4.4.12.12/12/18

COMPULSORY BID INFORMATION MEETING

PLEASE TAKE NOTE THAT NO LATE BIDDER(S) WILL BE ADMITTED.

NORTH WEST: DEPARTMENT OF

PLACE

| the above bidder. | | |
|-----------------------------|--|--|
| 1 | hereby confirm that | at the site inspection was attended by |
| CERTIFICATION INFORMATION M | | ENTATIVE <u>ON SITE</u> AFTER THE BID |
| SIGNATURE | | DATE |
| fully aware of the e | extent of the task. | · |
| - | | n was attended and that I/we am/are |
| - | of the company/firm | |
| I/We, | | |
| | BY BIDDER THAT THE CRIBED ABOVE WAS ATTENDED | COMPULSORY BID INFORMATION D: |
| | TEND THE COMPULSORY E | BID INFORMATION MEETING WILL ED. |
| | Technical Enquiries: No: 012 309 5855 | |
| ENQUIRIES | General Enquiries: Ms TEL. NO.: (012) 319 6 | |
| TIME DATE | 10:00 AM 17 OCTOBER 2018 | |
| | DEVELOPMENT | OKA DRIVE AND STADIUM |
| | RURAL, ENVIRONME | ENT AND AGRICULTURAL |

PART A INVITATION TO BID

| BID NUMBER: 4.4.12. | | | | | | | 1:00 AM |
|--------------------------------|---|-----------------------|--------------|-------------------------------------|--------|---------------------------------|-----------------------------|
| | BID NUMBER: 4.4.12.4/12/18 CLOSING DATE:25 OCTOBER 2018 CLOSING TIME: 11:00 AM APPOINTMENT OF A SERVICE PROVIDERS FOR THE EQUIPPING OF BOREHOLES IN THE NORTH WEST | | | | | | |
| | DVINCE, ADMINISTERED BY THE DEPARTMENT OF AGRICULTURE, FORESTRY AND FISHERIES THROUGH | | | | | | |
| | | LIMATE CHANGE AN | | | | | |
| BID RESPONSE DOCUM | IENTS MAY BE D | EPOSITED IN THE BID B | OX SITUATED | AT (STREET ADDI | RESS) | to second expedience and only | - while the second |
| DEPARTMENT OF AGRI | CULTURE FORES | STRY AND FISHERIES | | | | | |
| TENDER RECEIPTS OF | ICE ROMM NO:A | -GF-06 | | | | | |
| 20 STEVE BIKO ROAD A | RCADIA PROTOI | RIA | | | | | |
| | | | | | | | |
| BIDDING PROCEDURE | | BE DIRECTED TO | TECHNICAL | ENQUIRIES MAY E | E DIRE | CTED TO: | |
| CONTACT PERSON | MS NN ZWANE | | CONTACT P | | | MS M. Phuth | |
| TELEPHONE NUMBER | 012 319 6625 | | TELEPHONE | NUMBER | | 012 309 585 | 5 |
| FACSIMILE NUMBER | | | FACSIMILE N | IUMBER | | | |
| E-MAIL ADDRESS | NokuthulaZW@ | | E-MAIL ADD | | | MahlatseP@daff.gov.za | |
| SUPPLIER INFORMATIO | N min kathurapag. T | | 3 | The Page Action | | diament of live o | Ør ⊸n ji ji sesiam na jaji. |
| NAME OF BIDDER | | | | | | | |
| POSTAL ADDRESS | | | | | | | _ |
| STREET ADDRESS | | | | , | | | |
| TELEPHONE NUMBER | CODE | | | NUMBER | | | |
| CELLPHONE NUMBER | | | | | | | |
| FACSIMILE NUMBER | CODE | | | NUMBER | | | |
| E-MAIL ADDRESS | | | | | | | |
| VAT REGISTRATION NUMBER | | | | | | | |
| SUPPLIER | TAX | | | CENTRAL | | | |
| COMPLIANCE STATUS | COMPLIANCE SYSTEM PIN: | | OR | SUPPLIER DATABASE | | | |
| | OTO/LINT IIV. | | | No: | MAAA | | |
| B-BBEE STATUS | TICK API | PLICABLE BOX] | | TUS LEVEL SWORN | 1 | [TICK APPLICA | BLE BOX |
| LEVEL VERIFICATION CERTIFICATE | | | AFFIDAVIT | | | | |
| | ☐ Yes | ☐ No | | | | ☐ Yes | ☐ No |
| [A B-BBEE STATUS L | EVEL VERIFICA | TION CERTIFICATE/ | SWORN AFFI | DAVIT (FOR EME | S & Q. | SEs) MUST BE SU | BMITTED IN |
| ORDER TO QUALIFY I | | | | | | a garana Miliya Lafa sa | 1000年的第二 |
| ARE YOU THE ACCREDITED | | | | | | | |
| REPRESENTATIVE IN | _ | _ | 1 | OREIGN BASED OR THE GOODS | | ☐Yes | □No |
| SOUTH AFRICA FOR | ☐Yes | □No | 1 | WORKS OFFERED | ? | TIE VEG ANGWED | TUE |
| THE GOODS /SERVICES /WORKS | (IF YES ENCLOS | SE PROOFI | | | | [IF YES, ANSWER QUESTIONNAIRE | |
| OFFERED? | | | <u> </u> | | | | - |
| QUESTIONNAIRE TO BIL | DDING FOREIGN | SUPPLIERS | | | | | |
| IS THE ENTITY A RESIDE | ENT OF THE REPL | JBLIC OF SOUTH AFRIC | A (RSA)? | | | YES [| □ NO |
| DOES THE ENTITY HAVE | E A BRANCH IN TH | HE RSA? | | | | YES [| NO |
| DOES THE ENTITY HAVE | A PERMANENT I | ESTABLISHMENT IN THE | E RSA? | | | YES [| □NO |
| DOES THE ENTITY HAVE | ANY SOURCE O | F INCOME IN THE RSA? | , | | | YES [| □NO |
| IS THE ENTITY LIABLE IN | | | | | | ☐ YES [| |
| IF THE ANSWER IS "NO | " TO ALL OF TH | E ABOVE, THEN IT IS N | IOT A REQUIR | EMENT TO REGIST | TER FO | R A TAX COMPLIA | NCE 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 PA | RTICULARS 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: | |

PRICING SCHEDULE -- FIRM PRICES

NOTE: ONLY FIRM PRICES WILL BE ACCEPTED. NON-FIRM PRICES (INCLUDING PRICES SUBJECT TO RATE OF EXCHANGE VARIATIONS) WILL NOT BE CONSIDERED.

| NAME OF | SERVICE PROVIDER: | BID NO.: 4.4.12.2/12/18 |
|------------|--|--|
| CLOSING | TIME 11:00 ON 25 OCTOBER 2018 | |
| OFFER TO | D BE VALID FOR 90 DAYS (UNTIL 25 JANUARY 2019) FROM THE CLOSING DATE | OF BID. |
| ITEM NO | DESCRIPTION | BID PRICE IN RSA CURRENCY INCLUSIVE OF <u>VALUE ADDED TAX</u> |
| 1. | Bid Description: Appointment of a service providers for the North West Province, administered by the Departm Fisheries through its Directorate: Climate Change and D | ent of Agriculture, Forestry and |
| 2. | Bidders are required to indicate a total ceiling price of 13 bord to be equipped including all expenses for the project | eholes together with their reservoirs |
| | Borehole 1: Blok B Total price including vat and all cost | R |
| | Borehole 2: Disaneng Total price including vat and all cost | R |
| | Borehole 3: Lokaleng Total price including vat and all cost | R |
| | Borehole 4: Makgokgwane Total price including vat and all cost | R |
| | Borehole 5: Malaatshepe Total price including vat and all cost | R |
| | Borehole 6: Setlhatlhong farm Total price including vat and all co | ost R |
| | Borehole 7: Phiring Total price including vat and all cost | R |
| | Borehole 8: Southey Total price including vat and all cost | R |
| | Borehole 9: Tshunyane Total price including vat and all cost | R |
| | Borehole 10: Vergenoeg Total price including vat and all cost | R |
| | Borehole 11: itereleng Total price including vat and all cost | R |
| | Borehole 12: Magabue Total price including vat and all cost | R |
| | Borehole 13: Six Hundred Total price including vat and all cost | R |
| • | TOTAL PRICE FOR ALL THIRTEEN (13) BOREHOLES: R PRICE (INCLUSIVE OF ALL COSTS AND VAT) FIRM FOR A PE | |
| | Period required for commencement of project | |
| | Does the offer comply with the specification(s) | Yes / No |
| | If not to specification, indicate deviation(s) | |

Bid No.: SCM 4.4.12.2/12/14

| Name of Bidder: | |
|--|--------------------------------------|
| Period required for delivery | *Delivery: Firm / Not Firm |
| Did you submit a Valid Certificate B-BBEE/SWORN AFFIDAVIT? | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, |
| B-BBEE Status Level of Contribution | == |
| (A maximum of 10 points) | |

Technical enquiries can be directed to: Ms R.F. Phuthi

Tel: 012 309 5855

General enquiries Nokuthula Zwane Tel. no. 012 319 6625

Email: NokuthulaZW@daff.gov.za

SBD 4

DECLARATION OF INTEREST

- 1. Any legal person, including persons employed by the state¹, or persons having a kinship with persons employed by the state, including a blood relationship, may make an offer or offers in terms of this invitation to bid (includes an advertised competitive bid, a limited bid, a proposal or written price quotation). In view of possible allegations of favouritism, should the resulting bid, or part thereof, be awarded to persons employed by the state, or to persons connected with or related to them, it is required that the bidder or his/her authorised representative declare his/her position in relation to the evaluating/adjudicating authority where
 - the bidder is employed by the state; and/or
 - the legal person on whose behalf the bidding document is signed, has a relationship with persons/a person who are/is involved in the evaluation and or adjudication of the bid(s), or where it is known that such a relationship exists between the person or persons for or on whose behalf the declarant acts and persons who are involved with the evaluation and or adjudication of the bid.

| 2. | submitted with the bid. |
|-------|--|
| 2.1 | Full Name of bidder or his or her representative: |
| 2.2 | Identity Number: |
| 2.3 | Position occupied in the Company (director, trustee, shareholder², member): |
| 2.4 | Registration number of company, enterprise, close corporation, partnership agreement or trust: |
| 2.5 | Tax Reference Number: |
| 2.6 | VAT Registration Number: |
| 2.6.1 | The names of all directors / trustees / shareholders / members, their individual identity numbers, tax reference numbers and, if applicable, employee / PERSAL numbers must be indicated in paragraph 3 below. |

"State" means -

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

^{2*}Shareholder* means a person who owns shares in the company and is actively involved in the management of the enterprise or business and exercises control over the enterprise.

| 2.7 | Are you or any person connected with the bidder presently employed by the state? | YES / NO |
|---------|---|----------|
| 2.7.1 | If so, furnish the following particulars: | |
| | Name of person / director / trustee / shareholder/ member: Name of state institution at which you or the person connected to the bidder is employed : Position occupied in the state institution: | |
| | Any other particulars: | |
| | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | |
| | | |
| 2.7.2 | If you are presently employed by the state, did you obtain the appropriate authority to undertake remunerative work outside employment in the public sector? | YES / NO |
| 2.7.2. | If yes, did you attach proof of such authority to the bid document? | YES / NO |
| | (Note: Failure to submit proof of such authority, where applicable, may result in the disqualification of the bid. | |
| 2.7.2.2 | 2 If no, furnish reasons for non-submission of such proof: | |
| | | |
| 2.8 | Did you or your spouse, or any of the company's directors / trustees / shareholders / members or their spouses conduct business with the state in the previous twelve months? | YES / NO |
| 2.8.1 | If so, furnish particulars: | |
| | | |
| | | |
| | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | |
| 2.9 | Do you, or any person connected with the bidder, have any relationship (family, friend, other) with a person employed by the state and who may be involved with the evaluation and or adjudication of this bid? | YES / NO |
| 2.9.1 | If so, furnish particulars. | |
| | | |
| | .,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | |

| 2.10 | Are you, or any person connect aware of any relationship (far any other bidder and any per who may be involved with the of this bid? | mily, friend, other) bet son employed by the | state | 0 | |
|------|--|---|-------------------------|------------------|----------|
| 2.10 | .1 f so, furnish particulars. | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| 2.11 | Do you or any of the directors / t of the company have any interes whether or not they are bidding t | st in any other related | | 0 | |
| 2.11 | .1 If so, furnish particulars: | | | | |
| | | | | | |
| | | | | | |
| | *************************************** | | | | |
| 3 | Full details of directors / trustee | es / members / share | holders. | | |
| | Full Name | Identity | Personal Income | State | Employee |
| | | Number | Tax Reference Number | Number Number | / Persal |
| | | | | | |
| | | | | | |

November 2011

PREFERENCE POINTS CLAIM FORM IN TERMS OF THE PREFERENTIAL PROCUREMENT REGULATIONS 2017

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

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

1. GENERAL CONDITIONS

- 1.1 The following preference point systems are applicable to all bids:
 - the 80/20 system for requirements with a Rand value of up to R50 000 000 (all applicable taxes included); and
 - the 90/10 system for requirements with a Rand value above R50 000 000 (all applicable taxes included).

1.2

- a) The value of this bid is estimated to not exceed R50 000 000 (all applicable taxes included) and therefore the 80/20 preference point system shall be applicable; or
- b) Either the 80/20 or 90/10 preference point system will be applicable to this tender (delete whichever is not applicable for this tender).
- 1.3 Points for this bid shall be awarded for:
 - (a) Price; and
 - (b) B-BBEE Status Level of Contributor.
- 1.4 The maximum points for this bid are allocated as follows:

| | POINTS |
|---|--------|
| PRICE | 80 |
| B-BBEE STATUS LEVEL OF CONTRIBUTOR | 20 |
| Total points for Price and B-BBEE must not exceed | 100 |

- 1.5 Failure on the part of a bidder to submit proof of B-BBEE Status level of contributor together with the bid, will be interpreted to mean that preference points for B-BBEE status level of contribution are not claimed.
- 1.6 The purchaser reserves the right to require of a bidder, either before a bid is adjudicated or at any time subsequently, to substantiate any claim in regard to preferences, in any manner required by the purchaser.

2. **DEFINITIONS**

- (a) "B-BBEE" means broad-based black economic empowerment as defined in section 1 of the Broad-Based Black Economic Empowerment Act;
- (b) "B-BBEE status level of contributor" means the B-BBEE status of an entity in terms of a code of good practice on black economic empowerment, issued in terms of section 9(1) of the Broad-Based Black Economic Empowerment Act;
- (c) "bid" means a written offer in a prescribed or stipulated form in response to an invitation by an organ of state for the provision of goods or services, through price quotations, advertised competitive bidding processes or proposals;
- (d) "Broad-Based Black Economic Empowerment Act" means the Broad-Based Black Economic Empowerment Act, 2003 (Act No. 53 of 2003);
- (e) "EME" means an Exempted Micro Enterprise in terms of a code of good practice on black economic empowerment issued in terms of section 9 (1) of the Broad-Based Black Economic Empowerment Act;
- (f) "functionality" means the ability of a tenderer to provide goods or services in accordance with specifications as set out in the tender documents.
- (g) "prices" includes all applicable taxes less all unconditional discounts;
- (h) "proof of B-BBEE status level of contributor" means:
 - 1) B-BBEE Status level certificate issued by an authorized body or person;
 - 2) A sworn affidavit as prescribed by the B-BBEE Codes of Good Practice;
 - 3) Any other requirement prescribed in terms of the B-BBEE Act;
- (i) "QSE" means a qualifying small business enterprise in terms of a code of good practice on black economic empowerment issued in terms of section 9 (1) of the Broad-Based Black Economic Empowerment Act;
- (j) "rand value" means the total estimated value of a contract in Rand, calculated at the time of bid invitation, and includes all applicable taxes;

3. POINTS AWARDED FOR PRICE

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

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

80/20 or 90/10

$$P_S = 80 \left(1 - \frac{Pt - P\min}{P\min} \right)$$
 or $P_S = 90 \left(1 - \frac{Pt - P\min}{P\min} \right)$

Where

Ps = Points scored for price of bid under consideration

Pt = Price of bid under consideration

Pmin = Price of lowest acceptable bid

4. POINTS AWARDED FOR B-BBEE STATUS LEVEL OF CONTRIBUTOR

4.1 In terms of Regulation 6 (2) and 7 (2) of the Preferential Procurement Regulations, preference points must be awarded to a bidder for attaining the B-BBEE status level of contribution in accordance with the table below:

| B-BBEE Status Level of Contributor | Number of points (90/10 system) | Number of points (80/20 system) | | | |
|---------------------------------------|------------------------------------|------------------------------------|--|--|--|
| 1 | 10 | 20 | | | |
| 2 | 9 | 18 | | | |
| 3 | 6 | 14 | | | |
| 4 | 5 | 12 | | | |
| 5 | 4 | 8 | | | |
| 6 | 3 | 6 | | | |
| 7 | 2 | 4 | | | |
| 8 | 1 | 2 | | | |
| Non-compliant contributor | 0 | 0 | | | |

| 5. BID DECLARATION | | BID | DECL | ARA | NOIT |
|--------------------|--|-----|-------------|-----|-------------|
|--------------------|--|-----|-------------|-----|-------------|

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

| 6. | B-BBEE | STATUS | LEVEL | OF | CONTRIBUTOR | CLAIMED | IN | TERMS | OF |
|----|---------------|-------------------|--------------|----|-------------|---------|----|-------|----|
| | PARAGR | APHS 1.4 A | AND 4.1 | | | | | | |

| 6.1 | B-BBEE Status Level of Contributor: | 16 | = | (maximum of 10 or 20 |
|-----|-------------------------------------|----|---|----------------------|
| | points) | | | |

(Points claimed in respect of paragraph 7.1 must be in accordance with the table reflected in paragraph 4.1 and must be substantiated by relevant proof of B-BBEE status level of contributor.

7. SUB-CONTRACTING

7.1 Will any portion of the contract be sub-contracted?

(Tick applicable box)

| YES | NO | |
|-----|----|--|

7.1.1 If yes, indicate:

| | | percentage ed | of | the % | contract | will | be |
|------|-----|------------------|--------|----------|----------|------|------|
| | The | name | | of | the | | sub- |
| iii) | The | B-BBEE | status | levei | of | the | sub- |

iv) Whether the sub-contractor is an EME or QSE

(Tick applicable box)
YES NO

v) Specify, by ticking the appropriate box, if subcontracting with an enterprise in terms of Preferential Procurement Regulations, 2017:

| Designated Group: An EME or QSE which is at last 51% owned by: | EME √ | QSE √ |
|--|----------|----------|
| Black people | | |
| Black people who are youth | | |
| Black people who are women | <u> </u> | |

| Black people with disabilities | |
|---|------|
| Black people living in rural or underdeveloped areas or townships | |
| Cooperative owned by black people | |
| Black people who are military veterans | |
| OR | |
| Any EME | |
| Any QSE | |

| 8. | DECLARATION WITH REGARD TO COMPANY/FIRM |
|-----|--|
| 8.1 | Name of company/firm: |
| 8.2 | VAT registration number: |
| 8.3 | Company registration number: |
| 8.4 | TYPE OF COMPANY/ FIRM |
| | Partnership/Joint Venture / Consortium One person business/sole propriety Close corporation Company (Pty) Limited [TICK APPLICABLE BOX] |
| 8.5 | DESCRIBE PRINCIPAL BUSINESS ACTIVITIES |
| | |
| 8.6 | COMPANY CLASSIFICATION Manufacturer Supplier Professional service provider Other service providers, e.g. transporter, etc. [TICK APPLICABLE BOX] |
| 8.7 | Total number of years the company/firm has been in business: |
| 8.8 | I/we, the undersigned, who is / are duly authorised to do so on behalf of the company/firm, certify that the points claimed, based on the B-BBE status level of contributor indicated in paragraphs 1.4 and 6.1 of the foregoing certificate, qualifies the company/ firm for the preference(s) shown and I/we acknowledge that: |
| | i) The information furnished is true and correct; |

ii) The preference points claimed are in accordance with the General Conditions as indicated in paragraph 1 of this form;

- iii) In the event of a contract being awarded as a result of points claimed as shown in paragraphs 1.4 and 6.1, the contractor may be required to furnish documentary proof to the satisfaction of the purchaser that the claims are correct;
- iv) If the B-BBEE status level of contributor has been claimed or obtained on a fraudulent basis or any of the conditions of contract have not been fulfilled, the purchaser may, in addition to any other remedy it may have
 - (a) disqualify the person from the bidding process;
 - 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 bidder or contractor, its shareholders and directors, or only the shareholders and directors who acted on a fraudulent basis, be restricted by the National Treasury from obtaining business from any organ of state for a period not exceeding 10 years, after the audi alteram partem (hear the other side) rule has been applied; and
 - (e) forward the matter for criminal prosecution.

| WITNESSES | | |
|-----------|---------|--------------------------|
| 1 | | GNATURE(S) OF BIDDERS(S) |
| 2 | DATE: | |
| | ADDRESS | |
| | | |
| | | |
| | | |

DECLARATION OF BIDDER'S PAST SUPPLY CHAIN MANAGEMENT PRACTICES

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

| item | Question | Yes | No |
|-------|--|-----|------|
| 4.1 | Is the bidder or any of its directors listed on the National Treasury's database as companies or persons prohibited from doing business with the public sector? (Companies or persons who are listed on this database were informed in writing of this restriction by the National Treasury after the audi alteram partem rule was applied.) | Yes | No |
| 4.1.1 | If so, furnish particulars: | | |
| 4.2 | Is the bidder or any of its directors listed on the Register for Tender Defaulters in terms of section 29 of the Prevention and Combating of Corrupt Activities Act (No 12 of 2004)? To access this Register enter the National Treasury's website, www.treasury.gov.za, click on the icon "Register for Tender Defaulters" or submit your written request for a hard copy of the Register to facsimile number (012)326-5445. | Yes | No . |
| 4.2.1 | If so, furnish particulars: | | |
| 4.3 | Was the bidder or any of its directors convicted by a court of law (including a court outside of the Republic of South Africa) for fraud or corruption during the past five years? | Yes | No |
| 4.3.1 | If so, furnish particulars: | | |
| 4.4 | Was any contract between the bidder and any organ of state terminated during the past five years on account of failure to perform on or comply with the contract? | Yes | No |
| 4.4.1 | If so, furnish particulars: | | |

CERTIFICATION

| Position | Name of Bidder |
|---|-----------------------------|
| | |
| Signature | Date |
| I ACCEPT THAT, IN ADDITION TO CANCELLATIO BE TAKEN AGAINST ME SHOULD THIS DECLARA | |
| I, THE UNDERSIGNED (FULL NAME) CERTIFY THAT THE INFORMATION FURNISHED TRUE AND CORRECT. | ON THIS DECLARATION FORM IS |

SBD 9

CERTIFICATE OF INDEPENDENT BID DETERMINATION

- 1 This Standard Bidding Document (SBD) must form part of all bids¹ invited.
- Section 4 (1) (b) (iii) of the Competition Act No. 89 of 1998, as amended, prohibits an agreement between, or concerted practice by, firms, or a decision by an association of firms, if it is between parties in a horizontal relationship and if it involves collusive bidding (or bid rigging).² Collusive bidding is a *pe* se prohibition meaning that it cannot be justified under any grounds.
- Treasury Regulation 16A9 prescribes that accounting officers and accounting authorities must take all reasonable steps to prevent abuse of the supply chain management system and authorizes accounting officers and accounting authorities to:
 - a. disregard the bid of any bidder if that bidder, or any of its directors have abused the institution's supply chain management system and or committed fraud or any other improper conduct in relation to such system.
 - b. cancel a contract awarded to a supplier of goods and services if the supplier committed any corrupt or fraudulent act during the bidding process or the execution of that contract.
- This SBD serves as a certificate of declaration that would be used by institutions to ensure that, when bids are considered, reasonable steps are taken to prevent any form of bid-rigging.
- In order to give effect to the above, the attached Certificate of Bid Determination (SBD 9) must be completed and submitted with the bid:

includes price quotations, advertised competitive bids, limited bids and proposals.

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

CERTIFICATE OF INDEPENDENT BID DETERMINATION

| I, the undersigned, in submitting the accompanying bid: | |
|--|------------------------------------|
| (Bid Number and Descript | on) |
| in response to the invitation for the bid made by: | |
| (Name of Institution) | |
| do hereby make the following statements that I certify to be | true and complete in every respect |
| certify, on behalf of: | that: |
| (Name of Ridder) | |

(Name of Bidder)

- 1. I have read and I understand the contents of this Certificate;
- 2. I understand that the accompanying bid will be disqualified if this Certificate is found not to be true and complete in every respect;
- 3. I am authorized by the bidder to sign this Certificate, and to submit the accompanying bid, on behalf of the bidder;
- 4. Each person whose signature appears on the accompanying bid has been authorized by the bidder to determine the terms of, and to sign the bid, on behalf of the bidder;
- 5. For the purposes of this Certificate and the accompanying bid, I understand that the word "competitor" shall include any individual or organization, other than the bidder, whether or not affiliated with the bidder, who:
 - (a) has been requested to submit a bid in response to this bid invitation;
 - (b) could potentially submit a bid in response to this bid invitation, based on their qualifications, abilities or experience; and
 - (c) provides the same goods and services as the bidder and/or is in the same line of business as the bidder

- The bidder has arrived at the accompanying bid independently from, and without consultation, communication, agreement or arrangement with any competitor. However communication between partners in a joint venture or consortium³ will not be construed as collusive bidding.
- 7. In particular, without limiting the generality of paragraphs 6 above, there has been no consultation, communication, agreement or arrangement with any competitor regarding:
 - (a) prices;
 - (b) geographical area where product or service will be rendered (market allocation)
 - (c) methods, factors or formulas used to calculate prices;
 - (d) the intention or decision to submit or not to submit, a bid;
 - (e) the submission of a bid which does not meet the specifications and conditions of the bid; or
 - (f) bidding with the intention not to win the bid.
- 8. In addition, there have been no consultations, communications, agreements or arrangements with any competitor regarding the quality, quantity, specifications and conditions or delivery particulars of the products or services to which this bid invitation relates.
- 9. The terms of the accompanying bid have not been, and will not be, disclosed by the bidder, directly or indirectly, to any competitor, prior to the date and time of the official bid opening or of the awarding of the contract.

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

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

| Signature | Date |
|-----------|--------------------------|
| Position | Name of Bidder Js914w 2 |



Bid invitation

BID NUMBER:

4.4.12.4/12/18

SUBJECT:

APPOINTMENT OF A SERVICE PROVIDERS FOR THE EQUIPPING OF BOREHOLES IN THE NORTH WEST PROVINCE, ADMINISTERED BY THE DEPARTMENT OF AGRICULTURE, FORESTRY AND FISHERIES THROUGH ITS DIRECTORATE: CLIMATE CHANGE AND DISASTER MAN-

AGEMENT

1. GENERAL BID CONDITIONS

- 1.1 Bidders who failed to complete the bid terms of reference/specification in all respects will automatically be disqualified.
- 1.2 Bidders who failed to complete and sign all the bid documentation and/or failed to submit all the required information/documentation as requested in terms of the bid documentation may be disqualified. The recommended bidder(s) may be requested to complete and sign all bid documentation within five (5) working days from date of request. Failure to submit will result in disqualification of the bid.
- 1.3 The bid must conform to the minimum requirements, as set out in this document, or it must be stated clearly how it deviates from these requirements and why. Offers exceeding the minimum requirements of the terms of reference/specification are acceptable.
- 1.4 Bidders must complete all the necessary bid forms and undertakings, which normally or otherwise accompany a government bid. The following forms and terms of reference/specification must be completed and submitted together with the bidder's response to this bid:

SBD 1 = Invitation to bid SBD 3 = Pricing schedule

SBD 4 = Declaration of interest

SBD 6.1 = Preference points claim form

SBD 8 = Declaration of bidder's past Supply Chain Management (SCM) prac-

tices

SBD 9 = Certificate of Independent Bid Determination

- No bid may be awarded to any bidder whose tax status has not been declared compliant by SARS. Bidders that are not tax compliant according to the CSD must resolve their tax matters with SARS within seven (7) working days from date of request.
- 1.6 All bidders must ensure that they are registered on the Central Supplier Database (CSD): www.csd.gov.za. Bidders are advised to ensure that their banking details are successfully verified on the CSD.

- 1.7 The CSD Registration Report must be attached to the bid document.
- 1.8 The Department will not award any bid to a bidder not registered as a prospective service provider/supplier on the CSD.
- 1.9 The successful bidder will be required to sign a written contract form (SBD 7). This document will be a binding contract between the successful bidder and the department. No service should be rendered without receipt of an official order issued by the department. No official order will be issued unless a successful bidder(s) has been successfully registered on the Central Supplier Database of the National Treasury.
- 1.10 The official forms as per paragraph 1.4 above and the bid terms of reference/specification must NOT be retyped. To ensure authenticity of documents bidders must complete forms manually. Bidders who do not comply with this requirement and retype the bidding documentation will be disqualified.
- 1.11 This bid is subject to Government Procurement: General Conditions of Contract, which may not be amended.
- 1.11.1 Failure to withdraw, waive and/or renounce the bidder's own bid conditions, when called upon to do so, may invalidate the bid.
- 1.12 During evaluation of the bids, information may be requested in writing from bidders. Replies to such requests must be submitted within five (5) working days or bids may be disregarded.
- 1.13 The department may **only accept a total ceiling price** for the entire project that must be inclusive of **all** costs (including travel and subsistence expenses). The bidders will not be entitled to claim for travel and subsistence expenses, such items must be included in the bid price.
- 1.14 The department will give preference to bidders that bid firm prices for the entire duration of the contract in terms of this bid. Non-firm prices (including prices that are subject to rates of exchange variations) may be considered if supporting documentation is submitted. Should the bidder fail to indicate the bid price on the SBD 3 form (Pricing schedule), the bid may be regarded as invalid. No price increases will be considered by the Department in cases where firm bid prices have been agreed upon.
- 1.15 The department will not be held liable for any expenses incurred by bidders in preparing and submitting bids.
- 1.16 The department reserves the right to appoint more than one bidder, depending on conditions of the bid.
 - The award of the bid may be subjected to price negotiation with the preferred bidders.
- 1.17 The department hereby chooses the following street address as its *domicilium citandi et executandi* for the purpose of serving notices and legal documentation:

Street address
Agriculture Place
20 Steve Biko Road
ARCADIA
Pretoria
0007

DAFF BID: 4.4.12.2/12/18. Amended: 20 April 2017

- 1.18 Bidders are required to submit proof of B-BBEE Status Level of contributor. Proof includes original and valid B-BBEE Status Level Verification Certificates or certified copies thereof together with their bids or price quotations to substantiate their B-BBEE rating claims.
- 1.19 B-BBEE Status Level Verification Certificates submitted, must be issued by the following:

1.19.1 Bidders other than EMEs and OSEs

Verification agencies accredited by SANAS; or

1.19.2 Bidder who qualify as EMEs and QSEs

Sworn affidavit signed by the EME or QSE representative and attested by a Commissioner of Oaths.

- 1.19.3 Bidders who do not submit B-BBEE Status Level Verification Certificates or who are non-compliant contributors to B-BBEE do not qualify for preference points for B-BBEE.
- 1.19.4 A trust, consortium or joint venture (including unincorporated consortia and joint ventures) must submit a consolidated B-BBEE Status Level Verification Certificate for every separate bid.
- 1.19.5 Public entities and tertiary institutions must submit B-BBEE Status Level Verification Certificates together with their bids.
- 1.20 For joint venture to be considered and points allocated accordingly, the following documents are required:
- 1.20.1 Agreement between parties in joint venture;
- 1.20.2 Consolidated B-BBEE certificate (this is not a disqualification document, but a joint venture will not be allocated B-BBEE points if it is not submitted, except where it forms part of prequalification criteria in the evaluation of the bid; and
- 1.20.3 Both parties must be registered on the Central Supplier Database with a tax compliant status.
- 1.21 Bidder(s) may be requested to submit a valid company registration certificate issued by the Registrar of Companies and copies of the ID document(s) of active director(s).

1.22 Enquiries

| Technical enquiries | Mahlatse Phuthi | Tel. 012 309 5855 |
|-----------------------|-----------------|-------------------|
| General SCM enquiries | Nokuthula Zwane | Tel. 012 319 6625 |

- 1.22 The successful bidder must supply and deliver goods to the address as indicated in the bid documentation.
- 1.23 The validity period of this bid must be at least 90 days from the closing date of the bid.

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2. CONFIDENTIALITY

- 2.1 This bid and all information in connection therewith shall be held in strict confidence by bidders and the use of such information shall be limited to the preparation of the bid. Bidders shall undertake to limit the number of copies of this document.
- 2.2 All bidders are bound by a confidentiality clause preventing the unauthorised disclosure of any information regarding the department or of its activities to any other organisation or individual. The bidders may not disclose any information, documentation or products to other clients without the written approval of the Director-General or the delegated official.

COPYRIGHT

3.1 Copyright of all documentation in relation to this bid belongs to the department. The successful bidder may not disclose any information, documentation or products to other clients without the written approval of the Director-General or the delegated official.

4. PAYMENTS

- 4.1 Payment shall normally be made within 30 days after receipt of an original invoice, subject to satisfactory delivery of the service as outlined in the Terms of Reference/Specification.
- 4.2 The bidder will not be entitled to claim for travel and subsistence expenses. If such expenses are applicable, these charges must be included in the bid price.

5. NON-COMPLIANCE WITH DELIVERY TERMS

As soon as it becomes known to the bidder that he/she will not be able to perform the services/deliver the goods within the agreed time/or delivery period and/or against the quoted price and/or as specified in the contract, the department must be given immediate written notice to this effect. The department reserves the right to implement remedies as provided for in paragraph 22 of the General Conditions of Contract.

6. RETENTION

- 6.1 On termination of this agreement, the bidder shall on demand, hand over all documentation, information, etc. to the department without the right of retention.
- No agreement to amend or vary a contract or order or the conditions, stipulations or provisions thereof shall be valid and of any force and effect unless such agreement to amend or vary is entered into in writing and signed by the contracting parties. Any waiver of the requirement of the agreement to amend or vary conditions shall be in writing.

7. EVALUATION TEAM

The department will appoint a bid evaluation committee to evaluate the bid submissions. The committee will make recommendations to the Bid Adjudication Committee.

8. EVALUATION OF BIDS

Bids will be evaluated on the following basis:

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8.1 Phase 1: Prequalification criteria

- 8.1.1 The following prequalification criteria will be applicable to this bid:
 - (i) Service providers/suppliers must have a B-BBEE Status Level of 1 4
- 8.1.2 Bidders that do not meet the pre-qualification criteria stipulated in paragraph 8.1.1 above will be disqualified from further evaluation. Bidders must submit proof of B-BBEE Status Level of Contributor that complies with paragraph 1.18 above (sworn affidavits or B-BBEE Status Level Verification Certificates issued by SANAS accredited verification agencies).
- 8.2 Phase 2: Compliance with minimum bid requirements
- 8.2.1 All bids duly lodged will be evaluated to determine compliance with the bid requirements and conditions. Bids with obvious deviations from the bid requirements/conditions and not acceptable to the evaluation committee will be eliminated from the adjudication process, i.e. will not be shortlisted.
- 8.3 Phase 3: Evaluation for price and preference point system
- 8.3.1 Only bidders who met all the minimum requirements in terms of paragraph 8.2.1 above will be brought on a comparative price basis in terms of the applicable preference point system prescribed in the Preferential Procurement Regulations 6 and 7 of 2017 as indicated in the SBD 6.1 form.
- 8.4 Phase 4: Awarding of bid
- 8.4.1 The bid will be awarded to the bidder who scores the highest total number of points in terms of the preference point system (Price and B-BBEE points), unless objective criteria in terms of section 2(f) of the Act justify the award of the bid to another bidder.
- 9. LATE BIDS

All completed documentation must be returned to the Department of Agriculture, Forestry and Fisheries before 11:00 on 25 OCTBER 2018. The location of the drop off is: Agriculture Place, Tender Receipt Office, Tender Box, Room A-GF-06.

Bids received late shall not be considered. The bidding box shall be locked at exactly 11:00. The closing time will be in accordance with Telkom time (1026).

Bidders are therefore advised to ensure that bids are dispatched allowing sufficient time for any unforeseen events that may delay the delivery of the bid and time to access the premises because of security arrangements when entering the department's gate.

- COMPULSORY SITE INSPECTION/BRIEFING SESSION
- 10.1 Bidders not attending a compulsory site inspection/briefing session will automatically be disqualified.
- 10.2 No late arrivals by bidders for a compulsory site inspection/briefing session will be allowed.

DAFF BID: 4.4.12.2/12/18.
Amended: 20 April 2017

11. FRAUD AND CORRUPTION

All prospective bidders should take note of the implications of contravening the Prevention and Combating of Corrupt Activities Act, Act No. 12 of 2004 and any other act applicable.

12. THE DEPARTMENT RESERVES THE RIGHT TO REJECT OR CANCEL BIDS

Bids may be cancelled for any of the following reasons:

- 12.1 If the bidder has committed a proven corrupt or fraudulent act in competing for a particular contract.
- 12.2 If the bidder or any of its directors have:
 - (i) Abused the SCM system of any government department.
 - (ii) Failed to perform any previous contract and the proof thereof exists.
 - (iii) Restricted from doing business with the public sector if such a bidder obtained preferences fraudulently or if such bidder failed to perform on a contract based on the specific goals.
 - (iv) If there is proof of fraud or any other improper conduct in relation to such system.
- 12.3 Due to changed circumstances, there is no longer a need for the goods or services requested.
- 12.4 Funds are no longer available to cover the total envisaged expenditure.
- 12.5 No acceptable bids are received.
- 12.6 Due to material irregularities in the bid process.

