ensure compliance for the assignment / works including maintenance of a register for worker's contacts)

The Professional Service Provider shall further comply with all legislation as prescribed by the Department of Labour, Occupational Health and Safety Act and the Department of Environmental Affairs.

PROJECT TECHNICAL SPECIFICATIONS

Design Considerations

The basic design principles as prescribed by the Red Book (Guidelines for Human Settlement Planning and Design) will be generally applied throughout the design process.

Practical and situation specific design amendments will also be considered and where justified, given precedence over the Red Book dictated design guidelines, in order to ensure long term sustainability of the infrastructure.

Pipeline design parameters regarding minimum pipe gradients, diameters and cover depths, as prescribed by the Red Book (Guidelines for Human Settlement Planning and Design) will generally be applied during the design process.

All construction shall be according to SANS 1200 (Standard Specification for Civil Engineering Construction).

DRILLING SCOPE OF WORK

General

Drilling of a new borehole(s) for exploration, monitoring, production assessment and management purposes.	yes
Estimated number	Unspecified
Type of drilling method considered suitable (depending on site geology to be confirmed)	
Rotary air percussion with foam	Yes
Odex/ Symetrix	Yes
Mud Flush	yes
Rehabilitation of existing boreholes:	
Estimated number (as per desktop survey)	Unspecified
Type of drilling method considered suitable for rehab:	
Rotary air percussion with foam	Yes
Cable tool (jumper) percussion	yes

Drilling Conditions

Geology:
Unconsolidated sediments (e.g. loose sand, gravel and/or boulders)
Consolidated sediments (e.g. sandstone, mudstone, siltstone, shale, tillite)
Igneous rocks (e.g. granite, diabase, dolerite) Metamorphic rocks (e.g. gneiss, gabbro, norite, marble, schist)
Highly abrasive rocks (e.g. quartzite)
Carbonate rocks (e.g. dolomite, limestone, chert)

Expected rock conditions:
- Hard - Moderately hard - Soft - Weathered - Fractured - Weathered and fractured - Cavities
Expected drilling conditions:

- Good to excellent
- Fair to poor
- Difficult to very difficult

Standard Specifications for Borehole Drilling

Purpose and Scope

Simply stated, the purpose of this activity is to establish a means to access and tap groundwater resources. This is most often provided by the drilling of a borehole. It is not sufficient for this facility to represent just another hole in the ground. It is vital that the borehole be constructed and completed to certain minimum standards in order to secure the long-term viability and serviceability of the installation. In a case the Appointed Professional Service Provider appoints a Drilling Contractor or a Hydrogeological Consultant, it is expected of these parties to function as a team and within the framework of this contract.

Approach and Responsibility

In general, it is required that the drilling of any borehole be approached with due diligence and care on the part of the appointed Professional Service Provider. Specifically, it is required that the drilling of each borehole be approached in a cost effective manner to establish a water supply.

In some instances, boreholes may be drilled for exploration and/or resource monitoring purposes. Under normal circumstances, the pre-drilling of a 165 mm diameter exploration borehole is drilled and the borehole is reamed to larger diameters for construction purposes where find necessary.

All drilling activities shall be approached through communication and discussion between the Hydrogeological Consultant and the Professional Service Provider (s) with a view to developing the most suitable and mutually acceptable finished product serving the best interests of the project.

The Appointed Professional Service Provider will be required to maintain the aesthetic appearance of the site during drilling operations, including keeping the site neat, tidy and free of litter. More importantly, the Appointed Professional Service Provider must ensure that safety standards are met and that the work site is kept free, as far as is possible, from vehicular and pedestrian traffic and from interested bystanders and onlookers not involved with the project.

In essence, the final responsibility for the finished water supply borehole and all actions and activities must be carried out by the Appointed Professional Service Provider. This by no means implies that the sub-contractors are absolved from any professional responsibility.

Techniques

The most common method employed for the sinking of a water supply borehole is that of rotary air percussion drilling employing a down-the-hole (DTH) hammer. This drilling technique is ideally suited to hard rock formations and therefore finds wide application in most of the geological environments encountered in South Africa.

Other techniques which will be applied depending on site-specific circumstances include: (1) Odex drilling (2) cable tool percussion drilling and (3) Mud flush drilling. Method (1) represent technically more sophisticated techniques, which find specific application in loose and unconsolidated materials. Method (2) employs the familiar jumper rig, its most useful application being the cleaning and rehabilitation of existing boreholes. Method (3) is specific to primary unconsolidated type aquifers.

Equipment and Materials

The equipment made available by the Professional Service Provider must be in good working order. It must also be maintained in good condition for the duration of the project. In order to achieve this, time should be set aside each week for the routine service and preventative maintenance of all equipment. The drilling equipment must include a full air/foam pumping system. At the start of the project, the gauge diameter of the button drill bits to be employed with the rotary air percussion drilling technique must conform closely to their manufactured gauge and must also possess all of their tungsten carbide buttons.

The Professional Service Provider shall decide on the retirement of a bit due to excessive wear or damage incurred during the course of the project. Further, it is imperative that the equipment be of a suitable size and capacity to deal, on occasion, with: (1) deep boreholes (up to 300 m), (2) larger than average borehole diameters (up to 305 mm), (3) large quantities of groundwater and (4) potentially onerous drilling conditions. Since this capability is provided in large measure by the air compressor, it is considered that a compressor having a capacity of at least 2400 kPa (24 bar) and a volume of at least 750 cfm is appropriate for most water borehole drilling applications and conditions using the rotary air percussion technique. In order to maintain the straightness of a borehole, the professional service provider should ensure at least an overshot sleeve (drill collar) fitted to the pneumatic DTH hammer.

Further precautions to ensure this aspect might include the use of a stabiliser rod immediately behind the bit/hammer/overshot combination. All materials to be used on the project should be new and meet project specifications. This applies particularly to steel casing, which shall be: (1) of the seam-welded type, (2) round, (3) straight, (4) of uniform wall thickness and (5) have bevelled edges. Second-hand material such as steel casing recovered from an earlier borehole can be used provided that it has been refurbished to an acceptable condition (refer to subsection 5.6f). The department will have the right to reject any material (including casing) which is deemed inappropriate, substandard or otherwise unsuitable for the project.

Workmanship and Performance

The standard of workmanship of the Professional Service Provider will be subject to close scrutiny by the department. Many aspects thereof are of a subjective nature and not readily quantifiable. Every attempt must, therefore, be made to render this beyond possible criticism.

Judgment of the performance of the Professional Service Provider in the execution of assigned work is similarly of a subjective nature. Although it cannot be expected of the Professional Service Provider to complete a specified number of boreholes in a given time period, it is reasonable to expect that "favourable progress" be made under normal circumstances and drilling conditions. An indication of what might be regarded as "favourable progress" is considered to fall in the range of 50 to 100 m of drilling advancement per day taking into consideration inter-hole moves and set-up time. Performance being related to efficiency and efficiency in turn being a function of, amongst other factors, the number of mechanical equipment breakdowns suffered, it will be in the best interests of the Professional Service Provider to set aside time for the routine preventative maintenance of equipment. If the Professional Service Provider is inclined to work a 6 or 7-day week, it is preferred that maintenance activities be scheduled for the weekends. Such schedule must be communicated to the Department. This party may insist that the Professional Service Provider does not start with the drilling of a borehole over a weekend. Although work-in-progress may be completed, the Professional Service Provider shall under no circumstances vacate a site before the Department has inspected the completed works and sanctioned the move to the next borehole.

