COMPULSORY BID INFORMATION MEETING AND SITE INSPECTION

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

: A compulsory briefing session at

PLACE

SIGNATURE		DATE	
the above bidder.			
1	hereby confi	rm that the site inspection was attend	ded by
CERTIFICATION INFORMATION IN		PRESENTATIVE <u>ON SITE</u> AFTER TH	IE BID
SIGNATURE		DATE	
fully aware of the	extent of the task.		
		pection was attended and that I/we a	am/are
as representative	of the company/firm		
I/We,			
	BY BIDDER THAT TI RIBED ABOVE WAS ATTE	HE COMPULSORY BID INFORMA	ATION
	TTEND THE COMPULSO BIDDER'S BID TO BE RE.	RY BID INFORMATION MEETING JECTED.	WILL
	General Enquiries TEL. NO.: (012)	s: Ms Dikeledi Mohlala 319 7129	
ENQUIRIES	IRIES: Technical Enquiries: Ms. Mahlatse Phuthi TEL NO: 012 309 5855		
TIME	10H00		
DATE	16 OCTOBER 2	018	
	Northern Cape: Reform and Run 6236 Kgosi Moth MOTHIBISTAD NORTHERN CA	nibi Road	and

PART A INVITATION TO BID

YOU ARE HEREBY INVITED TO BID FOR REQUIREMENTS OF THE (NAME OF DEPARTMENT/ PUBLIC ENTITY)							
BID NUMBER: 4.4.12.2/13/18 CLOSING DATE: 26 OCTOBER 2018 CLOSING TIME: 11:00 APPOINTMENT OF A SERVICE PROVIDER FOR THE EQUIPPING OF BOREHOLES IN NORTHERN CAPE PROVINCE							
DESCRIPTION ADMINISTERED BY THE DEPARTMENT OF AGRICULTURE, FORESTRY AND FISHERIES							
BID RESPONSE DOCUMENTS MAY BE DEPOSITED IN THE BID BOX SITUATED AT (STREET ADDRESS)							
Department of Agricultu	ire, Forestry and	Fisheries, Agriculture P	Place Main Entra	ance			
Tender Receipt Office, F	Room No : A-GF-0	16					
20 Steve Biko Road, Arc	adia						
PRETORIA							
BIDDING PROCEDURE				ENQUIRIES MAY I			
CONTACT PERSON	Dikeledi Mohla	la	CONTACT PE	RSON		Mahlatse	Phuthi
TELEPHONE NUMBER	(012) 319 7129		TELEPHONE	NUMBER		(012) 309	5855
FACSIMILE NUMBER	(012) 319 6888		FACSIMILE N	UMBER			
E-MAIL ADDRESS	Dikeledil_@dafl		E-MAIL ADDF				P@daff.gov.za
SUPPLIER INFORMATIO	M of the company	North Carlotte (1986)		1986 (1931 1931 1931)	vi .	g + 15 - 15 - 1	er i yes a par
NAME OF BIDDER							
POSTAL ADDRESS							
STREET ADDRESS				I			·-
TELEPHONE NUMBER	CODE			NUMBER		e-	
CELLPHONE NUMBER				1			
FACSIMILE NUMBER	CODE			NUMBER			
E-MAIL ADDRESS							
VAT REGISTRATION NUMBER							
SUPPLIER	TAX			CENTRAL			
COMPLIANCE STATUS	COMPLIANCE		OR	SUPPLIER			
	SYSTEM PIN:			DATABASE No:	MAAA		
B-BBEE STATUS	TICK AP	PLICABLE BOXJ		US LEVEL SWOR	N	[TICK APPLI	CABLE BOX]
LEVEL VERIFICATION CERTIFICATE			AFFIDAVIT				
	☐ Yes	☐ No				☐ Yes	□No
[A B-BBEE STATUS L	FVFI VFRIFICA	TION CERTIFICATE/	SWORN AFFII	DAVIT (FOR FMF	S & OS	SES MUST RE	SUBMITTED IN
ORDER TO QUALIFY I					181	.20, 13,007, 22	, , , , , , , , , , , , , , , , , , ,
ARE YOU THE ACCREDITED							
REPRESENTATIVE IN	_	_		OREIGN BASED OR THE GOODS		☐Yes	□No
SOUTH AFRICA FOR THE GOODS	Yes	□No	1	VORKS OFFERED	?	[IF YES, ANSWE	:D TUE
/SERVICES /WORKS	[IF YES ENCLOS	SE PROOF]				QUESTIONNAIR	
OFFERED?							
QUESTIONNAIRE TO BIL	DDING FOREIGN	SUPPLIERS			et l		
IS THE ENTITY A RESIDE	ENT OF THE REP	UBLIC OF SOUTH AFRIC	CA (RSA)?			☐ YES	S □ NO
DOES THE ENTITY HAVE	A BRANCH IN T	HE RSA?				☐ YES	□ NO
DOES THE ENTITY HAVE	A PERMANENT	ESTABLISHMENT IN TH	E RSA?			☐ YES	S □ NO
DOES THE ENTITY HAVE	ANY SOURCE C	F INCOME IN THE RSA?	?			☐ YES	S □ NO
IS THE ENTITY LIABLE IN THE RSA FOR ANY FORM OF TAXATION? IF THE ANSWER IS "NO" TO ALL OF THE ABOVE, THEN IT IS NOT A REQUIREMENT TO REGISTER FOR A TAX COMPLIANCE STATUS SYSTEM PIN CODE FROM THE SOUTH AFRICAN REVENUE SERVICE (SARS) AND IF NOT REGISTER AS PER 2.3 BELOW.							