DAFF BID: 4.4.12.2/12/18. Amended: 20 April 2017 TERMS OF REFERENCE FOR THE QUOTATION FOR THE APPOINTMENT OF A SERVICE PROVIDER FOR THE EQUIPPING OF BOREHOLES IN THE NORTH WEST PROVINCE, ADMINISTERED BY THE DEPARTMENT OF AGRICULTURE, FORESTRY AND FISHERIES THROUGH ITS DIRECTORATE: CLIMATE CHANGE AND DISASTER MANAGEMENT

1. INTRODUCTION AND BACKGROUND

Agricultural production is a risky business as it is very sensitive to extreme weather and climate conditions. Due to the frequency of extreme weather and climate events in the country, the agricultural sector has moved from one disaster to another. Some of the impacts were directly related to the extreme weather and climate events i.e. floods, droughts etc. while others were indirectly related i.e. outbreak of some diseases and pests etc. which were reported as the secondary impacts. These disasters were costly for the government and funds utilized for disaster relief and recovery could have been prioritized for other developmental needs in the country.

Disaster Management Act 57 of 2002 puts more emphasis on pre-disaster risk reduction phase where activities aimed at disaster risk avoidance, prevention, mitigation and preparedness are prioritized. The Department of Agriculture, Forestry and Fisheries (DAFF) through among other disaster risk management activities implements an early warning system in support of disaster risk management. This system disseminates monthly National Agro-meteorological Committee (NAC) Advisories and daily extreme weather warnings with suggested strategies aimed at disaster risk reduction, prevention, avoidance, mitigation and preparedness as per the Disaster Management Act (Act No. 57 of 2002). Disaster risk reduction measures suggested in the advisories and warnings were not always implemented by the farming communities due to lack of resources which led to more exposure to natural hazards.

Disaster Risk Prevention and Mitigation Fund is aimed at effective implementation of disaster risk reduction measures as required by the Disaster Management Act 57 of 2002.

2. SCOPE OF SERVICE

The Directorate: Climate Change and Disaster Management wishes to appoint a service provider for the equipping of boreholes on the Disaster Risk Prevention and Mitigation Fund that is administered by the Department of Agriculture, Forestry and Fisheries, Directorate: Climate Change and Disaster Management.

| | Γ | COMPLY | | |
|-------|---|--------|--|--|
| | | YES | NO | REMARKS |
| 3. | SERVICE REQUIREMENTS | | | |
| 3.1. | A total number of thirteen (13) boreholes together with their reservoirs and drinking troughs to be equipped in North West Province. | | | The second secon |
| 3.2 T | plan together with the bid documents to show how the work will be completed within a period of six months. The service provider should also submit the cost breakdown per borehole. Failure to submit these documents will lead to the bid to be viewed as invalid and therefore rejected. (See Annexure A for an implementation plan example). | | | |
| 3.3 | The successful bidder will be expected to sign the implementation plan/schedule with time frames developed by the Department of Agriculture, Forestry and Fisheries (DAFF) in collaboration with the Provincial Department of Rural, Environmental and Agricultural Development (READ). | | | |
| 3.4 | The service provider will keep a construction book on site to record all technical instructions by the engineers/technicians. | | manufacture and the second sec | |
| 3.5 | The service provider will adhere to the inspection schedule in accordance with the agreed plan of phases/stages to be followed in equipping of boreholes. | | | |
| 3.6 | The service provider will only submit an invoice after the equipping of a borehole is complete and working, and monitoring and evaluation conducted by the engineers, DAFF and the provincial official. No payment will be made by DAFF before a borehole is finalised and signed off by the engineers/ technicians. | | The state of the s | |
| 3.7 | The service provider will submit an invoice signed by him/her in line with the payment certificate per completed borehole. | | | |
| 3.8 | The successful bidder should submit a status report with every signed invoice by him/her together with the relevant official from READ. The service provider should | | | |

| | [| | COMPLY | | |
|--------------------------|--|--|--|--|--|
| | į | YES | NO | REMARKS | |
| rannamia man ban na ti b | further submit the final report in accordance with the template to be provided by DAFF as well as the construction book. | and the second s | A 10 10 10 10 10 10 10 10 10 10 10 10 10 | | |
| 3.9 | The retention amount will be 10%. 5% of this retention money will be paid to the service provider following the issuing of the certificate of completion by the engineers. The remaining 5% will be paid 14 days after the end of Defect Liability Period. Defect Liability (Rectification) Period will be 3 months after completion of the last project site. | | | | |
| 3.10 | The successful bidder should provide skills transfer (general maintenance of a windmill, reservoir and drinking troughs) to the project beneficiaries. | and the state of t | | 2 | |
| 3.11 | Bidders must provide proof in the form of a declaration letter that they will be able to finalise more than one project of the Department simultaneously within the stipulated timeframe in case they have an existing project prior application to this bid. | | | | |
| | Failure to provide the declaration letter together with the bid document by the bidder who has work prior application to this bid on the closing date and time will invalidate the bid. The bidder who does not have any existing project does not need to submit any declaration letter. | | | The state of the s | |
| 3.12 | The service provider is expected to deliver materials and windmills to all borehole sites without additional costs. | | 24 24 34 | | |
| 3.13 | The bidder should have successfully executed a minimum of three contracts on equipping of boreholes with windmills and or repairing of windmills and construction reservoirs (two contracts of windmills and one of a reservoir). The bidder is expected to submit proof by means of completion letters/certificates from where the service was provided. | | | | |
| | The letters with an official letterhead must be signed and have references i.e. contact persons and telephone numbers must be included. In cases where the letters do not have letterheads they must be accompanied by affidavits from the South African Police Service. Relevant | | | | |

| ſ | | COMP | LY |
|--|--|------|--|
| | YES | NO | REMARKS |
| experience should be clearly highlighted. Failure to submit the completion letters/certificates will invalidate the bid. | The second secon | | |
| 3.14 Local community members must be prioritised for jobs during the implementation of the project. | | | |
| 3.15 The service provider is expected to travel to the specified properties to attend site visits at no extra costs to the Department. | , see a | | |
| 3.16 The service provider must have someone in the company who is able to communicate in the official local languages in case the service provider is unable to. | | | |
| 3.17 Work must be completed within six months after receiving the order number and signing of the implementation plan. | | | |
| 3.18 The Department reserves the right to appoint more than one service provider to render the required service. | | | |
| 4. DELIVERABLES | | | |
| 4.1 Thirteen(13) boreholes together with their reservoirs and drinking troughs to be equipped in North West Province as follows: | | | |
| Description | | | |
| Site establishment Office and storage shed (1 x Sum) Ablution and latrine facilities (2 x Sum) No water and electricity available | | | The state of the s |
| Occupational health and safety measures Cost of health and safety measures required in terms of the Construction Regulations (2003) of the Occupational Health and Safety act (1 x Sum) Compilation and maintenance of a Health and Safety Plan, including Risk Assessments, Safe Work Procedures and Method Statements (1 x Sum) Compilation and maintenance of a Health and Safety File (1 x Sum) | | | |
| PROJECTS SPECIFICATIONS | | | |
| | | | |

| | COMPLY | | LY |
|---|----------|-----------------------------------|----------------------|
| | YES | NO | REMARKS |
| | | | |
| 4.1.1 Blok B (S 26° 14' 43. 8"; E 23° 35' 44.6") | | | |
| Windmill location: S 26° 14' 43. 8"; E 23° 35' 44.6" | | - c-c-c- | |
| Supply and installation of Windmill (1 x Windmill) (Includes all equipment, materials, transport and labour required) | | | |
| Install 9 m high windmill tower with a 4.3 m Ø wheel with a gearbox, tail brake system, fork rod, bucket rod (pitman), wood rod x 3 meter and force head. | | Section 1 | |
| 40mm Ø x 3.0m galvanized medium screwed/socket pipe SABS (46 x Pipe) | | | |
| 12 mm Ø x 3.0m electro plated pump rods with socks and protectors (47 x Rod) | | | |
| Borehole specification (Pump depth = 92 meters) | J | | |
| Borehole depth: 132 m | | | |
| Water level: Before test: 62.2 | | | |
| After test: 91.2 | | | |
| Delivery: 6545 l/h | | | |
| Water abstraction limit at 60 % of delivery: 3927 l/h | | | |
| Stainless steel borehole cylinder diameter 60 mm tube length | | | 8 |
| 550 mm (1 x Cylinder) | | | #1.7] # |
| Cylinder make: | | | |
| Cylinder model: | | | |
| Cylinder size: mm | | | |
| Specify delivery of cylinder: Liters/hour | | : | |
| Total head : Meters | | | , NE 100 T - 1 100 T |
| Windmill Tower Foundation (2.8 m³) | | Ì | |
| Concrete strength: 30 MPa | | | |
| Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of | | | |
| 19 mm stone) | | | |
| Size: See attached specification in Appendix A | | | |
| Provide concrete test cube results | | | |
| Supporting concrete block around casing (0.3 m ³) | | | 1 |
| Concrete strength: 30 MPa | | | 1 |
| Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of | | | |
| 19 mm stone) | | | - |
| Size: 800mm diameter x 600mm high 4 x 12mm bolts and | | 7 | eries. |
| nuts | | C. manual | |
| Provide concrete test cube results | <u> </u> | Superior via Liveria proportion i | 1 |

| | Parallel 1, 100, 1000 | COMPLY | | |
|---|---|--------|---|--|
| | YES | NO | REMARKS | |
| Fittings from windmill to reservoir | Water State Co. | | | |
| 40 mm Ø brass foot valves (strainer) (1 x Valve) | | | ŧ | |
| • 40 mm Ø base plate (1 x Plate) | | | | |
| 40 mm Ø brass non return valve (1 x Valve) | | | | |
| 40 mm Ø brass force head (1 x F-head) | | | T. | |
| ■ 40 mm Ø inlet air chamber (150mm Ø x 900mm steel pipe | | | | |
| (2mm thick) with 20 mm brass gate valve) (1 x Air chamber) | | | | |
| 40 mm nipple (galv) (3 x Nipple) | | |] | |
| 40 mm T-piece (galv) (2 x T/piece) | | | | |
| • 40 mm x 0.5 meter standpipe (galv) (1 x Pipe) | | | | |
| 40 mm male bend (galv) (2 x Bend) | | | Ė | |
| 40 mm male adaptor (nylon) (1 x Adaptor) | | | | |
| • 40 mm pipe clamp (1 x Clamp) | | | | |
| e 40 mm LDPE pipe (30 Meter) | | | | |
| Reservoir location: Approximately 5m away from the windmill | | | | |
| 2.1 m , wall thickness 225 mm, capacity 33.5 m³ (33.5 kl), The wall should be reinforced horizontally and vertically and the floor horizontally. Reservoir should be supply with inlet and outlet. The drinking trough wall should be cast simultaneously with the first lift of the reservoir wall. The inner formwork of the trough wall should be 500mm wide and 22m length and 700mm wide and 23m length for the outer formwork. | | | | |
| The steel plate to cover the float valve in the drinking trough should be included. | | | 7 7 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 | |
| Provide concrete test cube results (10 x Test cube) | | | | |
| Construction of new apron around reservoir: (1 x apron) | | | | |
| Three (3) meter apron should be constructed around the | | | | |
| existing reservoir. | 1 | | | |
| Inner circumference apron : 23 meters | an interest reports | | | |
| Outer circumference of apron : 42 meters | | | | |
| Thickness of apron: 15 cm | Property and the second | | | |
| Length of apron : 3 meter | | | | |
| Size of apron: 96 m ² | İ | | Act mental | |
| Concrete strength: 30 MPa | 1 | | 8 | |

| I | COMPLY | | |
|---|-------------------|---------|--|
| | YES | NO | REMARKS |
| Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of | | | |
| 19mm stone) Provide concrete test cube results | | | |
| - LIONIDE COURTERS results | | | |
| | | | |
| Inlet pipe fittings (40 mm) | | | |
| 2.5 meter x 40 mm standpipe (galv) (1 x Pipe) | i. | | |
| 0.3 meter x 40 mm standpipe (galv) (1 x Pipe) | | | |
| | | | |
| 40 mm bend (galv) (3 x Bend)40 mm male adaptor (galv) (2 x Adaptor) | | | |
| | | | |
| 40 mm pipe clamp for LDPE pipe (1 x Clamp) Outlot pipe (10 mm) | | | |
| Outlet pipe fittings (40 mm) | | | |
| 40 mm outlet screen (stainless steel) (1 x Screen) | | | |
| 0.5 meter x 40 mm standpipe (galv) (1 x Pipe) | | | |
| 40 mm brass gate valve (brass) (1x Valve) | | | |
| 40 mm float valve (1 x Valve) | | | |
| 40 mm T-piece (1 x T/piece) | | | |
| 40 mm bend (galv) (1 x Bend) | | | |
| 40 mm nipple (galv) (1 x Nipple) | | | 7. C. J. C. |
| 40 mm x 32 mm reducing bush (galv) (1x R/Bush) | | | 1 |
| 32 mm male adaptor (1 x Adaptor) | | | CAST AND A COMPANY OF STREET |
| DRINKING TROUGHS: 1 ST LOCATION: Approximately 120 m away from the reservoir 2 ND LOCATION: Approximately 120 m away from the reservoir | | | |
| Supply and installation of concrete casted drinking troughs (2 x troughs) | | .1 - 12 | |
| | enemy A. Colonia. | | |
| Drinking troughs specifications | | | |
| Concrete casted drinking troughs with cover to protect ball valve | | | And the second s |
| Size: length 2.4 meter x width 1.10 meter x depth 0.8 meter Capacity: 1000 liters per trough | 1 | | 217 |

| | COMPLY | | LY |
|--|---------------------------------------|----|--|
| | YES | NO | REMARKS |
| Slab specification for drinking troughs (2 x slabs) | · · · · · · · · · · · · · · · · · · · | | |
| Concrete strength: 30 MPa | | | |
| Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of | | | |
| 19mm stone) | | | 1 to |
| Slab size : 9 meter x 7 meter x 0.15 meter | | | |
| Size: 62 m ² (9.45 m ³ concrete) | | į | ŀ |
| Provide concrete test cube results for slab (2 x Cube test) | | | |
| The trench specification (240 meters) | | | |
| Size: The pipe should be buried in a trench of 0.5m deep with | | | |
| the width of 0.3m | | | - |
| Fittings for troughs | | | |
| 32 mm inserts T-piece (nylon) (4 x T/piece) | | | ! |
| 32 mm male adaptor (nylon) (2 x Adaptor) | | | light state of the |
| 32 mm x 0.8m standpipe (2 x Pipe) | | | |
| 32 mm nipple (galv) (2 x Nipple) | | | |
| 32 mm bend (galv) (2x Bend) | | 1 | |
| 32 mm M&F bend (2 x Bend) | | | |
| 32 mm brass gate valve (2 x Valve) | | | |
| 32 mm ball valve (2 x Valve) | | | |
| 32 mm float valve (Control water level) (2 x Valve) | | | |
| 32 mm clamps (wire type) (24 x Clamp) | | 1 | . A |
| 32 mm class 3 LDPE pipe (300 x Meter) | | | |
| Thread tape (20 Roll) | | | |
| Filleda tapo (20 fton) | | | |
| 4.1.2. Disaneng (S 25° 47′ 6.46″; E 25° 16′ 14.5″) | | | MINTEN TO A PARAMETER TO THE PARAMETER T |
| Windmill location: S 25° 47′ 6.46″; E 25° 16′ 14.5″ | | | |
| | | 1 | 200 |
| Supply and installation of Windmill (1 x Windmill) | | | and the second |
| (includes all equipment, materials, transport and labour | | | |
| required) | | | - |
| Install 9 m high windmill tower with a 3.0m Ø wheel with a | 1 | | |
| gearbox, tail brake system, fork rod, bucket rod (pitman), | | | |
| wood rod x 3 meter and force head. | | | |
| 40 mm Ø x 3.0m galvanized medium screwed/socket pipe | | | |
| SABS (22 x Pipe) | | 1 | |
| 12 mm Ø x 3.0m electro plated pump rods with socks and | | | - |
| protectors (24 x Rod) | | | |
| Borehole specification (Pump depth = 66 meters) | | | |
| Borehole depth: Last strike 66 m | e description of | | |
| Water level: Before test: 28 m | 1 | | |
| After test: 60 m | | 1 | * |

| | COMPLY | | |
|---|-----------------------------|--------------------------------------|---------|
| | YES | NO | REMARKS |
| Delivery: 8000 l/h | | | |
| Water abstraction limit at 60 % of delivery: 4 800 l/h | | | |
| Stainless steel borehole cylinder diameter 60 mm tube length | | | |
| 550 mm (1 x Cylinder) | | | |
| Cylinder make: | | | |
| Cylinder model: | | | |
| Cylinder size: mm | | | |
| Specify delivery of cylinder: Liters/ hour | | | |
| Total head meters | | | |
| Windmill Tower Foundation (2.8 m³) | | | |
| Concrete strength: 30 MPa | | | |
| Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of | | | |
| 19 mm stone) | | | |
| Size: see attached specification in Appendix A | | | |
| Provide concrete test cube results | | | |
| Supporting concrete block around casing (0.3 m³) | | | |
| Concrete strength: 30 MPa | | | 1 |
| Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of | | | |
| 19 mm stone) | | | |
| Size: 800mm diameter x 600mm high 4 x12mm bolts and nuts | | | |
| Provide concrete test cube results | | F 1945 . 444 . 494 . 444 . 444 . 444 | V |
| Fittings from windmill to reservoir | | | |
| 40 mm Ø brass foot valves (strainer) (1x Valve) | | | |
| 40 mm Ø base plate (1 x Plate) | | | |
| 40 mm Ø brass non return valve (1 x Valve) | | | |
| 40 mm Ø brass force head (1 x F/head) | | | |
| 40 mm Ø inlet air chamber (150mm Ø x 900mm steel pipe (2mm) | | | |
| thick) with 20mm brass gate valve) (1 x Air chamber) | | | |
| 40 mm nipple (galv) (3 x Nipple) | | | |
| 40 mm T-piece (galv) (2 x T/piece) | | | |
| 40 mm x 0.5 meter standpipe (galv) (1 x Pipe) | | | |
| 40 mm male adaptor (nylon) (1 x Adaptor) | | | |
| 40 mm male bend (galv) (2 x Bend) | | | |
| 40 mm pipe clamp (1 x Clamp) | | | |
| 40 mm LDPE pipe (30 Meter) | 4970 | ,- | 1 |
| | | | |
| | | | |
| Repair and sealing of existing reservoir (1 x reservoir and | | | |
| 1 x trough) | | | |
| The existing reservoir and trough mond to be alcohold grants to | | | |
| The existing reservoir and trough need to be cleaned, cracks to be repaired inside and outside with sand/cement filler. The | | | * 37 |
| inside of the reservoir and troughs needs to be sealed with | | | |
| Inside of the reservoir and houghs needs to be sealed with | The second of the second of | | |

| Ţ | COMPLY | | |
|--|--------|---|--|
| | YES | NO | REMARKS |
| geotextiles matt (90-100 g/m²) and polymer anionic bitumen emulsion sealant. | | | |
| Specification type of matt: Specification type of sealing: Coating layers recommended: | | | The state of the s |
| The sealing matt should go over the wall of the reservoir down the outside wall for 30 cm and where the matt is joined the overlap should be 30 cm. Where the inner wall meet the floor the overlap should be 30 cm. Method of application: Paint area to be seal with sealant and apply the matt to the area and paint the matt 3 x coats with | | | |
| Size of reservoir Diameter: 5.09 meter Height: 2.4 meters Circumference: 16 meters Total m² to be sealed: 67 m² (floor 19.6 m², side wall 40 m² | | | |
| top of wall and outside wall 9.6 m²) Size of drinking trough Diameter: 3 meter | | a district | |
| Height: 0.3 meters Circumference: 9.4 meters | | | er (C) many commonwealth and (C) many common |
| Total m ² to be sealed: 17 m ² (floor 7.06 m ² , side wall 4.71 m ² , top of wall and outside wall 4.71 m ²) | | | |
| Construction of new apron around existing reservoir | | | |
| (1 x apron) One (1) meter apron should be constructed around the existing reservoir. | | O Common of the | |
| Inner circumference apron: 16 meters Outer circumference of apron: 21.67 meters Thickness of apron: 15 cm | | | |
| Width of apron: 1 meter Size of apron: 19.01 m 2 (± 2.85 m³ concrete mix) Concrete strength: 30 MPa | | | |
| Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm stone) Provide concrete test cube result | | | |
| Construction of new apron around existing drinking trough (1 x apron) | | | E E |

| ſ | | COMPL | V. |
|--|--|-------------------------------------|--|
| <u> </u> | VEO | | |
| part (17.70%), the transport of the contract o | YES | NO | REMARKS |
| Three (3) meter apron should be constructed around the | | | |
| existing trough. | | | |
| Inner circumference apron: 9.42 meters | İ | | 1 |
| Outer circumference of apron: 28.27 meters | : | | |
| Thickness of apron: 15 cm | | | |
| Width of apron: 3 meter | | | |
| Size of apron: 56.5 m ² (±8.50 m ³ concrete mix) | | | |
| Concrete strength: 30 MPa | | | Î |
| Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm | | | |
| stone) | | | ļ |
| Provide concrete test cube results | | | |
| Inlet pipe fittings (40 mm) | | | |
| 2.5 meter x 40 mm standpipe (galv) (1 x Pipe) | | | |
| 0.3 meter x 40 mm standpipe (galv) (1x Pipe) | | | |
| 40 mm bend (galv) (3 x Bend) | 1 | | , Andrews |
| 40 mm male adaptor (galv) (2 x Adaptor) | | ĺ | |
| 40 mm pipe clamp for LDPE pipe (1 x Clamp) | | | |
| Outlet pipe fittings (40 mm) | | | |
| 40 mm outlet screen (stainless steel) (1 x Screen) | | 3 | |
| 0.5 meter x 40 mm standpipe (galv) (1 x Pipe) | # 1 | | |
| 40 mm brass gate valve (brass) (1 x Valve) | | | |
| 40 mm bend (galv) (1 x Bend) | | | |
| 40 mm nipple (galv) (1 x Nipple) | | | |
| | | | |
| 40 mm x 32 mm reducing bush (galv) (1 xR/Bush) | } | | |
| 32 mm male adaptor (1 x Adaptor) DRINKING TROUGHS: | | | The state of the s |
| 1 ST LOCATION: Approximately 120 m away from the reservoir | | | |
| 2 ND LOCATION: Approximately 120 m away from the reservoir | | | |
| Supply and installation of concrete casted drinking troughs | | | |
| (2 x troughs) | | | } : |
| (2 A troughle) | | | * |
| Drinking troughs specifications | | | |
| Concrete casted drinking troughs with cover to protect ball | | | |
| valve | | | |
| Construction of the state of th | | | |
| i | | į | |
| Capacity : 1000 litres per trough | | C.f. a. M. C. Marco, recommendation | <u> </u> |
| Slab specification for drinking troughs (2 x slabs) | | | under van |
| Concrete strength: 30 MPa | İ | | į |
| Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of | ļ | | |
| 19mm stone) | 1 | ļ | |
| Slab size : 9 meter x 7 meter x 0.15 meter | | 17.25 | |
| Size: 62 m ² (9.45 m ³ concrete) | and the state of t | | |
| | | | |

| | | COMP | |
|---|-----------------|-----------------------|--|
| | YES | NO | REMARKS |
| Provide concrete test cube results for slab (2 x Cubes test) | | | |
| | | | |
| The trench specification (240 meter) | | | |
| Size: The pipe should be buried in a trench of 0.5 m deep | | | NATION AND ADDRESS OF THE PARTY |
| with the width of 0.3 m | | | |
| | N | | |
| Fittings for troughs | | | |
| 32 mm inserts T-piece (nylon)(4 x T/piece) | | | |
| 32 mm male adaptor (nylon) (2 x Adaptor) | | | |
| 32 mm x 0.8m standpipe (2 x Pipe) | | | |
| 32 mm nipple (galv) (2 x Nipple) | | | 1 |
| 32 mm bend (galv) (2 x Bend) | 1 | | ŀ |
| 32 mm M&F bend (2 x Bend) | | | |
| 32 mm brass gate valve (2 x Valve) | | | |
| 32 mm ball valve (2 x Valve) | | | |
| 32 mm float valve (control water level) (2 x Valve) | | | · June - Line - |
| 32 mm clamp (wire type) (24 x Clamp) | ļ | | |
| 32 mm class 3 LDPE pipe (300 Meter) | Andrew Comments | | |
| Thread tape (20 Roll) | A | and the second second | |
| 0.000 40105 55 5 050 00100 00 | | | 1 |
| 4.1.3. Lokaleng (S - 25° 48′ 35.5″; E 25° 33′ 30.9″) | | | ed Addresses a pre- |
| Windmill location: S - 25° 48' 35.5"; E 25° 33' 30.9" | | | |
| William iocation, 3 - 25 40 55.5 , L 25 55 55.5 | | | |
| Supply and installation of Windmill (1 x windmill) | | | |
| (Includes all equipment, materials, transport and labour | | | 713 (144 |
| required) | | | |
| Install 9 m high windmill tower with a 3.0 m Ø wheel with a | | | |
| gearbox, tail brake system, fork rod, bucket rod (pitman), | | | |
| wood rod x 3 meter and force head. | Ì | | |
| • 40 mm Ø x 3.0m galvanized medium screwed/socket pipe | | | P. 15 |
| SABS (12 x Pipe) | | | |
| • 12 mm Ø x 3.0m electro plated pump rods with socks and | | | |
| protectors (13 x Rod) | ļ | | |
| Borehole specification (Pump depth = 36 meters) | 14 | 2500 | |
| Poleugie specification (Lumb debru – 20 meters) | | | |
| | | | 1 |
| Borehole depth: last strike 50 m | | | 1 |
| Borehole depth: last strike 50 m | | | |
| Borehole depth: last strike 50 m Water level: Before test 26 meters | | | |

| [| | COMP | LY |
|--|----------|-------|---|
| | YES | NO | REMARKS |
| Stainless steel borehole cylinder diameter 60 mm tube length | IV L | | |
| 550 mm (1 x Cylinder) | | | |
| oos min (1 k og minos) | <u>i</u> | | |
| Cylinder make: | | | |
| Cylinder model: | | | |
| Cylinder size: mm | | | and the second |
| Specify delivery of cylinder average litres/dayLitres/day | | | |
| Windmill Tower Foundation (2.8 m³) | | | |
| Concrete strength: 30 MPa | | | |
| Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of | | | |
| 19mm stone) | | | |
| Size: see attached specification in Appendix A | | | |
| Provide concrete test cube results | | | |
| Supporting concrete block around casing (0.3 m ³) | | | |
| Concrete strength: 30 MPa | | | |
| Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of | | | |
| 19mm stone) | | | |
| Size: 800mm diameter x 600mm high 4x12mm bolts and | | | |
| nuts | | | |
| Provide concrete test cube results | | | |
| Fittings from windmill to reservoir | | | |
| 40 mm Ø brass foot valves (strainer) (1 x Valve) | | | |
| 40 mm Ø base plate (1 x Plate) | | | |
| 40 mm Ø brass non return valve (1 x valve) | | | |
| 40 mm Ø brass force head (1 x F-head) | | | |
| • 40 mm Ø inlet air chamber (150mm Ø x 900mm steel pipe | | | |
| (2mm thick) with 20mm brass gate valve) (1 x Air chamber) | | | ļ |
| 40 mm nipple (galv) (3 x Nipple) | | | ii |
| 40 mm T-piece (galv) (2 x T/piece) | | | į. |
| 40 mm x 0.5 meter standpipe (galv) (1 x Pipe) | | | |
| 40 mm male adaptor (nylon) (1 x Adaptor) | | ! | |
| 40 mm male bend (galv) (2 x Bend) | | | |
| 40 mm pipe clamp (1 x Clamp) | | | |
| 40 mm LDPE pipe (30 Meter) | | | 1 |
| 40 min cos c pipo (oo moor) | | | 101 |
| Reservoir location: Approximately 5m away from the windmill | | | |
| Construction of concrete reservoir with drinking trough around (1 x reservoir and 1 x drinking trough) | | | 100 M |
| Circular reinforced concrete reservoir, diameter 4.5 m, height 2.1 m, wall thickness 225 mm, capacity 33.5 m³ (33.5 kl), The | | | .,,,,, |

| | | COMP | LY |
|---|-----------|------------|--|
| | YES | NO | REMARKS |
| wall should be reinforced horizontally and vertically and the floor | | | |
| horizontally. Reservoir should be supply with inlet and outlet. | | | |
| | | | 4 |
| The drinking trough wall should be cast simultaneously with the | | | |
| first lift of the reservoir wall. The inner formwork of the trough | | | |
| wall should be 500mm wide and 22m length and 700mm wide | | | |
| and 23m length for the outer formwork. | | | |
| | | | |
| The steel plate to cover the float valve in the drinking trough | | | |
| should be included. | | | |
| Provide concrete test cube results (10 x Test cubes) | | | |
| Construction of new apron around reservoir: (1 x apron) | | | *** |
| Three (3) meter apron should be constructed around the | | | |
| existing reservoir. | l l | | |
| Inner circumference apron : 23 meters | | | P |
| Outer circumference of apron : 42 meters | | | and the state of t |
| Thickness of apron: 15 cm | | | AT CAS (APEXAME |
| Length of apron : 3 meter | | | |
| Size of apron: 96 m ² | | | |
| Concrete strength: 30 MPa | \ | | |
| Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm | | | |
| stone) | | | our te at manual |
| Provide concrete test cube results | | | |
| Inlet pipe fittings (40 mm) | | | |
| 2.5 meter x 40 mm standpipe (galv) (1 x Pipe) | | | |
| 0.3 meter x 40 mm standpipe (galv) (1 x Pipe) | | | |
| * 40 mm bend (galv) (3 x Bend) | | | |
| 40 mm male adaptor (galv) (2 x Adaptor) | | | |
| 40 mm pipe clamp for LDPE pipe (1 x Clamp) | | | |
| Outlet pipe fittings(40 mm) | | | |
| 40 mm outlet screen (stainless steel) (1 x Screen) | | | |
| 0.5 meter x 40 mm standpipe (galv) (1 x Pipe) | | | |
| ● 40 mm brass gate valve (brass) (1 x Valve) | 1 | | |
| 40 mm bend (galv) (1 x Bend) | | | |
| 40 mm float valve (1 x Valve) | | | |
| 40 mm T- piece (1 x T/piece) | | | |
| 40 mm nipple (galv) (1 x Nipple) | | | |
| 40 mm x 32 mm reducing bush (galv) (1 x R/Bush) | | | |
| 32 mm male adaptor (1 x Adaptor) | 1 | 4.8 | |
| DRINKING TROUGHS: 1ST LOCATION: Approximately 120 m a | | | |
| 2 ND LOCATION: Approximately 120 m | away fron | n the rese | rvoir |

| | | COMP | LY |
|---|---------|-------|--|
| | YES | NO | REMARKS |
| Supply and installation of concrete casted drinking Troughs (2 x troughs) | | | - |
| Drinking troughs specifications | | | |
| Concrete casted drinking troughs with cover to protect ball valve | | | |
| Size: length 2.4 meter x width 1.10 meter x depth 0.8 meter | | | ALL COMPANY OF THE PROPERTY OF |
| Capacity : 1000 litres per trough | | | |
| Slab specification for drinking troughs (2 x slabs) | | 41.7. | |
| Concrete strength: 30 MPa | | | |
| • Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of | | | |
| 19 mm stone) | | | |
| Slab size : 9 meter x 7 meter x 0.15 meter | | | |
| Size: 62 m² (9.45 m³ concrete) | | | |
| Provide concrete test cube results for slab (2 x Cubes test) | | | |
| The trench specification (240 meter) | | | |
| Size: The pipe should be buried in a trench of 0.5m deep | | | |
| with the width of 0.3m | | | |
| Fittings for troughs | | | |
| 32 mm inserts T-piece (nylon) (4 x T/piece) | | | |
| 32 mm male adaptor (nyion) (2 x Adaptor) | | | |
| 32 mm x 0.8m standpipe (2 x Pipe) | | | |
| 32 mm nipple(galv) (2 x Nipple) | | | |
| 32 mm bend (galv)(2 x Bend) | | | |
| 32 mm M&F bend (2 x Bend) | | | - 0.0 |
| 32 mm brass gate valve (2 x Valve) | | | 1 |
| 32 mm ball valve (2 x Valve) | | | |
| 32 mm float valve (control water level) (2 x Valve) | | | |
| 32 mm clamp (wire type) (24 x Clamp) | | | |
| 32 mm class 3 LDPE pipe (300 Meter) | | | |
| Thread tape (20 Roll) | | | |
| | <u></u> | | 2 |
| | | | |

| | | COMP | LY |
|---|--|--------------------|---|
| | YES | NO | REMARKS |
| | | - 31. 3 | |
| 4.1.4. Makgokgwane (S 25.604604356: E 25.732774167) | | | |
| Windmill location: S 25.604604356: E 25.732774167 | | | |
| | | | |
| Supply and installation of Windmill (1 x windmill) | | | |
| (Includes all equipment, materials, transport and labour | | | VMC · · · are |
| required) | | | |
| Install 6 m high windmill tower with a 2.5m Ø wheel with a gearbox, tail brake system, fork rod, bucket rod (pitman), | | | |
| wood rod x 3 meter and force head. | | | |
| 40 mm Ø x 3.0m galvanized medium screwed/socket pipe | | | ver c ser deter "de |
| SABS (10 x Pipe) | | | |
| • 12 mm Ø x 3.0m electro plated pump rods with socks and | | | |
| protectors (11 x Rod) | | | |
| Borehole specification (Pump depth = 30 meters) | | | X. |
| Borehole depth: 48 meters | | | b : |
| Water level: Before test : 25 m | | | |
| After test: 28 m | | | |
| Delivery: 12 000 l/h Water abstraction limit at 60 % of delivery: 7 200 l/h | | | |
| Stainless steel borehole cylinder diameter 60 mm tube length | | | |
| 550 mm (1 x Cylinder) | 1 | | |
| Cylinder make: | | | |
| Cylinder Model: | | | |
| Cylinder size: mm | | | |
| Specify delivery of cylinder: Liters/ hour | | | webster. |
| Total head: meters | | - mailto de minuto | |
| Windmill Tower Foundation (2.8m³) | 1 1 1 1 1 | | |
| Concrete strength: 30 MPa | 1 | | į |
| Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm | ĺ | | |
| stone) | | | |
| Size: see attached specification in Appendix A Provide concrete test cube results | | | estate of |
| Supporting concrete block around casing (0.3m³) | ., | | - |
| Concrete strength: 30 MPa | | | a min distance in |
| Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of | 1 | | w - y de la de Millana |
| 19mm stone) | Ì | | |
| Size: 800mm diameter x 600mm high 4 x12mm bolts and | ļ | | |
| nuts | | | |
| Provide concrete test cube results | | | 1 |
| Fittings from windmill to reservoir | | | 60 a |
| 40 mm Ø brass foot valves (strainer) (1 x Valve) | and the same of th | | 277 84 102 85 102 |

| | | COMP | LY |
|---|--------|------|--|
| | YES | NO | REMARKS |
| 40 mm Ø base plate (1 x Plate) | | | |
| 40 mm Ø brass non return valve (1 x Valve) | | | |
| 40 mm Ø brass force head (1 x F/head) | | | |
| • 40 mm Ø inlet air chamber (150mm Ø x 900mm steel pipe | | | |
| (2mm thick) with 20 mm brass gate valve) (1 x Air chamber) | | | |
| 40 mm nipple (galv) (3 x Nipple) | | | |
| 40 mm T-piece (galv) (2 x T/piece) | | | |
| 40 mm x 0.5 meter standpipe (galv) (1 x Pipe) | | | |
| 40 mm male adaptor (nylon) (1 x Adaptor) | | | |
| 40 mm male bend (galv) (2 x Bend) | | | <u> </u> |
| 40 mm pipe clamp (1 x Clamp) | | | |
| 40 mm LDPE pipe (30 Meter) | | | |
| Repair and sealing of existing reservoir (1 x Reservoir) | | | |
| | | | |
| The existing reservoir need to be cleaned, cracks to be repaired | | | |
| inside and outside with sand/cement filler. The inside of the | l I | | |
| reservoir and needs to be sealed with geotextiles matt (90-100 | į | | |
| g/m²) and polymer anionic bitumen emulsion sealant. | | | |
| | | | |
| Specification type of matt: | , | | |
| Specification type of sealing: | | | |
| Coating layers recommended : | | | |
| The sealing matt should go over the wall of the reservoir down | | | |
| the outside wall for 30 cm and where the matt is joined the | | | |
| overlap should be 30 cm. Where the liner wall meets the floor | | | |
| the overlap should be 30 cm. | 4 | | |
| Method of application : Paint area to be seal with sealant and | | | |
| apply the matt to the area and paint the matt 3 x coats with | - | | |
| sealant | | | 11.0 |
| 4 | | | |
| Size of reservoir | | | |
| Diameter : 5.09 meter | | | C Spirit |
| Height: 2.4 meters | | | |
| Circumference: 16 meters | | | April Broadste |
| Total m ² to be sealed: 67 m ² (floor 19.6 m ² , side wall 40 m ² , | | | organization of the control of the c |
| top of wall and outside wall 9.6 m²) | | | |
| Construction of new apron around existing reservoir: | | | The state of the s |
| One (1) meter apron should be constructed around the existing | | | |
| reservoir. | | | |
| Inner circumference apron: 16 meters Outer circumference of apron: 21.67 meters | | | |
| Thickness of apron: 15 cm | } | | |
| THICKIESS OF APTOIL TO CIT | 1 | | <u></u> |