Borehole Construction

The extremely diverse nature of subsurface conditions, sometimes over very short distances, renders it virtually impossible to address this aspect in great or specific detail. This factor also rules out standardization in this regard. It is possible, however, to address certain basic borehole construction practices which will contribute to final acceptance of the successfully finished product.

Drilling Diameter

Drilling diameters will be 152 mm (6"), 165 mm (6,5"), 203 mm (8"), 254 mm (10") and 305 mm (12") for rotary air percussion drilling. Odex drilling diameters will be 194 mm, 219 mm or 273 mm OD. Any variations must be acceptable to the Engineer.

The minimum final cased diameter of a successful community water supply borehole shall not be less than 152 mm ID nominal.

The Professional Service Provider will be remunerated for drilling per linear meter of depth at the rate bidded for each relevant drilling diameter employed as set out in the Schedule of Rates.

Steel Casing

Note: All steel casing supplied must conform to SABS 719 and SABS 62.

Steel casing may either be used in a temporary manner or form a permanent part of the borehole infrastructure. Its temporary use is indicated in instances where, for example, the borehole is unsuccessful or the need for it to remain in place becomes redundant. Under these circumstances it is also referred to as a pre-collar, surface casing, starter casing, outer casing or soil casing generally to be removed (recovered) on completion of drilling. The removal of temporary/starter casing to a depth of 5 m will not be a payable item under recovery of steel casing. It will be left in place where the Department is of the opinion that the unsuccessful borehole should be secured to serve a long-term groundwater monitoring purpose. In such instances, additional provision must be made to protect the borehole against actions, which may compromise this function.

More commonly, however, this casing constitutes the final casing with which a successful borehole is equipped/constructed. Its proper installation, therefore, is mandatory. It is installed from surface through unstable, unconsolidated or fractured materials usually occurring in the near surface. Under these circumstances, the function of steel casing includes one or more of: (1) supporting unstable materials against collapse into the borehole during drilling, (2) facilitating the installation or removal of other casing, (3) minimizing the erosion and widening of the unstable upper portions of the borehole sidewall caused by the return flow established during drilling and/or the passage of drilling equipment/tools and (4) facilitating the placement of a sanitary seal and/or gravel pack or formation stabilizer. The casing must conform to the required specifications.

In order to ensure as far as is possible that the annular space between this casing and the borehole sidewall remains open for the later emplacement of a sanitary seal, the circumferential entrance to this space must be temporarily plugged. Hessian sacking packed around and lightly tamped into the surface entrance to this annular space can be used for this purpose. In instances where steel casing needs to be driven through unstable horizons (generally at greater depths in a borehole), it will also be required that such casing be fitted with a casing shoe to protect the "mouth" of the casing from damage (subsection 5-6.c). Irrespective of the casing used to facilitate the drilling of the borehole, the final cased diameter of the finished product must be sufficient for the borehole to easily accept a borehole pump. Since the outside diameter of the latter is generally in the order of 1 00 mm, it is required that the final cased diameter of the borehole be not less than 152 mm (6 in.) nominal where steel casing is used.

The Professional Service Provider will be remunerated for steel casing per linear meter thereof supplied, delivered and installed at the rate bidded for each relevant casing diameter as set out in the Schedule of Rates.

Casing Shoe

This item is fitted (welded) to the bottom end (foot) of a casing string in order to protect the “mouth” of the casing from damage due to forcing the casing through unstable horizons. Its use is therefore only warranted (indeed mandatory) in instances where such conditions reveal themselves to require securement through the emplacement of casing.

The Professional Service Provider will be remunerated for each casing shoe supplied and used at the rate bidded for each relevant shoe diameter as set out in the Schedule of Rates.

uPVC Casing

Also referred to as thermoplastic casing, the material generally comprises PVC (polyvinyl chloride) which, when treated to withstand ultraviolet radiation, is known as uPVC casing. Its application in the construction of community water supply boreholes is rather specific, being used mainly in instances where security against the collapse of a borehole sidewall is required and where steel casing does not already offer such security. In such instances, the casing is inserted the entire length of the borehole and will certainly be perforated for some portion of its length.

The diameter of this casing will also necessarily be smaller than that of the steel casing used which, in most instances, will have a nominal diameter of 165 mm. In order not to compromise too severely on the minimum nominal diameter requirement of 152 mm for successfully completed community water supply boreholes (subsection 5-6.b), the inside diameter of the uPVC casing shall not be less than 127 mm with a wall thickness of 6 mm. It is also common practice to leave the steel casing in place in order to provide protection for the uPVC casing. The decision to use uPVC casing in the final construction of a borehole shall be made by the Professional Service Provider.

The Professional Service Provider will be remunerated for uPVC casing per linear meter thereof supplied and installed at the rate bidded for each relevant casing diameter as set out in the Schedule of Rates.

Perforated Casing

Also referred to as slotted casing, this is used in instances where a casing string inserted into a borehole will extend across a water-bearing horizon. The perforations or slots will allow the groundwater to enter the borehole. Perforations can be made in a number of ways ranging from prefabricated machine- or plasma-cut slots to hacksaw, angle grinder or oxyacetylene torch-cut slots made in the field. The latter type of slots are seldom satisfactory since it is difficult to produce perforations which are: (1) of uniform size, (2) clean, open and free of restrictions and (3) small enough to control the ingress of finer material into the borehole. It is therefore preferred that perforated casing used in the construction of community water supply boreholes be of a prefabricated type. As a general guideline, slots should be: (1) 300 mm in length, (2) 3 to 4 mm wide, (3) positioned in bands around the circumference of the casing, (4) spaced equally in each band, (5) each circumferential band of slots separated by 100 mm of plain pipe, (6) every second band of slots aligned with one another, and (7) a 300 mm section of plain pipe left at both ends of the casing. Bearing in mind that the number of slots forming each circumferential band depends not only on the casing diameter but also impact on the strength of the casing, it is suggested that the guidelines presented in Table 5-1 be adhered to in this regard.

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1: Recommended number of slots per circumferential band for various steel casing diameters and associated percentage open area provided

NORMAL CASING DIAMETER	NUMBER OF SLOTS PER CIRCUMFERENTIAL BAND	PERCENTAGE OPEN AREA
152mm	6	3,0%
165 mm	8	3,7%
203 mm	10	3,7%

Also presented in this table is the approximate open area provided by the above slot pattern applied to each of the given casing diameters. In certain instances, however, it may be required to use more sophisticated and expensive slotted casing. Also known as screens, these include: (1) continuously wound wedge wire screens, (2) louvered screens or bridge-slotted screens and (3) screens pre-coated with gravel. The decision to use such screens shall again be made by the Professional Service Provider after providing motivation to and gaining acceptance from the Implementing Authority.

The Professional Service Provider will be remunerated for perforated casing per linear metre thereof supplied and installed at the rate bidded for each relevant casing diameter as set out in the Schedule of Rates.

Recovery of Steel Casing

The Professional Service Provider shall make every effort to recover, only on instruction of the Employer's Agent, steel casing from unsuccessful or abandoned boreholes. This casing can also be refurbished to an acceptable condition for re-use.