PART B TERMS AND CONDITIONS FOR BIDDING

1. BID SUBMISSION:

- 1.1. BIDS MUST BE DELIVERED BY THE STIPULATED TIME TO THE CORRECT ADDRESS. LATE BIDS WILL NOT BE ACCEPTED FOR CONSIDERATION.
- 1.2. ALL BIDS MUST BE SUBMITTED ON THE OFFICIAL FORMS PROVIDED-(NOT TO BE RE-TYPED) OR IN THE MANNER PRESCRIBED IN THE BID DOCUMENT.
- 1.3. THIS BID IS SUBJECT TO THE PREFERENTIAL PROCUREMENT POLICY FRAMEWORK ACT, 2000 AND THE PREFERENTIAL PROCUREMENT REGULATIONS, 2017, THE GENERAL CONDITIONS OF CONTRACT (GCC) AND, IF APPLICABLE, ANY OTHER SPECIAL CONDITIONS OF CONTRACT.
- 1.4. THE SUCCESSFUL BIDDER WILL BE REQUIRED TO FILL IN AND SIGN A WRITTEN CONTRACT FORM (SBD7).

2. TAX COMPLIANCE REQUIREMENTS

- 2.1 BIDDERS MUST ENSURE COMPLIANCE WITH THEIR TAX OBLIGATIONS.
- 2.2 BIDDERS ARE REQUIRED TO SUBMIT THEIR UNIQUE PERSONAL IDENTIFICATION NUMBER (PIN) ISSUED BY SARS TO ENABLE THE ORGAN OF STATE TO VERIFY THE TAXPAYER'S PROFILE AND TAX STATUS.
- 2.3 APPLICATION FOR TAX COMPLIANCE STATUS (TCS) PIN MAY BE MADE VIA E-FILING THROUGH THE SARS WEBSITE WWW.SARS.GOV.ZA.
- 2.4 BIDDERS MAY ALSO SUBMIT A PRINTED TCS CERTIFICATE TOGETHER WITH THE BID.
- 2.5 IN BIDS WHERE CONSORTIA / JOINT VENTURES / SUB-CONTRACTORS ARE INVOLVED, EACH PARTY MUST SUBMIT A SEPARATE TCS CERTIFICATE / PIN / CSD NUMBER.
- 2.6 WHERE NO TCS PIN IS AVAILABLE BUT THE BIDDER IS REGISTERED ON THE CENTRAL SUPPLIER DATABASE (CSD), A CSD NUMBER MUST BE PROVIDED.
- 2.7 NO BIDS WILL BE CONSIDERED FROM PERSONS IN THE SERVICE OF THE STATE, COMPANIES WITH DIRECTORS WHO ARE PERSONS IN THE SERVICE OF THE STATE, OR CLOSE CORPORATIONS WITH MEMBERS PERSONS IN THE SERVICE OF THE STATE."

NB: FAILURE TO PROVIDE / OR COMPLY WITH ANY OF THE ABOVE PA	ARTICULARS 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.