| | Market William Andrews | COMP | LY |
|--|------------------------|--|--|
| | YES | NO | REMARKS |
| Width of apron: 1 meter | | | |
| Size of apron: 19.10 m ² (±2.85 m³ concrete mix) | | | |
| Concrete strength: 30 MPa | | | |
| Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm | | | |
| stone) | | | |
| Provide concrete test cube result | | | |
| Inlet pipe fittings (40 mm) | | | |
| 2.5 meter x 40 mm standpipe (galv) (1 x Pipe) | | | |
| 0.3 meter x 40 mm standpipe (galv) (1 x Pipe) | | | |
| 40 mm bend (galv) (3 x Bend) | | | |
| 40 mm male adaptor (galv) (2 x Adaptor) | | | |
| 40 mm pipe clamp for LDPE pipe (1 x Clamp) | | | |
| Outlet pipe fittings (40 mm) | | THE PERSON NAMED IN COLUMN NAM | |
| 40 mm outlet screen (stainless steel) (1 x Screen) | | | |
| 0.5 meter x 40 mm standpipe (galv) (1 x Pipe) | | | |
| 40 mm brass gate valve (brass) (1 x Valve) | | | 71 D. T. T. T. T. T. T. T. T. T. T. T. T. T. |
| 40 mm bend (galv) (1 x Bend) | | | |
| 40 mm nipple (galv) (1 x Nipple) | | | |
| 40 mm x 32 mm reducing bush (galv) (1 x R/Bush) | | | |
| ● 32 mm male adaptor (1 x Adaptor) | | | |
| DRINKING TROUGHS: 1ST LOCATION: Approximately 120 m a | way from | the reser | voir |
| 2 ND LOCATION: Approximately 120 m | away fron | n the rese | ervoir |
| Supply and installation of concrete casted drinking troughs | | | |
| (2 x troughs) | | | |
| | | | |
| Drinking troughs specifications | | | |
| Concrete casted drinking troughs with cover to protect ball | | | |
| valve | | | |
| Size: length 2.4 meter x width 1.10 meter x depth 0.8 meter | | | 1 |
| Capacity: 1000 litres per trough | | | |
| Slab specification for drinking troughs (2 x slabs) | | | La mana |
| Concrete strength: 30 MPa Datis 4.20 (4 second 2 sectors) | | | The state of the s |
| Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm stone) | | | |
| Slab size : 9 meter x 7 meter x 0.15 meter | | | |
| • Size: 62 m ² (9.45 m ³ concrete) | | | |
| Provide concrete test cube results for slab (2 x Cubes test) | 70.000 | | |
| The trench specification (240 meters) | | ************************************** | |
| Size: The pipe should be buried in a trench of 0.5 m deep | | | |
| with the width of 0.3m | 1 | | |
| WANTED TO THE TOTAL STATE OF THE | 1 | | I. x |

| | | COMP | LY |
|--|----------|------|--|
| | YES | NO | REMARKS |
| Fittings for troughs | | | |
| 32 mm inserts T-piece (nylon) (4 x T/piece) | | | 8 |
| 32 mm male adaptor (nylon) (2 x Adaptor) | - | | |
| 32 mm x 0.8 m standpipe (2 x Pipe) | | | |
| 32 mm nipple (galv) (2 x Nipple) | | | |
| 32 mm bend (galv) (2 x Bend) | 444 | | j j |
| 32 mm M&F bend (2 x Bend) | | | |
| 32 mm brass gate valve (2 x Valve) | | | |
| 32 mm ball valve (2 x Valve) | | | |
| 32 mm float valve (control water level) (2 x Valve) | | | |
| 32 mm clamp (wire type) (24 x Clamp) | | | |
| 32 mm class 3 LDPE pipe (300 Meter) | | | |
| Thread tape (20 Roll) | | | The state of the s |
| Trilledu tapo (20 Noil) | | | |
| 4.1.5. Malaatshepe (S 26° 10′ 46.7"; E 23° 47′ 13.8") | | - | |
| , | | | |
| Windmill location: S 26° 10' 46.7"; E 23° 47' 13.8" | | | ļ |
| | | | |
| Supply and installation of Windmill (1 x windmill) | | | |
| (Includes all equipment , materials, transport and le | abour | | 1 |
| required) | | | |
| Install 9 m high windmill tower with a 4.3 m Ø wheel w | | | |
| gearbox, tail brake system, fork rod, bucket rod (pitn | nan), | | |
| wood rod x 3 meter and force head. | | | |
| • 40 mm Ø x 3.0m galvanized medium screwed/socket | pipe | | |
| SABS (21 x Pipe) | an and | | |
| • 12 mm Ø x 3.0m electro plated pump rods with socks | and : | | |
| protectors (22 x Rod) | | | 344 . CAN U TAN A A C T WATE |
| Borehole specification (Pump depth =63 meters) | | | |
| Borehole depth: 120 m | | | 1 |
| Water level: Before test: 7.6 m | | | CHINA A AMARA |
| After test: 62.1 m | | | |
| Delivery: 1500 l/hour | # 5.00 m | | |
| Water abstraction limit at 60 % of delivery: 900 l/hour | | | mangrus worse no residentes of |
| Stainless steel borehole cylinder diameter 60 mm tube le | ength | | |
| 550 mm (1 x Cylinder) | | | |
| Cylinder make: | - | | |
| Cylinder model: | | | |
| Cylinder size: mm | | | |
| Specify delivery of cylinder : Liters/hour | 7 | | |
| Total head:meters | ,, | | |

| The state of the s | | COMP | LY |
|--|--|----------|--|
| | YES | NO | REMARKS |
| Windmill Tower Foundation (2.8 m³) | | | |
| Concrete strength: 30 MPa | | | |
| Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of | | | |
| 19mm stone) | | | |
| Size: see attached specification in Appendix A | | | |
| Provide concrete test cube results | | | <u> </u> |
| Supporting concrete block around casing (0.3 m³) | | | |
| Concrete strength: 30 MPa | | | |
| Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of | | | A PACIFIC AND AND AND AND AND AND AND AND AND AND |
| 19mm stone) | | | 7 |
| Size: 800mm diameter x 600mm high 4x12mm bolts and nuts | | | |
| Provide concrete test cube results | | | |
| Fittings from windmill to reservoir | | | The state of the s |
| 40 mm Ø brass foot valves (strainer) (1 x Valve) | | | Allered On the |
| 40 mm Ø base plate (1 x Plate) | | İ | |
| 40 mm Ø brass non return valve (1 x Valve) | | | |
| 40 mm Ø brass force head (1 x F-head) | | | |
| • 40 mm Ø inlet air chamber (150mm Ø x 900mm steel pipe | | | Y. |
| (2mm thick) with 20 mm brass gate valve) (1 x Air chamber) | | | |
| 40 mm nipple (galv) (3 x Nipple) | | | T |
| 40 mm T-piece (galv) (2 x T/piece) | | | r materials de S |
| 40 mm x 0.5 meter standpipe (galv) (1 x Pipe) | | | · Dane |
| 40 mm male adaptor (nylon) (1 x Adaptor) | | | 4° 'Salar o Salar 40 | | |] |
| 40 man day of an Oleman | | | |
| | | | |
| 40 mm LDPE pipe (30 Meter) | THE RESIDENCE OF THE PERSON OF | | |
| Reservoir location: Approximately 5m away from the windmill | | 2 | in a sub- |
| Construction of concrete reservoir with drinking trough | | | |
| around (1 x reservoir and 1 x drinking trough) | | | |
| Stortin (1 x lesetaou sur 1 x dunium suosasu) | | | G. |
| Circular reinforced concrete reservoir, diameter 4.5 m, height | | | State of the state |
| 2.1 m , wall thickness 225 mm, capacity 33.5 m³ (33.5 kl), The | | | |
| wall should be reinforced horizontally and vertically and the floor | | <u> </u> | |
| horizontally. Reservoir should be supply with inlet and outlet. | | | |
| The drinking trough wall should be cast simultaneously with the | | ĺ | |
| first lift of the reservoir wall. The inner formwork of the trough | | | |
| wall should be 500mm wide and 22m length and 700mm wide | | | |
| and 23m length for the outer formwork. | | | ĺ |
| and zom length for the outer formwork. | | | |
| The steel plate to cover the float valve in the drinking trough | | | |
| should be included. | | | |
| Snould be included. | | | 1 |

| | | COMP | LY |
|--|--|-----------|--|
| | YES | NO | REMARKS |
| Provide concrete test cube results (10 x Test cube) | | | |
| Construction of new apron around reservoir: (1 x apron) | | | |
| Three (3) meter apron should be constructed around the | | | |
| existing reservoir. | | | |
| Inner circumference apron : 23 meters | | | # |
| Outer circumference of apron : 42 meters | | | |
| Thickness of apron: 15 cm | | | |
| Length of apron : 3 meter | | | water and the second |
| Size of apron: 96 m ² | | | P P P P P P P P P P P P P P P P P P P |
| Concrete strength: 30 MPa | | | |
| Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm | | | |
| stone) | | | |
| Provide concrete test cube results | | | |
| Inlet pipe fittings (40 mm) | | | Charles and A 1981 in the Section 20 |
| 2.5 meter x 40 mm standpipe (galv) (1 x Pipe) | | | |
| 0.3 meter x 40 mm standpipe (galv) (1 x Pipe) | | | |
| 40 mm bend (galv) (3 x Bend) | | | |
| 40 mm male adaptor (galv) (2 x Adaptor) | | | |
| 40 mm pipe clamp for LDPE pipe (1 x Clamp) | | | |
| Outlet pipe fittings (40 mm) | | | |
| 40 mm outlet screen (stainless steel) (1 x Screen) | | | |
| 0.5 meter x 40 mm standpipe (galv) (1 x Pipe) | | | |
| to make the second of the seco | CI. Make Ave | | |
| (0 0 1 1 (4 3 (-1 3 | and the state of t | | |
| | ! | | |
| 40 mm T-piece (1 x T/piece) 40 mm t-piece (1 x T/piece) | | | |
| 40 mm bend (galv) (1 x Bend) 40 mm bend (galv) (1 x Ningle) | | | |
| 40 mm nipple (galv) (1 x Nipple) 42 mm nipple (galv) (1 x Nipple) | | | Ì |
| 40 mm x 32 mm reducing bush (galv) (1 x R/Bush) | | | |
| 32 mm male adaptor (1 x Adaptor) | | the recen | Lade |
| DRINKING TROUGHS: 1 ST LOCATION: Approximately 120 m a | | | |
| 2 ND LOCATION: Approximately 120 m | away fron | n the res | ervoir |
| Supply and installation of concrete casted drinking troughs | | | |
| (2 x troughs) | | | - 2 |
| | | | , |
| Drinking troughs specifications | | | The second secon |
| Concrete casted drinking troughs with cover to protect ball | | | dimension of the second |
| valve | ĺ | | |
| Size: length 2.4 meter x width 1.10 meter x depth 0.8 | | | |
| meter | 7 | | |
| Capacity: 1000 liters per trough | | | Î. |
| Slab specification for drinking troughs (2 x slabs) | 5 | | TO OR OF THE PARTY. |
| Concrete strength: 30 MPa | | | |

| Γ | | COMP | LY |
|--|--|--|---------------------|
| | YES | NO | REMARKS |
| Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm stone) | 17. | | |
| Slab size : 9 meter x 7 meter x 0.15 meter | | | ļ |
| Size: 62 m² (9.45 m³ concrete) | | | |
| Provide concrete test cube results for slab (2 x Cubes test) | | and the second of the second o | |
| The trench specification (240 meters) | | | |
| Size: The pipe should be buried in a trench of 0.5m deep with the width of 0.3m | | | |
| Fittings for troughs | | | |
| 32 mm inserts T-piece (nylon) (4 x T/piece) | | | |
| 32 mm male adaptor (nylon) (2 x Adaptor) | | | |
| 32 mm x 0.8 m standpipe (2 x Pipe) | | | |
| 32 mm nipple (galv) (2 x Nipple) | | | |
| 32 mm bend (galv) (2 x Bend) | | | |
| 32 mm M&F bend (2 x Bend) | | | |
| 32 mm brass gate valve (2 x Valve) | | | |
| 32 mm ball valve (2 x Valve) | | | |
| 32 mm float valve (control water level) (2 x Valve) | | | |
| 32 mm clamp (wire type) (24 x Clamp) | 1 | | |
| 32 mm class 3 LDPE pipe (300 x Meter) | | | |
| Thread tape (20 Roll) | | | |
| 4.1.6. Setihatihong farm (S 25.81989; E 25.10698) (DOA 5004) | | | |
| Windmill location: S 25.81989; E 25.10698 | | | |
| Supply and installation of Windmill (1 x Windmill) (Includes all equipment, materials , transport and labour required) | | | |
| Install 9 m high windmill tower with a 3.0m Ø wheel with a gearbox, tail brake system, fork rod, bucket rod (pitman), wood rod x 3 meter and force head. | | | |
| 40 mm Ø x 3.0m galvanized medium screwed/socket pipe SABS (23 x Pipe) | | | |
| 12 mm Ø x 3.0m electro plated pump rods with socks and protectors (24 x Rod) | and the second s | | Model that early as |
| Borehole specification (Pump depth = 69 meters) | | | |
| Borehole depth: 90 m | | | je P |
| Water level: Before test : 55.3 m | | | 1 |

| | | COMP | LY |
|---|--|------|---------|
| | YES | NO | REMARKS |
| After test: 66.9 m | | | |
| Delivery: 7200 l/h | | | |
| Water abstraction limit at 60 % of delivery: 4320 l/h | | | |
| Stainless steel borehole cylinder diameter 60 mm tube length | | | |
| 550 mm (1x Cylinder) | | | |
| Cylinder make: | | | |
| Cylinder model: | | | |
| Cylinder size: mm | | | i i |
| Specify delivery of cylinder: Liters/hour | | | |
| Total head:meters | | | |
| Windmill Tower Foundation (2.8 m³) | | | |
| Windmill Tower Foundation | | | |
| Concrete strength: 30 MPa | | | |
| Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm | | | |
| stone) | | | |
| Size: see attached specification in Appendix A | | | |
| Provide concrete test cube results | | | |
| Supporting concrete block around casing (0.3 m ³) | | | |
| Concrete strength: 30 MPa | 1 | | |
| Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm | | | |
| stone) | | | |
| Size: 800mm diameter x 600mm high 4x12mm bolts and nuts | | | Ì |
| Provide concrete test cube results | | | |
| Fittings from windmill to reservoir | : | | |
| 40 mm Ø brass foot valves (strainer) (1 x Valve) | | | 1 |
| 40 mm Ø base plate (1 x Plate) | İ | | - |
| 40 mm Ø brass non return valve (1 x Valve) | | | |
| 40 mm Ø brass force head (1 x F/head) | | | 1 |
| 40 mm Ø inlet air chamber (150mm Ø x 900mm steel pipe) | 1 | | |
| (2mm thick) with 20mm brass gate valve) (1 x Air chamber) | LIPS CALLED | | |
| 40 mm nipple (galv) (3 x Nipple) | | | |
| 40 mm T-piece (galv) (2 x T/piece) | | | |
| 40 mm x 0.5 meter standpipe (galv) (1 x Pipe) | | | |
| 40 mm male adaptor (nylon) (1 x Adaptor) | | | |
| e 40 mm male bend (galv) (2 x Bend) | · | | 1 |
| 40 mm pipe clamp (1 x Clamp) | , , , , , , , , , , , , , , , , , , , | | |
| 40 mm LDPE pipe (30 Meter) | | | |
| Repair and sealing of existing reservoir and drinking | | | |
| trough (1 x reservoir and 1 x trough) | | | |
| The existing reservoir and drinking trough around the reservoir | | | |
| need to be, cleaned and the cracks to be repaired inside and | | | |
| outside with sand/cement filler. The inside of the reservoir and | 1 | | j į |
| ONTOING AIRL COLLING II HIGH. THE HIGHE OF THE LOCALIAN WHI WHILE | A CONTRACT OF SUCCESSION OF SUCCESSION | | |



| ſ | | COMP | LY |
|--|--------------|----------------------------------|---------|
| | YES | NO | REMARKS |
| drinking trough needs to be sealed with geotextiles matt (90-100 g/m²) and polymer anionic bitumen emulsion sealant. | | | |
| Specification type of matt: Specification type of sealing: Coating layers recommended: | or man Artic | | |
| The sealing matt should go over the wall of the reservoir down the outside wall for 30 cm and where the matt is joined the overlap should be 30 cm. Where the inner wall meets the floor the overlap should be 30 cm. Method of application: Paint area to be seal with sealant and apply the matt to the area and paint the matt 3 x coats with sealant. | | | |
| Size of reservoir Diameter: 5.09 meter Height: 2.4 meters Circumference: 16 meters Total m² to be sealed: 67 m² (floor 19.6 m², side wall 40 m² top of wall and outside wall 9.6 m²) | | | |
| Size of drinking trough around reservoir Width: 40 cm Depth: 50 cm Circumference: 18 meters Total m² to be sealed: 35 m² | | | |
| Construction of new apron around existing reservoir: Three (3) meter apron should be constructed around the existing reservoir. Inner circumference apron: 23 meters Outer circumference of apron: 42 meters Thickness of apron: 15 cm Width of apron: 3 meter Size of apron: 96 m ² | | | |
| Concrete strength: 30 MPa Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm stone) Provide concrete test cube result | | | |
| Inlet pipe fittings (40 mm) 2.5 meter x 40 mm standpipe (galv) (1 x Pipe) 0.3 meter x 40 mm standpipe (galv) (1 x Pipe) 40 mm bend (galv) (3 x Bend) | | a yayay aya aya ayaa bakka sanka | |

| | 1 | COMP | LY |
|--|-----|------|--|
| | YES | NO | REMARKS |
| 40 mm male adaptor (galv) (2 x Adaptor) | | 4.07 | |
| 40 mm pipe clamp for LDPE pipe (1 x Clamp) | | | |
| Outlet pipe fittings (40 mm) | | | |
| 40 mm outlet screen (stainless steel) (1 x Screen) | | | 10 Table 10 |
| 0.5 meter x 40 mm standpipe (galv) (1 x Pipe) | | | |
| 40 mm brass gate valve (brass) (1 x Valve) | | | |
| 40 mm bend (galv) (1 x Bend) | | | |
| 40 mm nipple (galv) (1 x Nipple) | | | Particular Co. |
| 40mm x 32 mm reducing bush (galv) (1 x R/Bush) | | | welet (* 1534) |
| 32 mm male adaptor (1 x Adaptor) | | | |
| DRINKING TROUGHS: | - 1 | | |
| 1 ST LOCATION: At the windmill | | | |
| 2NDLOCATION: Halfway between windmill and reservoir | | | |
| 3RD LOCATION: At the reservoir | | | |
| 4TH LOCATION: 600 meter from reservoir | | | |
| Supply and installation of concrete casted drinking troughs | | | |
| (4 x troughs) | | | |
| | | | |
| Drinking troughs specifications | | | |
| Concrete casted drinking troughs with cover to protect ball | | | |
| valve | | | |
| Size: length 2.4 meter x width 1.10 meter x depth 0.8 meter | • | | |
| Capacity : 1000 litres per trough | | | e e e e e e e e e e e e e e e e e e e |
| Slab specification for drinking troughs (4 x slabs) | | | |
| Concrete strength: 30 MPa | | | |
| • Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of | | | |
| 19mm stone) | | | 1 |
| Slab size: 9 meter x 7 meter x 0.15 meter | | | a month of the |
| Size: 62 m² (9.45 m³ concrete) | | | 49 MB - 196 |
| Provide concrete test cube results for slab (4 x Cubes test) | | | |
| The trench specification (1800 meters) | | | |
| Size: The pipe should be buried in a trench of 0.5m deep with | ١ | | |
| the width of 0.3m | | | |
| Fittings for troughs | | | |
| 32 mm inserts T-piece (nylon) (8 x T/piece) | | | |
| 32 mm male adaptor (nylon) (4 x Adaptor) | | | |
| 32 mm x 0.8 m standpipe (4 x Pipe) | | | |
| 32 mm nipple (galv) (4 x Nipple) | | | |
| 32 mm bend (galv) (4 x Bend) | | | |
| 32 mm M&F bend (4 x Bend) | | | Ann William and |
| 32 mm brass gate valve (4 x Valve) | | | 2 |
| 32 mm ball valve (4 x Valve) | | | |
| AT HILL AND AND A TO A SOLITA | | | The second secon |

| Ţ | | COMP | LY |
|--|--|--|--|
| | YES | NO | REMARKS |
| 32 mm float valve (control water level) (4 x Valve) | 7 - 12 1 CW11 - | | |
| 32 mm clamp (wire type) (48 x Clamp) | | | |
| 32 mm class 3 LDPE pipe (1900 Meter) | | | |
| | Ì | | |
| Thread tape (40 Roll) | | | |
| | | | |
| 4.1.7. Phiring (S 25° 46' 44.35": E 25° 09' 58.06") | And a second sec | | |
| Windmill location: S 25° 46′ 44.35": E 25° 09′ 58.06" | nderminate de la deserve en estado de la deserve en es | | |
| Supply and installation of Windmill (1 x windmill) | | | |
| (Includes all equipment, materials , transport and labour required) | | | |
| Install 9 m high windmill tower with a 3.0m Ø wheel with a | | | |
| gearbox, tail brake system, fork rod, bucket rod (pitman), | | | With Light |
| wood rod x 3 meter and force head. | | | |
| 40 mm Ø x 3.0m galvanized medium screwed/socket pipe | | | |
| SABS (24 x Pipe) | | | |
| 12 mm Ø x 3.0m electro plated pump rods with socks and | | | |
| protectors (26 x Rod) | | | erinomentalis s |
| Borehole specification (Pump depth = 72 meters) | | | A CONTRACTOR OF THE PROPERTY O |
| Borehole depth: Last strike 74 m | | | |
| Water level: Before test : 29.5 m | | | |
| After test: 71.2 m | | | |
| Delivery: 2 800 l/h | } | | |
| Water abstraction limit at 60 % of delivery: 1 680 I/h | Villedge 6 to 10. | | |
| Stainless steel borehole cylinder diameter 60 mm tube length | | | |
| 550 mm (1 x Cylinder) | | | |
| Cylinder make: | 1 | | |
| Cylinder model: | 1 | | |
| Cylinder size: mm | | | |
| Specify delivery of cylinder: Liters/ hour | | | |
| Total head:meters Windmill Tower Foundation (2.8 m³) | | | |
| Windmill Tower Foundation (2.8 m ³) | 1000 | | and the second s |
| Concrete strength: 30 MPa | İ | | |
| Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of | | | |
| 19mm stone) | | | |
| Size: see attached specification in Appendix A | | | |
| Provide concrete test cube results | | | |
| Supporting concrete block around casing (0.3 m ³) | | | E P |
| Concrete strength: 30 MPa | 1 | | |
| Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm | And Andrews | | |
| stone) | | en de la Colombia de la colombia de la colombia de la colombia de la colombia de la colombia de la colombia de | 1 |

| ************************************** | | COMP | LY |
|---|---------|-----------------------|---------|
| | YES | NO | REMARKS |
| Size: 800mm diameter x 600mm high 4 x12mm bolts and nuts | | WESTERN TO BELLEVIOLE | |
| Provide concrete test cube results | | | |
| Fittings from windmill to reservoir | | | |
| 40 mm Ø brass foot valves (strainer) (1 x Valve) | | | |
| 40 mm Ø base plate (1 x Plate) | | | |
| 40 mm Ø brass non return valve (1 x Valve) | | | |
| 40 mm Ø brass force head (1 x F/head) | | | |
| 40 mm Ø inlet air chamber (150mm Ø x 900mm steel pipe | | | |
| (2mm thick) with 20mm brass gate valve) (1 x Air chamber) | | | |
| 40 mm nipple (galv) (3 x Nipple) | 1 | | |
| 40 mm T-piece (galv) (2 x T/piece) | | | |
| 40 mmx 0.5 meter standpipe (galv) (1 x Pipe) | | | |
| 40 mm male adaptor (nylon) (1 x Adaptor) | | | |
| 40 mm male bend (galv) (2 x Bend) | | | |
| 40 mm pipe clamp (1 x Clamp) | ? } | | |
| 40 mm LDPE pipe (30 x Meter) | | | |
| Repair and sealing of existing reservoir and drinking | | | |
| trough. (1 x reservoir and 1 x trough) | | | |
| | | | |
| The existing reservoir and drinking trough needs to be cleaned | | | |
| and the cracks to be repaired inside and outside with | i N | | : |
| sand/cement filler. The inside of the reservoir and trough needs | | | |
| to be sealed with geotextiles matt (90-100 g/m²) and polymer | | | i. |
| anionic bitumen emulsion sealant. | | | |
| Specification type of matt: | | | ji l |
| Specification type of sealing: | | | |
| Coating layers recommended : | | | |
| Coating tayore recommended : IIII | , | | |
| The sealing matt should go over the wall of the reservoir down | | | |
| the outside wall for 30 cm and where the matt is joined the | | | |
| overlap should be 30 cm. Where the inner wall meets the floor | | | |
| the overlap should be 30 cm. | | | |
| Method of application: Paint area to be seal with sealant and | | | |
| apply the matt to the area and paint the matt 3 x coats with | | | |
| sealant | | | |
| | | | |
| Size of reservoir | | | |
| Diameter: 5.09 meter | | | |
| Height: 2.4 meters | | | |
| Circumference: 16 meters Total m² to be sealed: 67 m² (floor 19.6 m², side wall 40 m²,top | | | |
| of wall and outside wall 9.6 m²) | | | |
| UI WAII AIIU UUISIUS WAII S.U III) | | <u> </u> | |

| | | COMP | LY |
|---|-----|--|---------|
| | YES | NO | REMARKS |
| | | | |
| Size of drinking trough | j | | |
| Diameter : 3 meter | | | |
| Height: 0.3 meters | | | } |
| Circumference: 9.4 meters | | | i i |
| Total m ² to be sealed: 17 m ² (floor 7.06 m ² , side wall 4.71 m ² , | : | | |
| top of wall and outside wall 4.71 m²) | | | |
| Construction of new apron around existing reservoir: (1 x | | | |
| apron) | | | - |
| One (1) meter apron should be constructed around the existing | | | |
| reservoir. | | | |
| Inner circumference apron: 16 meters | | | |
| Outer circumference of apron: 21.67 meters | | | į |
| Thickness of apron: 15 cm | | | |
| Width of apron: 1 meter | | | |
| Size of apron: 19.10 m ² (± 2.85 m³ concrete mix) | | | |
| Concrete strength: 30 MPa | | | |
| Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm | | | |
| stone) | | | |
| Provide concrete test cube result | | | |
| Construction of new apron around existing drinking | | | |
| trough: (1 x apron) | | | |
| Three (3) meter apron should be constructed around the | | i | |
| existing trough. | | | 1 |
| Inner circumference apron: 9.42 meters | | İ | |
| Outer circumference of apron: 28.27 meters | | | |
| Thickness of apron: 15 cm | | | |
| Width of apron: 3 meter | | | |
| Size of apron: 56.5 m ² (± 8.50 m ³ concrete mix) | | | |
| Concrete strength: 30 MPa | | | ii D |
| Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm | | | |
| | | | |
| stone) Provide concrete test cube result | | | |
| | | | |
| Inlet pipe fittings (40 mm) 2.5 meter x 40 mm standpipe (galv) (1 x Pipe) | | | |
| 1 | | | |
| 0.3 meter x 40 mm standpipe (galv) (1 x Pipe) | † | | |
| 40 mm bend (galv) (3 x Bend) 40 mm bend (galv) (3 x Adaptor) | | | |
| 40 mm male adaptor (galv) (2 x Adaptor) 40 mm male adaptor (galv) (1 x Clamp) | | | |
| 40 mm pipe clamp for LDPE pipe (1 x Clamp) | | - | |
| Outlet pipe fittings (40 mm) | | 1 | |
| 40 mm outlet screen (stainless steel) (1 x Screen) | | A. Carrier and Car | |
| 0.5 meter x 40 mm standpipe (galv) (1 x Pipe) (1 x Valva) | 1 | | |
| 40 mm brass gate valve (brass) (1 x Valve) | į | į | |
| 40 mm bend (gaiv) (1 x Bend) | 1 | 1 | |

| | | COMP | PLY |
|--|-----|----------|--|
| | YES | NO | REMARKS |
| 40 mm nipple (galv) (1 x Nipple) | | | |
| 40 mm x 32 mm reducing bush (galv) (1 x R/Bush) | | 4 TE | |
| 32 mm male adaptor (1 x Adaptor) | | | |
| DRINKING TROUGHS: | | <u> </u> | |
| 1 ST LOCATION: Approximately 120 m away from the reservoir | | | |
| 2 ND LOCATION: Approximately 120 m away from the reservoir | | | |
| Supply and installation of concrete casted drinking troughs | | - | |
| (2 x troughs) | | 1.1 | |
| | | | |
| Drinking troughs specifications | | | |
| Concrete casted drinking troughs with cover to protect ball | | | |
| valve | - | | |
| Size: length 2.4 meter x width 1.10 meter x depth 0.8 meter | | | |
| Capacity: 1000 litres per trough | | | |
| Slab specification for drinking troughs (2 x slabs) | | | 1 |
| | | | 1000 |
| Concrete strength: 30 MPa Paties 4:0:2 /4 servery 2 nexts seems and 2 nexts of | | | |
| Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of | | | |
| 19 mm stone) Slab size : 9 meter x 7 meter x 0.15 meter | | 1 | |
| | | | |
| Size: 62 m² (9.45 m² concrete) Provide concrete test substractly for eleb (2 x Cubes test) | | | |
| Provide concrete test cube results for slab (2 x Cubes test) The transfer one sitiantian (240 Meteor) | | W | |
| The trench specification (240 Meters) Size: The pipe should be buried in a trench of 0.5m deep with | : | | |
| the width of 0.3m | | | |
| Fittings for troughs | | | 47. |
| 32 mm inserts T-piece (nylon) (4 x T/piece) | ! | | |
| 32 mm male adaptor (nylon) (3 x Adaptor) | | | |
| 32 mm x 0.8 m standpipe (3 x Pipe) | 1 | | |
| 32 mm nipple (galv) (3 x Nipple) | | | |
| 32 mm bend (galv) (3 x Bend) | | | |
| 32 mm M&F bend (3 x Bend) | | | |
| 32 mm brass gate valve (3 x Valve) | 1 | | 8 |
| 32 mm ball valve (3 x Valve) | | | |
| 32 mm float valve (control water level) (3 x Valve) | 1 | | radic to the second |
| 32 mm clamp (wire type) (26 x Clamp) | | | |
| 32 mm class 3 LDPE pipe (310 Meter) | Ì | | |
| Thread tape (20 x Roll) | | | |
| | | | |
| | | | and the same and t |

| ſ | | COMP | LY |
|--|--|------|--|
| | YES | NO | REMARKS |
| 4.1.8. Southey (S 26. 8040; E 23. 9949) | | | 4 |
| Windmill location: S 26. 8040; E 23. 9949 | | | |
| Supply and installation of Windmill (1 x windmill) | i | | |
| (Includes all equipment, materials, transport and labour required) | | | ************************************** |
| Install 9 m high windmill tower with a 3.0m Ø wheel with a gearbox, tail brake system, fork rod, bucket rod (pitman), wood rod x 3 meter and force head. | | | |
| 40 mm Ø x 3.0m galvanized medium screwed/socket pipe SABS (19 x Pipe) | | | |
| 12 mm Ø x 3.0m electro plated pump rods with socks and protectors (20 x Rod) | | | |
| Borehole specification (Pump depth = 56 meters) | The second secon | | |
| Borehole depth: 78 m Water level: Before test : 35.20 m |] | | 8.00 |
| After test: 54 m | | | 1 |
| Delivery: 5538 l/h | | | |
| Water abstraction limit at 60 % of delivery: 3322.8 l/h | | | |
| Stainless steel borehole cylinder diameter 60 mm tube length | | | |
| 550 mm (1 x Cylinder) | | | 1 |
| Cylinder make: | | | |
| Cylinder model: | | | C. ELLEPS P. C. |
| Cylinder size: mm | | | |
| Specify delivery of cylinder: Liters/ hour | | | |
| Total head: meters | | | |
| Windmill Tower Foundation (2.8 m³) | | | 1 |
| Concrete strength: 30 MPa | | | 4 9 |
| Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of | | | |
| 19mm stone) | | | |
| Size: See attached specification in Appendix A | | | |
| Provide concrete test cube results | İ | | |
| Supporting concrete block around casing (0.3 m ³) | | | 100 |
| Concrete strength: 30 MPa | | | |
| Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of | | | 1 |
| 19mm stone) | | | |
| Size: 800mm diameter x 600mm high 4 x12mm bolts and nuts | | | |
| Provide concrete test cube results | | | |
| Fittings from windmill to reservoir | | | |
| 40 mm Ø brass foot valves (strainer) (1 x Valve) | | | |
| 40 mm Ø base plate (1 x Plate) | | | |
| 40 mm Ø brass non return valve (1 x Valve) | | | |

| r | | COMP | |
|--|-------|------|--|
| | YES | COMP | REMARKS |
| 40 mm Ø brass force head (1 x F/head) | 1 E 2 | NO | KEMAKAS |
| 40 mm Ø brass force flead (TX Phlead) 40 mm Ø inlet air chamber (150mm Ø x 900mm steel pipe | | [| |
| (2mm thick) with 20mm brass gate valve) (1 x Air chamber) | | | |
| | | | |
| 40 mm nipple (galv) (3 x Nipple) 40 mm T piece (galv) (3 x T/plece) | | | |
| 40 mm T-piece (galv) (2 x T/piece) 40 mm x 0.5 meter standpipe (galv) (1 x Pipe) | | | |
| 40 mm x 0.5 meter standpipe (galv) (1 x Pipe) 40 mm male adaptor (nylon) (1 x Adaptor) | | | |
| | | | |
| 40 mm male bend (galv) (2 x Bend) 40 mm pine clamp (1 x Clamp) | | | |
| 40 mm pipe clamp (1 x Clamp) 40 mm I DBE pipe (30 Meter) | | | |
| 40 mm LDPE pipe (30 Meter) Parallel and profile and drinking recognitions | | | |
| Repair and sealing of existing reservoir and drinking | | | |
| trough. (1 x reservoir and 1 x trough) | | | |
| The second the page 10 in the page 1 | | | |
| The existing reservoir and drinking trough around the reservoir | | | |
| need to be cleaned and the cracks to be repaired inside and outside with sand/cement filler. The inside of the reservoir and | | | |
| | | | |
| drinking trough needs to be sealed with geotextiles matt (90-100 | | | |
| g/m²) and polymer anionic bitumen emulsion sealant. | | | |
| Specification type of matt: | | | |
| Specification type of matter. | | | |
| Coating layers recommended | 1 | | |
| Coating layers reconnicienced | | | |
| The sealing matt should go over the wall of the reservoir down | | | |
| the outside wall for 30 cm and where the matt is joined the | | | |
| overlap should be 30 cm. | | | |
| Where the inner wall meets the floor the overlap should be 30 | | | |
| cm. | | | ĺ |
| Method of application: Paint area to be seal with sealant and | | | |
| apply the matt to the area and paint the matt 3 x coats with | | | |
| sealant. | | | |
| | | | |
| Size of reservoir | e e | | 6 to 10 to 1 |
| Diameter : 5.09 meter | | | 1 |
| Height: 2.4 meters | | | i de mario |
| Circumference: 16 meters | | | |
| Total m ² to be sealed: 67 m ² (floor 19.6 m ² , side wall 40 m ² , | | | |
| top of wall and outside wall 9.6 m²) | | | |
| | - | | |
| Size of drinking trough around reservoir | | | |
| Width: 40 cm | | | |
| Depth: 50 cm | [| | |
| Circumference: 18 meters | : | | • |
| Total m² to be sealed: 35 m² | | | i |

| | | COMP | LY |
|---|--|------------|--|
| | YES | NO | REMARKS |
| Construction of new apren around existing reservoir: | | | *** |
| Three (3) meter apron should be constructed around the | | | . D. Carriero |
| existing reservoir. | | | |
| Inner circumference apron: 23 meters | | | |
| Outer circumference of apron: 42 meters | all and a second | | |
| Thickness of apron: 15 cm | 1 | | No. |
| Width of apron: 3 meter | | | |
| Size of apron: 96 m ² | | | eburgge spaarm. |
| Concrete strength: 30 MPa | | | |
| Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm | | | T-987 - 68600 |
| stone) | | | |
| Provide concrete test cube results | | · | |
| Inlet pipe fittings (40 mm) | | | |
| 2.5 meter x 40 mm standpipe (galv) (1x Pipe) | To the state of th | | |
| 0.3 meter x 40 mm standpipe (galv) (1 x Pipe) | 7.100 | | |
| 40 mm bend (galv) (3 x Bend) | | | |
| 40 mm male adaptor (galv) (2 x Adaptor) | | | |
| 40 mm pipe clamp for LDPE pipe (1 x Clamp) | | w ======== | |
| Outlet pipe fittings (40 mm) | | | |
| 40 mm outlet screen (stainless steel) (1 x Screen) | | | |
| 0.5 meter x 40 mm standpipe (galv) (1 x Pipe) | and the order | | |
| 40 mm brass gate valve (brass) (1 x Valve) | *** | | |
| 40 mm bend (galv) (1 x Bend) | | | 1 |
| 40 mm nipple (galv) (1 x Nipple) | | | |
| 40mm x 32 mm reducing bush (galv) (1 x R/Bush) | | | |
| 32 mm male adaptor (1 x Adaptor) | | | |
| DRINKING TROUGHS: | | | |
| 1 ST LOCATION: Approximately 120 m away from the reservoir | | | |
| 2 ND LOCATION: Approximately 120 m away from the reservoir | | | eringother (b.e. right), controller eine americane ambbil da |
| Supply and installation of concrete casted drinking troughs | | | |
| (2 x troughs) | | | |
| | : | | and the second s |
| Drinking troughs specifications | | | Andrew Analysis |
| Concrete casted drinking troughs with cover to protect ball | 9 | | |
| valve | | | Served Advance - |
| Size: length 2.4 meter x width 1.10 meter x depth 0.8meter | | | |
| Capacity : 1000 litres per trough | | |] |