The Professional Service Provider will be remunerated for the recovery of steel casing per linear metre thereof salvaged from a borehole as per the rate bidded in the Schedule of Rates. The removal of temporary/ starter casing to a depth of 5 m not be a payable item to the Professional Service Provider

Payment for the proper refurbishment of such casing shall be made on a time basis against bidded standing time rates subject to verification and certification of the amount/duration of this work by the Employer's Agent.

Borehole Straightness

The straightness (alignment) of a borehole is defined by the degree to which it deviates along its length from an imaginary centre line drawn through the borehole. This is readily determined by passing a "dummy" or "dolly" through the borehole. The equipment comprises a rigid hollow steel pipe having an outside diameter which is smaller by not more than 20 mm than the inside diameter of the final casing. Caution should be exercised when conducting a straightness test in an uncased or partially cased borehole since irregularities in the borehole sidewall may cause the "dummy" to become jammed. Since the casing string is normally constructed from six-metre lengths, it is required that the "dummy" itself have a length of at least six metres in order to adequately "straddle" casing joints. This equipment must form part of the standard equipment supplied by the Professional Service Provider. It must also be readily available since the Department may request a straightness test at any stage during drilling. The "dummy", suspended from a flexible steel rope (normally the hoist line with which most drilling rigs are equipped), is slowly lowered down the borehole.

The borehole will be considered straight if the “dummy” passes down the entire length of the borehole and can be withdrawn without it binding or becoming stuck in the borehole. The straightness test must be performed by the Professional Service Provider and its success (or failure) recorded.

A borehole which fails a straightness test will be deemed lost (subsection 5-6.1) and it will be required of the Professional Service Provider to drill a replacement borehole at own expense. In the event that a straightness test is made before completion of the borehole, then the Professional Service Provider will be required to cease operations and facilitate access to the borehole for the duration of such activity.

The Professional Service Provider will recover the cost of production loss (incurred for the duration that drilling activities are interrupted) against the rate bidded for standing time in the Schedule of Rates. It will be the responsibility of the Department to verify and certify any claim by the Professional Service Provider in this regard.

Borehole Verticality

This represents the plumb ness of the borehole as measured by the deviation of the centre of the borehole from the vertical at any depth within the bore. The deviation must not exceed two thirds of the borehole diameter (casing inside diameter) per 30 m of depth. Although the SABS 045-1974 standard code of practice for testing water boreholes (including for verticality) has been withdrawn, the nature and form of the apparatus to be used for this purpose remains valid.

The equipment comprises a tripod (shear legs), a plumb-bob and a flexible wire line. The plumb-bob must be fitted with a centre-mounted spindle at one end and a centralising device on its circumference. The tripod is erected over the borehole such that its apex is above the centre of the borehole. The wire line is passed through a small pulley mounted at the apex. The plumb-bob, suspended from the wire line, must hang vertically from the pulley such that the wire line passes exactly through the centre of the borehole when the plumb-bob is centrally positioned within the mouth of the casing (tolerance 3 mm). The vertical distance from the pulley to the top of the casing must be measured accurately (tolerance 0,01 m). This distance must not be less than 2,4 m. The plumb-bob is then lowered in equal increments (generally 3 m) down the borehole. The deviation of the wire line measured in millimetres from the centre of the casing must be determined at each depth increment and the measurements recorded on a data sheet. This procedure must be continued for the entire length of the borehole. The measured deviation of the wire line from the centre of the mouth of the casing at each depth increment indicates the drift ($\emptyset$) of the plumb-bob. The measured deviation is used together with a deflection factor (Df) to calculate the actual deflection (Da) of the borehole from the vertical at each depth increment according to the equation:

$$Da = \emptyset (d + h)/h$$

where $\emptyset$ = the measured drift (in millimetres) of the wire line at a given plumb-bob depth,

d = depth of plumb-bob below casing collar (in metres) for each drift ($\emptyset$) measurement,

h = vertical distance between the casing collar and the pulley (at the tripod apex) over which the wire line passes (in metres), and

$(d + h)/h$ represents the deflection factor (Df).

The wire line deviation measurement is most accurately performed if a revolving template with a graduated radial slot is mounted directly over the collar of the casing. The slot is graduated in millimetres outwards from the centre of the template. The template is revolved until the wire line passing through the slot hangs free and straight in the slot and its deviation from the centre read off on the graduated slot.

The verticality test must be performed by the Professional Service Provider. The consultant will therefore be required to provide the necessary equipment for conducting a verticality test. A borehole which fails a verticality test will be deemed lost (subsection 5-6.1) and it will be required of the Professional Service Provider to drill a replacement borehole at own expense. In the event that a verticality test is made before completion of the borehole, then the Professional Service Provider will be required to cease operations and facilitate access to the borehole for the duration of such activity.

The Professional Service Provider will recover the cost of production loss (incurred for the duration that drilling activities are interrupted) against the rate bidded for standing time in the Schedule of Rates. It will be the responsibility of the Department to verify and certify any claim by the Professional Service Provider in this regard.

Backfilling

This entails filling the annular space between the borehole sidewall and the outside of the casing with suitable material. The purpose of annular backfilling includes: (1) the provision of a base on which to found a sanitary seal and (2) the provision of support for the sidewalls of the borehole and the casing. In instances where casing has been seated at a comparatively shallow depth in fresh material below a weathered near-surface horizon, all of the drill cuttings removed from the borehole whilst drilling represents suitable material for this purpose. Annular backfilling with this material is not advisable in instances where this is not the case, such as for example where the casing extends to a substantial depth and comprises slotted/perforated sections or where the water-bearing horizon is shallow and open to the borehole via slotted/perforated casing. In these instances, it will be required to insert a formation stabiliser into the annulus. The backfilling must extend to within approximately 5 m of the ground surface.

The PROFESSIONAL SERVICE PROVIDER will be remunerated for backfilling against the standing time rate (which shall include the supply and insertion of material required therefore) bidded for in the Schedule of Rates.

Formation Stabiliser

This comprises material which is placed in the annulus between the borehole sidewall and perforated/slotted sections of casing to stabilise the formation against collapse and ingress into the borehole. The drill cuttings and spoils removed from the borehole is not suitable material for this purpose. The stabiliser must comprise material which is: (1) well sorted, (2) well rounded, (3) low in calcareous content, and (4) graded such that the smallest grain size is larger than the casing perforations/slots. The stabiliser material can either be placed by hand or through a tremie pipe. Excessive bridging of stabiliser material in the annulus can be prevented: (1) through the use of centralisers on the casing or (2) by washing it in with clean water. The formation stabiliser should extend some 10 m above the top of the uppermost perforated/slotted section of casing before the borehole is developed.

The Professional Service Provider will be remunerated for formation stabiliser per 20 litre container supplied and installed at the rate bidded for in the Schedule of Rates.

Concrete Collar

The Professional Service Provider will construct a shallow circular concrete collar around each successfully completed borehole. This collar yields a volume approaching 0,08 m³. The concrete mixture shall consist of water, Portland cement, stone aggregate (10 mm) and river sand. Quantities of these materials sufficient to make 0,1 m³ of concrete with the required strength of some 30 MPa after 28 days are: (1) 20 litre of water, (2) 42 kg (0,8 bag) of Portland cement, (3) 0,07 m³ of stone aggregate, and (4) 0,07 m³ of river sand. A similar collar may need to be constructed, on request off the Employer's Agent, over unsuccessful or abandoned boreholes.