	SERVICE PROVIDER:	BID NO.: 4.4.12.2/13/18
CLOSING	TIME 11:00 ON 26 OCTOBER 2018	
OFFER TO	D BE VALID FOR 90 DAYS (UNTIL 26 JANUARY 2019) FROM THE CLOSING DATE	E 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 Northern Cape Province, administered by the Depart and Fisheries through its Directorate: Climate Change a	partment of Agriculture, Forestry
2.	Bidders are required to indicate a total ceiling price of 15 bor to be equipped including all expenses for the project	eholes together with their reservoirs
	Borehole 1: Adderly Total price including vat and all cost	R
	Borehole 2: Bothetheletsa Total price including vat and all cost	R
	Borehole 3: Charlesdale Total price including vat and all cost	R
	Borehole 4: Churchill Total price including vat and all cost	R
	Borehole 5: Clifton Total price including vat and all cost	R
	Borehole 6: Dutton Total price including vat and all cost	R
	Borehole 7: Eiffel Total price including vat and all cost	R
	Borehole 8: Gasehubane Total price including vat and all cost	R
	Borehole 9: Glenred Total price including vat and all cost	R
	Borehole 10: Klein Eira Total price including vat and all cost	R
	Borehole 11: Lokaleng Total price including vat and all cost	R
	Borehole 12: Maphiniki Total price including vat and all cost	R
	Borehole 13: Morotobolo Total price including vat and all cost	R
	Borehole 14: Mapoteng Total price including vat and all cost	R
	Borehole 15: Mogonate Total price including vat and all cost	R
	TOTAL PRICE FOR ALL THIRTEEN (15) BOREHOLES: R PRICE (INCLUSIVE OF ALL COSTS AND VAT) FIRM FOR A PE	RIOD OF SIX (6) MONTHS
	Period required for commencement of project	

Bid No.: SCM 4.4.12.2/13/14

Name of Bidder:	
Does the offer comply with the specification(s)	Yes / No
If not to specification, indicate deviation(s)	
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

Dikeledi Mohlala Tel. no. 012 319 7129

Email: DikelediM@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.

In order to give effect to the above, the following questionnaire must be completed and

	submitted with the bid.
2.1	Full Name of bidder or his or her representative:
2.2	Identity Number:
2.3	Position occupied in the Company (director, trustee, 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 -

2.

- (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&}quot;Shareholder" means a person who owns shares in the company and is actively involved in the management of the enterprise or business and exercises control over the enterprise.

2.7	Are you or any person connected with the bidder presently employed by the state?	YES / NO
2.7,1	If so, furnish the following particulars:	
	Name of person / director / trustee / shareholder/ member: Name of state institution at which you or the person connected to the bidder is employed : Position occupied in the state institution:	
	Any other particulars:	
2.7.2	If you are presently employed by the state, did you obtain the appropriate authority to undertake remunerative work outside employment in the public sector?	YES / NO
2.7.2.1	If yes, did you attach proof of such authority to the bid document?	YES/NO
	(Note: Failure to submit proof of such authority, where applicable, may result in the disqualification of the bid.	
2.7.2.2	If no, furnish reasons for non-submission of such proof:	
2.8 [Did you or your spouse, or any of the company's directors / trustees / shareholders / members or their spouses conduct business with the state in the previous twelve months?	YES / NO
2.8.1	If so, furnish particulars:	
2.9 2.9.1	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? If so, furnish particulars.	YES / NO
د. ی . ا	ii so, iuinisii paiticulais.	

2.10	Are you, or any person conne aware of any relationship (f any other bidder and any po who may be involved with the of this bid?	amily, friend, other) be erson employed by the	state	YES/NO	0	
2.10	1 lf so, furnish particulars.					
2.11	Do you or any of the directors of the company have any interest whether or not they are bidding	est in any other related		YES/NO)	
2.11.	1 If so, furnish particulars:					

3	Full details of directors / truste	ees / members / share	eholders.			
	Full Name	Identity Number		Income erence	State Number Number	Em

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

DECLARATION	
I, THE UNDERSIGNED (NAME)	
	I FURNISHED IN PARAGRAPHS 2 and 3 ABOVE IS CORRECT. AY REJECT THE BID OR ACT AGAINST ME SHOULD THIS SE.
Signature	Date
Position	Name of bidder

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:

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

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	О	

Ę.	RID	DFC!	AD/	MOLT	
D.	DIU	175	ARA	4 1 14 719	

5.1	idders who claim points in respect of B-BBEE Status Level of Contribution	n musi
	omplete the following:	