| | | COMPL | .Y |
|--|--|--|--|
| | YES | NO | REMARKS |
| Slab specification for drinking troughs (2 x slabs) | | | |
| Concrete strength: 30 MPa | | | |
| Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of | | | |
| 19mm stone) | | | |
| Slab size : 9 meter x 7 meter x 0.15 meter | | | |
| Size: 62 m ² (9.45 m ³ concrete) | | | |
| Provide concrete test cube results for slab (2 x Cubes test) | | | |
| The trench specification (240 Meters) | | | |
| Size: The pipe should be buried in a trench of 0.5m deep | | | |
| with the width of 0.3m | | | |
| Fittings for troughs | | | |
| 32 mm inserts T-piece (nylon) (4 x T/piece) | | | |
| 32 mm male adaptor (nylon) (2 x Adaptor) | | - | |
| 32 mm x 0.8m standpipe (2 x Pipe) | | | |
| 32 mm nipple (galv) (2 x Nipple) | | | ļ |
| 32 mm bend (galv) (2 x Bend) | | | And any property of the control of t |
| 32 mm M&F bend (2 x Bend) | | | |
| 32 mm brass gate valve (2 x Valve) | | | |
| 32 mm ball valve (2 x Valve) | | | |
| 32 mm float valve (control water level) (2 x Valve) | | | |
| 32 mm clamps (wire type) (24 x Clamp) | | | |
| 32 mm class 3 LDPE pipe (300 Meter) | | | |
| Thread tape (20 Roll) | | | |
| | | | |
| 4.1.9. Tshunyane (S 26. 060755658; E 25.52319602) | | | |
| | | | |
| Windmill location: S 26. 060755658; E 25.52319602 | | | |
| Supply and installation of Windmill (1 x windmill) | | | the state of the s |
| (Includes all equipment , materials, transport and labour | | | |
| required) | | | |
| Install 9 m high windmill tower with a 3.0 m Ø wheel with a | | | |
| gearbox, tail brake system, fork rod, bucket rod (pitman), | | | |
| wood rod x 3 meter and force head. | | | |
| 40mm Ø x 3.0m galvanized medium screwed/socket pipe | | | |
| SABS (23 x Pipe) | PROPERTY AND ADDRESS OF THE PROPERTY ADDRESS OF THE PROPERTY ADDRESS OF THE PROPERTY ADDRESS OF THE PROPERTY ADDRESS OF THE PROPERTY ADDRESS OF THE PROPERTY ADDRESS OF THE PROPERTY ADDRESS OF THE PROPERTY ADDRESS OF THE PROPERTY ADDRESS OF THE PROPERTY ADDRESS OF THE PROPERTY ADDRESS OF THE PROPERTY ADDRESS OF THE PROPERTY ADDRESS OF THE PROPERTY ADDRESS OF THE PROPERTY ADDRESS OF THE PROPERTY ADDRESS OF THE PROPERTY A | | |
| • 12 mm Ø x 3.0m electro plated pump rods with socks and | 1 | | |
| protectors (24 x Rod) | | | |
| Borehole specification: (Pump depth = 69 meters) | | | |
| Borehole depth: (no information) | | Problems of the Control of the Contr | |
| Water level: Before test : 23.1 m | B Y W W W W W W W W W W W W W W W W W W | | |
| After test : 67.7m | | | |



| Γ | | COMP | LY |
|---|----------|---|---------|
| | YES | NO | REMARKS |
| Delivery: 800 l/hour | 20,000 | | |
| Water abstraction limit at 60 % of delivery: 480 l/hour | | | |
| Stainless steel borehole cylinder diameter 60 mm tube length | | | |
| 550 mm (1 x Cylinder) | | | |
| Cylinder make: | | | |
| Cylinder model: | | | |
| Cylinder size: mm | i | | |
| Specify delivery of cylinder average liters/day :Liters/day | | | |
| Total head: meters | | | |
| Windmill Tower Foundation (2.8 m³) | | | |
| Concrete strength: 30 MPa | | | į |
| Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of | | | |
| 19mm stone) | | | |
| Size: see attached specification in Appendix A | | | |
| Provide concrete test cube results | | | |
| Supporting concrete block around casing(0.3 m³) | <u> </u> | | |
| Concrete strength: 30 MPa | | | |
| Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of | | | |
| 19mm stone) | | | |
| Size: 800mm diameter x 600mm high 4 x12mm bolts and nuts | | | |
| Provide concrete test cube results | | | Ì |
| Fittings from windmill to reservoir | | | |
| to an of her and solved to determine (4 v) (also) | | | |
| | | | |
| 40 mm Ø base plate (1 x Plate) 40 mm Ø base plate (1 x Plate) | | | |
| 40 mm Ø brass non return valve (1 x Valve) | | | |
| 40 mm Ø brass force head (1 x F-head) | | | |
| • 40 mm Ø inlet air chamber (150mm Ø x 900mm steel pipe | | | |
| (2mm thick) with 20mm brass gate valve) (1 x Air chamber) | | | |
| 40 mm nipple (galv) (3 x Nipple) | | # 2 | |
| 40 mm T-piece (galv) (2 x T/piece) | | C. | |
| 40 mm x 0.5 meter standpipe (galv) (1 x Pipe) | | | |
| 40 mm male adaptor (nylon) (1 x Adaptor) | | | |
| 40 mm male bend (galv) (2 x Bend) | | | |
| € 40 mm pipe clamp (1 x Clamp) | | | |
| 40 mm LDPE pipe (30 Meter) | | | |
| Reservoir location: Approximately 5m away from the windmill | | İ | 4 |
| Construction of concrete reservoir with drinking trough | | | |
| around. (1 x reservoir and 1 x drinking trough) | | | |
| Circular reinforced concrete reservoir, diameter 4.5 m, height | | | |
| 2.1 m , wall thickness 225 mm, capacity 33.5 m³ (33.5 kl), The | | | |
| Z. L III , Wall Blickings 220 Hill, departy oc. o III (oc. o III) | | I CONTRACTOR OF THE PERSON OF | |

| Ţ | | COMP | LY |
|--|----------------|-----------|--|
| | YES | NO | REMARKS |
| wall should be reinforced horizontally and vertically and the floor | | A | |
| horizontally. Reservoir should be supply with inlet and outlet. | | | ĺ |
| | | | |
| The drinking trough wall should be cast simultaneously with the | | | |
| first lift of the reservoir wall. The inner formwork of the trough | | | |
| wall should be 500mm wide and 22m length and 700mm wide | | | |
| and 23m length for the outer formwork. | | | |
| | | | |
| The steel plate to cover the float valve in the drinking trough | and the second | | |
| should be included. | | | į |
| Provide concrete test cube results (10 x Test cubes) | | | |
| Construction of new apron around reservoir: (1 x apron) | | | |
| Three (3) meter apron should be constructed around the | [| | |
| existing reservoir. | | | |
| Inner circumference apron : 23 meters | | | 1 |
| Outer circumference of apron : 42 meters | | | |
| Thickness of apron : 15 cm Length of apron : 3 meter | | | |
| Size of apron : 96 m ² | | | |
| Concrete strength: 30 MPa | ananany, a | | and the second s |
| Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm | | | |
| stone) | | | ļ |
| Provide concrete test cube results | | | |
| inlet pipe fittings (40 mm) | | | |
| 2.5 meter x 40 mm standpipe (galv) (1 x Pipe) | | | |
| 0.3 meter x 40 mm standpipe (galv) (1 x Pipe) | | | |
| 40 mm bend (galv) (3 x Bend) | | | |
| 40 mm male adaptor (galv) (2 x Adaptor) | 1 | | |
| 40 mm pipe clamp for LDPE pipe (1 x Clamp) | £ | | |
| Outlet plpe fittings (40 mm) | | | |
| 40 mm outlet screen (stainless steel) (1 х Screen) | | | |
| 0.5 meter x 40 mm standpipe (galv) (1 x Pipe) | | | |
| 40 mm brass gate valve (brass) (1 x Valve) | | | |
| 40 mm float valve (1 x Valve) | | | |
| 40 mm T-piece (1 x Valve) | | | |
| 40 mm bend (galv) (1 x Bend) | | | |
| 40 mm nipple (galv) (1 x Nipple) | j 1 | | |
| 40 mm x 32 mm reducing bush (galv) (1 x R/Bush) | | | |
| 32 mm male adaptor (1 x Adaptor) | | | |
| DRINKING TROUGHS: 1ST LOCATION: Approximately 120 m at | - | | î |
| 2 ND LOCATION: Approximately 120 m | away fro | m the res | servoir |
| Supply and installation of concrete casted drinking troughs | | | 4. 2 |
| (2 x troughs) | | | |

| | ſ | | COMP | LY |
|---|--|--|--|--|
| | | YES | NO | REMARKS |
| | | A 200 | | |
| Drinking troughs specifications | | | | |
| Concrete casted drinking troughs | with cover to protect ball | | | |
| valve | | | | ĺ |
| Size: length 2.4 meter x width | 1.10 meter x depth 0.8 | | | |
| meter | | | | |
| Capacity : 1000 litres per trough | The state of the s | | | |
| Slab specification for drinking trou | ghs (2 x slabs) | | | |
| Concrete strength: 30 MPa | | | | |
| Ratio: 1:3:3 (1 cement, 3 parts coa | rse sand and 3 parts of | | | |
| 19mm stone) | | | | |
| Slab size: 9 meter x 7 meter x 0.1 | 5 meter | | | |
| • Size: 62 m ² (9.45 m ³ concrete) | | | | ************************************** |
| Provide concrete test cube results | | N. S. Levi Salar | 7. 7. 7. 7. 7. 7. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. | |
| The trench specification (240 meter | | | | |
| Size: The pipe should be buried in a t | rench of 0.5m deep | | | |
| with the width of 0.3m | The second secon | | | |
| Fittings for troughs | 774-1> | | | |
| 32 mm inserts T-piece (nylon) (4x) | | | | |
| 32 mm male adaptor (nylon) (2 x x x x x x x x x x x x x x x x x x | | | | - |
| 32 mm x 0.8 m standpipe (2 x Pipe | *) | | | Ē |
| 32 mm nipple (galv) (2 x Nipple) | | | | |
| 32 mm bend (galv) (2 x Bend) | j | | | NACT TRANSPORT |
| • 32 mm M&F bend (2 x Bend) | | | | ADDRAG AND THE STREET |
| 32 mm brass gate valve (2 x Valve |) | | | Ì |
| 32 mm ball valve (2 x Valve) | | | | |
| 32 mm float valve (control water le | | | | |
| 32 mm clamp (wire type) (24 x Clamp (220 lb) | | | i | |
| • 32 mm class 3 LDPE pipe (300 M | neter) | | | ¥ 5 11 12 |
| Thread tape (20 Roll) | | | | |
| | | | | |
| 4.1.10. Vergenoeg (S 26° 10' 25.664" | ; E 23° 40′ 59.359") | | | |
| | | | | |
| Windmill location: S 26° 10' 25.664"; | E 23° 40' 59.359" | | | |
| | / | | | |
| Supply and installation of Windmill | | | | English Columns |
| (Includes all equipment, materials | transport and labour | 1 | | |
| required) | | | | |
| Install 9 m high windmill tower with | a 43 m (A wheel with a | | | |
| gearbox, tail brake system, fork | | | | |
| wood rod x 3 meter and force hear | | | | |
| WOOD TOO X O HISTER AND TOTOE HEAD | yr + | 04.07. a | | 4-2-4-2 |



| ļ. | · · · · · · · · · · · · · · · · · · · | COMP | LY |
|---|---------------------------------------|------|--|
| | YES | NO | REMARKS |
| 40 mm Ø x 3.0m galvanized medium screwed/socket pipe | 1752 | | |
| SABS (20x pipe) | | | |
| • 12 mm Ø x 3.0m electro plated pump rods with socks and | | | |
| protectors (21 x rod) | | | |
| Borehole specification (Pump depth = 60 meters) | | | |
| Borehole depth: 156 m | | | |
| Water level :Before test : 53.10 m | | | |
| After test : 58.30 m | | | |
| Delivery: 935 l/hour | | | |
| Water abstraction limit at 60 % of delivery: 561 l/hour | | | |
| Stainless steel borehole cylinder diameter 60 mm tube length | | | |
| 550 mm (1 x Cylinder) | | | ĺ |
| Cylinder make: | | | |
| Cylinder model: | | | |
| Cylinder size: mm | | | 1 |
| Specify delivery of cylinder average liters/day: Liters/day | | | The state of the s |
| Total head :meters | | | |
| Windmill Tower Foundation (2.8 m³) | | | |
| Concrete strength: 30 MPa | | | |
| Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of | | | W I SPECT |
| 19mm stone) | | | |
| Size: See attached specification in Appendix A | | | |
| Provide concrete test cube results | | | |
| Supporting concrete block around casing (0.3 m ³) | | | |
| Concrete strength: 30 MPa | | | 1 |
| Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of | | | 20 |
| 19 mm stone) | | | |
| Size: 800mm diameter x 600mm high 4 x 12mm bolts and nuts | | | |
| Provide concrete test cube results | | 1 | |
| Fittings from windmill to reservoir | | | |
| 40 mm Ø brass foot valves (strainer) (1 x Valve) | | | ļ |
| 40 mm Ø base plate (1 x Plate) | | | |
| 40 mm Ø brass non return valve (1 x Valve) | | | |
| 40 mm Ø brass force head (1 x F-head) | | | |
| • 40 mm Ø inlet air chamber (150mm Ø x 900mm steel pipe | | | \$ 4 5 |
| (2mm thick) with 20mm brass gate valve) (1 x Air chamber) | | | |
| 40 mm nipple (galv) (3 x Nipple) (a k) (6 x T/class) | | | |
| 40 mm T-piece (galv) (2 x T/piece) | | | Į į |
| 40 mm x 0.5 meter standpipe (galv) (1 x Pipe) | | | |
| 40 mm male adaptor (nylon) (1 x Adaptor) | | - | |
| 40 mm male bend (galv) (2 x Bend) | | | |
| 40 mm pipe clamp (1 x Clamp) | | | |
| 40 mm LDPE pipe (30 Meter) | | | ž |

| Ţ | | LY | |
|--|-----|----|--|
| | YES | NO | REMARKS |
| Reservoir location: Approximately 5m away from the windmill | | | |
| Construction of concrete reservoir with drinking trough around. (1 x reservoir and 1 x drinking trough) | | | THE THE PARTY OF T |
| Circular reinforced concrete reservoir, diameter 4.5 m, height 2.1 m, wall thickness 225 mm, capacity 33.5 m³ (33.5 kl), The wall should be reinforced horizontally and vertically and the floor horizontally. Reservoir should be supply with inlet and outlet. | | | |
| The drinking trough wall should be cast simultaneously with the first lift of the reservoir wall. The inner formwork of the trough wall should be 500mm wide and 22m length and 700mm wide and 23m length for the outer formwork. | | | |
| The steel plate to cover the float valve in the drinking trough should be included. | | | On the Addition of the Additio |
| Provide concrete test cube results (10 x Test cube) | | | |
| Construction of new apron around reservoir: (1 x apron) | | | |
| Three (3) meter apron should be constructed around the | | | |
| existing reservoir. | | | |
| Inner circumference apron : 23 meters | | | |
| Outer circumference of apron : 42 meters | | | |
| Thickness of apron: 15 cm | | | |
| Length of apron : 3 meter | | | |
| Size of apron: 96 m ² | | | |
| Concrete strength: 30 MPa Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm | | | |
| stone) | | | |
| Provide concrete test cube results | 5 | | |
| Inlet pipe fittings (40 mm) | | | |
| 2.5 meter x 40 mm standpipe (galv) (1 x Pipe) | | | |
| 0.3 meter x 40 mm standpipe (galv) (1 x Pipe) | | | |
| 40 mm bend (galv) (3 x Bend) | | | |
| 40 mm male adaptor (galv) (2 x Adaptor) | | | |
| 40 mm pipe clamp for LDPE pipe (1 x Clamp) | | | |
| Outlet pipe fittings (40 mm) | | | |
| 40 mm outlet screen (stainless steel) (1 x Screen) | 1 | | |
| 0.5 meter x 40 mm standpipe (galv) (1 x Pipe) | A | | |
| 40 mm brass gate valve (brass) (1 x Valve) | | | |
| 40 mm float valve (1 x Valve) | | | |
| 40 mm T-piece (1 x T/piece) | | | |

| | | COMP | LY |
|--|-----------|------------|--|
| | YES | NO | REMARKS |
| 40 mm bend (galv) (2 x Bend) | | | |
| 40 mm nipple (galv) (1 x Nipple) | | | |
| 40 mm x 32 mm reducing bush (galv) (1 x R/Bush) | | | W. Commission of the Commissio |
| 32 mm male adaptor (1 x Adaptor) | | | |
| DRINKING TROUGHS: 1 ST LOCATION: Approximately 120 m a | wav from | the reser | voir |
| 2 ND LOCATION: Approximately 120 m | awav fron | n the rese | rvoir |
| Supply and installation of concrete casted drinking troughs | | I | T |
| (2 x troughs) | | ĺ | · · · · / Medicine |
| (2 x 3 0 6 3) | | | |
| Drinking troughs specifications | | | |
| Concrete casted drinking troughs with cover to protect ball | | | |
| valve | | | |
| • Size: length 2.4 meter x width 1.10 meter x depth 0.8 | | | |
| meter | | ĺ | |
| Capacity: 1000 liters per trough | | | |
| Slab specification for drinking troughs (2 x slabs) | | | |
| Concrete strength: 30 MPa | | | |
| Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of | | | |
| 19mm stone) | | | a. |
| Slab size : 9 meter x 7 meter x 0.15 meter | | | |
| Size: 62 m² (9.45 m³ concrete) | | | |
| Provide concrete test cube results for slab (2 x Cubes test) | | | |
| The trench specification (240 Meters) | | | |
| Size: The pipe should be buried in a trench of 0.5m deep with | | | |
| the width of 0.3m | | | |
| Fittings for troughs | | 1 | |
| 32 mm inserts T-piece (nylon) (4 x T/piece) | | : | |
| 32 mm male adaptor (nylon) (2 x Adaptor) | | | |
| 32 mm x 0.8 m standpipe (2 x Pipe) | | | |
| 32 mm nipple (galv) (2 x Nipple) | | | |
| 32 mm bend (galv) (2 x Bend) | | | |
| 32 mm M&F bend (2 x Bend) | | | |
| 32 mm brass gate valve (2 x Valve) | | | |
| 32 mm ball valve (2 x Valve) | | T She | |
| 32 mm float valve (control water level) (2 x Valve) | | | |
| 32 mm clamp (wire type) (24 x Clamp) | | | P. C. Calle |
| 32 mm class 3 LDPE pipe (300 Meter) | | | |
| Thread tape (20 x Roll) | | | |
| And the state of t | | | |
| 4.1.11. Itereleng (S 26° 49' 14.9"; E 23° 57' 19.9") | | | |
| | . v | | |
| Windmill location: S 26° 49′ 14.9"; E 23° 57′ 19.9" | * | * | |

| | | COMP | LY |
|---|--|------|--|
| | YEŞ | NO | REMARKS |
| Supply and installation of Windmill (1 x windmill) | | | |
| (Includes all equipment, materials , transport and labour | | | |
| required) | | | All the second s |
| Install 9 m high windmill tower with a 4.3 m Ø wheel with a | | | All All All All All All All All All All |
| gearbox, tail brake system, fork rod, bucket rod (pitman), | | | Ì |
| wood rod 3 meters and force head. | | | |
| 40 mm Ø x 3.0m galvanized medium screwed/socket pipe | | | |
| SABS (52 x Pipe) | | | |
| • 12 mm Ø x 3.0m electro plated pump rods with socks and | | | |
| protectors (53 x Rod) | | | |
| Borehole specification (Pump depth =156 meters) | | | |
| Borehole depth: 204 m | | | |
| Water level: Before test: 28.8 m | | | 4 |
| After test :154.3 m | | | |
| Delivery: 610 l/h | | | |
| Water abstraction limit at 60 % of delivery: 366 I/h | | | |
| Stainless steel borehole cylinder diameter 60 mm tube length | | | |
| 550 mm. (1 x Cylinder) | | | |
| Cylinder make: | | | 10 mg |
| Cylinder model: | | | T de la constant de l |
| Cylinder size: mm | } | | |
| Specify delivery of cylinder: Liters/ hour | | | |
| Total head:meters | | *** | |
| Windmill Tower Foundation (2.8 m³) | | | ļ |
| Concrete strength: 30 MPa | | | |
| Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of | | | |
| 19 mm stone) | | | |
| Size: see attached specification in Appendix A | | | |
| Provide concrete test cube results | | | |
| Supporting concrete block around casing (0.3 m³) | | | |
| Concrete strength: 30 MPa | | | |
| Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts | | | |
| of 19mm stone) | | | , , skinemation |
| Size: 800mm diameter x 600mm high 4x12mm bolts and nuts | | | |
| Provide concrete test cube results | gregoria e e e e e e e e e e e e e e e e e e e | | m, garageran com caracteristical design Ari |
| Fittings from windmill to reservoir | | | |
| 40 mm Ø brass foot valves (strainer) (1 x Valve) | | | 1 |
| 40 mm Ø base plate (1 x Plate) | | | |
| 40 mm Ø brass non return valve (1 x Valve) | | | |
| 40 mm Ø brass force head (1 x F/head) | | | 1 |
| • 40 mm Ø inlet air chamber (150mm Ø x 900mm steel pipe | | | |
| (2mm thick) with 20mm brass gate valve) (1 x Air chamber) | | | 1 |

| F | | COMP | LY |
|--|---|------|--|
| | YES | NO | REMARKS |
| • 40 mm nipple (galv) (3 x Nipple) | | | |
| 40 mm T-piece (galv) (2 x T/piece) | 1 | | a person. |
| 40 mm x 0.5 meter standpipe (galv) (1 x Pipe) | | | |
| 40 mm male adaptor (nylon) (1 x Adaptor) | | | |
| 40 mm male bend (galv) (2 x Bend) | | | |
| 40 mm pipe clamp (1 x Clamp) | | | |
| 40 mm LDPE pipe (30 Meter) | | | |
| Repair and sealing of existing reservoir and trough. (1 x | | | |
| reservoir and 1 x drinking trough) | | | |
| | | | |
| The existing reservoir and drinking trough around the reservoir | | | |
| need to be cleaned and the cracks to be repaired inside and | | | |
| outside with sand/cement filler. The inside of the reservoir and | | | |
| drinking trough needs to be sealed with geotextiles matt (90-100 | | | |
| g/m²) and polymer anionic bitumen emulsion sealant. | į | | |
| | | | |
| Specification type of matt: | | | |
| Specification type of sealing: | | | |
| Coating layers recommended : | į | | |
| | | | |
| The sealing matt should go over the wall of the reservoir down | | | |
| the outside wall for 30 cm and where the matt is joined the | | | |
| overlap should be 30 cm. Where the inner wall meets the floor | | | |
| the overlap should be 30 cm. | | | |
| Method of application: Paint area to be seal with sealant and apply the matt to the area and paint the matt 3 x coats with | | | |
| sealant | | | |
| Sediant | | | |
| Size of reservoir | Ì | | Consequence of the consequence o |
| Diameter : 5.09 meter | | | |
| Height: 2.4 meters | | | |
| Circumference: 16 meters | | | |
| Total m ² to be sealed: 67 m ² (floor 19.6 m ² , side wall 40 m ² , | | | |
| top of wall and outside wall 9.6 m²) | | | |
| | | | |
| Size of drinking trough around reservoir | S. Contraction of the state of | | |
| Width: 40 cm | ľ | | |
| Depth: 50 cm | | | |
| Circumference: 18 meters | 1 | | |
| Total m² to be sealed : 35 m² | | | |
| Construction of new apron around existing reservoir: (1 x | | | |
| apron) | | | Assessed to the second |

| | | COMP | LY |
|---|-------------------|----------|--|
| | YES | NO | REMARKS |
| Three (3) meter apron should be constructed around the | | | |
| existing reservoir. | | | |
| Inner circumference apron: 23 meters | | | THE PERSON NAMED IN COLUMN TO THE PE |
| Outer circumference of apron: 42 meters | | | *Agriculturals |
| Thickness of apron: 15 cm | | | - |
| Width of apron: 3 meter | | 1 | Alfrida was |
| Size of apron: 96. m ² | | 1 | |
| Concrete strength: 30 MPa | | | |
| Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm | | | |
| stone) | | | |
| Provide concrete test cube result | | | |
| Inlet pipe fittings (40 mm) | | | |
| 2.5 meter x 40 mm standpipe (galv) (1 x Pipe) | | | |
| 0.3 meter x 40 mm standpipe (galv) (1 x Pipe) | | | |
| 40 mm bend (galv) (3 x Bend) | | | |
| 10 11 11 11 11 11 11 11 11 11 11 11 | | | |
| 10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | | | |
| 40 mm pipe clamp for LDPE pipe (1 x Clamp) Outlet pipe fittings (40 mm) | м. на мога разии. | | |
| | | | |
| 40 mm outlet screen (stainless steel) (1 x Screen) | | | |
| 0.5 meter x 40 mm standpipe (galv) (1 x Pipe) | | | Î |
| 40 mm brass gate valve (brass) (1 x Valve) | | | |
| 40 mm bend (galv) (1 x Bend) | | | |
| 40 mm nipple (galv) (1 x Nipple) | | | |
| 40 mm x 32 mm reducing bush (galv) (1 x R/Bush) | | | |
| 32 mm male adaptor (1 x Adaptor) | | | |
| DRINKING TROUGHS: 1ST LOCATION: Approximately 120 m a | - | | |
| 2 ND LOCATION: Approximately 120 m a | away from | the rese | rvoir |
| Supply and installation of concrete casted drinking troughs | | | |
| (2 x troughs) | : | | Annah - Annah |
| | | | of the state of th |
| <u>Drinking troughs specifications</u> | | | |
| Concrete casted drinking troughs with cover to protect ball | 1 | | |
| valve | 1 | | |
| Size: length 2.4 meter x width 1.10 meter x depth 0.8 meter | | | |
| Capacity : 1000 liters per trough | | | |
| Slab specification for drinking troughs (2 x slabs) | 3 | | |
| | | | |
| • Concrete strength: 30 MPa | | | |
| Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of | 1 | | |
| 19mm stone) | 1 | | |
| Slab size : 9 meter x 7 meter x 0.15 meter | | | |
| • Size: 62 m ² (9.45 m ³ concrete) | | | ļ |

| | | COMP | LY |
|--|--|------|--|
| | YES | NO | REMARKS |
| Provide concrete test cube results for slab (2 x Cubes test) | And the second s | | |
| The trench specification (240 Meters) | | | |
| Size: The pipe should be buried in a trench of 0.5m deep | | | |
| with the width of 0.3m | | | |
| Fittings for troughs | | | |
| 32 mm inserts T-piece (nylon) (4 x T/piece) | | | |
| 32 mm male adaptor (nylon) (2 x Adaptor) | | | |
| 32 mm x 0.8 m standpipe (2 x Pipe) | | | |
| 32 mm nipple (galv) (2 x Nipple) | | | |
| 32 mm bend (galv) (2 x Bend) | | | T-Christian Control |
| 32 mm M&F bend (2 x Bend) | | | |
| 32 mm brass gate valve (2 x Valve) | | | |
| 32 mm ball valve (2 x Valve) | | | |
| 32 mm float valve (control water level) (2 x Valve) | | | |
| 32 mm clamp (wire type) (24 x Clamp) | | | 1 |
| 32 mm class 3 LDPE pipe (300 Meter) | | | |
| Thread tape (20 Roll) | | | |
| - Imode tape (actively | c- 1-44 | | |
| 4.1.12. Magabue (S 26° 37' 04"; E 24° 05' 21.10") | | | Constitution of the Consti |
| , | | | |
| Windmill location: S 26° 37' 04"; E 24° 05' 21.10" | | | |
| Supply and installation of Windmill (1 x Windmill) | | | |
| (Includes all equipment, materials , transport and labour | | | |
| required) | | | |
| ■ Install 9 m high windmill tower with a 3.0m Ø wheel with a | | | |
| gearbox, tail brake system, fork rod, bucket rod (pitman), | | | 100 mm |
| wood rod x 3 meter and force head. | | | * |
| 40 mm Ø x 3.0m galvanized medium screwed/socket pipe | | | |
| SABS (19 x Pipe) | | | |
| • 12 mm Ø x 3.0m electro plated pump rods with socks and | | | |
| protectors (20 x Rod) | | | |
| Borehole specification (Pump depth = 58 meters) | and the second second | | |
| Borehole depth: 90 m | | | 4 |
| Water level: Before test : 43.1m | | | |
| After test : 56.3 m | | | The state of the s |
| Delivery: 3789 l/h | | | |
| Water abstraction limit at 60 % of delivery: 2273.4 l/h | | | |
| Stainless steel borehole cylinder diameter 60 mm tube length | | | |
| 550 mm. (1 x Cylinder) | | | |
| Cylinder make: | | | *** |
| Cylinder model: | | | |

| | LY | |
|-----|-----|--|
| YES | NO | REMARKS |
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| | | And the second |
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| | | |
| | | |
| | | |
| | YES | YES NO |

| | | COMP | LY |
|---|--|------|---------|
| | YES | NO | REMARKS |
| Repair and sealing of existing reservoir and drinking trough. (1 x reservoir and 1 x trough) | | | |
| The existing reservoir and drinking trough need to be cleaned and the cracks to be repaired inside and outside with sand/cement filler. The inside of the reservoir and drinking trough needs to be sealed with geotextiles matt (90-100 g/m²) and polymer anionic bitumen emulsion sealant. | TOTAL TOTAL | | |
| Specification type of matt: Specification type of sealing: Coating layers recommended: | , | | |
| The sealing matt should go over the wall of the reservoir down the outside wall for 30 cm and where the matt is joined the overlap should be 30 cm. Where the inner wall meets the floor the overlap should be 30 cm. Method of application: Paint dam area to be seal with sealant and apply the matt to the area and paint the matt 3 x coats with sealant | and contact to the second seco | | |
| Size of reservoir Diameter: 5.09 meter Height: 2.4 meters Circumference: 16 meters Total m² to be sealed: 67 m² (floor 19.6 m², side wall 40 m², top of wall and outside wall 9.6 m²) | | | |
| Size of drinking trough Width: 40 cm Depth: 50 cm Circumference: 18 meters Total m² to be sealed: 35 m² | The state of the state of | | |
| Construction of new apron around existing reservoir: (1 x apron) One (1) meter apron should be constructed around the existing reservoir. | Section and Add Street, and an artist of the section of the sectio | | |
| Inner circumference apron: 23 meters Outer circumference of apron: 42 meters Thickness of apron: 15 cm Width of apron: 3 meter | The state of the s | | |
| Size of apron: 96 m2 Concrete strength: 30 MPa | | | |



| | | COMP | LY |
|---|--|--|--|
| | YES | NO | REMARKS |
| Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm | | | |
| stone) | | | |
| Provide concrete test cube result | | | |
| Construction of new apron around existing drinking | Control of the International States | | <u> </u> |
| trough: (1 x apron) | | | - |
| Three (3) meter apron should be constructed around the | | | ************************************** |
| existing trough | | | Ì |
| Inner circumference apron: 9.42 meters | | | |
| Outer circumference of apron: 28.27 meters | | | 1 |
| Thickness of apron: 15 cm | | | water L |
| Width of apron: 3 meter | | | |
| Size of apron: 56.5 m 2 (± 8.50 m³ concrete mix) | | | |
| Concrete strength: 30 MPa | | | |
| Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm | | | 2 |
| stone) | | | |
| Provide concrete test cube result | | | |
| Inlet pipe fittings (40 mm) | | | |
| ● 2.5 meter x 40 mm standpipe (galv) (1 x Pipe) | | | |
| 0.3 meter x 40 mm standpipe (galv) (1 x Pipe) | | | |
| 40 mm bend (galv) (3 x Bend) | | | |
| 40 mm male adaptor (galv) (2 x Adaptor) | | | |
| 40 mm pipe clamp for LDPE pipe (1 x Clamp) | | | |
| Outlet pipe fittings (40 mm) | | No. Village | |
| 40 mm outlet screen (stainless steel) (1 x Screen) | | | |
| 0.5 meter x 40 mm standpipe (galv) (1 x Pipe) | | | |
| € 40 mm brass gate valve (brass) (1 x Valve) | | | |
| ● 40 mm bend (galv) (1 x Bend) | 1 | | |
| 40 mm nipple (galv) (1 x Nipple) | 9 | | |
| 40 mm x 32 mm reducing bush (galv) (1 x R/Bush) | | | |
| 32 mm male adaptor (1 x Adaptor) | | | |
| DRINKING TROUGHS: 1ST LOCATION: Approximately 120 m av | vay from th | ne reservi | oir |
| 2 ND LOCATION: Approximately 120 m a | | | |
| Supply and installation of concrete casted drinking troughs | | | TOTAL STREET, TO |
| (2 x troughs) | A STATE OF THE PERSON OF THE P | | |
| | | | |
| Drinking troughs specifications | | | |
| Concrete casted drinking troughs with cover to protect ball | | ĺ | |
| valve | ļ | | |
| Size: length 2.4 meter x width 1.10 meter x depth 0.8 meter | | | |
| Capacity : 1000 liters per trough | - | | 1 |
| Slab specification for drinking troughs (2 x slabs) | i | - | 10. 10 Sec. 10. |
| Concrete strength: 30 MPa | [| a de la companya de l | |
| Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of | | and the state of t | |



| | | COMP | LY |
|---|--|--|--|
| 40 | YES | NO | REMARKS |
| 19mm stone) | | | |
| Slab size : 9 meter x 7 meter x 0.15 meter | | | |
| • Size: 62 m² (9.45 m³ concrete) | | | ļ. |
| Provide concrete test cube results for slab (2 x cube test) | | | |
| The trench specification (240 Meters) | | | |
| Size: The pipe should be buried in a trench of 0.5m deep | | | |
| with the width of 0.3m | | | |
| Fittings for troughs | | | |
| 32 mm inserts T-piece (nylon) (4 x T/piece) | | | W. |
| 32 mm male adaptor (nylon) (2 x Pipe) | | | |
| 32 mm x 0.8 m standpipe (2 x Pipe) | Į. | | |
| 32 mm nipple (galv) (2 x Nipple) | | | |
| 32 mm bend (galv) (2 x Bend) | | | |
| 32 mm M&F bend (2 x Bend) | | | |
| e 32 mm brass gate valve (2 x Valve) | | | i i |
| 32 mm ball valve (2 x Valve) | | | |
| 32 mm float valve (control water level) (2 x Valve) | | | |
| 32 mm clamp (wire type) (24 x Clamp) | | | |
| 32 mm class 3 LDPE pipe. (300 x Meter) | | | |
| Thread tape (20 Roll) | j | | |
| | The second second | | The State of the S |
| 4.1.13. Six Hundred (S 25° 35' 48"; E 25° 41' 10") | | - | ************************************** |
| <u> </u> | A R Section 1 | The state of the s | |
| Windmill location: S 25° 35' 48"; E 25° 41' 10" | : | | |
| | | | |
| Supply and installation of Windmill (1 x windmill) | | | |
| Includes all equipment, materials , transport and labour | | ļ | |
| required) | | į | |
| | į | | |
| Install 9 m high windmill tower with a 3.0m Ø wheel with a | | | |
| gearbox, tail brake system, fork rod, bucket rod (pitman), | | | |
| wood rod x 3 meter and force head. | | | |
| 40 mm Ø x 3.0m galvanized medium screwed/socket pipe | ļ | THE COMPANY | |
| SABS (15 x Pipe) | i i | | |
| 12 mm Ø x 3.0m electro plated pump rods with socks and | | · | |
| protectors (16 x Rod) Borehole specification (Pump depth = 46 meters) | - VERTON BARREST PERSONAL PROPERTY AND ADMINISTRATION OF THE PERSO | | |
| Borehole depth: Last strike 47 m | | | |
| Vater level: Before test : 38.7 m | | | |
| After test: 44.6 m | | Î | |
| Delivery: 6545 I/h | | | |
| Vater abstraction limit at 60 % of delivery: 3927 I/h | | į | |
| | 91 | i | |