The Professional Service Provider will be remunerated for a concrete collar per unit constructed at the rate provided in the Schedule of Rates, which rate shall include for the transport, supply, mixing and placement of all the materials required.

Unsuccessful and Abandoned Boreholes

A borehole will be declared unsuccessful at the discretion of the Employer's Agent. The latter may also, at any time during the course of the work, order the abandonment of a borehole in progress.

In such instances, the Employer's Agent must instruct the Professional on further actions to be taken. These may include either: (1) the salvage of any casing from the borehole and (2) the plugging of the borehole or (3) the securement of the borehole for long-term monitoring purposes, in which case it will be provided with a sanitary seal (subsection 5-6.n), concrete collar (5-6.k), protection (5-6.q) and marking (5-6.r)

Plugging (or finishing) of an unsuccessful or abandoned borehole is aimed at removing any danger or hazard such boreholes may present to the environment, e.g. as a conduit for the inflow or surface water into the groundwater regime or as a danger to traffic (whether human, stock or vehicular) in the immediate vicinity thereof. This is achieved by shovelling the drill cuttings and other suitable natural material back into the unsuccessful borehole. In order to prevent this material from "hanging" in the borehole, it might be required to periodically wash it in with clean water during the infilling process. Once the infill material extends to the ground surface, it must be compacted by tamping it down manually and any subsidence topped up with fresh backfill material. The compacting and topping up activities should be repeated until assurance can be had that all reasonable precaution has been taken to prevent future subsidence. It will also be required to cast a concrete collar over the infilled borehole (subsection 5-6.m).

The Professional Service Provider will be remunerated for an unsuccessful or abandoned borehole on the basis of bidded rates in the Schedule of Rates for such of the following items as are relevant: (1) drilling per linear metre of depth for each relevant drilling diameter employed, (2) steel casing per linear metre thereof recovered excluding starter casing to a depth of 5 metres, (3) backfilling, (4) a sanitary seal, (5) borehole protection, and (6) borehole marking. Payment for any casing left behind in an unsuccessful or abandoned borehole will only be made, on the same basis as described in (2) above, on written certification by the Employer's Agent that the Professional Service Provider has made every reasonable recovery attempt in this regard.

Lost Boreholes

A borehole will be declared lost by the Professional Service Provider in the event that it cannot be completed satisfactorily due to factors such as: (1) the irrecoverable loss of drilling equipment, materials or tools therein, (2) accident to plant or heavy machinery, (3) failure to pass a straightness test, and (4) failure to pass a verticality test.

A decision in this regard must be made after consultation with the Professional Service Provider, who will have the considered option to either attempt remediation of the situation to the satisfaction of the Employer or, alternatively, declare the situation irretrievable. No payment shall be made for any work done, materials used or time spent by the Professional Service Provider on a lost borehole. The cost of any materials recovered in a damaged state from a lost borehole will be borne by the Professional Service Provider.

A borehole which is declared lost shall be replaced with a new borehole to be constructed by the Professional Service Provider in the vicinity of the lost borehole and at a position indicated by the Employer. Payment for a new borehole constructed under these circumstances shall be made on the same basis as for any other successfully completed borehole. Materials recovered in good condition may, however, be re-used by the Professional Service Provider.

Sanitary Seal

The purpose of a sanitary seal is to prevent the ingress of potentially contaminated surface water into the borehole via the annular space between the borehole sidewall and the outside of the casing. It is required, therefore, that every successful community water supply borehole be provided with a sanitary seal. The seal must consist of Portland cement mixed to slurry with bentonite and water, which is free of oil and other organic matter. The bentonite and water should be thoroughly mixed in the ratio of 2 kg bentonite to 25 litre water prior to adding and mixing in 50 kg (one bag) cement. The final grout seal must extend to a depth of at least 5 m below ground surface. The seal is preferably placed at the beginning of the drilling process after a 5 m deep 305 mm hole has been drilled and cased with 254 mm ID steel casing (type 1 sanitary seal) or with a 215 mm ID steel casing (type 2 sanitary seal). After placing the casing and centring the hole, an amount of bentonite, cement and water grout, adequate to fill the entire annulus between the casing and the wall of the borehole, is tremied into the casing. The slurry can be gravity-fed into the annulus through a small diameter tube (tremie pipe) extending to the depth of emplacement. The tremie pipe should be withdrawn slowly as the slurry fills up the annulus.

Care should be taken not to leave voids in the sanitary seal. These may result from: (1) channelling caused by casing which is not centred in the borehole, (2) an improperly mixed slurry which contains lumps and (3) an annular space which is too small to assure a uniform thickness of seal.

The Professional Service Provider will be remunerated for a sanitary seal per linear metre thereof against the rate bidded in the Schedule of Rates. This rate will include for the supply, delivery, mixing and installation of all material for type 1 and type 2 sanitary seals.

Borehole Development

This activity entails flushing all loose material from the borehole upon the completion of drilling. This material might comprise one or more of: (1) drill cuttings resting on the bottom, (2) loose material forming insecure portions of the borehole sidewall, (3) clayey material “plastered” to the borehole sidewall during the drilling process, and (4) fine material which has collected behind screened portions of the borehole. The removal of this potentially “clogging” material often leads to an improvement in the yield of the borehole. The most common borehole development technique used simply entails repeatedly running the drill bit up and down in sequential passes across portions of the borehole with the compressed air turned open. The length of each pass will be dictated by the length of the drill rods used by the Professional Service Provider. The process is normally performed from the bottom up; one drill rod being removed from the drill string upon development of the preceding (lower) section.

The borehole will be deemed sufficiently developed when very little or no material is brought to the surface in the return flow from the borehole as evidenced by collecting a portion of this flow in a bucket placed at the bore head during development. Other methods, which may be employed, for borehole development includes: (1) surge plunging using a surge block and (2) jetting using a purpose-built jetting tool. This activity must be concluded with the collection of a one-litre representative water sample obtained from the return flow during development.

The Professional Service Provider will be remunerated for borehole development on a time basis against the work time rate bidden in the Schedule of Rates. It will be the responsibility of the Employer to verify and certify any claim by the Professional Service Provider in this regard.

Borehole Disinfection

Also known as sterilisation, the purpose hereof is to disinfect the borehole and its contents of any bacteria, and particularly coliform bacteria, introduced into the borehole during drilling operations. Sterilisation is most readily accomplished by introducing chlorine (or chlorine-yielding compounds) into the borehole. On completion of development the borehole shall be disinfected with a solution of 0.5 kg of HTH mixed in 250 litres of water.

The Professional Service Provider will be remunerated for borehole disinfection per single application at the cost (which shall include for all materials supplied and used and the time spent) bidden for one such application as set out in the Schedule of Rates.

Borehole Protection

This entails sealing the borehole from the introduction of foreign material directly through the casing. It is often achieved by means of a lockable cap fitted to the borehole collar. Experience suggests, however, that a 3 to 4 mm thick steel plate (lid) welded onto the borehole collar ensures better security. Of course, it will later be required of the Professional Service Provider to remove this plate in order to gain access to the borehole for testing purposes. In order to provide the Employer with ready access to the borehole for water level measuring purposes, it is required that a small hole be drilled in the lid. This hole must be furnished with a tamper-proof plug such as a “dead-end” threaded into a water pipe connector welded on the hole. The final diameter of the hole providing access to the borehole must be sufficient to allow a “normal” diameter probe to pass through it. It is considered that a diameter of at least 10 mm and not more than 20 mm is suitable for this purpose.