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

6.1	B-BBEE Status Level of Contributor:	(*)	=	(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:

i)	What	percentage	of	the	contract	will	be
	subcontrac	ted		%			
ii)	The	name		of	the		sub-
	contractor.						
iii)	The	B-BBEE	status	level	of	the	sub-
	contractor.						

iv) Whether the sub-contractor is an EME 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		

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:
3.8	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.

ltem	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 CANCELLATE BE TAKEN AGAINST ME SHOULD THIS DECLAR	
I, THE UNDERSIGNED (FULL NAME) CERTIFY THAT THE INFORMATION FURNISHE TRUE AND CORRECT.	

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.
- 3 Treasury Regulation 16A9 prescribes that accounting officers and accounting authorities must take all reasonable steps to prevent abuse of the supply chain management system and authorizes accounting officers and accounting authorities to:
 - a. disregard the bid of any bidder if that bidder, or any of its directors have abused the institution's supply chain management system and or committed fraud or any other improper conduct in relation to such system.
 - b. cancel a contract awarded to a supplier of goods and services if the supplier committed any corrupt or fraudulent act during the bidding process or the execution of that contract.
- 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:

¹ 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 Desc	cription)
in response to the invitation for the bid made by:	
(Name of Institution	on)
	Ø.
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	4

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

- 6. The bidder has arrived at the accompanying bid independently from, and without consultation, communication, agreement or arrangement with any competitor. However communication between partners in a joint venture or 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.
- 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.

³ 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.

		٠.
Signature	Date	
***************************************	***************************************	•••
Position	Name of Bidder	
	1.044	_

Js914w 2



Bid invitation

BID NUMBER:

4.4.12.2/13/18

SUBJECT:

APPOINTMENT OF A SERVICE PROVIDER FOR THE EQUIPPING

OF BOREHOLES IN NORTHERN CAPE PROVINCE ADMINISTERED BY THE DEPARTMENT OF AGRICULTURE, FORESTRY

AND FISHERIES

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

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

-2-

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 QSEs

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 Kentse Setshedi	Tel. 012 309 5855 Tel. 012 309 5849
General SCM enquiries	Dikeledi Mohlala	Tel. 012 319 7129

- 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.
- 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.

DAFF BID: 4.4.12.2/13/18

SUBJECT: APPOINTMENT OF A SERVICE PROVIDER FOR THE EQUIPPING OF BOREHOLES IN NORTH-ERN CAPE PROVINCE ADMINISTERED BY THE DEPARTMENT OF AGRICULTURE, FORESTRY

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.

3. 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

- On termination of this agreement, the bidder shall on demand, hand over all documentation, information, etc. to the department without the right of retention.
- 6.2 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:

8.1 Phase 1: Prequalification criteria

- 8.1.1 The following prequalification criteria will be applicable to this bid:
 - (i) Service provider/supplier must have a B-BBEE Level of 1 to 4

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DAFF BID: 4.4.12.2/13/18

SUBJECT: APPOINTMENT OF A SERVICE PROVIDER FOR THE EQUIPPING OF BOREHOLES IN NORTH-ERN CAPE PROVINCE ADMINISTERED BY THE DEPARTMENT OF AGRICULTURE, FORESTRY

- 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.
- LATE BIDS

All completed documentation must be returned to the Department of Agriculture, Forestry and Fisheries before 11:00 on 26 October 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.
- 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.

DAFF BID: 4.4.12.2/13/18

SUBJECT: APPOINTMENT OF A SERVICE PROVIDER FOR THE EQUIPPING OF BOREHOLES IN NORTH-ERN CAPE PROVINCE ADMINISTERED BY THE DEPARTMENT OF AGRICULTURE, FORESTRY

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:
 - 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.

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TERMS OF REFERENCE FOR THE QUOTATION FOR THE APPOINTMENT OF A SERVICE PROVIDER FOR THE EQUIPPING OF BOREHOLES IN THE NORTHERN CAPE 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.