| | | COMP | LY |
|---|--|---|------------|
| Province of management of the second of the | YES | NO | REMARKS |
| Stainless steel borehole cylinder diameter 60 mm tube length | 7.20 | | |
| 550 mm. (1 x Cylinder) | | | The second |
| Cylinder make: | | | 1 |
| Cylinder model: | | | |
| Cylinder size: mm | | | |
| Specify delivery of cylinder: Liters/ hour | | | |
| Total head: meters | | | |
| Windmill Tower Foundation (2.8 m ³) | | *************************************** | ř |
| Concrete strength: 30 MPa | | | |
| Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of | } | | |
| 19mm stone) | | | |
| Size: see attached specification in Appendix A | | | T V COMMEN |
| Provide concrete test cube results | | | |
| Supporting concrete block around casing(0.3 m³) | | ************************************** | |
| Concrete strength: 30 MPa | į | | |
| Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of |] | | |
| 19mm stone) | | | |
| Size: 800mm diameter x 600mm high 4 x12mm bolts and nuts | | | e L |
| Provide concrete test cube results | | | |
| Fittings from windmill to reservoir | | | |
| 40 mm Ø brass foot valves (strainer) (1 x Valve) | } | | |
| 40 mm Ø base plate (1 x Plate) | | | |
| 40 mm Ø brass non return valve (1 x Valve) | 177 | | |
| 40 mm Ø brass force head (1 x F/head) | à de la companya de l | | |
| 40 mm Ø inlet air chamber (150mm Ø x 900mm steel pipe | L. | | |
| (2mm thick) with 20 mm brass gate valve) (1 x Air chamber) | | | |
| 40 mm nipple (galv) (3 x Nipple) | | | |
| 40 mm T-piece (galv) (2 x T/piece) | | | |
| | ļ | | |
| is in a second or analysis (gair) (X 196) | 1 | į | |
| 40 mm male adaptor (nylon) (1 x Adaptor) | * | | |
| 40 mm male bend (galv) (2 x Bend) | | | |
| 40 mm pipe clamp (1 x Clamp) | | | |
| 40 mm LDPE pipe (30 Meter) | | | |
| Repair and sealing of existing reservoir and drinking | | | |
| rough. (1 x reservoir and 1 x trough) | | | , |
| | j. | | |
| he existing reservoir and drinking trough around the reservoir | I | | |
| eed to be cleaned and the cracks to be repaired inside and | | | h ma |
| utside with sand/cement filler. The inside of the reservoir and | | | ĺ |
| Irinking trough needs to be sealed with geotextiles matt (90-100 | | | |
| l/m²) and polymer anionic bitumen emulsion sealant. | | ļ | |
| Specification type of matt: | | | , |

| | | COMP | LY |
|--|-----|-------------|--|
| | YES | NO | REMARKS |
| Specification type of sealing: | | | |
| Coating layers recommended : | | | |
| | 1 | | |
| The sealing matt should go over the wall of the reservoir down | | | |
| the outside wall for 30 cm and where the matt is joined the | | | İ |
| overlap should be 30 cm. Where the inner wall meets the floor | | | |
| the overlap should be 30 cm. | | | |
| Method of application : Paint area to be seal with sealant and | İ | | |
| apply the matt to the area and paint the matt 3 x coats with | | | * |
| sealant | | | |
| | 1 | | |
| Size of reservoir | | | |
| Diameter : 5.09 meter | | | |
| Height: 2.4 meters | | | |
| Circumference: 16 meters | | | |
| Total m² to be sealed: 67 m² (floor 19.6 m², side wall 40 m², | - | | |
| top of wall and outside wall 9.6 m²) | | | |
| | | | |
| Size of drinking trough around reservoir | | | EL CAMPACIA CON CA |
| Width: 40 cm | | | |
| Depth: 50 cm | | | |
| Circumference: 18 meters | | | |
| Total m² to be sealed: 35 m² | | | |
| Construction of new apron around existing reservoir: | | | |
| Three (3) meter apron should be constructed around the | | | |
| existing reservoir. | | | |
| Inner circumference apron: 23 meters | | | |
| Outer circumference of apron: 42 meters | Ì | 11 | |
| Thickness of apron: 15 cm | | ļ | |
| Width of apron: 3 meter | 7 | į | |
| Size of apron: 96 m ² | | 3 | |
| Concrete strength: 30 MPa | ì | | |
| Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm | | ļ | |
| stone) | | | |
| Provide concrete test cube result | | | |
| Inlet pipe fittings (40 mm) | | | |
| 2.5 meter x 40 mm standpipe (galv) (1 x Pipe) | 1 | | |
| 0.3 meter x 40 mm standpipe (galv) (1 x Pipe) | | | |
| 40 mm bend (galv) (3 x Bend) | | T-SE-Chemic | |
| 40 mm male adaptor (galv) (2 x Adaptor) | ř | İ | |
| 40 mm pipe clamp for LDPE pipe (1x Clamp) | | , | |
| Outlet pipe fittings (40 mm) | | ļ | |
| 40 mm outlet screen (stainless steel) (1 x Screen) | | Ì | 1 |

| | | COMP | LY |
|--|--------------|--|--|
| | YES | NO | REMARKS |
| 0.5 meter x 40 mm standpipe (galv) (1 x Pipe) | | A71 .7 | |
| 40 mm brass gate valve (brass) (1 x Valve) | | | |
| 40 mm bend (galv) (1 x Bend) | | | ĺ |
| 40 mm nipple (galv) (1 x Nipple) | | | , |
| 40 mm x 32 mm reducing bush (galv) (1 x R/Bush) | | | |
| 32 mm male adaptor (1 x Adaptor) | | | |
| DRINKING TROUGHS: 1 ST LOCATION: Approximately 120 m a | wav from | the reser | .Lvoir |
| 2 ND LOCATION: Approximately 120 m | | | |
| Supply and installation of concrete casted drinking troughs | | | |
| (2 x troughs) | | | |
| | | | |
| <u>Drinking troughs specifications</u> | | | |
| Concrete casted drinking troughs with cover to protect ball | | | |
| valve | | | ************************************** |
| Size: length 2.4 meter x width 1.10 meter x depth 0.8 meter | | | |
| Capacity : 1000 liters per trough | | | |
| Slab specification for drinking troughs (2 x slabs) | | | |
| Concrete strength: 30 MPa | | | |
| Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of | | | |
| 19mm stone) | | | |
| Slab size : 9 meter x 7 meter x 0.15 meter | | | |
| Size: 62 m² (9.45 m³ concrete) | 1 | | |
| Provide concrete test cube results for slab (2 x Cubes test) | | | |
| The trench specification (240 meters) | | | |
| Size: The pipe should be buried in a trench of 0.5m deep with | | | |
| the width of 0.3m | | | |
| Fittings for troughs | | | |
| 32 mm inserts T-piece (nylon) (4 x T/piece) | | 1 | |
| 32 mm male adaptor (nylon) (2 x Adaptor) | | | |
| 32 mm x 0.8 m standpipe (2 x Pipe) | Africa, comm | į | |
| 32 mm nipple (galv) (2 x Nipple) | į | ļ | |
| 32 mm bend (galv) (2 x Bend) | | ŀ | |
| • 32 mm M&F bend (2 x Bend) | \$ 3 1 | in the second se | |
| 32 mm ball valve (2 x Valve) | ļ | į | 1 |
| 32 mm brass gate valve (2 x Valve) | 1 | | |
| 32 mm float valve (control water level) (2 x Valve) | 1 | | 1 |
| 32 mm clamp (wire type) (24 x Clamp) | | | 4 |
| • 32 mm class 3 LDPE pipe (300 Meter) | | ĺ | |
| Thread tape (20 Roll) | | | and the |

5. Did the service provider complete all the required documentation (Pricing schedule), specification and submitted all the required documentation/valid Tax Clearance Certificate/Cipro certificate?

Ensure that all relevant documentation are completed in full or signed and submitted.

PLEASE NOTE THAT CONTACT DETAILS MUST BE ACTIVE THROUGH COMPLETION OF CONTRACT AND THE DEPARTMENT MUST BE NOTIFIED IMMEDIATELY IF THERE ARE ANY AMENDMENT OF THE CONTACT DETAILS. FAILURE TO DO SO WILL INVALIDATE YOUR QUOTATION.

I/we, the undersigned, declare that the information furnished is true and correct and warrants that he/she is duly authorised to sign on behalf of the company.

| SIGNATURE OF SUPPLIER: | |
|------------------------|--|
| DATE: | |
| NAME OF COMPANY: | |

NAME AND CAPACITY:





IMPLEMENTATION PLAN GUIDELINE FOR THE EQUIPPING OF BOREHOLES

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| FROPOSED STAKT DATE FOR DATE-DATE-DATE FOR DATE-DATE-DATE-DATE-DATE-DATE-DATE-DATE- | POOTINGS | DYG TROUGH | Concrete caring Concrete caring Concrete caring | Holent | GCINSTRUCTION OF THE RESERVOIR WALL A TRANSPERSOR Of Teleforcement Comercia placing S Coucrate caring | HOW |
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| FROPOSED STAKT DATS BY FTSM | | | 4.3 | 5.2 | 1.4 | 7.7.7.2.2.8.9.7.9 |



SPECIFICATION FOR CONSTRUCTION OF NEW WINDMILL RESERVOIR AND REPAIR OF DRINKING TROUGHS IN NORTH WEST

COMPILED

BY

RAMAGOSHI N.T

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| 2.13 Six Hundred | |

1. PRELIMINARY AND GENERAL

| Di | ESCRIPTION | City | Unit | Price/Unit | Total Price |
|----|---|------|------|------------|-------------|
| SH | a establishment | | | | |
| • | Office and storage shed | 1 | Sum | | |
| • | Ablution and latrine facilities | 2 | Sum | | |
| | No water and electricity available | | | | |
| Oc | cupational health and safety measures | | | | |
| • | Cost of health and safety measures required in terms of the Construction Regulations (2003) of the Occupational Health and Safety act | 1 | Sum | | MM0400-44-1 |
| • | Compilation and maintenance of a Health and Safety Plan, including | | Sum | | |
| - | Risk Assessments, Safe Work Procedures and Method Statements | | ount | | |
| • | Compilation and maintenance of a Health and Safety File | 1 | Sum | | ,,,, |

2. PROJECTS SPECIFICATIONS

2.1 Blok B (S 26° 14' 43. 8"; E 23° 35' 44.6")

| | DESCRIPTION | | Qty | Unit | Price/Un VAT Inc | |
|----|--|--|-------|--|---------------------|--|
| 1. | WINDMILL | OGATION: S 26° 14' 43. 8"; E 23° 35 | 44.6" | | | ······································ |
| | Supply and installation of Windmill | | | | | |
| | (Includes all equipment , materials and labo | pur required) | | on the state of th | | |
| | Install 9 m high windmill tower with a 4.3 m | Ø wheel with a gearbox, tall brake | 1 | Windmill | | |
| | system, fork rod, bucket rod (pitman), wood | rod x 3 meter and force head. | | | | |
| | 40mm Ø x 3.0m Galvanized medium sc | rewed/socket pipe SABS | 46 | Pipe | | |
| | 12 mm Ø x 3.0m Electro plated pump ro | ds with socks and protectors | 47 | Rod | | |
| | Borehole specification (Pump depth = 92 m | eters) | | | | |
| Î | Semilist count | 1953m | | | | |
| | Water level | Before test: 62.2 | | The state of the s | | |
| | | After test : 91.2 | | | TO COMPANY | |
| | Delivery | 6545 I ∕h | | | | |
| | Water abstraction limit at 60 % of delivery | 3927 l/h | | | | |
| | Stainless steel borehole cylinder diameter | er 60 mm tube length 550 mm | 1 | Cylinder | W 074. | |
| | Cylinder make: | | | | | |
| 1 | Cylinder model: | **** | Î | | | |
| - | Cylinder size: mm | THE STATE OF THE S | | - Anna | Art Bow. | |
| Ì | Specify delivery of cylinder: | Liters/hour | | and the state of t | 52 m | ! |

| Total head : meters | | |
|--|--|--|
| Windmill Tower Foundation | THE PERSON NAMED IN COLUMN NAM | 7. |
| Concrete strength: 30 MPa | 2.8 | m ³ |
| Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm stone) | | 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - |
| Size: See attached specification in Appendix A | Ì | COLC A AMERICA |
| Provide concrete test cube results | | |
| Supporting concrete block around casing | 0.3 | m ⁸ |
| Concrete strength: 30 MPa | ŀ | |
| Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm stone) | | |
| Size: 800mm diameter x 600mm high 4x12mm bolts and nuts | Part Area | |
| Provide concrete test cube results | | |
| Fittings from whereful to reservoir | <u> </u> | |
| a 40 mm Ø brass foot valves (strainer) | 1 | Valve |
| 40mm Ø base plate | 1 | Plate |
| 40mm Ø brass non return valve | 1 | Valve |
| → 40mm Ø brass force head | 1 | F-head |
| * 40 mm Ø inlet air chamber (150mm Ø x 900mm steel pipe (2mm thick) | 1 | Air |
| 20mm brass gate valve | | chember |
| 40mm nipple (galv) | 3 | Nipple |
| 40mm T-piece (galv) | 2 | T/piece |
| 40 mm x 0.5 meter standpipe (galv) | 1 | Pipe |
| 40 mm male bend (galv) | 2 | Bend |
| 40 mm male Adaptor (nyion) | 1 | Adeptor |
| 40 mm pipe clamp | 1 | Clamp |
| 40 mm LDPE pipe | 30 | Neter |
| RESERVOIR LOCATION: | arter - arabadan'i makiris | The second secon |
| Construction of concrete reservoir | | |
| Circular reinforcad concreta reservoir, diameter 4.5 m, height 2.1 m, wall | 1 | Reservoir |
| thickness 225 mm, capacity 33.5 m³(33.5 kl). The wall should be reinforced | | |
| horizontally and vertically and the floor horizontally. Reservoir should be supply | grand of the state | AND THE PARTY OF T |
| inlet and outlet. | | |
| Provide concrete test cube results | 10 | Test cuip |
| Inlet pipe fittings (40 mm) | | |
| 2.5 meter x 40 mm standpipe (galv) | 1 | Pipe |
| 0.3 meter x 40 mm standpipe (galv) | 1 | Pipe |
| 40 mm bend (galv) | 3 | Bend |
| 40 mm male Adaptor (galv) | 2 | Adaptor |
| 40 mm pipe clamp for LDPE pipe | 1 | Clamp |
| - 40 mill hithe citatility for EPLE table | - | Alexith |
| Outlet ninn filtigen (40 mm) | | Screen |
| Outlet pipe fittings (40 mm) | 1 4 | CONTRACT (|
| 40 mm outlet screen (stainless steel) | 1 | |
| | 1 1 | Pipe Valve |



| • 4 | 40mm nipple (galv) | 1 | Nipple | |
|---------|---|-------------------------------|---|---|
| | 40mm x 32 mm reducing bush (galv) | 1 | R/Bush | STATE STORY AND POST OF |
| | 32 mm male adaptor | 1 | Adaptor | |
| | DRINKING TROUGHS: 18T LOCATION: | - traffica night, pp. antenni | territorial analas, mais e mis el es estatutarios mais planes e atras escuencia e analas. | MCalestocomp rorum y |
| | 2 ND LOCATION: | | | |
| Supp | ly and installation of concrete casted drinking troughs | 2 | Trough | |
| Drink | ing troughs specifications | | | |
| Conc | rete casted drinking troughs with cover to protect ball valve | | | |
| Size: | length 2.4 meter x width 1.10 meter x depth 0.8 meter | | | |
| Capa | city: 1000 liters per trough | | | |
| Slab | specification for drinking troughs | 2 | Slab | Westing area to ideal and an appearance |
| Concr | rete strength: 30 MPa | | 3. | |
| Ratio: | : 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm stone) | | | |
| Slab s | size: 9 meter x 7 meter x 0.15 meter | | | |
| Size: | 62 m ² (9.45 m ² concrete) | | | |
| Provid | se concrete test cube results for slab | 2 | Cube test | leder der d ense kurne tuter |
| The tr | ench specification | 200 | Meter | uch no chinac prosesses |
| Size: | The pipe should be buried in a trench of 0.5m deep with the width of 0.3m | | | |
| Fitting | s for troughs | | | |
| • 32 | 2 mm inserts T-piece (nylon) | 4 | T/piece | and the second section of the |
| • 32 | 2mm male adaptor (nylon) | 2 | Adaptor | |
| • 32 | 2mm x 0.8m standpipe | 2 | Pipe | Str. Control of Street, or other party of the last of |
| • 32 | 2 mm nipple (galv) | 2 | Nipple | |
| • 32 | 2 mm bend (galv) | 2 | Bend | |
| • 32 | mm M&F bend | 2 | Bend | |
| • 32 | Imm brass gate valve | 2 | Valve | |
| • 32 | mm ball valve | 2 | Valve | |
| • 32 | mm float valve (Control water level) | 2 | Valve | |
| • 32 | mm clamps (wire type) | 24 | Clamp | |
| • 32 | mm class 3 LDPE pipe | 200 | Meter | |
| • Th | read tape | 20 | Roll | |
| TOTAL | 100.00000000000000000000000000000000000 | | | 204 |

2.2 Disaneng (S- 25° 47′ 6.46"; E 25° 16′ 14.5")

| | DESCRIPTION | | Qty | <u>Unit</u> | Price/Ur | Total Pr |
|-------------------|---|--|-------|-----------------|---|----------------------------------|
| - | | | | | VAT Inc | VAT Inc |
| L | WINDMILL L | OCATION: S 25° 47° 6.46°; E 25° | 16′ 1 | 4.5" | 4-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1 | |
| | Supply and installation of Windmill | | | | | |
| (| includes all equipment, materials , transport | and labour required) | | | | |
| h | nstall 9 m high windmill tower with a 3.0m Ø | wheel with a gearbox, tail brake | 1 | Windmill | | ĺ |
| 3 | system, fork rod, bucket rod (pitman), wood rod x 3 meter and force head. | | | | | |
| 1 | 40mm Ø x 3.0m Galvanized medium scr | ewed/socket pipe SABS | 22 | Pipe | | |
| Ŀ | 12 mm Ø x 3.0m Electro plated pump roo | ds with socks and protectors | 24 | Rod | | |
| E | lorehole specification (Pump depth = 66 me | tera) | | | | |
| | PM in the the chap th | Lorst arthur Chin | | | | |
| Î | Water level | Before test : 28 m | | | | |
| | | After test: 60 m | | | | |
| | Delivery | 8000 I/h | | | | |
| | Water abstraction limit at 60 % of delivery | 4 800 l/h | | | | |
| | Stainless steel borehole cytinder diamete | er 60 mm tube length 550 mm | 1 | Cylinder | *************************************** | |
| Mary Mary College | Cylinder make: | | | | | |
| | Cylinder model: | | | | | |
| 1 | Cylinder size: mm | | | | | |
| 10 m | Specify delivery of cylinder :Liters/ hour | | | | | |
| | Total head:melers | | | | | |
| M | Mindmill Tower Foundation | | | | | Militingarky co. 1 May 2 |
| C | Concreís strength: 30 MPa | | | តា ³ | | |
| R | atio: 1:3:3 (1 cament, 3 parts coarse sand a | nd 3 perts of 19mm stone) | | | | |
| s | Size: See attached specification in Appendix A | | | | | |
| Р | rovide concrete test cube results | | | | | |
| 8 | upporting concrete block around casing | | 0.3 | m ³ | | rendC Salebbleviiii 50F2bbellii |
| C | oncrete strength: 30 MPa | | | | | |
| R | atio: 1:3:3 (1 cement, 3 paris coarse sand a | nd 3 parts of 19mm stone) | | | | |
| S | ize: 800mm diameter x 800mm high 4x12m | m bolts and nuts | | | | |
| P | rovide concrete test cube results | | | Į | | |
| · [7] | litings from windmill to reservoir | | | | | |
| 0 | 40 mm Ø brass foot valves (strainer) | | 1 | Valve | | / |
| ¢) | 40mm Ø base plate | | 1 | Plate | | - |
| £ | 40mm Ø brass non return valve | and the state of t | 1 | Valve | | erentime version in Control Land |
| ė | 40mm Ø brass force head | | 1 | F/head | | |
| 0 | 40 mm Ø inlet air chamber (150mm Ø z | 900mm steel pipe (2mm thick) witi | 1 | Air | | e villa, i Phresid i vis |
| | brass gate valve | | | chamber | | |
| 9 | 40mm nipple (galv) | | 3 | Nipple | | |
| | 40mm T-piece (galv) | www.next.mpcres tender/life inventor ?= \$7-17/2000 Newtoning and properties (1-minutespectual 1-10-17/200 | 2 | T/piece | | egyppildes (Allebalds, 1) 39 |
| | 40 mmx 0.5 meter standpipe (galv) | | 1 | Pipe | T | rotte o employ out the |

| | 40 mm male adaptor (nylon) | 1 | Adaptor | | |
|------------|---|---|--|--|--|
| | 40 mm male bend (galv) | 2 | Bend | | AVE 91 11 11 11 11 11 11 11 11 11 11 11 11 |
| | 40 mm pipe clamp | 1 | Clamp | | |
| | 40 mm LDPE pipe | 30 | Meter | | 14 Salaran Methodologia |
| | REPAIR OF RESERVOIR AND DRINKING T | ROUG | iH: | | |
| | Repair and sealing of existing reservoir. | | | | |
| | The existing reservoir and trough need to be cleaned, cracks to be repaired | | | | |
| | inside and outside with sand/cement filler. The Inside of the reservoir and | | | | |
| | troughs needs to be sealed with geotextiles matt (90-100 g/m²) and polymer | | | 1 | |
| | anionic bitumen emulsion sealant. | | NO. 14 (Marie | | |
| | Specification type of matt: | | | of the control of the | |
| | Specification type of sealing: | | | | |
| | Coating layers recommended : | | The state of the s | | |
| 1 | The sealing matt should go over the wall of the reservoir down the outside wall | TO THE PERSON NAMED IN COLUMN | And the second s | | |
| Separate N | for 30 cm . Where the matt is joined the overlap should be 30 cm. | | | | |
| 1 | Where the inner wall meet the floor the overlap should be 30cm. | | | | |
| l | Method of application: Paint area to be seal with sealant and apply the | | S. A. C. C. C. C. C. C. C. C. C. C. C. C. C. | | |
| | matt to the area and paint the matt 3 x coats with sealant | | | | |
| | Size of reservoir | | | | |
| | Diameter: 5.09 meter | | | | |
| | Height: 2.4 meters | 1 | Reservoir | 1 | |
| | Circumference: 16 meters | | | | |
| | Total m² to be sealed: 67 m² (Floor 19.6 m², Side wall 40 m², top of | | | | |
| | wali and outside wall 9.6 m²) | | | | |
| | Size of drinking trough | | | - Control of the cont | |
| | Diameter: 3 meter | | | | |
| | Height: 0.3 meters | | | Property Lambau | |
| ļ | Circumference: 9.4 meters | Tolkin them | | 10 mm (10 mm) | |
| | Total m² to be sealed: 17 m² (Floor 7.06 m², Side wall 4.71 m², top of | j. | | | |
| 1 | wall and outside wall 4.71 m²) | | | | |

| Construction of new apron around existing reservoir: | | WANG STATE | | | | |
|--|--|--|--|--|--|--|
| One (1) meter apron should be constructed around the existing reservoir. | A CARDA | description of the state of the | | | | |
| Inner circumference apron: 16 meters | unit-debut | 774 | | | | |
| Outer circumference of apron: 21.67 meters | | 1000 | | | | |
| Thickness of apron: 15 cm | 1 | Apron | | | | |
| Width of apron: 1 meter | | and the state of t | | | | |
| Size of apron: 19.01 m 2 (±2.85 ms concrete mix) | 4 | | | | | |
| Concrete strength: 30 MPa | | With the second | | | | |
| Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm stone) | | A COLUMN TO THE | | | | |
| Provide concrete test cube result | | S. Co. | | | | |
| Construction of new apron around existing drinking trough: | After a delivery of the second | A CONTRACTOR OF THE PERSONS AND A SECOND ASSESSMENT OF THE PERSONS ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSESSMENT ASSE | | | | |
| Three (3) meter apron should be constructed around the existing trough. | Outside the control of | | | | | |
| Inner circumference apron: 9.42 meters | | C) (Coloredo | | | | |
| Outer circumference of apron: 28.27 meters | 1 | Apron | | | | |
| Thickness of apron: 15 cm | | Chargemen | | | | |
| Width of apron: 3 meter | erada de la companyo | Manufacture () | | | | |
| Size of apron: 56.5 m ² (± 8.50 m ^s concrete mbx) | | Andrew Allenda | | | | |
| Concrete strength: 30 MPa | Chemical | 10000 A | | | | |
| Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm stone) | Accessor. | | | | | |
| Provide concrete test cube results | 402-700 MARIE | T. Common | | | | |
| Inlet pipe fittings(40 mm) | | | Sumblemburghyddwyd - 18 ywr au ydd, chaddauller (* 2) | | | |
| 2.5 meter x 40 mm standpips (galv) | 1 | Pipe | ************************************** | | | |
| 0.3 meter x 40 mm standplps (galv) | 1 | Pipe | | | | |
| 40 mm bend (gelv) | 3 | Bend | | | | |
| 40 mm male adaptor (galv) | 2 | Adaptor | | | | |
| 40 mm pipe clamp for LDPE pipe | | Clamp | Committee of the Commit | | | |
| Outlet pipe fittings(40 mm) | | | p40400000 | | | |
| 40 mm outlet screen (stainless steel) | 1 | Screen | | | | |
| 0.5 meter x 40 mm standpipe (galv) | | Pipe | | | | |
| | | Valve | THE RESERVE ASSESSMENT OF THE PERSON NAMED IN COLUMN TWO IN COLUMN TO THE PERSON NAMED IN COLUMN | | | |
| | | Bend | SERVICE CONTRACTOR (CONTRACTOR CO | | | |
| | | | and a second second second second second | | | |
| 40 mm nipple (galv) | 1 1 1 | Nipple | | | | |
| 40mm x 32 mm reducing bush (galv) 32 mm male adaptor | | R/Bush | | | | |
| Contract of the contract of th | 100 | Adaptor | The same of the sa | | | |
| DRINKING TROUGHS: 1 ST LOCATION: 2 ND LOCATION | | | | | | |
| Supply and installation of concrete casted drinking troughs | 2 | Trough | | | | |
| Drinking troughs specifications | | | NCV are planted | | | |
| Concrete casted drinking troughs with cover to protect ball valve | | | | | | |
| Size: length 2.4 meter x width 1.10 meter x depth 0.8 meter | at Company and | | | | | |
| Capacity: 1000 liters per trough | | | | | | |
| Slab specification for drinking troughs | 2 | Slab | | | | |

| Concrete strength: 30 MPa | | | j |
|--|-----|--|--|
| Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm stone) | į | | |
| Slab size: 9 meter x 7 meter x 0.15 meter | | | |
| Size: 62 m ² (9.45 m ² concrete) | | | |
| Provide concrete test cube results for slab | 2 | Cube test | |
| The trench specification | 200 | Meter | |
| Size: The pipe should be buried in a trench of 0.5m deep with the width of | | T. T. T. T. T. T. T. T. T. T. T. T. T. T | Ì |
| 0.3m | | *************************************** | |
| Fittings for troughs | | | |
| 32 mm inserts T-piece (nylon) | 4 | T/piece | and a commentation of a commentation of a |
| 32mm male adaptor (nylon) | 2 | Adaptor | |
| 32mm x 0.8m standpipe | 2 | Pipe | PAR SALE OF AND ADDRESS OF THE PARTY OF THE |
| 32 mm nipple (galv) | 2 | Nipple | |
| 32 mm bend (galv) | 2 | Bend | |
| 32 mm M&F bend | 2 | Bend | Artifician de Commission de la Confession de Commission de la commission de la Confession d |
| 32 mm brass gate valve | 2 | Valve | ###C#PARAMENTAL ARTIFIC CONTRACTOR - CANCELLO |
| 32 mm ball valve | 2 | Valve | rem - causer silvagas seque paper |
| 32mm float valve (control water level) | 2 | Valve | K15-2000 Complete Superior Company |
| 32mm clamp (wire type) | 24 | Clamp | - |
| 32mm class 3 LDPE pipe | 200 | Meter | |
| Thread tape | 20 | Roll | Company of the compan |
| TOTAL | | | |

2.3 Lokaleng (S - 25° 48' 35.5"; E 25° 33' 30.9")

| DESCRIPTION | | Oty | <u>Unit</u> | Price/Uni | Total P |
|---|--|--------------|--------------------|--|-------------------------------|
| | | | | VAT incl | VAT Inc |
| WINDMILL | OCATION: S 25° 48' 35.5"; E 25° 33 | 30.9 | | | |
| Supply and installation of Windmill | Supply and Installation of Windmill | | | | |
| (Includes all equipment, materials and labour | r required) | | | | |
| Install 9 m high windmill tower with a 3.0 m | Ø wheel with a gearbox, tail brake | 1 | Windmill | | |
| system, fork rod, bucket rod (pitman), wood rod x 3 meter and force head. | | | | | |
| 40mm Ø x 3.0m Galvanized medium screwed/socket pipe SABS | | | Pipe | | |
| → 12 mm Ø x 3.0m Electro plated pump rod | s with socks and protectors | 13 | Rod | | |
| Barehole specification (Pump depth = 36 met | ata) | | | | |
| likewing eligish | Let wise to m | | | | |
| Water level | Before test 26 meters | 1 | | | |
| | After test : 32 meter | | | | |
| Delivery | 13 090 Vhour | | | | |
| Water abstraction limit at 60 % of delivery | 7854 Vhour | | rederitande entant | | |
| Stainless steel borehole cylinder diameter | 60 min tube length 550 mm | 1 | Cylinder | A STATE OF THE STA | TOTAL OF STREET |
| Cylinder make: | | | | | |
| Cylinder model: | | | | | |
| Cylinder size: mm | | | | | |
| Specify delivery of cylinder average liters/day : Liters/day | | | | | |
| findmill Tower Foundation | | | | | |
| Concrete strength: 30 MPa | | | m³ | | |
| Ratio: 1:3:3 (1 cement, 3 parts coarse sand an | | 6346.1 Admin | | | |
| Size: See attached specification in Appendix A | | | | | |
| Provide concrete test cube results | | | | | |
| Supporting concrete block around casing | | | | | C 8000, Annies Marie 1901 |
| Concrete strength: 30 MPa | | | | | |
| Ratio: 1:3:3 (1 cement, 3 parts coarse sand an | d 3 parts of 19mm stone) | | | | |
| Size: 800mm diameter x 600mm high 4x12mn | n bolts and nuts | | | | |
| Provide concrete test cube results | | | <u> </u> | Live device | |
| Fittings from windmili to reservoir | | | | | |
| 40 mm Ø brass foot valves (strainer) | | 1 | Valve | | |
| 40mm Ø base plate | - | 1 | Plate | | |
| 40mm Ø brass non return valve | | 1 | yalve | | |
| 40mm Ø brass force head | | 1 | F-head | | |
| • 40 mm Ø inlet air chember (150mm Ø x 8) | 00mm steel pipe (2mm thick) with 20m | 1 | Air | | |
| gate valve | Andrews | | chamber | | |
| 40mm nipple (galv) | | 3 | Nipple | | |
| 40mm T-piece (galv) | | 2 | T/piece | | - Andrews Strangers - Company |
| 40 mmx 0.5 meter standpipe (galv) | | 1 | Pipe | | |
| 40 mm male adaptor (nylon) | The second secon | 1 | Adaptor | | |
| 40 mm male bend (galv) | 2 | Bend | 0 | THE PERSON NAMED AND ADDRESS OF | |

| | 40 mm pipe clamp | 1 | Clamp | | | | | |
|--|--|-------|--|------------|--|--|--|--|
| | 40 mm LDPE pipe | 30 | Meter | į | | | | |
| | RESERVOIR LOCATION: | | | | | | | |
| | Construction of concrete reservoir | | Reservoir | T | | | | |
| | Circular reinforced concrete reservoir, diameter 4.5 m, height 2.1 m, wall | 1 | | | | | | |
| | thickness 225 mm, capacity 33.5 m²(33.5 kl). The wall should be reinforced | | | Ì | | | | |
| | horizontally and vertically and the floor horizontally. Reservoir should be supply with inlet and outlet. | | 1 A 2 A 2 A 2 A 2 A 2 A 2 A 2 A 2 A 2 A | | | | | |
| | Provide concrete fest cube results | 10 | Test cub | - | | | | |
| | Inled pips fittings (40 mm) | | | | | | | |
| | 2.5 meter x 40 mm standpipe (galv) | 1 | Pipe | + | | | | |
| | 0.3 meter x 40 mm standpipe (galv) | 1 | Pipe | 1- | | | | |
| | 40 mm bend (galv) | 3 | Bend | | | | | |
| | 40 mm male Adaptor (galv) | 2 | Adaptor | + | | | | |
| ij | 40 mm pipe clamp for LDPE pipe | 1 | Clamp | - | | | | |
| 100 | Outlet pipe fittings (40 mm) | 1 | | | | | | |
| 1 | 40 mm outlet screen (steinless steel) | 1 | Screen | 1- | | | | |
| 1 | 0.5 meter x 40 mm standpipe (galv) | 1 | Pipe | | | | | |
| 477 | 40 mm brass gate valve (brass) | 1 | Valve | - | | | | |
| | 40 mm bend (galv) | 1 | Bend | 1 | | | | |
| Ì | 40 mm nipple (galv) | 1 | Nipple | | | | | |
| the same | 6 40mm x 32 mm reducing bush (galv) | 1 | R/Bush | 1 | | | | |
| and a | 32 mm male adaptor | 1 | Adaptor | | | | | |
| | DRINKING TROUGHS: 1 ST LOCATION: 2 ND LOCATION: | | | | | | | |
| | Supply and installation of concrete casted drinking troughs | 2 | Trough | | | | | |
| | Drinking troughs specifications | 1 | | ĺ | | | | |
| The same of | Concrete casted drinking troughs with cover to protect ball valve | 1 | | | | | | |
| | Size: length 2.4 meter x width 1.10 meter x depth 0.8 meter | | 7 1 115, A 888 | | | | | |
| - | Capadity: 1000 likers per trough | 200 | | | | | | |
| į. | Slab specification for drinking troughs | 2 | Slab | | | | | |
| | Concrete strength: 30 MPz | | Total Management | | | | | |
| 1 | - | | | | | | | |
| | Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm stone) | | | | | | | |
| | - | | | | | | | |
| The state of the s | Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm stone) | | | | | | | |
| The state of the s | Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm stone) Slab size: 9 meter x 7 meter x 0.15 meter | 2 | Cube test | | | | | |
| The state of the s | Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm stone) Slab size: 9 meter x 7 meter x 0.15 meter Size: 62 m ² (9.45 m ³ concrete) | 2 200 | Cube test Meter | **** | | | | |
| The state of the s | Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm stone) Slab size: 9 meter x 7 meter x 0.15 meter Size: 62 m² (9.45 m² concrete) Provide concrete test cube results for slab | | The second secon | eer Aveste | | | | |
| The state of the s | Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm stone) Slab size: 9 meter x 7 meter x 0.15 meter Size: 62 m ² (9.45 m ² concrete) Provide concrete test cube results for slab The trench specification | | The second secon | *** | | | | |
| The state of the s | Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm stone) Slab size: 9 meter x 7 meter x 0.15 meter Size: 62 m² (9.45 m² concrete) Provide concrete test cube results for slab The trench specification Size: The pipe should be buried in a trench of 0.5m deep with the width of 0.3m | | The second secon | | | | | |
| The state of the s | Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm stone) Slab size: 9 meter x 7 meter x 0.15 meter Size: 62 m ² (9.45 m ³ concrete) Provide concrete test cube results for slab The tranch specification Size: The pipe should be buried in a trench of 0.5m deep with the width of 0.3m Fittings for troughs | 200 | Meter | | | | | |
| The state of the s | Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm stone) Slab size: 9 meter x 7 meter x 0.15 meter Size: 62 m² (9.45 m² concrete) Provide concrete test cube results for slab The tranch specification Size: The pipe should be buried in a trench of 0.5m deep with the width of 0.3m Fittings for troughs 32 mm inserts T-piece (nylon) | 200 | Meter T/plece | | | | | |

| • | 32 mm bend (galv) | 2 | Bend |
|----|--|-----|-------|
| 0 | 32 mm M&F bend | 2 | Bend |
| a | 32 mm brass gate valve | 2 | Valve |
| 9 | 32 mm ball valve | 2 | Valve |
| | 32mm float valve (control water level) | 2 | Valve |
| a | 32mm clamp (wire type) | 24 | Clamp |
| • | 32mm class 3 LDPE pips | 200 | Meter |
| • | Thread tape | 20 | Roll |
| TO | TAL | | |