The Professional Service Provider will be remunerated for borehole protection per single installation at the cost (which shall include for all materials supplied and used and the time spent) bidden for one such installation as set out in the Schedule of Rates.

Borehole Marking (in the field)

For all Community Water Supply and Sanitation projects, the borehole identifying number will be provided by the Directorate Water Regulation and Use, sub-directorate Geohydrology of the regional KwaZulu Natal DWS, or else by the Implementing Authority. It is the responsibility of the Employer to ensure that the correct number is provided to the Professional Service Provider for this purpose. The Professional Service Provider will be responsible for securing a batch of numbers as is deemed fit and appropriate.

The activity itself represents marking the borehole by: (1) script-welding its assigned and unique identifying number onto the lid of the borehole and (2) planting a concrete block with dimensions of 200 mm x 200 mm x 200 mm in the ground with a pole bearing the number of the borehole at a distance of five metres to the north of the borehole.

The Professional Service Provider will be remunerated for borehole marking per single application at the cost (which shall include for all materials supplied and used and the time spent) bidded for one such application as set out in the Schedule of Rates.

Site Finishing

The activities associated with this task must include the repair of construction scars on the work site resulting from drilling activities, as well as the general clean-up of the site of waste materials, debris and oil spills.

The latter must be suitably disposed of in an environmentally friendly manner. The Professional Service Provider will be remunerated for site finishing per single application at the cost (which shall include for the time spent) bidded for one such application as set out in the Schedule of Rates.

Data Recording and Reporting

It is imperative that a detailed and accurate record of all information arising from the borehole drilling activity be recorded with care and diligence. Much of this information can be collected by the Professional Service Provider. It must be recorded on a driller's log such as is provided in Section 6. This must be kept current and available for inspection at request of the Employer. The Professional Service Provider will include the cost of these activities as a single sum per borehole in the Schedule of Rates. It will be the responsibility of the Professional Service Provider to verify receipt of this information prior to certifying a claim by the Drilling sub-contractors in this regard. The following items of information represent the minimum number of parameters, which must be monitored and recorded by the Professional Service Provider.

Penetration Rate

This represents the time taken, as measured with a stopwatch, to advance the borehole a specific depth (generally one metre). In broad terms, the harder the rock formation the slower the penetration rate and vice versa. Since the hardness (or softness) of a rock formation is a characteristic which can be associated with specific rock types, an accurate record of penetration rates serves as an additional means of identifying changes in rock type with depth. Although a slow penetration rate may be of hydrogeological significance, it can also be caused by worn equipment or difficult drilling conditions such as are presented by loose, unstable material. The measured penetration rate must, therefore, not include time spent overcoming technical problems or remedying mechanical breakdowns encountered during drilling.

Formation Sampling and Description

This entails a brief description of the visual appearance of the rock formation being drilled. It is performed by inspection of the rock chips (also known as drill cuttings) brought to the surface during drilling. A spadeful of chips should be collected at the mouth of the borehole for each metre drilled.

The “samples” should be placed as sequential piles in ordered rows at a cleared and visible location away from the immediate area of activity and traffic around the borehole being drilled. These samples should be kept at a pre-arranged location for description at a later stage. The samples should be described by a suitably qualified geotechnician/earth scientist according to the guidelines set out by the South African Institute for Engineering Geologists (SAIEG, 1995). The driller’s description must include, as a minimum, a note on the colour of the formation, the relative size of the drill cuttings and, if possible, an identification of the possible rock type.

Water Strike Depth

This information relates to the depth at which any water, including seepage, is encountered in a borehole during drilling. It is possible for water to be encountered at more than one depth as drilling advances. The depth(s) at which water is encountered must be determined to an accuracy of one metre and recorded. It is also necessary to record the nature of the formation associated with the water strike(s). This may, for example, be represented by a single fracture or fissure, a system of such features or a noticeably softer or more weathered horizon.

Blow Yield

Water which is encountered in a borehole being drilled by the rotary air percussion method is blown out of the borehole during drilling. The amount of water being blown from the borehole provides an indication of the possible yield of the borehole. The blow yield must not be guesstimated, even though a fair visual estimate based on experience can often be provided by the professional Service Provider. Also, since water may be encountered at more than depth, it is necessary to measure and record the blow yield immediately following each water strike. These measurements should be repeated as drilling continues until constancy is revealed by at least four consecutive measurements each representing a further metre of drilling.

The accurate measurement of the blow yield does not require the use of sophisticated equipment. The most acceptable and preferred means of measurement is provided by the use of a 90° V-notch weir. The use of a 90° V-notch weir entails channelling all of the water being blown from the borehole through such a weir, which has been placed level in the channel (or ditch) leading the return water flow away from the borehole being drilled. The height of water flowing over the notch is translated into a flow rate or yield as indicated in Table 5-2. It is imperative that the height of water flowing over the weir is not measured within the notch itself but at and from a position in the weir upstream and to the side of the notch and which corresponds exactly in height to the inverted apex of the notch.

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2: Tabulation of height vs flow rate data for a 90° V-notch weir

HEIGHT (mm)	FLOW RATE (l/s)	FLOW RATE (l/s) FOR				
		HEIGHT + 2 mm	HEIGHT + 4 mm	HEIGHT + 5 mm	HEIGHT + 6 mm	HEIGHT + 8 mm
10	0,01			0,04		
20	0,08			0,15		
30	0,23			0,04		
40	0,47	0,53	0,60		0,67	0,74
50	0,80	0,88	0,97		1,06	1,16
60	1,26	1,36	1,47		1,59	1,71
70	1,84	1,97	2,11		2,25	2,40

80	2,55	2,71	2,88		3,05	3,23
90	3,41	3,60	3,80		4,00	4,21
100	4,42	4,64	4,87		5,10	5,34
110	5,59	5,85	6,11		6,38	6,65
120	6,94	7,22	7,52		7,83	8,14
130	8,46	8,79	9,12		9,46	9,81
140	10,17	10,53	10,90		11,28	11,67
150	12,07	12,47	12,88		13,30	13,73
160	14,17	14,61	15,07		15,53	16,00
170	16,48	16,96	17,46		17,96	18,48
180	19,00	19,53	20,07		20,62	21,18
190	21,75	22,32	22,91		23,50	24,11
200	24,72	25,34	25,97		26,61	27,26
210	27,92	28,59	29,26		29,95	30,65
220	31,36	32,08	32,80		33,54	34,28
230	35,04	35,81	36,58		37,37	38,17
240	38,97	39,79	40,62		41,45	42,30

Another common but less preferred method in use is the “drum-and-stopwatch” technique. This requires only that all of the water blown from the borehole be channelled to a point where the concentrated flow can be collected in an open-ended drum of known volume (generally 20 litres) and the time taken to fill the container measured with a stopwatch for accuracy. Dividing the full volume of the drum (in litres) by the time taken (in seconds) to fill the drum gives the blow yield in litres per second (l/s). It is cautioned, however, that this method is only effective and reliable for yields of less than approximately 2 l/s.