			COM	PLY
	And the same of th	YES	NO	REMARKS
3.	SERVICE REQUIREMENTS			
3.1	A total number of 15 boreholes together with their reservoirs and drinking troughs to be equipped in Northern Cape Province Department of Agriculture, Land Reform and Rural Development.	The state of the s		
3.2	The service provider must submit a detailed implementation			
VVI.	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).	Mile Andrews (1994) market by the special ma		
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 Northern Cape Department of Agriculture, Land Reform and Rural Development (NCDLR).			A COMMISSION OF THE PARTY OF TH
3.4	The service provider will keep a construction book on site to record all technical instructions by the engineers/technicians.			
3.5	The service provider will adhere to the inspection schedule			
5.5	in accordance with the agreed plan of phases/stages to be followed in equipping of boreholes.	PRETTY AND ADMINISTRATION OF THE PRETTY OF T		
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.			
.7 TI	he service provider will submit an invoice signed by him/her in line with the payment certificate per completed borehole.			
.8	The successful bidder should submit a status report with every signed invoice by him/her together with the relevant		1	k k

f		COM	PLY
p. 3 to 1 m m m m m m m m m m m m m m m m m m	YES	NO	REMARKS
official from NCDLR. The service provider should further submit the final report in accordance with the template to be provided by DAFF as well as the construction book.			
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.	and the state of t		
3.10 The successful bidder should provide skills transfer (general maintenance of a windmill, reservoir and drinking troughs) to the project beneficiaries.	The state of the s		
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.			
3.12 The service provider is expected to deliver materials and windmills to all borehole sites without additional costs.	100 mm 10	Ĭ	
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			

			COM	PLY
		YES	NO	REMARKS
4 3 W A A A A A A A	experience should be clearly highlighted. Failure to submit the completion letters/certificates will invalidate the bid.			
3.14	Local community members must be prioritised for jobs during the implementation of the project.		and the same of th	
3.15	The service provider is expected to travel to the specified properties to attend site visits at no extra costs to the Department.			
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.	The second secon		
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.	Fifteen (15) boreholes together with their reservoirs and drinking troughs to be equipped in Northern Cape Department of Agriculture, Land Reform and Rural Development (NCDLR) as follows:	The state of the s		
Descri	ption	A -		- <u>}</u>
Site es	tablishment	The Park of Management		
Ablutio	and storage shed (1 x Sum) n and latrine facilities (2 x Sum) er and electricity available	The state of the s	C Demonstrate the second secon	O mention and the second secon
Cost of Constru Safety of Compile	ational health and safety measures f health and safety measures required in terms of the action Regulations (2003) of the Occupational Health and act (1 x Sum) ation and maintenance of a Health and Safety Plan,	THE REPORT OF THE PROPERTY OF	Transcription of the second se	
Statem	g Risk Assessments, Safe Work Procedures and Method ents (1 x Sum) ation and maintenance of a Health and Safety File		THE STATE OF THE S	

		COMI	PLY
Later and the second se	YES	NO	REMARKS
(1 x Sum)			
PROJECTS SPECIFICATIONS			
4.1.1. Adderly (S- 27°10'21.2"; E 23°17'10.6")			
Windmill location: S- 27°10'21.2"; E 23°17'10.6"		· ·	
Supply and installation of Windmill (1 x Windmill)	i.		
(Includes all equipment, materials, transport and labour required)	1		
 Install 9 m high windmill tower with a 3.0 m Ø wheel with a 	E E		
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 SARS (14 x 5ipe)	1		
SABS (14 x Pipe)			- The state of the
 12 mm Ø x 3.0m electro plated pump rods with socks and protectors (15 x Rod) 			
Borehole specification (Pump depth = 42 meters)			
Borehole depth: 66.5 m			
Water level: Before test :14.5 m			
After test: 46.45 m			
Delivery: 2057 I/h			
Water abstraction limit at 60 % of delivery:1234.2 l/h			
Stainless steel borehole cylinder diameter 60 mm tube length 550			
mm (1 x cylinder)			
Cylinder make:	· ·		
Cylinder model:			
Cylinder size: mm			9
Specify delivery of cylinder : Liters/ hour			ļ
Total head: meters	1		
Windmill Tower Foundation (2.8 m³)			
Concrete strength: 30 MPa		i	ļ.
Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm		ŀ	
stone)	**	ļ	
Size: See attached specification in Appendix A			
Provide concrete test cube results		į	
Supporting concrete block around casing (0.3 m ³)			1
Concrete strength: 30 MPa			
Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19 mm	M. Wall		
stone)			į
Size: 800mm diameter x 600mm high 4 x 12mm bolts and nuts	ĺ	Ì	4
Provide concrete test cube results	79.78		
Fittings from windmill to reservoir		The state of the s	AFF AND A