2.4 Makgokgwane (S 25.604604356: E 25.732774167)

| DESCRIPTION | 4 | | Qty | Unit | Price/Ur VAT Inc | Total Pric |
|--|--|--|----------|---|--|---|
| | WINDMILL LO | OCATION: S 25.604604356: E 2 | 5.73277 | 4167 | 447 | |
| | Supply and installation of Windmill (Includes all equipment, materials , transport and labour required) | | | | | |
| Install 6 m high | • | wheel with a gearbox, tail brake | 1 | Windmill | | |
| 40mm Ø x 3.0m Galvanized medium screen | | ewed/socket pipe SABS | 10 | Pipe | | |
| • 12 mm Ø > | 3.0m Electro plated pump roo | ds with socks and protectors | 11 | Rod | | |
| Borehole speci | ication (Pump depth = 30 me | ters) | | | | ······································ |
| Burehole gesi | , A | 49 (#91/29) | | | | |
| Water level | 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | Before test : 25 m | | | | |
| | | After test: 28 m | | | | |
| Delivery | | 12 000 Vh | | | | |
| Water abstract | ion limit at 60 % of delivery | 7 200 l/h | | | | |
| Stainless st | sel borehole cylinder diamete | r 60 mm tube length 550 mm | 1 | Cylinder | | Les unes militars, et se-voltentière, éville l'évelèrés ; |
| Cylinder make: | | | | -, | The state of the s | |
| Cylinder model: | | | | | | |
| Cylinder size: mm | | | | | | |
| Specify deli | Specify delivery of cylinder : Liters/ hour | | | | | |
| | Total head:meters | | | | | |
| Windmii Tower | Foundation | | | - her own areas or a so a seed to be a seed | **** | passing the contract of |
| Concrete streng | oncrete strength: 30 MPa | | | m ³ | | |
| Ratio: 1:3:3 (1 co | atio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm stone) | | | ,,,, | | |
| | Ize: See attached specification in Appendix A | | | | | |
| | test cube results | | | | | |
| | rete block around casing | | 0.3 | LU3 | ter transporte design | |
| Concrete strengt | | | | d Transaction | ** | |
| | ment, 3 parts coarse sand an | d 3 parts of 19mm stone) | | | | |
| | ımeter x 600mm high 4x12mn | . , | | | ì | |
| | test cube results | | | | | |
| Fittings from wind | imiil to reservoir | | | | | |
| • 40 mm Ø bra | iss foot valves (strainer) | | 1 | Valve | | |
| • 40mm Ø bas | | | 1 | Plate | | welfall sprange special in |
| | ss non return valve | No. of the contract of the con | 1 | Vaive | | ······································ |
| 40mm Ø bra | s force head | The second secon | 1 | F/head | | electrod et annum e e e e e |
| | | 900mm steel pipe (2mm thick) with | ال السيس | Air | | 有关的现在分词 |
| brass gate vi | | The second seconds and | - | chamber | (1) L. (1) | |
| 40mm nipple | and the second s | | 3 | Nipple | | |
| 40mm T-piec | The state of the s | restants, et appart hiphosphic (i.e.), plategraph of british has been hid gripped by the complete of the compl | | T/piece | 1 | CONTRACTOR COMPANY |
| The state of the s | mater standpipe (galv) | | 1 | Pipe | | |
| THE R. LEWIS CO., LANSING, MICH. SALES STREET, | adaptor (nylon) | | | ı iba | | |

| | 40 mm male bend (galv) | 2 | Bend | | |
|----|--|------------|--|--|--|
| | 40 mm pipe clamp | 1 | Clamp | | |
| | | 30 | Meter | | |
| | REPAIR OF RESERVOIR LOCATION | √ | 3 | dentity of | |
| F | Repair and sealing of existing reservoir. | | | | |
| | The existing reservoir need to be cleaned, cracks to be repaired inside | | | and the control of | |
| | and outside with sand/cernent filler .The inside of the reservoir and needs | | | | |
| | e sealed with geotextiles matt (90-100 g/m²) and polymer anionic bitumen | | | | |
| | mulsion sealant. | | | | |
| | | | Maria de la companio del companio de la companio de la companio del companio de la companio della companio de la companio de la companio della companio de la companio de la companio dell | | |
| 8 | pecification type of mati: | | Military in the Control of the Contr | | |
| S | pecification type of sealing: | | | | |
| C | Coating layers recommended: | | THE STATE OF THE S | | |
| Т | he sealing matt should go over the wall of the reservoir down the outside wall | | And the state of t | | |
| fc | or 30 cm . Where the matt is joined the overlap should be 30 cm. | TO COMPANY | Andrews and Andrews | | |
| V | There the inner wall meet the floor the overlap should be 30cm. | | - | | |
| N | lethod of application: Paint dam area to be seal with sealant and apply the | | welch Linesian | | |
| п | eatt to the area and paint the matt 3 x coats with sealant | | - Action of the second | | |
| 9 | ize of reservoir | | | | And the second s |
| D | lameter: 5.09 meter | | | 1 | The second |
| Н | eight: 2.4 meters | | | | a E |
| C | ircumference: 16 meters | | formal dates | To the latest and the | and the second |
| T | ctal m² to be sested: 67 m² (Floor 19.6 m², Side wali 40 m², top of wall | | | | - Pro-Probability |
| a | nd outside wall 9.6 m²) | | | | |
| C | onstruction of new apron around existing reservoir: | | | | |
| 0 | ne (1) meter apron should be constructed around the existing reservoir. | | |) | |
| In | ner circumference apron: 16 meters | | | Y | |
| 0 | uter circumference of apron: 21.67 meters | | | 2 | |
| T | nickness of apron: 15 cm | | and Alexanders | | |
| W | lidth of apron: 1 meter | | 1 | | |
| 8 | ze of apron: 19.10 m ² (± 2.85 m³ concrete mbx) | | | | |
| C | oncrete strength: 30 MPa | | · · | 1 | |
| R | atio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm stone) | | | | |
| Pi | ovide congrete test cube result | | | | |
| In | let pipe fittings(40 mm) | | | - foots weighted the pr | |
| • | 2.5 meter x 40 mm Standpipe (galv) | 1 | Pipe | | |
| • | 0.3 meter x 40 mm Standpipe (galv) | 1 - | Pipe | | |
| 0 | 6 40 mm Bend (galv) 4 5 4500 (b. free control of th | 3 | Bend | | |
| 0 | 40 mm Male Adaptor (galv) | 2 | Adaptor | | |
| | 40 mm pipe clamp for LDPE pipe | 1 | Clamp | 1 | |

| | 40 mm outlet screen (stainless steel) | 1 | Screen | |
|--|--|-----|-----------|--|
| | 0.5 meter x 40 mm standpipe (galv) | 1 | Pipe | A STATE OF THE PARTY OF THE PAR |
| | 40 mm brass gate valve (brass) | 1 | Valve | Photocomatol Charles (Sp. Landing Char |
| | 40 mm bend (gaiv) | 1 | Bend | |
| | • 40 mm nipple (galv) | 1 | Nipple | The state of the s |
| | 40mm x 32 mm reducing bush (galv) | 1 1 | R/Bush | MORROW AND A STATE OF THE STATE |
| | s 32 mm male adaptor | 1 | Adaptor | |
| - | DRINKING TROUGHS: 18T LOCATIO | N: | | Maria E. Maria |
| | 2 ND LOCATIO | DN: | | |
| Annual Control of Cont | Supply and Installation of concrete cested drinking troughs Drinking troughs specifications Concrete casted drinking troughs with cover to protect ball valve Size: length 2.4 meter x width 1.10 meter x depth 0.8 meter Capacity: 1000 liters per trough | 2 | Trough | The state of the s |
| 4 | Slab specification for drinking troughs Concrete strength: 30 MPa | 2 | Slab | PROPERTY AND ADDRESS OF THE PROPERTY ADDRESS OF THE PROPERTY ADDRESS OF THE PROPERTY ADDRESS OF THE PROPERTY ADDRESS OF THE PROPERTY ADDRESS OF THE PROPERTY ADDRESS OF THE PROPERTY ADDRESS OF THE PROPERTY ADDRESS OF THE PROPERTY ADDRESS OF THE PROPERTY ADDRESS OF THE PROPERTY ADDRESS OF THE PROPERTY ADDRESS OF THE PROPERTY ADDRESS OF THE PROPERTY ADDRESS OF THE PROPERTY ADDRESS OF THE PROPERTY ADDRESS OF THE PROPERTY A |
| | Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm stone) | Ī | i i i | |
| E | Slab size : 9 meter x 7 meter x 0.15 meter | | 13 | |
| | Size: 62 m ⁻² (9.45 m ⁻² concrete) | | | MC Shelle Can |
| Immu | Provide concrete test cube results for slab | 2 | Cuba test | |
| 7 | The trench specification | 200 | Meter | |
| 1 | Size: The pipe should be buried in a trench of 0.5 m deep with the width of 0.3m | | | - Africa de Companya de Compan |
| F | itings for troughs | | | |
| | 32 mm inserts T-piece (nylon) | 4 | T/ptece | |
| • | 32mm male adaptor (nylon) | 2 | Adaptor | |
| | 32mm x 0.8m standpipe | 2 | Pipe | |
| • | 32 mm nipple (galv) | 2 | Nippie | |
| • | 32 mm bend (galv) | 2 | Bend | THE RESERVE TO SERVE THE PARTY OF THE PARTY |
| • | 32 mm M&F bend | 2 | Bend | |
| | 32 mm brass gate valve | 2 | Valve | |
| • | 32 mm ball valve | 2 | Valve | |
| • | 32mm float valve (control water level) | 2 | Valve | ZSMANIA COLLANDO |
| • | 32mm clamp (wire type) | 24 | Clamp | |
| • | 32mm class 3 LDPE pipe | 200 | Meter | |
| • | Thread tape | 20 | Roll | |
| T | DTAL | 200 | | A Maria Commission of the Land |

2.5 Malaatshepe (\$ 26° 10' 46.7"; E 23° 47' 13.8")

| | DESCRIPTION | | Qty | Unit | Price/Un! | Total F | | |
|---------------|---|--|-----|----------------|---|-----------------------------|--|--|
| n n | WINDMILL LOCATION: S 26° 10' 48.7"; E 23° 47' 13.8" | | | | | | | |
| | Supply and installation of Windmill (Includes all equipment, materials and labour required) Install 9 m high windmill tower with a 4.3 m Ø wheel with a gearbox, tail brake system, fork rod, bucket rod (pitman), wood rod x 3 meter and force head. | | | Windmill | | | | |
| | * 40mm Ø x 3.0m Galvanized medium scre | ewed/socket pipe SABS | 21 | Pipe | | enter mojo rimente y ter; (| | |
| AA-THI-VI-DAM | • 12 mm Ø x 3.0m Electro plated pump rod | Is with socks and protectors | 22 | Rod | | | | |
| 1 | Bersimia opechicaden (Puna) dapin =63 mala | 100) | | | | | | |
| Ì | · 文字 特別法 引要強 | 120 M | | | | | | |
| | Water level Delivery | Before test: 7.6 m After test: 82.1 m 1500 l/hour | | | THE THE THE THE THE THE THE THE THE THE | : | | |
| | Water abstraction limit at 60 % of delivery 900 l/hour Stainless steel borshole cylinder diameter 60 mm tube length 560 mm Cylinder make: Cylinder model: Cylinder size: mm Specify delivery of cylinder: Liters/hour Total head: meters | | | Cylinder | | | | |
| | Windmili Towar Foundation Concrete strength: 30 MPa Ratio: 1:3:3 (1 cament, 3 parts coarse sand and 3 parts of 19mm stone) Size: See attached specification in Appendix A Provide concrete test cube results | | | €19 | | | | |
| | Supporting concrete block around casing Concrete strength: 30 MPa Ratio: 1:3:3 (1 cement, 3 parts coarse sand ar Size: 800mm diameter x 600mm high 4x12mm Provide concrete test cube results | , | 0.3 | m ³ | | | | |
| _ | Fittings from windmill to raservoir | | | | | | | |
| L | 40 mm Ø brass foot valves (strainer) | | 1 | Valve | | | | |
| 1 | 40mm Ø base plate | . All the state of | 1 | Plate | | | | |
| | 40mm Ø brass non return valve | | 1 | Valve | | | | |
| | 40mm Ø brass force head | | 1 | F-head | | | | |
| | 40 mm Ø inlet air chember (150mm Ø x 9 gate valve | 00mm steel pipe (2mm thick) with 20ml | 1 | Air chamber | Andrew Mr. V (Americans) Services | | | |
| | e 40mm nipple (galv) | | 3 | Nipple | | | | |
| | 40mm T-plece (galv) | | 2 | T/piece | | | | |
| Bed raca | 40 mmx 0.5 meter standpipe (galv) | V | 1 | Pipe | | | | |
| Maria - 7 M | 40 mm mais adaptor (nylon) | | 1 | Adaptor | 722 | | | |

| | 40 mm male bend (gafv) | 2 | Bend | | | | | |
|----------------|---|---------------------------------------|--|--|--|--|--|--|
| | 40 mm pipe clamp | 1 | Clamp | | | | | |
| | 40 mm LDPE pipe | 30 | meter | 100 | | | | |
| | RESERVOIR LOCATION: | · · · · · · · · · · · · · · · · · · · | | Artificants at | | | | |
| | Construction of concrete reservoir | 1 | Reservoir | | | | | |
| | Circular reinforced concrete reservoir, diameter 4.5 m, height 2.1 m, wall | 1 | | | | | | |
| | thickness 225 mm, capacity 33.5 m²(33.5 kl). The wall should be reinforced | ĺ | | | | | | |
| | horizontally and vertically and the floor horizontally. Reservoir should be supply with inlet and outlet. | All a car | | | | | | |
| | Provide concrete test cube results | 10 | Test cub | 1- | | | | |
| | Inlet pipe fittinga(40 mm) | 1.5 | 1000 000 | +- | | | | |
| | 2.5 meter x 40 mm standpipe (galy) | 1 | Pipe | V PARTITION | | | | |
| | 0.3 meter x 40 mm standpipe (galv) | 1 | Pipe | | | | | |
| | 40 mm bend (galv) | 3 | Bend | | | | | |
| | 40 mm male adaptor (galv) | 2 | Adaptor | | | | | |
| | 40 mm pipe clamp for LDPE pipe | 1- | Clemp | - | | | | |
| | Outist plps fittings(40 mm) | See County of the Lab | Olemp | | | | | |
| | 40 mm outlet screen (stainless steel) | 1 | Screen | | | | | |
| | 0.5 meter x 40 mm standpipe (galy) | 1 | Pipe | | | | | |
| | 40 mm brass gate valve (brass) | 1 | Valve | | | | | |
| | 40 mm bend (galv) | 1 | Bend | | | | | |
| 1 | 40 mm nipple (galv) | 1 | | | | | | |
| | 40mm x 32 mm reducing bush (galv) | | Nipple | | | | | |
| | 32 mm male adaptor | 1 | R/Bush | Percent management | | | | |
| - | | 1 | Adaptor | an and the sales of the sales o | | | | |
| | DRINKING TROUGHS: 1 ST LOCATION: 2 ND LOCATION: | | | | | | | |
| | Supply and installation of concrete casted drinking troughs | 2 | Trough | | | | | |
| and the second | Drinking troughs specifications | | | | | | | |
| - | Concrete casted drinking troughs with cover to protect ball valve | İ | | | | | | |
| 1000 | Size: length 2.4 meter x width 1.10 meter x depth 0.8 meter | | | | | | | |
| 1 | Capacity: 1000 liters per trough | | | | | | | |
| ļ | Slab specification for drinking troughs | 2 | Slab | TOTAL MEMORY | | | | |
| | Concrete strength: 30 MPa | | | | | | | |
| | Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm stone) | | | | | | | |
| Same Course | Slab size: 9 meter x 7 meter x 0.15 meter | | | | | | | |
| A | Size: 62 m ² (9.45 m ^s concrete) | | | | | | | |
| | Provide concrete test cube results for slab | 2 | Cube | | | | | |
| THE STATE OF | | | test | | | | | |
| - | The trench specification | 200 | Meter | | | | | |
| Mary Comme | Size: The pipe should be buried in a trench of 0.5m deep with the width of 0.3m | | - C | | | | | |
| T | Fittings for troughs | | 7 | | | | | |
| 1.300 | 32 mm inserts T-piece (nylon) | 4 | T/piece | | | | | |
| 4 | 32mm male adaptor (nylon) | - | Market and the second of the s | | | | | |

| GB . | 32mm x 0.8m standpipe | 2 | Pipe |
|------|--|-----|--------|
| • | 32 mm nipple (gatv) | 2 | Nipple |
| a | 32 mm bend (galv) | 2 | Bend |
| | 32 mm M&F bend | 2 | Bend |
| ю | 32 mm brass gete valve | 2 | Valve |
| | 32 mm ball valve | 2 | Valve |
| 8 | 32mm float valve (control water level) | 2 | Valve |
| | 32mm clamp (wire type) | 24 | Clamp |
| | 32mm class 3 LDPE pipe | 200 | Meter |
| C | Thread tape | 20 | Roll |
| TC | TAL | | |
| | | | |

2.6 Meloke (\$ 27° 43' 04"; E 23° 38' 57")

| | DESCRIPTION | | Qty | Unit | Price/U | - |
|---------|--|---|------------|--|--|----------------------------|
| - | The state of the s | | | | VAT Inc | VAT Inc |
| | | L LOCATION: S 27° 43' 04"; E 2 | 23° 38′ 57 | • | | - |
| | Supply and installation of Windmill (Includes all equipment, materials, transport install 9 m high windmill tower with a 3.0m Ø system, fork rod, bucket rod (pitman), wood r | wheel with a gearbox, tail brak | e 1 | Windmill | | |
| | 40mm Ø x 3.0m Gaivanized medium scr | ewed/socket pipe SABS | | Pipe | | |
| | • 12 mm Ø x 3.0m Electro plated pump roo | is with socks and protectors | | Rod | A Part Assess | |
| | Borehole specification (Pump depth = mete | rs) (No borehole result info) | | | | |
| | Respossingly | The state of the s | | | | |
| | Water level Delivery Water abstraction limit at 60 % of delivery | Before test: m After test: m I/h | | | | |
| - | Stainless steel borehole cylinder diamete | | 1 | Cylinder | | mint have seen to make the |
| | Cylinder make: Cylinder model: Cylinder size: mm Specify delivery of cylinder : | liters/ hour | | | | |
| F | Windrnill Tower Foundation Concrete strength: 30 MPa Ratio: 1:3:3 (1 cement, 3 parts coarse sand an Size: See attached specification in Appendix A Provide concrete test cube results | - | 2.8 | m ₃ | And the second s | очени "Метонен очени терду |
| C | Supporting concrete block around casing Concrete strength: 30 MPa Ratio: 1:3:3 (1 cament, 3 parts coarse sand an | 10-1-10-1-10 | 0.3 | m ³ | | |
| S | Size: 800mm diameter x 600mm high 4x12mn | · · | | Andrew Commencer | - | |
| | Provide concrete test cube results | The state of the s | | | | |
| | ittings from windmill to reservoir | | | | | |
| • | TO THE DIGGO TOUT TOUTON (GUILLINGS) | | 1 | Valve | | |
| • | 40mm Ø base plate | | 1 | Plate | | |
| | 40mm Ø brass non return valve | er er ar ar 1977 var 12 vij de er 17 e lle - 18 filosofi franskript des filosofi fil | 1 | Valve | | 1) et el est, celains sons |
| • | 40mm Ø brass force head | Medicanistrature ps. C., i s ps. medicani implicativa provincia p | 1 | F/head | | TORRESTO N. TRANS. J. BASE |
| • | 40 mm Ø inlet air chamber (150mm Ø x s brass gate valve | 100mm steel pipe (2mm thick) with | 1 | Air chamber | | |
| • | 40mm nipple (galv) | | 3 | Nipple | | |
| | 40mm T-piece (galv) | | 2 | T/piece | | |
| • | 40 mmx 0.5 meter standpipe (galv) | | 1 | Pipe | | Annual Committee Committee |
| W 27.00 | | Control of the Contro | | - Tree I | 3 | |

| | | 7 | V | *************************************** | - wysers |
|-----|--|-----------------|--|---|----------------------|
| | 40 mm male bend (galv) | 2 | Bend | | |
| | 40 mm pipe clamp | 1 | Clamp | | nere with the second |
| | 40 mm LDPE pipe | 30 | Meter | | Ì |
| 2. | REPAIR OF RESERVOIR WITH DRINKING T | ROUGH: | | | |
| | Repair and sealing of existing reservoir and trough. | CHORNEL OF | | | ì |
| | The existing reservoir and drinking trough around the reservoir need to be | Monte | | | |
| | cleaned, cracks to be repaired inside and outside with sand/cement filler. | reconstant Arms | | | |
| | The Inside of the reservoir and drinking trough needs to be sealed with | | | | |
| | geotextiles matt (90-100 g/m^2) and polymer anionic bitumen emulsion sealant. | - Company | | | |
| | | | | | 1 |
| | Specification type of matt: | | | All production of the state of | |
| | Specification type of sealing: | | | Blakking or green | |
| | Coating layers recommended: | | | | |
| | The sealing matt should go over the wall of the reservoir down the outside wall | | The state of the s | | |
| | for 30 cm .Where the matt is joined the overlap should be 30 cm. | | | | |
| | Where the inner wall meet the floor the overlap should be 30cm. | | | | |
| | Method of application: Paint dam area to be seal with sealant and apply the | | No. of Street, | | |
| | matt to the area and paint the matt 3 x coats with sealant | | | *************************************** | |
| | Size of reservoir | 1 | Reservoir | | |
| | Diameter: 5.09 meter | | | | |
| 187 | Height: 2.4 meters | | | ļ | |
| j | Circumierence: 16 meters | | | | |
| | Total m² to be sealed: 67 m² (Floor 19.6 m², Side wall 40 m² | | | | |
| | top of wall and outside wall 9.6 m²) | | | | |
| | Size of drinking trough around reservoir | | | | |
| | Width: 40 cm | 1 | Drinking | | |
| | Depth: 50 cm | | trough | | |
| 1 | Circumierence: 18 meters | | | | |
| - | Total m² to be sealed: 35 m² | | | | |
| | Construction of new apron around existing reservoir: | | | | |
| • | Three (3) meter apron should be constructed around the existing reservoir. | ĺ | | | |
| | nner circumference apron: 23 meters | | | | |
| 1 | Outer circumference of apron: 42 meters | | | | |
| 1 | Thickness of apron: 15 cm | | | Company | |
| 1 | Midth of apron; 3 meter | | | ļ | |
| | Size of apron: 96 m ² | 1 | Apron | P 11 | |
| 1 | Concrete strength: 30 MPa | | 10.00 | İ | |
| F | Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm stone) | - | | | |
| | Provide concrete test cube result | | | | |
| 1 | nlet pipe fittings(40 mm) | | | | |
| 6 | 2.5 meter x 40 mm standpipe (galv) | 1 | Pipe | | ****** |
| ø | 0.3 meter x 40 mm standpipe (galv) | 1 | Pipe | | |

| 6 | (8-17) | 3 | Bend | | -4497 |
|------------|--|--|--|--|--------------------------|
| • | 40 mm male adaptor (galv) | 2 | Adaptor | | 7100724 |
| • | 40 mm pipe clamp for LDPE pipe | 1 | Clamp | | CL MARIN A |
| 0 | Outlet pipe fittings(40 mm) | | | | ******* |
| • | 40 mm outlet screen (stainless steet) | 1 | Screen | | One-thing or an in- |
| | 0.5 meter x 40 mm standpipe (galv) | 1 | Pipe | | * |
| ¢ | 40 mm brass gate valve (brass) | | Valve | | THEFT |
| ٠ | 40 mm bend (galv) | | Bend | | polypolicists. |
| 0 | 40 mm nipple (galv) | 1 | Nipple | | WK PROSE/ |
| | 40mm x 32 mm reducing bush (gelv) | 1 | R/Bush | | PHINING AND |
| 0 | 32 mm Male Adaptor | 1 | Adaptor | | |
| | DRINKING TROUGHS: 18T LOCATION: AT | | | | Pideline (m |
| Su | 3rd LOCATION: At the 4th LOCATION: 600 spely and Installation of concrete casted drinking troughs | meter fin | om reservoir | | |
| Dri Co | Inking troughs specifications oncrete casted drinking troughs with cover to protect ball valve te: length 2.4 meter x width 1.10 meter x depth 0.8 meter | 4 | Trough | WILLIAM CONTROL OF THE PROPERTY OF THE PROPERT | |
| | pacity: 1009 liters per trough ib specification for drinking troughs | | Siab | | |
| Rai Sla | tio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm stone) b size: 9 meter x 7 meter x 0.15 meter e: 62 m 2 (9.45 m 2 concrete) | Automotive control of the state | Company of the Control of the Contro | | |
| Pro | vide concrete test cube results for slab | 4 | Cube test | | West of the |
| The | trench specification | 1 800 | Meter | | |
| | e: The pipe should be buried in a trench of 0.5m deep with the width of | | | Me. D. V. W. Berkerson | |
| Fiîti | ings for troughs | | | | |
|) | 32 mm inserts T-piece (nylon) | 8 | T/piece | | - |
| | 32mm male adaptor (nylon) | 4 | Adaptor | | |
| | 32mm x 0.8m standpipe | 4 | Pipe | | |
| | oznan x olom auntopipe | _ | | | |
| • | 32 mm nipple (galv) | 4 | Nipple | | |
| · | | | | | |
| | 32 mm nîpple (galv) | 4 | Nipple | | ** ***** |
| | 32 mm nipple (galv) 32 mm bend (galv) | 4 | Nipple Bend | | TO STATE OF THE STATE OF |
| | 32 mm nîpple (galv) 32 mm bend (galv) 32 mm M&F bend | 4 | Nipple Bend Bend | | |
| | 32 mm nîpple (galv) 32 mm bend (galv) 32 mm M&F bend 32 mm brass gate valve | 4 4 4 | Nipple Bend Bend Valva Valve | | |
| | 32 mm nîpple (galv) 32 mm bend (galv) 32 mm M&F bend 32 mm brass gate valve 32 mm ball valve | 4 4 4 4 | Nipple Bend Bend Valve Valve Valve | | |
| | 32 mm nîpple (galv) 32 mm bend (galv) 32 mm M&F bend 32 mm brass gate valve 32 mm ball valve 32mm float valve (control water level) | 4 4 4 4 4 48 | Nipple Bend Bend Valve Valve Valve Clamp | | |
| | 32 mm nîpple (galv) 32 mm bend (galv) 32 mm M&F bend 32 mm brass gate valve 32 mm ball valve 32mm float valve (control water level) 32mm clamp (wire type) | 4 4 4 4 | Nipple Bend Bend Valve Valve Valve | | |

2.7 Phiring (\$ 25° 46' 44.35": E 25° 09' 58.06")

| DESCRIPTION | DN | | Qty | Unit | Price/Lir | Total F |
|--|--|--|-----------|-----------------|----------------------|--|
| | WINDMILL LO | CATION: S 25° 46' 44.35": E 25 | ° 09' 58. | 06" | Acert street, market | <u> </u> |
| (<i>Includes all</i> Install 9 m hi | installation of Windmill equipment, materials, transport gh windmill tower with a 3.0m Ø rod, bucket rod (pitman), wood ro | wheel with a gearbox, tail brake | 1 | Windmill | | |
| - 40mm Ø | x 3.0m Galvanized medium scre | ewed/socket pipe SABS | 24 | Pipe | | The state of the s |
| • 12 mm @ | x 3.0m Electro plated pump rod | is with socks and protectors | 26 | Rod | | |
| Water level Delivery | A COLUMN TO THE RESERVE ASSESSMENT ASSESSMEN | Before test: 29.5 m After test: 71.2 m 2 800 l/h | | | | |
| Stainless Cylinder Cylinder Cylinder Specify d | steel borehole cylinder diamete make: model: size: mm lelivery of cylinder : | r 60 mm tuba langtin 550 mm Liters/ hour | 1 | Cylinder | | e fa shirin agus dhaada waa |
| Size: See atta | | • | 2.8 | m³ | | |
| Supporting co Concrete stre Ratio: 1:3:3 (1 | ncrata block around cosing | , | 0.3 | m² | | unumbritisch eine der Schaffen |
| macamanana o see camp aire, sitataa | ete test cube results | | | | | |
| ··· | vindmili to reservoir | | 4 | | | |
| | brass foot valves (strainer) | | 1 | Valve | | njama Rapin sp |
| | base plate | | 1 | Plate | | we risk to disease a |
| and the work with the second of | brass non return valve | Charles (Control of the Control of t | 1 | Valve | | dilitera, arrowar (a |
| and the second | brass force head | DOB man also all the IBs distalet color | 1 | F/head | | Collection Recognition |
| 40 mm Ø brass gat | • | 900mm steel plpa (2mm thick) With | 1 | Air chamber | | |
| | | | 3 | Nipple | | |
| 40mm nip 40mm T-r | pie (galv) | Description of the Control of the Co | 2 | | | |
| THE REAL PROPERTY AND ADDRESS OF |).5 meter standpipe (galv) | | 1 | T/piece Pipe | | |
| er er a andressen er armen | ale adaptor (nylon) | va vin pr., verna pr. szemelenentététététététésessesses szemelt par vin programmentetétététététététététété | 1 | Adaptor | | , , , , , , , , , , , , , , , , , , , |

| | 40 mm male bend (galv) | 2 | Bend | |
|--------|---|-------------|--|---|
| i i | 40 mm pipe clamp | 1 | Clamp | |
| | 40 mm LDPE pipe | 30 | Meter | alan Marak Mala Medi - 1 Sedurasa arrasa |
| | REPAIR OF RESEVIOR AND TROUG | 3H: | The second section of the second seco | |
| | Repair and sealing of existing reservoir and drinking trough. | | | |
| 1. | The existing reservoir and drinking trough needs to be cleaned, cracks to be | | | |
| ľ | repaired inside and outside with sand/cement filler. The inside of the reservoir | - | | 1 |
| 1 8 | and trough needs to be sealed with geotextiles matt (90-100 g/m²) and | | | |
| ŗ | polymer anionic bitumen emulsion sealant. | 100 m 100 m | | |
| 8 | Specification type of matt: | | Section (see | a. managara a sa sa sa sa sa sa sa sa sa sa sa sa |
| 8 | Specification type of sealing: | | | |
| C | Coating layers recommended: | | | 1 |
| T | The sealing matt should go over the wall of the reservoir down the outside | | 7 77 77 78 78 78 78 78 78 78 78 78 78 78 | Treat the past of |
| W | vail for 30 cm .Where the matt is joined the overlap should be 30 cm. | | | ĺ |
| M | Vinere the inner wall meet the floor the overlap should be 30cm. | | 1 | |
| N | lethod of application: Paint area to be seal with sealant and apply the | | and the same of th | |
| m | natt to the area and paint the matt 3 x coats with sealant | | | |
| S | ize of reservoir | | | |
| D | lameter: 5.09 meter | | 1 | |
| H | elgin: 2.4 meters | 1 | Reservoir | |
| 9 | ircumference: 16 meters | | | |
| | otal m2 to be sealed: 67 m2 (Floor 19.6 m2, Side wall 40 m2,top of wall | | det. | |
| ar | nd outside wall 9.6 m²) | | | |
| | | | Drinking | Š |
| 4 | ze of drinking trough | 1 | trough | |
| - | lametar: 3 meter | | | |
| | aight: 0.3 meters | | | į |
| | rcumieranca: 9.4 metera | | | |
| | otal m ^a to be seeled: 17 m ^a (Floor 7.06 m ^a , Side wall 4.71 m ^a , top of | | | |
| | all and outside wall 4,71 m²) | | | |
| | onstruction of new apron around existing reservoir: | | | |
| | ne (1) meter apron should be constructed around the existing reservoir. | | | * 74.5.4 |
| | ner circumference apron: 16 meters | | 22 W | 1 |
| | ter circumference of apron: 21,67 meters ickness of apron: 15 cm | | | - |
| | dth of apron: 1 meter | 1 | Apron | E |
| | te of apron: 19.10 m 2 (± 2.85 m³ concrete mbt) | | | į. |
| | encrete strength: 30 MPa | | | |
| | tio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm stone) | | | |
| 2 4.ET | ovide concrete test cube result | | | desired as an assessment |

| | Construction of new apron around existing drinking trough: | | | |
|------------|--|----------------|--|--|
| | Three (3) meter apron should be constructed around the existing trough. | | No. Application (Co.) | |
| | Inner circumference apron: 9.42 meters | diversities on | | |
| | Outer circumference of apron: 28.27 meters | | | |
| | Thickness of apron: 15 cm | | | |
| | Width of apron: 3 meter | 1 | Apron | Î |
| | Size of apron: 56.5 m ² (± 8.50 m³ concrete mix) | | | |
| | Concrete strength: 30 MPa | | | |
| | Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm stone) | | | |
| | Provide concrete test cube result | | Land Company | |
| 344 | Inlet pipe fittings(40 mm) | | | The state of the s |
| | 2.5 meter x 40 mm standpipe (galv) | 1 | Pipe | |
| | 0.3 meter x 40 mm standpipe (galv) | 1, 10 % | Pipe | |
| | • 40 mm bend (galv) | 3 | Bend : | Vincens and the Commission of |
| | 40 mm male adaptor (galv) | 2 | Adaptor | |
| - | 40 mm pipe clamp for LDPE pipe | 1 | Clamp | |
| right will | Outlet pipe fittings(40 mm) | | | |
| 0 | 40 mm outlet screen (stainless steel) | 1 2000 | Screen | |
| - No. | 0.5 meter x 40 mm standpipe (galv) | 1 | Pipe | |
| | • 40 mm brass gate valve (brass) | 1 | Valve | |
| - | • 40 mm bend (galv) | 1 : | Bend | |
| İ | 40 mm nipple (galv) | 1 | Nipple | ** *********************************** |
| - | 40mm x 32 mm reducing bush (galv) | 1 | R/Bush | |
| | 9 32 mm male adaptor | 1 | Adaptor | |
| I | DRINKING TROUGHS: 18T LOCATIO | N: | | |
| | 2 ND LOCATIO | N: | | *************************************** |
| | Supply and installation of concrete casted drinking troughs | 2 | Trough | |
| | Drinking troughs specifications | | With a | |
| | Concrete casted drinking troughs with cover to protect ball valve | | ; | |
| | Size: length 2.4 meter x width 1.10 meter x depth 0.8 meter | | And the second s | Manager Co. |
| L | Capacity: 1000 liters per trough | | | |
| | Slab specification for drinking troughs | 2 | Slab | |
| | Concrete strength: 30 MPa | | | |
| 1 | Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm stone) | | | |
| ğ | Slab size : 9 meter x 7 meter x 0.15 meter | | | |
| e. | Size: 62 m 2 (9.45 m 2 concrete) | | | |
| κ. | Provide concrete test cube results for slab | 2 | Cube test | |
| | The trench specification | 200 | Meter | |
| | Size: The pipe should be burled in a trench of 0.5m deep with the width of | | | ĺ |
| ì | 0.3m | | | |
| L | Fittings for troughs | | | Water a Manager our assessment supply |
| - | 32 mm Inserts T-piece (rrylon) | 4 | T/piece | |
| | 32mm male adaptor (nylon) | 3 | Adaptor | 1 |

| | 32mm x,0.8m standpipe | 3 | Pipe | |
|----|--|-----|--------|--|
| • | 32 mm nipple (galv) | 3 | Nipple | |
| 6 | 32 mm bend (galv) | 3 | Bend | Maria American In 1994 of State of Stat |
| • | 32 mm M&F bend | 3 | Bend | |
| • | 32 mm brass gate valve | 3 | Valve | |
| | 32 mm balí valve | 3 | Valve | |
| • | 32mm float valve (control water level) | 3 | Valve | |
| * | 32mm clamp (wire type) | 26 | Clamp | |
| ¢ | 32mm class 3 LDPE pipe | 210 | Meter | |
| • | Thread tape | 20 | Roll | |
| TO | TAL | | | |