Groundwater Rest Level

This parameter represents the depth, as measured from surface, to the level of standing water in the borehole. This measurement can be made with the use of any liquid level indicating device, the most common of which is an electrical contact meter (dipmeter). The groundwater level measurement must be accurate to the nearest 0,01 metre (one centimetre). The measurement reference point, which may either be the ground level or the collar of the borehole, should be identified against the measured depth value. The latter reference point will generally be represented by the top of the casing with which the borehole has been equipped. In these instances, it will also be necessary to measure the height by which the casing extends above ground level. If the borehole is drilled and completed on the same day, then a groundwater level measurement must be taken immediately before leaving the site.

If drilling and borehole construction extends over two or more days, then such measurements must also be taken before daily drilling activities commence, provided that water, including seepage water, has been encountered in the borehole. A groundwater level measurement must be referenced to the date on which it is made and, if more than one such measurement is made per day, then also the time of each such measurement must be recorded.

Down-the-hole Loss of Equipment

Drilling equipment, materials or tools may be lost down a borehole during drilling operations. Since this can often result in the irretrievable loss of a borehole, substantial efforts are generally employed by the Professional Service Provider to recover such material. This activity is also referred to as fishing. The Employer's agent will afford the Professional Service Provider every opportunity and reasonable time to fish for lost equipment. The Professional Service Provider must, in turn, keep the Employer informed of progress and the likelihood of success in this regard. The Professional Service Provider will have no claim against any other party for any losses incurred in this regard. Further, the fate of a borehole which cannot be continued or completed due to the presence of lost equipment, materials or tools therein will finally be decided by the Employer. It may either be declared successful or lost.

Borehole declared Successful

Circumstances under which a borehole may be declared successful include: (1) the borehole has encountered significant water or is drilled for resource monitoring purposes, (2) pumping equipment can be installed to an acceptable depth in the borehole and (3) the lost equipment does not pose a threat to the present and future quality of the groundwater. In the event that a borehole is declared successful despite the irrecoverable loss of drilling equipment, materials or tools therein, then the exact nature and position of the equipment lost in the borehole must be recorded and appear in relevant project documentation. The Professional Service Provider will be remunerated for a borehole declared successful under these circumstances on the same basis as for any other successfully completed borehole.

Borehole declared Lost

Although the circumstances under which a borehole will be declared lost are varied and diverse, the criteria which should apply include: (1) the borehole has not yet encountered water irrespective of the depth reached, (2) the borehole has not yet encountered water even though the geological and hydrogeological indications are positive, (3) the borehole has encountered water but in too small a quantity to warrant the installation of pumping equipment, yet the geological and hydrogeological indications are positive that more water can be obtained, and (4) the borehole has encountered a significant quantity of water but the lost equipment prevents the installation of pumping equipment to an acceptable depth. In the event that a borehole is declared lost under these circumstances, then the criteria set out in subsection 5-6.1 for further actions, payment, etc, shall apply.

Down-the-hole Borehole Measurements

This activity is more commonly referred to as borehole logging. The measurements are carried out by manually or mechanically lowering tools or instruments of various technical sophistication down a borehole. Borehole logging is useful in instances where:

- (1) surface geophysical data need to be calibrated against subsurface information,
- (2) geological information for a borehole is absent or suspect,
- (3) borehole construction information is absent or suspect, and
- (4) information is required for the proper and effective stimulation by various means of borehole yields.

Although down-the-hole borehole measurements may be made at any time during the construction of a borehole, they are generally performed on completion thereof. In the event that such measurements need to be made before completion of the borehole, then the Professional Service Provider will be required to cease operations and facilitate access to the borehole for the duration of such activity. The Professional Service Provider shall recover the cost of production loss (incurred for the duration that drilling activities are interrupted) against the rate specified for standing time in the Schedule of Rates, any claim in this regard to be verified and certified by the Employer.

The nature of the information to be gathered dictates the technique(s) to be used and the time required to complete these measurements. Basic information such as the depth of the borehole and the amount of steel casing installed therein is readily and cheaply determined by means of straightforward and uncomplicated instruments. Geophysical and geological information, on the other hand, requires the more costly application of specialized borehole logging instrumentation including the use of video cameras. It is required that the more sophisticated of these investigations: (1) be motivated to and authorised by the Implementing Authority prior to their execution and (2) be applied judiciously at the discretion of the Employer.

Borehole Construction Information

This includes information such as: (1) the depth and diameter(s) of the borehole, (2) the depth and diameter(s) of casing installed in the borehole and (3) the integrity of the casing. This information can be used to verify/check the documented construction details of a borehole. The depth of a borehole can be determined simply by plumbing with a weighted line. A calliper tool can be used to determine borehole and casing diameters and the length and integrity of the casing string. The length of steel casing can also be determined more simply with a sensor operating on electromagnetic principles.

Geological Information

This covers aspects such as identifying: (1) the nature of different rock formations occurring at various depths within a borehole on the basis of their geophysical (geo-electrical) properties and (2) the presence and size of fractures and/or fissures intersected by a borehole. This information can be used to: (1) calibrate surface geophysical data obtained from similar geological environments, (2) determine the optimum depth at which a borehole pump should be installed in a borehole and (3) direct the application of borehole yield stimulation activities such as hydro fracturing.

Hydrogeological Information

This includes information such as (1) the porosity of rock formations and (2) the rate of groundwater movement. These measurements generally require the use of more sophisticated and costly instrumentation.

Hydro chemical Information

This covers aspects such as the variation of groundwater quality with depth in a borehole. These measurements again require the use of generally more sophisticated instrumentation. Not quite in the same vein as these measurements, yet of probably greater importance, is the representative water sample obtained from a borehole during its development.

The water sample must be submitted to a laboratory as soon as is reasonably possible for chemical analysis of: (1) the electrical conductivity, (2) the nitrate concentration and (3) the fluoride concentration. These results will provide an early indication of whether the groundwater quality is acceptable or not and, if not, whether test pumping is warranted.

Rehabilitation of Existing Boreholes

The scope of this work may vary from the basic cleaning out and redevelopment of an existing borehole to the recovery of casing, the reaming and subsequent reinstallation of casing. As far as it is possible, the nature of the rehabilitation required in each individual instance should be identified prior to undertaking this activity since this will indicate which equipment will most suitably complete the task. This is illustrated in the following examples. The straight-forward cleaning out and redevelopment of an existing borehole can readily be accomplished using a rotary air percussion drilling rig. On the other hand, the recovery of casing and the removal of unnatural material from a borehole are more readily accomplished using a cable tool (jumper) drilling rig.

It is particularly helpful to both the Employer and Professional Service Provider undertaking the rehabilitation to know as much about the original construction (e.g. depth, diameter, length and type of casing, geology, etc) of the borehole as possible. This is impossible in instances where original records are lost, deficient, vague or poorly documented/archived. It will be required in such cases to obtain as much information as can reasonably be gleaned from an in situ inspection of the borehole. This might include such basic measurements as plumbing the current depth of the borehole and establishing, by means of a casing detector, the length of casing (steel) installed, to carrying out various of the more sophisticated down-the-hole borehole measurements and observations.