2.8 Southey (S 26. 8040; E 23. 9949)

| DESCRIPTION | | Qty | Unit | Price/Un VAT Inc | 4 |
|--|--|-------------------|--|--|---------------------------------------|
| WINDM | ILL LOCATION: \$ 26. 8040; E 23 | . 9949 | | 2 | |
| Supply and installation of Windmill (Includes all equipment, materials, transport Install 9 m high windmill tower with a 3.0m Ø system, fork rod, bucket rod (pitman), wood in the system of the syste | wheel with a gearbox, tall brake | 1 | Windmill | | |
| 40mm Ø x 3.0m Galvanized medium scr | | 19 | Pipe | | |
| • 12 mm Ø x 3.0m Electro plated pump ro | | 20 | Rod | | |
| Borehole specification (Pump depth = 56 m | | | | | - |
| Rowlinds down | 7 th 191 | | | A TOTAL OF THE PARTY OF THE PAR | |
| Water level | Before test : 35.20 m After test : 54 m | | | ACTION AND ACTION ACTION AND ACTION AND ACTION AND ACTION AND ACTION AND ACTION AND ACTION AND ACTION AND ACTION AND ACTION AND ACTION AND ACTION ACTION AND ACTION AND ACTION AND ACTION AND ACTION AND ACTION AND ACTION AND ACTION AND ACTION AND ACTION AND ACTION AND ACTION ACTION AND ACTION AND ACTION AND ACTION AND ACTION AND ACTION AND ACTION ACTION AND ACTION AND ACTION AND ACTION ACTION ACTION AND ACTION ACTI | |
| Delivery Water abstraction limit at 60 % of delivery | 5538 I/h 3322.8 I/h | | | | |
| Stainless steel borehole cylinder diame Cylinder make: Cylinder model: Cylinder size: | ter 60 mm tube length 550 mm | 1 | Cylinder | Section 1 to the section of the sect | Mary Sandan (Mary Sanga) |
| Windmill Tower Foundation Concrete strength: 30 MPa Ratio: 1:3:3 (1 cament, 3 parts coarse sand a Size: See attached specification in Appendix a | , | 2.8 | m³ | | e-againealaine si em a tairig |
| Provide concrete test cube results Supporting concrete block around casing | | 0.3 | m ³ | | |
| Concrete strength: 30 MPa Ratio: 1:3:3 (1 cement, 3 parts coarse sand at Size: 800mm diameter x 600mm high 4x12m Provide concrete test cube results | - , | 0.0 | The state of the s | | |
| Fittings from windmill to reservoir | | | | | |
| 40 mm Ø brass foot valves (strainer) | | 1 | Valve | | **** |
| 40mm Ø base plate | | 1 | Plate | · na | |
| 40mm Ø brass non return valve | | 1 | Valve | | |
| 40mm Ø brass force head | | 1 | F/head | | ar Biri New Lindskie Lindson |
| 40 mm Ø inlet air chamber (150mm Ø x brass gate vaive | 900mm steel pipe (2mm thick) will | rations are super | Air chamber | | |
| 40mm nipple (galv) | CONTROL COLLEGE CONTROL PROCESSAN PARAMETERS I SELVICE AND MARKET DE MARKET | 3 | Nipple | | · · · · · · · · · · · · · · · · · · · |
| 40mm T-piece (galv) | | 2 | T/plece | - | |
| 40 mmx 0.5 meter standpipe (galv) | The second secon | 1 | Pipe | Marian Lineary Marian | |
| TO THE OWN TO SEE THE STREET STREET, | 1 1 1 1 2 1 1 2 1 1 2 1 1 2 1 2 1 2 1 2 | 1 | Adaptor | | Marine His COT's 3 |

| | 40 mm male bend (galv) | 1 - | | - | |
|--|---|----------|--|--|---|
| | 40 mm pipe clamp | 2 | Bend | Male Company | |
| | | 1 | Clamp | | |
| • | 40 mm LDPE pipe | 30 | Meter | | |
| 2. | REPAIR OF RESERVOIR WITH DRINKING | TROU | GH: | | Maria Salara Salara Salara Salara Salara Salara Salara Salara Salara Salara Salara Salara Salara Salara Salara |
| | Repair and sealing of existing reservoir and trough. | | | | |
| | The existing reservoir and drinking trough around the reservoir need to be | | | MC AND AND AND AND AND AND AND AND AND AND | |
| | cleaned, cracks to be repaired inside and outside with sand/cement filler. | | | | |
| | The inside of the reservoir and drinking trough needs to be sealed with | | | | |
| | geotextiles matt (90-100 g/m²) and polymer anionic bitumen emulsion sealant. | | | | |
| The State of | Specification type of matt: | | | | a special control of the control of |
| | Specification type of sealing: | | | | |
| And the second | Coating layers recommended: | | | | |
| - | The sealing matt should go over the wall of the reservoir down the outside wall | | | | |
| | for 30 cm . Where the matt is joined the overlap should be 30 cm. Where the | | | i | |
| | inner wall meet the floor the overlap should be 30cm. | | | | |
| | Method of application : Paint dam area to be seal with sealant and apply the | | | | |
| | matt to the area and paint the matt 3 x coats with sealant | | | | |
| | Size of reservoir | | 4 | | |
| 1 | Diameter: 5.09 meter | | Î | | |
| | Height: 2.4 meters | 1 | Reservoir | | : |
| | Circumference: 16 meters | | | | |
| 1 | Total ms to be sealed: 67 ms (Floor 19.6 ms, Side wall 40 ms, top of | | | | |
| ¥ | wall and outside wall 9.6 m²) | | | | 1 |
| 8 | Size of drinking trough around reservoir | 1 | Drinking | | |
| | Midth: 40 cm | ľ. | trough | | |
| | Depth: 50 cm | | n oagu | ĺ | |
| C | Circumference: 18 meters | | | | |
| T | otal m ² to be sealed: 35 m ² | | | | |
| C | construction of new apron around existing reservoir: | | | | |
| -1 | hree (3) meter apron should be constructed around the existing reservoir, | | | | |
| | nner circumference apron: 23 meters | | | | 1 |
| 1 | uter circumference of apron: 42 meters | İ | | | |
| | hickness of apron: 15 cm | E Jane 1 |) per une de la composition della composition de | Modern Com. | |
| W | fidth of apron: 3 meter | } | P. S. S. S. S. S. S. S. S. S. S. S. S. S. | 7777 Villesham | |
| S | ize of apron: 96. m² | | ļ | ļ | |
| C | oncrete strength: 30 MPa | | j | | |
| 1 | No. 4-0-9 (4 second 0 st | . | Apron | ļ | |
| | rovide concrete test cube results | | - daren | į | |
| In | let pipe fittings(40 mm) | | | | |

| 1 | Pine | |
|---|--|--|
| | | 70 - 7 0 10 10 10 10 10 10 10 10 10 10 10 10 10 |
| | | |
| | | |
| | The same of the sa | |
| | Ошир | |
| | Screen | |
| | | |
| | | |
| | | in mitter street in process of the second |
| 1 | | |
| 1:0 | | |
| | | |
| | | |
| - | | |
| 2 | Trough | THE STATE OF THE S |
| | Commence of the commence of th | |
| 2 | Slab | |
| | The state of the s | |
| | ed/ | Section 1 |
| 2 | Cube test | A Comment |
| 2 200 | Cube test Meter | |
| - | | |
| - | Meter | |
| 200 | | |
| 200 | Meter T/piace | |
| 200 | T/piace Adaptor Pipe | |
| 200 | Meter T/piace Adaptor | |
| 200 | T/piece Adaptor Pipe Nipple | |
| 200 4 2 2 2 2 | T/piace Adaptor Pipe Nipple Bend | |
| 200 4 2 2 2 2 2 2 | T/piace Adaptor Pipe Nipple Bend Bend | |
| 200 4 2 2 2 2 2 2 | T/piace Adaptor Pipe Nipple Bend Bend Valve | |
| 200 4 2 2 2 2 2 2 2 2 | T/piace Adaptor Pipe Nipple Bend Bend Velve | |
| 200 4 2 2 2 2 2 2 2 2 2 | T/piece Adaptor Pipe Nipple Bend Bend Velve Valve | |
| | 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | 1 Pipe 3 Bend 2 Adaptor 1 Clamp 1 Screen 1 Pipe 1 Valve 1 Bend 1 Nippte 1 R/Bush 1 Adaptor N: 2 Trough |



2.9 Tshunyane (S 26. 060755658; E 25.52319602)

| DESCRIPTION | | Qt | y <u>Unit</u> | Price/Uni | |
|--|---|--------|---------------------|---|--|
| The state of the s | | | | VAT Inci | VAT Incl |
| | CATION: S 26. 060755658; E 25.52 | 231960 | 2 | | |
| Supply and installation of Windmill (Includes all equipment, materials and labour Install 9 m high windmill tower with a 3.0 m system, fork rod, bucket rod (pitman), wood rod | Zi wheel with a gearbox, tail brake | 7 | Windmil | | |
| 40mm Ø x 3.0m Galvanized medium screen | wed/socket pipe SABS | 23 | Pipe | | |
| • 12 mm Ø x 3.0m Electro pleted pump rods | with socks and protectors | 24 | Rod | | |
| Borehole specification: (Pump depth = 69 me | riera) | Ť | | | |
| Sain which they have | M Ing Internations | - M | | | |
| Water level Defivery Water abstraction limit at 60 % of delivery | Before test : 23.1 m After test : 67.7m 800 l/hour 480 l/hour | | | | |
| Stainless steel borehole cylinder diameter Cylinder make: Cylinder model: | 60 mm tube length 550 mm | | Cylinder | | |
| Windmill Tower Foundation Concrete strength: 30 MPs Ratio: 1:3:3 (1 cement, 3 parts coarse sand and Size: See attached specification in Appendix A Provide concrete test cube results | 3 parts of 19mm stone) | 2.8 | шз | C V V C C C C C C C C C C C C C C C C C | |
| Supporting concrete block around casing Concrete strength: 30 MPa Ratio: 1:3:3 (1 coment, 3 parts coarse sand and | • | 0.3 | m ³ | | The state of the s |
| Size: 800mm diarneter x 600mm high 4x12mm Provide concrete test cube results | poits and nuts | | To make Part of the | | |
| Fittings from windmill to reservoir | | | | | |
| 40 mm Ø brass foot valves (strainer) | | 4 | 1 10.0 | | |
| 40mm Ø base plate | managa. A. m. op. op. (1999) (1999) (1999) (1999) (1999) (1999) (1999) (1999) (1999) (1999) (1999) (1999) | 1 | Valve | | |
| 40mm Ø brass non return valve | PROFITE OF THE REST OF STREET | 1 | Plate | - | |
| 40mm Ø bress force head | With Halliage 1 to 36 Every Arts as a second | 1 | Valve | | * A maritimation of the |
| 40 mm Ø inlet air chamber (160mm Ø x 900) | mm shad nine /2mm thinks with com | 1 | F-head | | |
| gate valve | प्रकार अञ्चल प्रमुख (दामारा प्राप्टस) आया 20m | ŀ | Air | | |
| | | 3 | chamber | | |
| • • • • • • • • • • • • • • • • • • • | | a | Nipple | | |
| - Address / Addr | | 9 8 | Thelean | ì | |
| 40mm T-plece (galv) 40mm T-plece (galv) 40 mmx 0.5 meter standpipe (galv) | | 2 1 | T/piece Pipe | | |

| 40 mm male bend (galv) | 2 | Bend | SANCE SERVICE |
|---|------------------------|--|---|
| 40 mm pipe clamp | 1 | Clamp | 1 |
| · 40 mm LDPE pipe | 30 | Meter | The second second |
| RESERVOIR LOCATION: | ************* | 19. de de la composition della composition della composition della composition della composition della composition della composition della composition della composition della composition della composition della composition della composition della composition della composition della composition della composition della composition della composition della composition della | |
| Construction of concrete reservoir | į | Reservoir | |
| Circular reinforced concrete reservoir, diameter 4.5 m, height 2.1 m, wall thickness | ess 1 | | # Thursday |
| 225 mm, capacity 33.5 m³(33.5 kl). The wall should be reinforced horizontally and | 1 | | |
| vertically and the floor horizontally. Reservoir should be supply with inlet and outlet. | a depart of the second | The state of the s | W. W. C. J. D. L. L. L. L. L. L. L. L. L. L. L. L. L. |
| Provide concrete test cube results | 10 | Test cub | |
| inlet pipe fizinga(40 mm) | | 1 | ************************************** |
| 2.5 meter x 40 mm standpipe (galv) | 1 | Pipe | |
| 0.3 meter x 40 mm standpipe (galv) | 1 | Pipe | |
| 40 mm bend (galv) | 3 | Bend | 1 |
| 40 mm male adaptor (galv) | 2 | Adaptor | |
| 40 mm pipe clamp for LDPE pipe | 1 | Clamp | |
| Outlet plps fittings(40 mm) | | | |
| 40 mm outlet screen (stainless steel) | 1 | Screen | |
| 0.5 meter x 40 mm standpipe (galv) | 1 | Pipe | |
| 40 mm brass gate valve (brass) | 1 | Valve | |
| 40 mm bend (galv) | 1 | Bend | |
| 40 mm nlpple (galv) | 1 | Nipple | |
| 40mm x 32 mm reducing bush (galv) | 1 | R/Bush | |
| 32 mm male adaptor | 1 | Adaptor | |
| DRINKING TROUGHS: 19T LOCATION: 2ND LOCATION: | | | |
| Supply and installation of concrete casted drinking troughs | 2 | Trough | CALLEY HAVE TO MAKE |
| Drinking troughs specifications | | | toma and the |
| Concrete casted drinking troughs with cover to protect ball valve | | | |
| Size: length 2.4 meter x width 1.10 meter x depth 0.8 meter | | | |
| Capacity: 1000 liters per trough | | | |
| Slab specification for drinking troughs | 2 | Slab | persephanic reliability to |
| Concrete strength: 30 MPa | | | |
| Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm stone) | | | |
| Slab size: 9 meter x 7 meter x 0.15 meter | | 3.0 | |
| Size: 62 m ² (9.45 m ³ concrete) | | | |
| Provide concrete test cube results for slab | 2 | Cube test | |
| The irench specification | 200 | Meter | |
| Size: The pipe should be buried in a trench of 0.5m deep with the width of 0.3m | | | |
| Fittings for troughs | | | |
| 32 mm inserts T-plece (nylon) | 4 | T/piece | |
| \$ contract to the second secon | | | |
| 32mm male adaptor (nylon) | 12 | Adaptor | |

| | 32 mm nipple (galv) | 2 | Nippie |
|----|--|--|--------|
| | 32 mm bend (galv) | 2 | Bend |
| | 32 mm M&F bend | 2 | Bend |
| 0 | 32 mm brass gate valve | 2 | Valve |
| 0 | 32 mm ball valve | 2 | Valve |
| Ð | 32mm float valve (control water level) | 2 | Valve |
| P | 32mm clamp (wire type) | 24 | Clamp |
| • | 32mm class 3 LDPE pipe | 200 | Meter |
| • | Thread tape | 20 | Roll |
| TC | TA. | we demonstrate the way of the popular control | 7-1 |

2.10 Vergenoeg (S 26° 10' 25.664"; E 23° 40' 59.359")

| | DESCRIPTION | | Qty | Unit | Price/Un | - |
|---|--|--|-----------------|----------------|------------------------------|--|
| | WINDMILLLOCATION | 년; S 26° 10' 25.664"; E 23° 40' | 59.356 | יינ | | |
| | Supply and installation of Windmili (Includes all equipment, materials and labour requi | ired) | | | | |
| | Install 9 m high windmill tower with a 4.3 m Ø who system, fork rod, bucket rod (pitman), wood rod x 3 is | * ' | 1 | Windmill | | |
| | • 40mm Ø x 3.0m Galvanized medium screwed/s | ocket pipe SABS | 20 | Pipe | | |
| | o 12 mm Ø x 3.0m Electro plated pump rods with | socks and protectors | 21 | Rod | | |
| | Borzhole specification (Pump dapth = 60 maters) | | | | l i | - PODOLICIA IMPROVINA BYRIS |
| | Received the state of the state | 155 m) | A vert | | | |
| | Water level | Before test : 53.10 m After test : 58.30 m | | 1777 | many property and the second | |
| | Delivery | 935 l/hour | | | | |
| L | Water abstraction limit at 60 % of delivery | 561 l/hour | And Distriction | | | |
| | Stainless steel borehole cylinder diarneter 60 mi Cylinder make: | | 1 | Cylincier | | * Selligible (1944) dyspologomously or |
| | Cytrider model: | \$\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\ | | | | |
| | Cylinder size: mm | | | | | |
| l | Spacify delivery of cylinder everage liters/day ; , | Liters/day | | | | |
| Ĺ | Total head:meters | | | | | |
| | Windstill Tower Foundation | | | | | |
| | Concrete strength: 30 MPa | | 2.8 | ms | | |
| | Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 pa | rts of 19mm stone) | No. 13 | | | |
| 1 | Size: See attached specification in Appendix A | | | | | |
| | Provide concrete test cube results | | | | | |
| | Supporting concrete block around casing | | 0.3 | m ³ | | |
| ŀ | Concrete strength: 30 MPs | | | | | |
| | Railo: 1:3:3 (1 cement, 3 parts coarse sand and 3 pa | ris of 10mm stone) | | | | |
| | Sizo: 800mm diameter x 600mm high 4x12mm bolts | and nuts | | | | |
| | Provide concrete tast cube results | | | | | |
| L | Fittings from windmill to reservoir | | | | | |
| - | 40 mm Ø brass foot valves (strainer) | | 1 | Valva | | |
| 4 | 40mm Ø base plate | | 1 | Plate | | |
| 4 | 40mm Ø brass non return valve | | 1 | Valva | | |
| * | 40mm Ø brass force heed | | 1 | F-head | | |
| 4 | 40 mm Ø inlet sir chamber (150mm Ø = 900mm s | teel pipe (2mm thick) with 20m | 1 | Air | | se zoni dola 45 mil. |
| | gate valve | | | chamber | | |
| ŧ | 40mm nipple (galv) | | 3 | Nipp!a | | |
| 6 | 40mm T-piece (galv) | | 2 | T/piece | | |
| r | 40 mmx 0.5 meter standpipe (galv) | | 1 | Pipe | | and a |
| 4 | 40 mm male adapter (nylon) | And the Market Street S | A | Adaptor | | |

| | 40 mm male bend (galv) | 2 | Bend | |
|---------|---|--|--|--|
| | 40 mm plpe clamp | 1 | Clamp | |
| | 40 mm LDPE pipe | 30 | | |
| i di | RESERVOIR LOCATION: | | waters and our succession | |
| | Construction of concrete reservoir | | Reservoir | 1 |
| | Circular reinforced concrete reservoir, diameter 4.5 m, height 2.1 m, wall | 1 | | |
| | thickness 225 mm, capacity 33.5 m²(33.5 kl). The wall should be reinforced hori | ZOT | *************************************** | - |
| | and yertically and the floor hortzontally. Reservoir should be supply with inlet ar | nd | | į. |
| | outlet. | | RT C V C V C V C V C V C V C V C V C V C | A SALANIA |
| | Provide concrete test cube results | 10 | Test cub | |
| | Intel ploe fittings(40 mm) | | | |
| | 2.5 meter x 40 mm standpipe (galv) | 1 | Pipe | |
| | 0.3 meter x 40 mm standpipe (galv) | 1 | Pipe | |
| | 40 mm bend (galv) | 3 | Bend | |
| | 40 mm male adaptor (galv) | 2 | Adaptor | |
| | 40 mm pipe clamp for LDPE pipe | 1 | Clamp | |
| | Outlet pips tittings(46 mm) | | | |
| ĺ | 40 mm outlet screen (stainless steel) | 1 | Screen | |
| | 0.5 meter x 40 mm standpipe (galv) | 1 | Pipe | |
| | 40 mm brass gate valve (brass) | 1 | Valve | |
| Ĺ | 40 mm bend (galv) | 2 | Bend | |
| A | 40 mm nipple (galv) | 1 | Nipple | , , , , , , , , , , , , , , , , , , , |
| - | ง 40mm x 32 mm reducing bush (galv) | 11 | R/Bush | |
| | s 32 mm male adaptor | 1 | Adaptor | The second secon |
| Ī | DRINKING TROUGHS: 15T LOCATION: | | | |
| _ | 2ND LOCATION; | | | |
| 7 | Supply and installation of concrete cested drinking troughs | 2 | Trough | |
| 1 " | Drinking troughs specifications | 477 | (1) | |
| 1 | Concrete casted drinking troughs with cover to protect ball valve | The state of the s | C (WHI) consider | |
| 1 | Stze: length 2.4 meter x width 1.10 meter x depth 0.8 meter | or the special or the | A To a second | 1 |
| 1195 | Capacity: 1000 liters per trough | | | Ì |
| | Slab specification for drinking troughs | 2 | Slab | |
| | Concrete strength: 30 MPa | | | |
| | Ratio; 1:3:3 (1 cament, 3 parts coarse sand and 3 parts of 19mm stone) | | | i |
| | Slab size : 9 meter x 7 meter x 0.15 meter | | 1 | A A |
| - | Size: 62 m 2 (9.45 m 2 concrete) | | - Park | W. C. Personalis |
| F | rovide concrete test cube results for slab | 2 | Cube test | |
| 7 | he trench specification | 200 | Meter | |
| | Size: The pipe should be buried in a trench of 0.5m deep with the width of 0.3m | | Action Teacher | } |
| F | ittings for troughs | | | DOWN BOOM AND A TOTAL OF |
| er is | 32 mm Inserts T-piece (nylon) | 4 | T/piece | |
| | | | | |
| • | 32mm male adaptor (nylon) | 2 | Adaptor | - } |

| 0 | 32 mm nipple (galv) | 12 | Nipple |
|---|--|-----|--------|
| • | 32 mm bend (galv) | 2 | Bend |
| • | 32 mm M&F bend | 2 | Bend |
| • | 32 mm brass gate valve | 2 | Valve |
| 6 | 32 mm ball valve | 2 | Valve |
| 8 | 32mm float valve (control water level) | 2 | Valve |
| | 32mm clamp (wire type) | 24 | Clamp |
| 6 | 32mm class 3 LDPE pipe | 200 | Meter |
| 8 | Thread tape | 20 | Roll |

2.11 Itereleng (S 26° 49' 14.9"; E 23° 57' 19.9")

| | DESCRIPTION | | | Qty | Unit | Price/Ur | Total Pric |
|-----------------|---|--|--|--------------|--|--|------------------------|
| 1 | SARAIPA III | | | | | VAT Ing | VAT Incl |
| | Supply and installation of Windmili | LOCATION: S 26° 49' 14.9" | E 23 | 57' 19 | 9.9" | | - (Carres - 1) |
| | Unchides all equipment and at a | | | | | *** | |
| | (includes all equipment, materials , transpo | rt and labour required) | | | | | |
| | Install 9 m high windmill tower with a 4.3 | m Ø wheel with a gearbox | , taii | 1 | Windmill | | |
| | brake system, fork rod, bucket rod (plimal | n), wood rod 3 meters and f | orce | | | | |
| - | IIGGS, | | | | | | |
| - | 40mm Ø x 3.0m Galvanized medium so 12 mm Ø x 3.0m Floater in the second medium so | rawed/eocket pipe SABS | | 52 | Pipe | | |
| - | 12 mill to y profit electro brated bruib to | ds with socks and protectors | | 53 | Rod | | |
| | screnote specification (Pump depth = 156 | meters) | | - | 1000 | | - |
| - | Butterin unger | 204 m | | | | | |
| | Water level | Before test : 26.8 m | 100 | | | | |
| | | After test: 154.3 m | | İ | | | |
| 1 | Delivery | 610 Uh. | | ĺ | | | |
| . Parada | Water abstraction limit at 60 % of delivery | 366 Vh | | Call Control | | | |
| | Stainless steel borehole cylinder diamete | 60 mm tube I 4. see | | - | | | |
| | Cylinder make: | oo min tube langth 550 mm, | 1 | | Cylinder | | |
| | Cylinder model: | , | | | | | |
| | Cylinder size: mm | *************************************** | . | | MA | 7 | |
| | | | 1 | | | 1 | |
| | Specify delivery of cylinder : L | iters/ hour | | | 1 | ĺ | |
| W | Total head: | neters | i i | 1 | 79910aaaga | the state of the s | 9 |
| | ncrete strength: 30 MPa | · · · · · · · · · · · · · · · · · · · | 1 | | THE RESIDENCE OF THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN | | - |
| | | | 2.8 | n | 7 8 | 1 | į |
| Str | tio: 1:3:3 (1 cement, 3 parts coarse sand and | 3 parts of 19mm stone) | | T. Alexander | | | į |
| Den | e: See attached specification in Appendix A | | | | | | |
| | vide concrete test cube results | | Department of the Control of the Con | 4 | | | |
| Guj Car | porting concrete block around casing | | 0.3 | П | 8 | | |
| | crete strength: 30 MPa | | Į. | Ì | | | T. |
| 7.01 E | lo: 1:3:3 (1 cement, 3 parts coarse sand and | 3 parts of 19mm stone) | | | | | |
| 312,0 | s. Southill diameter x 600mm high 4x12mm i | ootts and nuts | | | | ar Jan | |
| | ride concrete test cube results | | | | | | |
| | ngs from windmill to reservoir | | | | | | |
| e Tables (1.50) | 40 mm Ø brass foot valves (strainer) | | 1 | Va | h.a. | | |
| | 40mm Ø base plate | | 1 | | | | |
| | 40mm Ø brass non return valve | And the state of t | 1 | Pla | | | |
| | 10mm Ø brass force head | The second secon | | Vai | F | | |
| 4 | 10 mm Ø inlet alr chamber (150mm Ø x 900 | MM stast pipe (2mm thints) | 1 | F/h | e de la companya della companya della companya de la companya dell | | |
| | ruso gale varye | THE CENTRE (STREET WAS WAS | 1 | Air | | | |
| 4 | Omm nipple (galv) | | | - | mber | | Marie Colombia |
| 4 | Omm T-plece (galv) | | 3 | Nipp | le | | |
| 4 | 0 mmx 0.5 meter standpipe (galv) | The second secon | 2 | T/pk | ce l | | |
| W | and the same of the same of the same transfer and the same of the | | 1 | Pipe | | | F Step 1 - security of |

| | 40 mm male adaptor (nylon) | | 1 | Adapto | - 1 | 1 |
|--------------|---|----------|--|-----------|-----|--|
| | 40 mm male bend (galv) | | 2 | Bend | | |
| | 40 mm pipe clamp | | 1 | Clamp | | |
| in a subject | • 40 mm LDPE pipe | | 30 | | | |
| 2. | REPAIR OF RESERVOIR WITH T | | | Meter | | |
| | Kepair and sealing of existing reservoir and trough. | | 7. | 1 | | |
| | The existing reservoir and drinking trough around the reservoir need to be | | | | | İ |
| | cleaned, cracks to be repaired inside and outside with sand/cement filler. | | | | | |
| | The inside of the reservoir and drinking trough needs to be sealed with | | | | | |
| | georextiles matt (90-100 g/m²) and polymer anionic bitumen emulsion and | lant | | - | | |
| | Specification type of matt: | ent. | | | | |
| | | | | | ĺ | ł |
| | Specification type of sealing: | | | | | - |
| 1 | Coating layers recommended: | | | | | |
| | | | ĺ | | | 1 |
| | The sealing mett should go over the wall of the reservoir down the outside | t em fil | | | | |
| | for 30 cm .Where the matt is joined the overlap should be 30 cm. | werr | | | 1 | |
| | Where the inner wall meet the floor the overlap should be 30cm. | 100 | | | | |
| H | Method of application: Paint dam area to be seal with sealant and apply the | | | | | |
| r | matt to the area and paint the matt 3 x coats with sealant | 8 | - 1 | | | |
| Н | Diameter : 5.09 meter leight: 2.4 meters | 1 | | deservoir | | A spanish distance of the span |
| | dicumference: 16 meters | 1. | 1 | ceservoir | | |
| T | otal mª to be sealed: 67 m² (Floor 19.6 m², Side wall 40 m², top of | | | | | iller (|
| ¥ | vall and outside wait 9.6 m²) | | | | | |
| _ | | 1 | D | rinking | | |
| Si | ze of drinking trough around reservoir | | - 1 | ough | | and the second |
| | ldth: 40 cm | | " | oogi i | | |
| | 9pth : 50 cm | | | | | |
| | rcumference: 18 meters | | | | | |
| | tal m² to be sealed: 35 m² | | | | | |
| Ca _ | natruction of new apron around existing reservoir. | | + | | · | |
| ורו ו | ree (3) meter apron should be constructed around the existing reservoir. | | | | | |
| (II) | er circumterence apron: 23 meters | ĺ | | | | |
|)U | ter circumference of apron: 42 meters | | - business | | | |
| | ckness of apron: 15 cm | | | | | ļ |
| | ith of apron: 3 meter | | The state of the s | | | E.A. Yannası |
| | e of apron: 96. m² | | | | | |
| | crete strength: 30 MPa | 1 | Apn | an | | |
| ati | o; 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm stone) | • | -wit |) I I | | |
| | ride concrete test cube result | | 1 | 1 | [| |
| rov | pipe fittings(40 mm) | | i | 1 | 1 | |



| - | 2.5 meter x 40 mm standpipe (galv) | *** | | bear | 2-2- | | · · · · · · · · · · · · · · · · · · · |
|--|---|--|--|---|--|--|--|
| _ | 0.3 meter x 40 mm standpipe (galv) | | 1 | Pipe | | | |
| | 40 mm bend (galv) | | 11 | 1,40 | | | |
| | * 40 mm male adaptor (galv) | 32111 | 3 | Bend | | | |
| | 40 mm pipe clamp for LDPE pipe | unter | 2 | Adapto | - | | |
| | Outlet pipe fittings(40 mm) | | 1 | Clamp | | | |
| | 40 mm outlet screen (stainless steel) | | | | | | |
| | 0.5 meter x 40 mm standpipe (galv) | i. | 1 | Screen | | | |
| | • 40 mm brass gate valve (brass) | *1 | 1 | Pîpe | -87 | | |
| | e 40 mm bend (galv) | | 1 | Valve | | ~ | THE STREET STREET |
| | 40 mm nipple (galv) | - 1 | 1 | Bend | | | |
| | 40mm x 32 mm reducing bush (galv) | 11 | 1 | Nipple | | and the same of the same | |
| | 32 mm male adaptor | | 1 | R/Bush | | | |
| 3. | | | 1 | Adaptor | | | |
| | DRINKING TROUGHS: 157 LO | | | | | Odming-to-phyline in version | - Over- |
| 1 | Supply and installation of concrete casted drinking troughs | TION | a b | | | | |
| 1 | Drinking troughs specifications | | 2 | Trough | | | |
| 10 | Concrete casted drinking troughs with cover to protect bell valve | | | | | | |
| 8 | Size: length 2.4 meter x width 1.10 meter x depth 0.8 meter | | | | Control of the last | | |
| | | | 15 | | 8 | | |
| C | Sapacity: 1000 liters per trough | | Í | | PC204 | | |
| | apacity: 7000 liters per trough | | | 1.50 | And the same way and the same of the same | | |
| S | Specification for drinking troughs Oncrete strength: 30 MPa | 2 | | Slab | And the second s | | |
| SC | capacity: 1000 liters per trough liab specification for drinking troughs concrete strength: 30 MPa atio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 40 | 2 | | Slab | The second secon | | - Arthurson |
| SC | capacity: 1000 liters per trough liab specification for drinking troughs concrete strength: 30 MPa atio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 40 | 2 | The second secon | Slab | The special security of the second se | | - Johnson of Sandy |
| S C R | idab specification for drinking troughs concrete strength: 30 MPa atio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm stone) ab size: 9 meter x 7 meter x 0.15 meter | 2 | And the state of t | Slab | The special content of the content o | The state of the s | Arthurson, of Samuelyn |
| S C Ri | capacity: 1000 liters per trough liab specification for drinking troughs concrete strength: 30 MPa atio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm stone) ab size: 9 meter x 7 meter x 0.15 meter ze: 62 m 2 (9.45 m 2 concrete) | | And demonstrate the second contract of the se | | The All Chapter and All Chapter are the All Chapter and All Ch | The second secon | Andrews of the state of the sta |
| S C Ri Si | concrete strength: 30 MPa atio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm stone) ab size: 9 meter x 7 meter x 0.15 meter ze: 62 m 2 (9.45 m 2 concrete) ovide concrete test cube results for slab | 2 | And demonstrate the second contract of the se | Slab | The Community of the Co | | Lifetimen of Sample minimes |
| S C Ri Si Si Pri | capacity: 1000 liters per trough liab specification for drinking troughs concrete strength: 30 MPa atio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm stone) ab size: 9 meter x 7 meter x 0.15 meter ze: 62 m ² (9.45 m ³ concrete) ovide concrete test cube results for slab e trench specification | 2 | And the second of the second o | | The second secon | | Additional of Management of Ma |
| S C Ri Si Si Pri | idab specification for drinking troughs concrete strength: 30 MPa atio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm stone) ab size: 9 meter x 7 meter x 0.15 meter ze: 62 m 2 (9.45 m 2 concrete) ovide concrete test cube results for slab se trench specification ze: The pipe should be buried in a trench of 0.5m deep with the width | 2 | And the second of the second o | Cube test | The second secon | | And the second s |
| Si Si Si Si Si Si Si Si Si Si Si Si Si S | idab specification for drinking troughs concrete strength: 30 MPa atio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm stone) ab size: 9 meter x 7 meter x 0.15 meter ze: 62 m 2 (9.45 m 2 concrete) ovide concrete test cube results for slab se trench specification ze: The pipe should be buried in a trench of 0.5m deep with the width | 2 | And the second of the second o | Cube test | Charles and the charles of the charl | | Andrews of Stangers |
| Si Si Si Si Si Si Si Si Si Si Si Si Si S | sepacity: 1000 liters per trough liab specification for drinking troughs concrete strength: 30 MPa atio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm stone) lab size: 9 meter x 7 meter x 0.15 meter ze: 62 m 2 (9.45 m 3 concrete) ovide concrete test cube results for slab trench specification ze: The pipe should be buried in a trench of 0.5m deep with the width of meters. | 2 | And the second of the second o | Cube test | Continues and the continues of the conti | The state of the s | |
| Si Si Si Si Si Si Si Si Si Si Si Si Si S | sepacity: 1000 liters per trough liab specification for drinking troughs concrete strength: 30 MPa atio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm stone) ab size: 9 meter x 7 meter x 0.15 meter ze: 62 m² (9.45 m² concrete) ovide concrete test cube results for slab e trench specification ze: The pipe should be buried in a trench of 0.5m deep with the width of lings for troughc 32 mm inserts T-piace (nylon) | 2 | 0 1 | Cube test | | | |
| Si Si Si Si Si Si Si Si Si Si Si Si Si S | sepacity: 1000 liters per trough liab specification for drinking troughs concrete strength: 30 MPa atio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm stone) lab size: 9 meter x 7 meter x 0.15 meter ze: 62 m 2 (9.45 m 3 concrete) ovide concrete test cube results for slab trench specification ze: The pipe should be buried in a trench of 0.5m deep with the width of meters. | 2 20 4 2 | 0 | Cube test Neter | | The state of the s | |
| Si Si: | sepacity: 1000 liters per trough liab specification for drinking troughs concrete strength: 30 MPa atio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm stone) ab size: 9 meter x 7 meter x 0.15 meter ze: 62 m² (9.45 m³ concrete) ovide concrete test cube results for slab e tranch specification ze: The pipe should be buried in a trench of 0.5m deep with the width of the single for troughs 32 mm inserts T-piece (nylon) 32mm male adaptor (nylon) 32mm x 0.8m standpipe | 2 20 | 0 | Cube test Aeter /piece | | | |
| SI SI: SI: SI: SI: SI: SI: SI: SI: SI: S | sapacity: 1000 liters per trough liab specification for drinking troughs concrete strength: 30 MPa atio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm stone) lab size: 9 meter x 7 meter x 0.15 meter ze: 62 m² (9.45 m² concrete) covide concrete test cube results for slab te trench specification ze: The pipe should be buried in a trench of 0.5m deep with the width of lings for troughs 32 mm inserts T-piece (nylon) 32mm male adaptor (nylon) | 2 20 4 2 | O A | Cube test Aeter /piece | | The state of the s | |
| Si Si Si Si Si Si Si Si Si Si Si Si Si S | sapacity: 1000 liters per trough liab specification for drinking troughs concrete strength: 30 MPa atio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm stone) lab size: 9 meter x 7 meter x 0.15 meter ze: 62 m ² (9.45 m ° concrete) ovide concrete test cube results for slab le trench specification ze: The pipe should be buried in a trench of 0.5m deep with the width of lings for troughs 32 mm inserts T-piece (nylon) 32mm male adaptor (nylon) 32mm x 0.8m standpipe 32 mm nipple (galv) | 2 20 4 2 2 2 2 | O A | Cube test Aeter /piece daptor pe pple | | | |
| SI SI SI SI SI SI SI SI SI SI SI SI SI S | sapacity: 1000 liters per trough liab specification for drinking troughs concrete strength: 30 MPa atio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm stone) lab size: 9 meter x 7 meter x 0.15 meter ze: 62 m z (9.45 m concrete) ovide concrete test cube results for slab le trench specification ze: The pipe should be buried in a trench of 0.5m deep with the width of lings for troughs 32 mm inserts T-piece (nylon) 32mm male adaptor (nylon) 32mm x 0.8m standpipe 32 mm nippte (galv) 32 mm bend (galv) 32 mm M&F bend | 2 20 4 2 2 2 | O A PI | Cube test feter fpiece claptor pe pple | | | |
| Si Si Si Si Si Si Si Si Si Si Si Si Si S | sapacity: 1000 liters per trough liab specification for drinking troughs concrete strength: 30 MPa atio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm stone) lab size: 9 meter x 7 meter x 0.15 meter ze: 62 m² (9.45 m² concrete) covide concrete test cube results for slab let tranch specification ze: The pipe should be buried in a trench of 0.5m deep with the width of lings for troughts 32 mm inserts T-piece (nylon) 32mm x 0.8m standpipe 32 mm nipple (galv) 32 mm bend (galv) | 2 20 4 2 2 2 2 | O A PI | Cube test Meter /piece daptor pe pple ind ind | | | |
| SI SI SI SI SI SI SI SI SI SI SI SI SI S | sapacity: 1000 liters per trough liab specification for drinking troughs concrete strength: 30 MPa atio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm stone) lab size: 9 meter x 7 meter x 0.15 meter 2e: 62 m² (9.45 m² concrete) covide concrete test cube results for slab le trench specification 2e: The pipe should be buried in a trench of 0.5m deep with the width of lings for troughs 32 mm inserts T-piece (nylon) 32mm x 0.8m standpipe 32 mm nipple (galv) 32 mm bend (galv) 32 mm M&F bend 32 mm brass gate valve 32 mm ball valve | 2 20 4 2 2 2 2 2 | Tr. Au Pi Ni Be Be | Cube test Actor Spiece daptor pe pple nd nd | | | |
| Si Si Si Si Si Si Si Si Si Si Si Si Si S | sapacity: 1000 liters per trough liab specification for drinking troughs concrete strength: 30 MPa atio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm stone) ab size: 9 meter x 7 meter x 0.15 meter ze: 62 m² (9.45 m³ concrete) ovide concrete test cube results for slab e trench specification ze: The pipe should be buried in a trench of 0.5m deep with the width of lings for troughs 32 mm inserts T-piece (nylon) 32mm x 0.8m standpipe 32 mm nipple (galv) 32 mm bend (galv) 32 mm brass gate valve 32 mm ball valve 32 mm ball valve 32 mm float valve (control water level) | 2 20 4 2 2 2 2 2 2 2 2 | O A AI PI NI Be Be Val | Cube test Meter /piece daptor pe pple ind ive | | | |
| SI SI SI SI SI SI SI SI SI SI SI SI SI S | sapacary: 1000 liters per trough liab specification for drinking troughs concrete strength: 30 MPa atio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm stone) ab size: 9 meter x 7 meter x 0.15 meter 2e: 62 m² (9.45 m² concrete) ovide concrete test cube results for slab e trench specification ze: The pipe should be buried in a trench of 0.5m deep with the width of management in the standard of the lines for troughts 32 mm inserts T-piece (nylon) 32 mm male adaptor (nylon) 32 mm nippte (galv) 32 mm bend (galv) 32 mm brass gate valve 32 mm ball valve 32 mm float valve (control water level) 33 mm clamp (wire type) | 2 20 4 2 2 2 2 2 2 2 | O M A(P) Ni Be Be Val | Cube test Aleter /piece claptor pe pple ind ind ive | | | |
| Si Si Si Si Si Si Si Si Si Si Si Si Si S | specification for drinking troughs concrete strength: 30 MPa atio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm stone) lab size: 9 meter x 7 meter x 0.15 meter ze: 62 m² (9.45 m° concrete) ovide concrete test cube results for slab le trench specification ze: The pipe should be buried in a trench of 0.5m deep with the width of lings for troughs 32 mm inserts T-piece (nylon) 32mm male adaptor (nylon) 32mm x 0.8m standpipe 32 mm hippile (galv) 32 mm bend (galv) 32 mm bend (galv) 32 mm ball valve 32 mm ball valve 32 mm clamp (wire type) 32mm clamp (wire type) | 2 20 4 2 2 2 2 2 2 2 2 | O A Pi Ni Be Pe Val Val | Cube test Aeter Ppiece daptor pe pple nd lve ve mp | | | |