The rehabilitation of an existing borehole should preferably be carried out under the supervision of the Employer. In any event, the execution of such work will be subject to the same degree of data collection and record keeping as is required of a new borehole.

The Professional Service Provider will be remunerated for this service on the basis of the rates bidden in the Schedule of Rates. It will be expected of the Professional Service Provider to have assessed the potential technical risks involved with such work and, as a consequence, the Professional Service Provider shall have no claim against any other party for the loss of equipment, materials or tools incurred in the course of such work.

Final Acceptance

The Employer shall accept a successfully finished community water supply or monitoring borehole by certifying the Professional Service Provider's invoice for such borehole as true and correct for payment by the Implementing Authority. At this stage, the Professional Service Provider will have established that all aspects pertaining to the work and the final product meet, at least, those of the various criteria and requirements set out above which have been imposed.

TEST PUMPING SCOPE OF WORK

General

a)	Testing of new boreholes for community water supply, resource and assessment, resource monitoring and management purposes.	yes
	Estimated Number of Boreholes	To confirm
b)	Type of testing method to be applied	
	Calibration testing	Yes
	Stepped discharge testing	Yes
	Constant discharge testing	Yes

	Recovery testing	Yes
	Slug Testing	No
c)	Type of pump considered appropriate	
	Positive displacement	Yes
	Line-shaft turbine	Yes
	Submersible	No
d)	Testing of existing boreholes	
	Estimated total number	TBC
	Estimated number equipped	Unspecified
	Removal of existing equipment required	Yes
	Re-installation of existing equipment required	Yes
e)	Salient Information	
	Smallest borehole inside diameter (mm)	165
	Smallest cased inside diameter (mm)	152
	Estimated maximum pump setting installation depth (m)	120
	Estimated maximum depth to water level (m)	
	Estimated maximum discharge line length (m)	500
	Estimated yield range (l/s)	0.2 to 20
	Estimated specialised testing yield range	20 to 40
	Estimated maximum duration of constant discharge test (hr)	72
	Tests with observation boreholes	yes

Test Pumping Specification

Application and Status

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

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.

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 “Employer of Water and Sanitation”, “DWS” or any party not being the “Employer”, the Professional Service Provider, the Engineer, the Geohydrological Consultant or the Consultant, it shall be deemed to mean the Employer.

Purpose and Scope

The Contract is for the test pumping of water supply boreholes for CoGTA 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 Employer’s Agent.

The borehole test pumping services are required 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 Professional Service Provider 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 Professional Service Provider will, from time to time during the currency of the Contract, be detailed in a written instruction by the Employer’s agent as provided for in the Conditions of Contract.

Test Pumping Equipment and Materials

The Professional Service Provider 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 Professional Service Provider shall furnish all the particulars requested in 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 Professional Service Provider 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 Professional Service Provider 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 Professional Service Provider 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 Professional Service Provider 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.

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.

Measurement and Payment

The Professional Service Provider 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 Professional Service Provider 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:

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 Professional Service Provider or Hydrogeological Consultant due to inclement weather. Further, no standing time will be payable to the Professional Service Provider in respect of any periods where the Professional Service Provider 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 Professional Service Provider is required to carry out work.

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.

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.

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 Professional Service Provider is instructed otherwise by the Hydrogeological Consultant.

Standard Specifications for the Test Pumping of Boreholes

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 Professional Service Provider (Test pumping Professional Service Provider) may be required to test either:

- (1) newly drilled boreholes which have not yet been equipped, (2) existing "older" 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 calibration test, (2) the stepped discharge test, (3) the constant discharge test and (4) 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.

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.

- (a) 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.

(b) 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.

(c) 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.

(d) 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.

General Approach and Methodology

As mentioned in subsection 3.3.1, 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 Professional Service Provider. 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 Professional Service Provider by the Hydrogeological Consultant. If not, the Professional Service Provider 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 Professional Service Provider 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 Professional Service Provider must be sufficiently well equipped to gather this information with acceptable accuracy.

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 Professional Service Provider 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 Professional Service Provider 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 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 Professional Service Provider 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 Professional Service Provider 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 Professional Service Provider 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 Professional Service Provider 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.

Arrival-on-site Actions

The Professional Service Provider must firstly establish whether the borehole is equipped or not. If so, the Professional Service Provider 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 Professional Service Provider 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 Professional Service Provider 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.

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 Professional Service Provider 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.

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 Employer's Agent and communicated to the Professional Service Provider. 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 Professional Service Provider 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.

Final pre-test Measurements

The Professional Service Provider 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 Professional Service Provider 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.

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 Professional Service Provider 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 Professional Service Provider in the course of a pumping test shall be incorporated into an hourly rate as set out in the Schedule of Rates.

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 Employer's Agent will advise on this matter in instances where the Professional Service Provider 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 Professional Service Provider.

(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 PSP.

Aborted Tests and Breakdowns

The Employer's Agent may at any stage during the execution of a pumping test request the Test pumping Professional Service Provider to abort a test if, continuation of the test is not in the interests of the project. Factors which might contribute to such a decision by the Employer's agent 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 Professional Service Provider 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 Professional Service Provider will be required to remedy the cause(s) for an abort decision by the Employer's Agent. 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 Professional Service Provider is instructed thereto by the Employer's Agent. The Test pumping Professional Service Provider 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 Professional Service Provider 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 Professional Service Provider 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 cannot 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 Error! No text of specified style in document.-3, continue with the test at this yield after measuring and recording the water level immediately before restarting the pump.

If the breakdown cannot 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 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 Error! No text of specified style in document.-

4.

Table Error! No text of specified style in document.-3:

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 Error! No text of specified style in document.-

4: 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 Professional Service Provider 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 Professional Service Provider 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.

Connections to Electricity Supply

The Bill of Quantities makes provision for a provisional sum for the bidder to make an allowance for connectivity to alternate electricity supply; municipal grid power and back-up diesel generators. It would therefore be of essence that on completion that an Electrical Compliance Certificate is issued by a registered service provider.

Construction of Overhead Tank

The appointed service provider will be required to construct an elevated tank to a required specification. Supply and install pump fittings from the borehole to the tank and reticulation depending on the specifications/requirements per district.

The Professional Service Provider must conform to the following standards:
SANS 10299: Development, Maintenance and Management of Groundwater Resources
The Environmental Guidelines for Drilling and Test Pumping Operations
SANS 10142: Code of Practice for Wiring of Premises.
SANS 241: Drinking water

All building and concrete works shall be in accordance with the SANS standard.

4. TECHNICAL EVALUATION REQUIREMENTS

Bidders must meet all the requirements in the technical evaluation, failure to meet all the requirement will result in an unacceptable tender.