2.12 Magabue (S 26° 37' 04"; E 24° 05' 21.10")

| | DESCRIPTION | | | Qty | Unit | Price/Ur | Total Pri |
|---|---|--|---------|-----------------|--|----------------|--|
| 1. | THE RESIDENCE OF THE PROPERTY | | | | | VAT los | |
| S | upply and installation of Windmill | LOCATION: S 26° 37' 04"; | E 24° (| 5' 21.1 | 0" | | |
| (A | Toludes all equipment materials | | | | | | |
| In | ncludes all equipment, materials , transport stall 9 m high windmill tournauth - a 2 | rt and labour required) | | | | | |
| sy | stall 9 m high windmill tower with a 3.0m (stem, fork rod, bucket rod (pitman), wood | rod x 3 motor and town to | rake | 1 | Windmill | | |
| | Torring & X 3.0m Galvanized medium sc | rewed/socket nine SADE | | 19 | 5) | | |
| 9 | 12 mm 9 x 3.0m Electro plated pump m | ds with sorte and protect | | | Pipe | | |
| Ba | earole specification (Pump depth = 52 m | (Care) | | 20 | Rod | | |
| | melicin diciti | Pt, rp | | | | | |
| W | eter level | Before test: 43.1m | - | 1 | | | |
| | | After test: 56.3 m | | - 1 | | | |
| | livery | 3789 Vh | | 1 | | | |
| Wa | ater abstraction limit at 60 % of delivery | 2273 A III | | Į | * | | |
| 1 * | Stainless steel borchole cylinder diameter | 60 mm tube lands tree | | | | | |
| | Aunds west. | **** | 1 | 1 | Cylinder | | |
| | Cylinder model: | | - | | | | |
| ' | Cylinder size: mm | | . | | | ĺ | |
| | Specify delivery of cylinder :L | itara/ have | | | | ĺ | |
| 7 | Total head: | unia ilotti | | | 1 | - | |
| Wind | mill Tower Foundation | India! | - | | | | |
| Conc | rete strength: 30 MPa | | - Total | 1 | | | LAT MALTHEWAY N VINC |
| Ratio: | 1:3:3 (1 cement, 3 parts coarse sand and | 3 norte of them. | 2.8 | 3 m | 3 | Ì | |
| Size: | See attached specification in Appendix A | o herre or sainth stolle) | | | ļ | ŀ | } |
| Provid | e concrete test cube results | | La Age | | | | |
| | rting concrete block around casing | The state of the s | 1 | | | | 1 |
| Concre | ete strength: 30 MPa | | 0.3 | LU ₃ | | | |
| Ratio: | 1:3:3 (1 cement, 3 parts coarse sand and | 3 norte of 10 | | | | | The state of the s |
| OIZE. C | POLEMEN CHEMBER X 600mm high 4x12mm b | Opens of 19111111 85006) | | | Î | | |
| Provide | concrete test cube results | was critic lifting | | | | | j |
| Fittings | from windmill to reservoir | The state of the s | | | | | |
| | mm Ø brass foot valves (strainer) | | | | | | |
| 40r | nm Ø base plate | | 1 | Vah | | | |
| 40n | nm Ø brass non return valve | | 1 | Plat | | | |
| 40n | am Ø brass force head | | 1 | Valv | The same of the sa | | ATTENDED TO |
| 40 r | mm Ø inlet air chamber (150mm Ø x 900) | 1917 Charles when the same | 1 | F/he | ad | | |
| bras | s gale valve | -leer pipe (2mm tnick) Will | 1 | Air | | | |
| 40m | m nipple (galv) | W. Carryon Co., Carryon Co. | | chan | | | į |
| 40m | m T-piece (galv) | | 3 | Nipp | | | |
| | mx 0.5 meter standpipe (galv) | the special state of the special special special state of the special st | 2 | T/pie | ce | -Ti-Makes, and | |
| THE RESERVE AND DESCRIPTION OF THE PARTY NAMED IN | -1-1- (Sout) | _ | 1 | Pipe | The state of the s | - | |

| | 40 mm male adaptor (nylon) | | | | | | |
|-------------------------------|--|-----------|--|---|--|--|------------|
| | 40 mm male bend (galv) | | 1 | Adaptor | | | |
| | 40 mm pipe clamp | | 2 | Bend | | | Al VANO |
| | 40 mm LDPE pipe | | 1 | Clamp | 1 | | |
| 2. | The state of the s | | 30 | Meter | | | Alexan ye |
| - | REPAIR OF RESERVOIR AND DRINKIN Repair and sealing of existing reservoir and trough. | NG TR | OUGH | ſ: | | | |
| Ì | The existing reservoir and drinking to the existing reservoir and drinking reservoir and d | | | | | 1 | PCG |
| | The existing reservoir and drinking trough around the reservoir need to be | | | | | | |
| İ | cleaned, cracks to be repaired inside and outside with sand/cement filler. | | - | | - 1 | | |
| 1 | The inside of the reservoir and drinking trough needs to be sealed with | | 1 | | | | |
| 1 | geotextiles matt (90-100 g/m²) and polymer anionic bitumen emulsion seal | ant. | 46.2 | | 1 | Mywn, L. R. Adep. (1) | |
| | Specification type of matt: | | ĺ | | The second second | | |
| .1 | Specification type of sealing: | | | | | | |
| 4 | Coating layers recommended : | | | | | | |
| Ţ | The sealing matt should go over the wall of the reservoir down the outside w | second II | The state of the s | | | | |
| 1 10 | 30 cm .where the matt is joined the overlap should be 30 cm. Where the | | | | | l l | |
|) mi | iner wall meet the floor the overlap should be 30cm. Method of applications | | | | İ | Í | |
| pε | aint dam area to be seal with sealant and apply the matt to the area and | | | | | ļ | |
| рs | aint the matt 3 x coats with sealant | | 1 | | | İ | |
| EN. | ze of reservoir | | ĺ | | | | |
| | | | | | | | |
| | ameter: 5.09 meter | ļ | | | | i | |
| | Night: 2.4 meters | 1 | Re | eservoir | | | |
| | cumference: 16 meters | Î | | | | T. C. | |
| I QI | tel m² to be sealed: 67 m² (Floor 19.6 m², Side wall 40 m², top of | - | | | | Ì | |
| WEI | ll and outside wall 9.6 m²) | | | | Commence of the Commence of th | ĺ | |
| Siz | e of drinking trough | | Dri | nking | | | |
| | ith : 40 cm | 1 | trou | ıgh | - | 1 | |
| | ith : 50 cm | 8 | į | | | The state of the s | |
| | sumference: 18 meters | | İ | | | Ì | A Comment |
| | al m² to be sealed : 35 m² | - | | | | ĺ | Ì |
| | | | | | | | |
| OIL | struction of new apron around existing reservoir: | [| | | | | |
| ne | (1) meter apron should be constructed around the existing reservoir. | į | | is a | | * ************************************ | 7 |
| ner | circumference apron: 23 meters | | | i i | | | The second |
| | r circumference of apron: 42 meters | | W C C China | ļ | | | 7 |
| | | | | 5 | s I | | 7 × 11,000 |
| ute | iness of apron: 15 cm | | | J | Í | | 1 |
| ute nick | ness of apron: 15 cm | | } | | } | | |
| ute nick idth | of apron: 3 meter | | | | | | |
| ute hick /idth ize d | | | | A. He july he was a second to be a second | | | |

| Construction of new apron around existing drinking trough: Three (3) meter apron should be constructed around the existing trough | To be seen to be seen | | | - |
|--|---|--|--|--|
| Inner circumference apron: 9.42 meters | | | - | |
| Outer circumference of apron: 28,27 meters | Į. | | A. A. S. | |
| Thickness of apron: 15 cm | | | | |
| Width of apron: 3 meter | - 1 | Apron | Į | |
| Size of apron: 56.5 m ² (± 8.50 m ^s concrete mix) | | | j | |
| Concrete strength: 30 MPa | | | 16. | |
| | | | 3 | i i |
| Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm stone) Provide concrete test cube result | | | MACA INSTITUTE | İ |
| inlet pipe fittings (40 mm) | | | | |
| 2.5 meter x 40 mm standpipe (galv) | | | | |
| 0.3 meter x 40 mm standpipe (galv) | 1 | Pipe | | |
| 40 mm bend (galv) | 1 | Pipe | | |
| 40 mm male adaptor (galv) | 3 | Bend | | |
| 40 mm pipe clamp for LDPE pipe | _ 2 | Adaptor | | |
| Outlet pipe fittings(40 mm) | 1 | Clamp | | |
| | | | Married Lawrence and Control of the | |
| (Stamless steet) | 1 | Screen | | TO AMERICAN PROPERTY AND ADDRESS OF THE PERSON ADDRESS OF THE PERSON AND ADDRESS OF THE PERSON AND ADDRESS OF THE PERSON AND ADDRESS OF THE PERSON AND ADDRESS OF THE PERSON AND ADDRESS OF THE PERSON AND ADDRESS OF THE PERSON AND ADDRESS OF THE PERSON ADDRESS OF THE PERSON AND ADDRESS OF THE PERSON ADDRESS OF THE PERSON ADDRESS OF THE PERSON AND ADDRESS O |
| 5.5 mater x 40 mm standpipe (galv) | 1 | Pipe | | |
| To mill Mass gate Valve (brass) | 1 | Valve | | |
| To this being (gally) | 1 | Bend | | |
| • 40 mm nipple (galv) | 1 | Nippie | | |
| Total A 32 film reducing bush (gaiv) | 1 | R/Bush | | |
| 32 mm male adaptor | 1 | Adaptor | ere of the second | |
| DRINKING TROUGHS: 1ST LOCATION | DN: | hadronistation of response patterns and patt | ACCOUNT OF THE PARTY OF THE PAR | e standard of the standard of |
| 2 ND LOCAT | TON: | | | |
| Supply and installation of concrete casted drinking troughs | 2 | Trough | | |
| Drinking troughs specifications | | | 100 | j |
| Concrete casted drinking troughs with cover to protect ball valve | | | | |
| Size: length 2.4 meter x width 1.10 meter x depth 0.8 meter | | | - | |
| Capacity: 1000 liters per trough | | | | |
| Slab specification for drinking troughs Concrete strength: 30 MPa | 2 | Slab | 1 | |
| | | | | |
| Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm stone) Slab size: 9 meter x 7 meter x 0.15 meter | | | 1 | |
| | | | 1 | |
| Size: 62 m ^e (9.45 m ^s concrete) | | | 3 | |
| Provide concrete test cube results for sleb | 2 | Cube test | | 1 |
| The trench specification | 200 | Meter | 1 | |
| Size: The pipe should be buried in a trench of 0.5m deep with the width of | 9 | | Ì | ĺ |
| I 3m | | t . | | |
| V.STI | | | | |
| U.3m Fittings for troughs 32 mm Inserts T-piece (nylon) | | | Section of Section 2 in Section | |

| • 3 | 2mm male adaptor (nylon) | 2 | Pipe | 1 |
|-------|--|-----|----------------|------|
| • 3 | 2mm x 0.8m standpipe | 2 | Pipe | - |
| • 3 | 2 mm nipple (galv) | 2 | | |
| • 3 | 2 mm bend (galv) | 2 | Nipple Bend | -001 |
| • 32 | 2 mm M&F bend | 2 | | |
| • 32 | 2 mm brass gate valve | 2 | Bend | |
| • 32 | mm ball valve | | Valve | |
| • 32 | rmm float valve (control water level) | 4 | Valve | |
| | mm clamp (wire type) | 2 | Valve | |
| | mm class 3 LDPE pipe. | 24 | Clamp | |
| | read tape | 300 | Meter | |
| TOTAL | NAME AND ADDRESS OF THE PARTY O | 20 | Roll | |
| | | | | |

2.13 Six Hundred (S 25° 35' 48"; E 25° 41' 10")

| | DESCRIPTION | - Andrew of the Company of the Company | | Qty | Unit | Price/Ur | F. Name and Address of the Owner, when |
|---|---|--|--|---|----------|--|--|
| 1 | WINDMH | LLOCATION: \$ 25° 35' 48"; E | 25° 4 | 42.40 | <u> </u> | VAT les | VATING |
| | Supply and installation of Windmill (Includes all equipment, materials, transportinstall 9 m high windmill tower with a 3.0m system, fork rod, bucket rod (pitman), wood | of and labour required) | | | Windmill | | |
| | 40mm Ø x 3.0m Galvanized medium screwed/socket pipe 8ABS 12 mm Ø x 3.0m Electro plated pump rods with socks and protectors | | 1 | 5 | Pipe | | |
| - | | | 1 | 6 | Rod | | |
| | Borehole specification (Pump depth = 48 mil | oters) | 4 T T T T T T T T T T T T T T T T T T T | | . 100 | <u> </u> | |
| A Section Control of the Control of | Water level Delivery Water abstraction limit at 60 % of delivery | Before test: 38.7 m After test: 44.6 m 6545 l/h 3927 l/h | | * Sec. of American Control of the American Control of | | | |
| Control of the second | Stainless steel borehole cylinder diamete Cylinder make: Cylinder model: Cylinder size: mm Specify delivery of cylinder: Total head: | _iters/ hour | Control Andrewson Property of the American | | Cylinder | A. (| |
| C R Si | Vindmiti Tower Foundation concrete strength: 30 MPa atio: 1:3:3 (1 cement, 3 parts coarse sand an ize: See attached specification in Appendix A rovide concrete test cube results | d 3 parts of 19mm stone) | 2.8 | ľ | 8, | | |
| Re Si | upporting concrete block around casing concrete strength: 30 MPa atio: 1:3:3 (1 cement, 3 parts coarse sand and ze: 800mm diameter x 600mm high 4x12mm | 13 parts of 19mm stone) bolts and nuts | 0.3 | TI. | 3 | | |
| | ovide concrete test cube results | | | | | Ì | |
| | ilings from windmill to reservoir | | W. average | | | | |
| | 40 mm Ø brass foot valves (strainer) | | 1 | Va | ve | | Prints and Addition and Assembly |
| - | 40mm Ø base plate | | 1 | Pla | te | | |
| | 40mm Ø brass non return valve | antiferrores (all record residences and a secretary and a secr | 1 | Val | ve | | |
| | 40mm Ø brass force head | Control to the contro | 1 | F/h | ead | The second State of the State o | |
| | 40 mm Ø inlet air chamber (150mm Ø x 90 brass gate valve | Omm steel pipe (2mm thick) with | 1 | Alr | mber | | |
| · | 40mm nipple (galv) | | 3 | Nip | ole | | |
| • | 40mm T-piece (galv) | | 2 | T/pi | | | |
| | 40 mmx 0.5 meter standpipe (galv) | | 1 | Pip | | to the statement | |
| ELEKTRIST IN SEC | 40 mm male adaptor (nylon) | | 1 | Ada | | | |

| | 40 mm male bend (galv) | 77 00 | | | |
|-------|--|------------------|--|----------------|--|
| | | 2 | 2 Bend | | |
| | 40 mir hibe ciamb | 1 | Clamp | | |
| - | 44 mill Fold bhe | 1 " | 0 Meter | | |
| 2. | REPAIR OF RESEVIOR WITH TRO | UGH: | | | |
| | Repair and sealing of existing reservoir and trough. | | <u> </u> | | |
| | The existing reservoir and drinking trough around the reservoir need to be | | | | |
| ĺĺ | cleaned, cracks to be repaired inside and outside with sand/cement filler. | | | | |
| | The Inside of the reservoir and drinking trough needs to be sealed with | | | j | |
| | geotextiles matt (90-100 g/m²) and polymer anionic bitumen emulsion sealer | nt. | | ļ | |
| | OnestCourt . | | | | |
| | Specification type of matt: | | | | |
| | Specification type of sealing: | | | | And relationships of Phila |
| | | | İ | | į |
| - ' | Coating layers recommended : | | | | |
| | The cooling man about | | | | |
| | The sealing matt should go over the well of the reservoir down the outside wa | ıll 💮 | And the second s | j | |
| | for 30 cm . Where the matt is joined the overlap should be 30 cm. | | | | |
| | Where the inner wall meet the floor the overlap should be 30cm. | | | | |
| j II | Nethod of application: Paint dam area to be seal with sealant and apply the | | | | |
| l n | natt to the area and paint the matt 3 x coats with sealant | | | | ŀ |
| S | nize of reservoir | | | ļ | |
| D | Hameter : 5.09 meter | | | | |
| ř | eight: 2.4 meters | | | | |
| - 1 | incuméronce; 16 meters | 11 | Reservoir | | 1 |
| - 1 | otal m² to be saaled: 67 m² (Floor 19.6 m², Side wali 40 m², top of | Ì | | | |
| W | all and outside wall 9.6 m²) | | | 1.4.3-14 | , |
| | in y | The second | | | |
| Si | ze of drinking trough eround reservoir | 1 | Drinking | | |
| - 1 | idth: 40 cm | | trough | 19.75.34 | |
| De | apth: 50 cm | | | | |
| - 1 | cumference: 18 meters | | | | The state of the s |
| i i | te! m² to be sealed: 35 m² | | | | 1 |
| ~ | nstruction of new apron around existing reservoir: | | | | |
| | ree (3) meter apron should be constructed around the existing reservoir. | | | 6 | |
| inn | er circumference apron: 23 meters | i | | | |
| 1 | ter circumference of apron: 42 meters | | | | |
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| Prov | vide concrete test cube result | 4 | | 7 1 | 1 |

| 2.5 meter x 40 mm standpipe (galv) | 1 | Pipe | | |
|--|--|--|-----|-------|
| 0.3 meter x 40 mm standpipe (galv) | 1 | | | |
| o 40 mm bend (galv) | 3 | | | |
| 40 mm male adaptor (galv) | - 3 | Adaptor | | - |
| 40 mm pipe clamp for LDPE pipe | 1 | Clamp | | |
| Outlet pipe fittinge(40 mm) | | | | |
| 40 mm outlet screen (stainless steel) | 1 | Screen | | - |
| 0.5 meter x 40 mm standpipe (galv) | 1 | Pipe | | - |
| 40 mm brass gate valve (brass) | | Valve | | - |
| 40 mm bend (galv) | | Bend | | |
| 40 mm nipple (galv) | | | | - CO. |
| 40mm x 32 mm reducing bush (galv) | | 1 albhio | | |
| 32 mm male adaptor | | R/Bush | | ļ |
| DRINKING TROUGHS: 18T LOC | | Adaptor | | |
| | CATION: | | | |
| Supply and installation of concrete casted drinking troughs | CATION: | | | · |
| Drinking troughs specifications | 2 | Trough | W. | |
| Concrete casted drinking troughs with cover to protect ball valve | | İ | | |
| Size: length 2.4 meter x width 1.10 meter x depth 0.8 meter | | 1 | | |
| Capacity: 1000 liters per trough | | | | |
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| Slab specification for drinking troughs Concrete strength: 30 MPs | 2 | Slab | | |
| Concrete strength: 30 MPa | 2 | Slab | | |
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CONSTRUCTION DETAILS OF THE 4.5m DIAMETER REINFORCED CONCRETE RESERVOIR

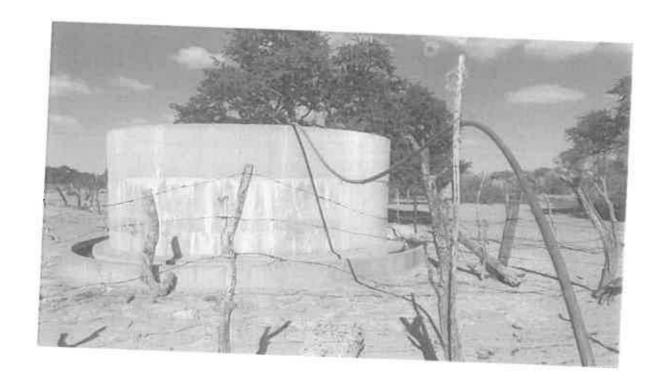




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PURPOSE OF THE DOCUMENT

This document provides construction guidelines and specification of the 4.5m diameter reinforced concrete reservoir. It is important that this document is read alongside the two drawings referenced RCR1 and RCR2, respectively. Attached is Annexure A, a Gantt chart summarizing the entire construction phases of the reservoir. It is important that the construction is carried out according to the SABS standards as stipulated in the referenced drawings.

1. CLEARING AND DEBUSHING

The designated area by the Engineer, approximately 400m², will be cleared as follows if and when necessary:

- a) clearing of boulders,
- b) grubbing of trees and tree stumps,
- c) backfilling of cavities,
- d) demolishing of structures and
- e) disposing of material thus cleared, grubbed, cut and/or demolished.

2. SETTING OUT OF THE FOOTING

In this, the procedure for setting out the footing for the reinforced concrete reservoir is explained. Refer to Figure 2.1 for an illustration of the procedure.

When the site has been leveled in all directions, a strong pipe is set firmly and vertically at the center of the reservoir. A strong wire loop is formed in such a way that it fits loosely around the central pipe and can easily slide up and down. To this loop attach a lighter wire and measure accurately along it a length equal to the inside radius of the reservoir. At this





point, twist a small loop into the wire. The loop not only serves as the base from which the trench for the footing can be set out, but also as a guide for the setting up of the forms.

Holding the wire stretched on the ground, drive a steel peg 100mm back from the base loop towards the center of the tank. From the peg, measure outwards along the center wire a distance equal to the required width of the footing (i.e. 1250mm) and drive a second peg. Next wind the loose end of the wire tightly round the first peg, withdraw it from the ground and with the bottom end mark out a circle round the center pipe. Straighten wire and repeat the procedure using the second (outer) peg.

The inner and outer circles scratched on the ground mark the corresponding inner and outer edges of the excavation for the footing.

As the final step in the setting out, a series of wooden pegs are driven into the ground at intervals of 1.5m along the perimeter of the reservoir and just inside the circle marking the inner edge of the footing excavation. The pegs should be leveled with a straight edge and hand level to serve as a reference point for the top of the footing. The top of the footing should be perfectly level and should correspond with the top of the ground surface on which the floor is to be laid (or that of any compact layer of gravel or hardcore which may be necessary because of the nature of the ground).



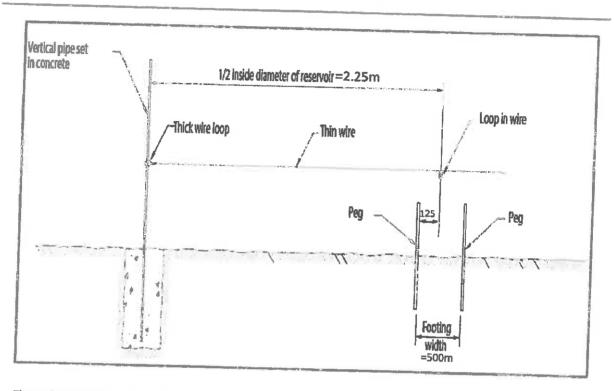


Figure 2.1: Setting out the circular reservoir footing

3. CONSTRUCTION OF WALL FOOTINGS

The excavations for footings should be carried down to firm ground, but in any case to a depth of not less than 250mm below the prepared surface of the site. The bottom of the excavation should be level, or cut in a series of steps, the top of which are horizontal. Stepped footings should be used only if the floor is to be slopped.

Pipe work under the reservoir should be placed and concreted in before the footing and ribs are cast.

Before placing any concrete, the bottom and sides of the excavation should be damped to prevent absorption of water from the concrete. When the concrete is placed, however, there should be no free water in the trench.



The concrete for footings need not be water tight, low strength concrete is therefore suitable. It should be placed uniformly and continuously along the trench, construction joints being avoided as far as possible. The concrete should be thoroughly tamped and spaded into place.

The top surfaces of footings should be brought up to exact levels and the concrete wood=floated to a smooth surface immediately after placing. When all bleeding has ceased, which usually takes one to three hours after placing, the bleed water should be removed by mopping or be allowed evaporate, the surface of the concrete should be heavily steeltrowelled to a smooth, flat finish.

The footing should be damped cured for a week (7 days) by covering it with sacking or old paper sacks which are kept saturated. Before walls are built and when concrete is sufficiently dry, the surface of the footing should be mopped with bitumen to provide the sliding joint.

Normally, footings need not be reinforced, but if the reservoir is to be built on clayey soil, or other material of doubtful stability, the Engineer shall provide specifications of the required reinforcement.

4. CONSTRUCTION OF THE DRINKING TROUGH

The drinking trough wall should be cast simultaneously with the first lift of the reservoir wall. The inner formwork of the trough wall should be 500mm wide and 22m length and 700mm wide and 23m length for the outer formwork. The reinforcement should be as specified in Drawing Ref No.: RCR 1. See section 6 below for further details on formwork.

The wall concrete should be 30MPa. The concrete should be placed within 30 minutes of mixing, in layers of 150mm for the full circumference of the wall. Care should be taken to ensure that the outer cover of concrete over reinforcement is well compacted. The wall should be thoroughly and continuously cured for at least 14 days after placing.



5. CONSTRUCTION OF THE RESERVOIR FLOOR

Once the footing has been completed, what follows is to cast the walls for the full height of the formwork, which is 800mm. The detail on the construction of the wall is given in section 6 below.

Before laying the floor, the earth immediately adjacent to the footing should be wetted and well rammed to ensure compaction, and the top surface of the footing should be mopped with bitumen.

A flexible, watertight expansion joint is required between the edge of the floor and the wall. The type of joint recommended is illustrated in Figure 5.1. The joint-filler in board form should be of resilient material, such as closed cell expanded polyethylene, cut beforehand into strips of the appropriate width, namely 75mm.

The timber strips for forming the grooves in the floor for the sealing compound should be prepared beforehand. If they are of the tapered cross-section shown in the drawing they will be easy to remove when necessary.

To make them easy to bend to fit against curved walls, saw-cuts may be made at intervals into the face of the timber which bears against the wall. A detachable strip of joint filler board may be used instead of the timber strip to form the groove. Joint-fillers and timbers are placed against the foot of the wall immediately before the concrete for the floor is cast.

The perimeter joint is necessary for concrete floors. Its width (dimension T in Figure 5.1) should be 12mm.





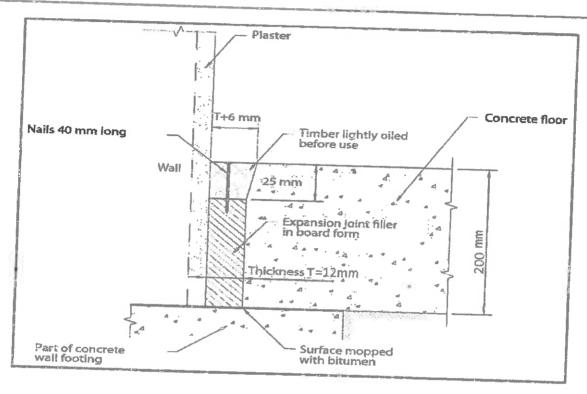


Figure 5.1 Joint between edge of floor and wall

Since the reservoir floor is only 4.5m in diameter, the floor can be cast at one go, and not divided up into panels.

The floor should be constructed as specified according to Drawing Ref. No.: RCR 1, making an important note of the reinforcement and concrete strength. Before placing the 50mm blinding layer of concrete, the ground (or layer of compacted material) under the floor should be thoroughly damped down to prevent moisture absorption from the concrete. However, at the time of placing, there should be no free water on the surface. Before placing the floor concrete, the blinding layer should be mopped with bitumen.

A 40mm depth of concrete is first put down; the reinforcement is laid over it and covered immediately by the remaining 160mm of concrete. Do not let the bottom layer of the concrete to dry out before the top layer is placed in position. The concrete in reservoir floors should be thoroughly compacted. The surface should be screeded level and float smoothed with a wood float as soon as possible.



Damp curing of the floor should continue for at least 14 days. The floor concrete should be damp cured by covering with sacking or empty cement bags which are continuously kept saturated. Covering the concrete with plastic sheeting to prevent drying is also satisfactory, while even better results will be obtained if the plastic is spread over the wet sacking, so ensuring that the latter does not dry out.

After the concrete has been damp-cured and has dried out, the timber strips are removed. The resulting groove is then cleaned, primed (to aid the adhesion of the joint-sealant) and finally filled with permanent plastic (elastomeric) joint sealant.

Some types of elastomeric sealant can be applied cold. Most of these compounds require that the concrete should be primed (i.e. painted beforehand with a suitable material). The concrete should be scrupulously clean. While these proprietary materials may be more expensive than solid bitumen, they are easier to use especially where they can be applied cold, and are far more satisfactory in service than bitumen.

6. CONSTRUCTION OF THE RESERVOIR WALL

The reservoir wall should be constructed as specified in the Drawing Ref. No.: RCR 1. The wall should be cast in three lifts, and the forms for the upper lift are to overlap the concrete previously cast by 100mm. The form height should be 800mm. The form may be entirely of timber, of timber and sheet metal, or of corrugated steel sheeting. The form should be raised when the concrete has hardened sufficiently, which is 48 hours after placing has been completed.

Corrugated steel forms are recommended, and when they are used, allowance should be made for an overlap of at least two corrugations when the forms are lifted.

A set of inside and outside forms that fit completely round the reservoir should be provided, to avoid vertical joints and to avoid the difficulty caused by the hoop reinforcement crossing the joints of shorter sets.



The length of the formwork to be provided is 15m and 16m for the inside and outside forms, respectively.

Since freshly placed concrete exerts considerable pressure outward pressure on the formwork, wires ties should be provided to prevent this pressure from forcing forms apart.

Forms should be oiled before use, and thoroughly cleaned and re-oiled before re-use.

The wall concrete should be 30MPa. The concrete should be placed within 30 minutes of mixing, in layers of 150mm for the full circumference of the wall. Care should be taken to ensure that the outer cover of concrete over reinforcement is well compacted. The wall should be thoroughly and continuously cured for at least 14 days after placing.

7. CONSTRUCTION OF THE APRON

The reservoir apron should be constructed as specified in the Drawing Ref. No.: RCR 1. The concrete should be cured for at least 14 days.

8. FIRST FILLING OF THE RESERVOIR

The reservoir should not be filled completely until the finished walls are at least 28 days old and have been actively cured for 14 days. It is recommended that the reservoir is filled to half its capacity 7 days after completion and three-quarters full after 14 days.

Upon the tank being filled to its maximum capacity, it should be checked for any leakages, cracks, damp patches and seepages.

If any leakages occur, the tank should be emptied and any cracks should be opened up and filled with the sealant used in the floor expansion joints. Damp areas on the walls should be given two coats of cement paint, each coat being carefully cured.



9. APPROVAL

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REVISION NO.;

THE NATIONAL TREASURY Republic of South Africa



GOVERNMENT PROCUREMENT: GENERAL CONDITIONS OF CONTRACT

July 2010

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.

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

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General Conditions of Contract

1. Definitions

- 1. The following terms shall be interpreted as indicated:
- 1.1 "Closing time" means the date and hour specified in the bidding documents for the receipt of bids.
- 1.2 "Contract" means the written agreement entered into between the purchaser and the supplier, as recorded in the contract form signed by the parties, including all attachments and appendices thereto and all documents incorporated by reference therein.
- 1.3 "Contract price" means the price payable to the supplier under the contract for the full and proper performance of his contractual obligations.
- 1.4 "Corrupt practice" means the offering, giving, receiving, or soliciting of any thing of value to influence the action of a public official in the procurement process or in contract execution.
- 1.5 "Countervailing duties" are imposed in cases where an enterprise abroad is subsidized by its government and encouraged to market its products internationally.
- 1.6 "Country of origin" means the place where the goods were mined, grown or produced or from which the services are supplied. Goods are produced when, through manufacturing, processing or substantial and major assembly of components, a commercially recognized new product results that is substantially different in basic characteristics or in purpose or utility from its components.
- 1.7 "Day" means calendar day.
- 1.8 "Delivery" means delivery in compliance of the conditions of the contract or order.
- 1.9 "Delivery ex stock" means immediate delivery directly from stock actually on hand.
- 1.10 "Delivery into consignees store or to his site" means delivered and unloaded in the specified store or depot or on the specified site in compliance with the conditions of the contract or order, the supplier bearing all risks and charges involved until the supplies are so delivered and a valid receipt is obtained.
- 1.11 "Dumping" occurs when a private enterprise abroad market its goods on own initiative in the RSA at lower prices than that of the country of origin and which have the potential to harm the local industries in the

RSA.

- 1.12 "Force majeure" means an event beyond the control of the supplier and not involving the supplier's fault or negligence and not foreseeable. Such events may include, but is not restricted to, acts of the purchaser in its sovereign capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions and freight embargoes.
- 1.13 "Fraudulent practice" means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of any bidder, and includes collusive practice among bidders (prior to or after bid submission) designed to establish bid prices at artificial non-competitive levels and to deprive the bidder of the benefits of free and open competition.
- 1.14 "GCC" means the General Conditions of Contract.
- 1.15 "Goods" means all of the equipment, machinery, and/or other materials that the supplier is required to supply to the purchaser under the contract.
- 1.16 "Imported content" means that portion of the bidding price represented by the cost of components, parts or materials which have been or are still to be imported (whether by the supplier or his subcontractors) and which costs are inclusive of the costs abroad, plus freight and other direct importation costs such as landing costs, dock dues, import duty, sales duty or other similar tax or duty at the South African place of entry as well as transportation and handling charges to the factory in the Republic where the supplies covered by the bid will be manufactured.
- 1.17 "Local content" means that portion of the bidding price which is not included in the imported content provided that local manufacture does take place.
- 1.18 "Manufacture" means the production of products in a factory using labour, materials, components and machinery and includes other related value-adding activities.
- 1.19 "Order" means an official written order issued for the supply of goods or works or the rendering of a service.
- 1.20 "Project site," where applicable, means the place indicated in bidding documents.
- 1.21 "Purchaser" means the organization purchasing the goods.
- 1.22 "Republic" means the Republic of South Africa.
- 1.23 "SCC" means the Special Conditions of Contract.
- 1.24 "Services" means those functional services ancillary to the supply of the goods, such as transportation and any other incidental services, such as installation, commissioning, provision of technical assistance, training, catering, gardening, security, maintenance and other such

obligations of the supplier covered under the contract.

1.25 "Written" or "in writing" means handwritten in ink or any form of electronic or mechanical writing.

2. Application

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

3. General

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

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
- 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 Tender Defaulters. When a person's name has been endorsed on the Register, the person will be prohibited from doing business with the public sector for a period not less than five years and not more than 10 years. The National Treasury is empowered to determine the period of restriction and each case will be dealt with on its own merits. According to section 32 of the Act the Register must be open to the public. The Register can be perused on the National Treasury website.
- 24. Anti-dumping and countervailing duties and rights
- 24.1 When, after the date of bid, provisional payments are required, or antidumping or countervailing duties are imposed, or the amount of a
 provisional payment or anti-dumping or countervailing right is
 increased in respect of any dumped or subsidized import, the State is
 not liable for any amount so required or imposed, or for the amount of
 any such increase. When, after the said date, such a provisional
 payment is no longer required or any such anti-dumping or
 countervailing right is abolished, or where the amount of such
 provisional payment or any such right is reduced, any such favourable
 difference shall on demand be paid forthwith by the contractor to the
 State or the State may deduct such amounts from moneys (if any)
 which may otherwise be due to the contractor in regard to supplies or
 services which he delivered or rendered, or is to deliver or render in
 terms of the contract or any other contract or any other amount which

may be due to him

25. Force Majeure

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

26. Termination for insolvency

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

27. Settlement of Disputes

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

28. Limitation of liability

- 28.1 Except in cases of criminal negligence or 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

- (b) the aggregate liability of the supplier to the purchaser, whether under the contract, in tort or otherwise, shall not exceed the total contract price, provided that this limitation shall not apply to the cost of repairing or replacing defective equipment.
- 29. Governing language
- 29.1 The contract shall be written in English. All correspondence and other documents pertaining to the contract that 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 33.1 Industrial Participation (NIP) Programme
 - The NIP Programme administered by the Department of Trade and Industry shall be applicable to all contracts that are subject to the NIP obligation.
- 34 Prohibition of Restrictive practices
- 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)