TABLE 1. MANDATORY RETURNABLE AND COMPULSOTY DOCUMENTS			
Description	Returnable	Further Notes	Minimum
1) Tenderers experience	- Detailed company profile with contactable references - Certified copies of referral / confirmation letter/s as proof of similar work undertaken - Occupation Safety and Health, 1993: Registration of Professional Service Provider with the Department of Labour (valid certified copy)	Company profile indicating the companies' capabilities and management structure. Experience in Hydro-geotechnical studies, boreholes system designs & standard drawings, borehole water prognosis, drilling installation & lining of boreholes, water treatment, borehole commissioning & maintenance, community facilitation during project implementation, skills transfer & labour intensive methods (job creation).	Minimum = 3 reference letters 1 valid certified copy of registration certificate (The registration certificate shall clearly shows the company name, registration number)
2) Qualification of key personnel	Hydrogeologist / Geohydrologist: - Detailed CV with experience in borehole development (5 years' experience) - Valid proof of registration with the South African Council for Natural Science Professional (SACNASP) as a Pr. Nat. Sci.	The Hydrogeologist / Geohydrologist must hold a: - Degree in Hydrogeology / Geohydrology (NQF level 7) from a recognised SAQA accredited institution - Valid certificate as proof of registration with professional body (SACNASP) Registration with professional body is compulsory	- 1 Detailed CV 1 Valid certified copy of relevant qualification 1 Valid certified copy as proof of registration with professional body (SACNASP)

	Civil Engineer: - Detailed CV with experience in borehole development (5 years' experience) - Valid proof of registration with the Engineering Council of South Africa (ECSA) as a Pr. Eng/ Pr. Tech	The Civil Engineer must hold a: - Bachelors / B. Tech Degree in Civil Engineering (NQF level 7) from a recognised SAQA accredited institution - Valid certificate as proof of registration with professional body (ECSA) Registration with professional body is compulsory	1 Detailed CV 1 Valid certified copy of relevant qualification 1 Valid certified copy as proof of registration with professional body (ECSA)
	Experienced site personnel with at least a minimum qualification of a trade test in equipment operation: - Detailed CV with experience in borehole development (3 years' experience) - Valid license and trade test Certificate	The site personnel must have experience 3 years' experience in borehole development and equipment operation (i.e water related)	1 Detailed CV 1 Valid certified copy Certificate 1 valid certified copy of licence
	Occupational Health and Safety officer with registration with the South African Council for Project and Construction Management Professions (SACPCMP): - CV clearly detailing years of experience (5 years' experience) - Valid SHE Certificate - Valid SACPMP registration certificate	The OHS officer must have experience in construction development projects	1 Detailed CV 1 Valid certified copy SHE Certificate 1 valid certified copy of registration with SACPMP
Description	Returnable	Further Notes	Minimum
3) CIDB Rating	Valid CIDB Certificate: 5 CE and higher	None	Only 1 Valid Certificate

4) Plant and Equipment	The Professional Service Providers must attach Proof of ownership / leasing agreements for resources available to the organisation. Resources available to the organisation - plant and equipment but not limited to: • Geo-survey equipment (e.g instruments) • Drilling Units • Testing Units • Water level measuring instruments • Excavator (20-ton minimum) • Tipper truck (10 cubic metre)	The Professional Service Providers must attach Proof of ownership / leasing agreements from a registered hire company showing rental agreements.	Minimum = 1
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DETAILS FOR COMPLETION OF AN ENVELOPE FOR A BID/QUOTATION

Section 1 paragraph 6 of this bid/quotation document indicates the requirements for addressing of an envelope when a bid/quotation is submitted to the Department. Kindly ensure the envelope is addressed correctly because if it is not properly addressed the bid/quotation may be rejected as being invalid and returned to the respective bidder. The correct manner in which it is to be addressed is detailed below:

EXAMPLE FORMAT

FRONT SIDE OF ENVELOPE	
Name and address of bidder:	XYZ Consultants, PO Box 1234, Durban 4000
Bid/Quotation Number:	ZNT 2037/2021LG
Description:	
REQUEST FOR APPROVAL TO ADVERTISE BID: ZNT2037/2022LG- APPOINTMENT OF A PANEL OF SERVICE PROVIDERS TO PROVIDE SERVICES FOR SITING, DRILLING, PUMP TESTING & WATER SAMPLING, DISCHARGE YIELD TESTING, EQUIPPING OF HAND PUMP TYPE AND PRODUCTION TYPE BOREHOLES, CONNECTION TO WATER TANKS, TESTING, COMMISSIONING AND CONSTRUCTION MONITORING OF BOREHOLE WORKS FOR KZN COGTA FOR A PERIOD OF 36 MONTHS	
Closing date:	30 June 2023
Closing time:	11:00

REVERSE SIDE OF ENVELOPE	
Department's details and address:	The Head: Supply Chain Management Department of Co-operative Governance and Traditional Affairs 13 th Floor, North Tower Natalia Building 330 Langalibalele Street Pietermaritzburg 3201

RETURNABLE DOCUMENTS

BIDDERS ARE REQUIRED TO ATTACH THE FOLLOWING DOCUMENT TOGETHER WITH THEIR PROPOSAL ON THE CLOSING DATE OF THE BID:

CERTIFIED COPY OF B-BBEE STATUS VERIFICATION CERTIFICATE
VALID PIN STATUS FROM SARS VALID FOR A MINIMUM OF 12 MONTHS
COMPANY PROFILE
PROOF OF REGISTRATION WITH CENTRAL SUPPLIER DATABASE (CSD)
PDF COPY OF PROPOSAL (COMPLETED TENDER DOCUMENT AND ATTACHMENTS) ON A DISC (COMPULSORY)

ANNEXURE “B”

GENERAL CONDITIONS OF CONTRACT3

THE NATIONAL TREASURY
Republic of South Africa



GOVERNMENT PROCUREMENT: GENERAL CONDITIONS OF CONTRACT July 2010

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.

1. The General Conditions of Contract will form part of all bid documents and may not be amended.
2. Special Conditions of Contract (SCC) relevant to a specific bid, should be compiled 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.

3 A copy of the complete document set containing the General Conditions of Contract is available on www.kzncogta.gov.za/bids

GENERAL CONDITIONS OF CONTRACT TABLE OF CLAUSES

1. Definitions
2. Application
3. General
4. Standards
5. Use of contract documents and information; inspection
6. Patent rights
7. Performance security
8. Inspections, tests and analysis
9. Packing
10. Delivery and documents
11. Insurance
12. Transportation
13. Incidental services
14. Spare parts
15. Warranty
16. Payment
17. Prices
18. Contract amendments
19. Assignment
20. Subcontracts
21. Delays in the supplier's performance
22. Penalties
23. Termination for default
24. Dumping and countervailing duties
25. Force Majeure
26. Termination for insolvency
27. Settlement of disputes
28. Limitation of liability
29. Governing language
30. Applicable law
31. Notices
32. Taxes and duties
33. National Industrial Participation Programme (NIPP)
34. Prohibition of restrictive practices

GOVERNMENT PROCUREMENT

GENERAL CONDITIONS OF CONTRACT

July 2010

NOTES

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GOVERNMENT PROCUREMENT

GENERAL CONDITIONS OF CONTRACT

July 2010

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- 64. Applicable law
- 65. Notices
- 66. Taxes and duties
- 67. National Industrial Participation Programme (NIPP)
- 68. Prohibition of restrictive practices

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 anything 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 Bulletin. The Government Bulletin may be obtained directly from the Government Printer, Private Bag X85, Pretoria 0001, or accessed electronically from 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 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 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 fulfillment 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 canceling 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 and in such manner as it 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 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 anti-dumping 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.

28.1 Except in cases of criminal negligence or willful 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

28. Limitation of liability

29. Governing language

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.

29.1 The contract shall be written in English. All correspondence and other documents pertaining to the contract that is 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

34 Prohibition of Restrictive practices

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.

34.1 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.

Js General Conditions of Contract (revised July 2010)