			COME	PLY
		YES	NO	REMARKS
	40 mm Ø brass foot valve (strainer)(1 x Valve)		W-1-	
•	40 mm Ø base plate (1 x Plate)	1		
•	40 mm Ø brass non return valve (1 x Valve)			1
•	40 mm Ø brass force head (1 x F/head)			Í
•	40 mm Ø inlet air chamber (150mm Ø x 900mm steel pipe (2mm			
1	thick) with 20mm brass gate valve) (1 x Air chamber	į		
•	40 mm nipple (galv) (3 x Nipple)			- Clarify
0	40 mm T-piece (galv) (2 x T/piece)			
.0	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 (1x Clamp)			
0	40 mm LDPE pipe (30 Meter)			
Re	pair and sealing of existing reservoir and drinking trough			A Marie and Annual Annu
	x reservoir and 1 x trough)	ì		
				j
	e existing reservoir and drinking trough around the reservoir,	}		
	ed to be cleaned and the cracks to be repaired inside and	1100		
F	side with sand/cement filler. The inside of the reservoir and			
	king trough need to be sealed with geotextiles matt (90-100			
g/m	²) and polymer anionic bitumen emulsion sealant.			ĺ
_				
	ecification type of matt:	ļ		
	ecification type of sealing:	Í		
Coa	ating layers recommended :	İ		
The	sealing matt should go over the well of the recommit down			
	sealing matt should go over the wall of the reservoir down outside wall for 30 cm, where the matt is joined the overlap			
	uld be 30 cm. Where the inner wall meets the floor, the			1
	rlap should be 30 cm.			
	hod of application: Paint area to be seal with sealant and			
	ly the matt to the area and paint the matt 3 x coats with	- 1)
	ant.			
-				
Size	of reservoir			
s	Diameter : 5.09 meter			
	Height: 2.4 meters		1	
•	Circumference: 16 meters		ĺ	
•	Total m² to be sealed : 67 m² (floor 19.6 m², side wall 40 m²			
	op of wall and outside wall 9.6 m²)			
	of drinking trough around reservoir			
• 1	Width: 40 cm			

		COMPLY		
and the second s	YES	NO	REMARKS	
Depth : 50 cm				
Circumference: 18 meters	1			
↑ Total m² to be sealed : 35 m²				
Construction of new apron around existing reservoir:				
(1 x apron)	Į.		New York	
 Three (3) meter apron should be constructed around 	d 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 m² 				
 Concrete strength: 30 MPa 				
 Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts 	ts of		Ĩ	
19mm stone)				
 Provide concrete test cube result 				
Inlet pipe fittings(40 mm)			ARTON STANSON ARTON STANSON ARTON	
 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) 				
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) (1x Pipe)		İ		
 40 mm brass gate valve (brass) (1 x Valve) 		j		
40 mm bend (galv) (1 x Bend)				
 40 mm nipple (galv) (1 x Bend) 	Andrew Committee			
 40 mm x 32 mm reducing bush (galv) (1x R/Bush) 	. Co	ĺ		
 32 mm male adaptor (1 x Adaptor) 			P.S. F.	
The second secon				
DRINKING TROUGHS: 1st LOCATION: Approximately 120rd	n away from the	reservoi	r	
2 ND LOCATION: Approximately 120	Om away from th	ne reserv	oir	
Supply and installation of concrete casted drinking troug	ihs	1		
(2 x Trough)		1996		
Drinking troughs specifications	197			
Concrete casted drinking troughs with cover to protect	ball			
valve				
Size: length 2.4 meter x width 1.10 meter x depth 0.8 met	er	T Co. Mary Page		
Capacity: 1000 liters per trough			77	
Slab specification for drinking troughs				
Concrete strength: 30 MPa				

		COMP	PLY
	YES	NO	REMARKS
Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of		*	
19mm stone) Slab size : 9 meter v 7 meter v 0 15 meter			Ì
Slab size : 9 meter x 7 meter x 0.15 meter			
Size: 62 m ² (9.45 m ³ concrete) (2 x Slab)			7 17
Provide concrete test cube results for slab (2 x Cube test)			
he trench specification (240 Meters)			
Size: The pipe should be buried in a trench of 0.5m deep			
with the width of 0.3m	ĺ		and the second
ttings 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)	Î		
32 mm nipple (galv) (2 x Nipple)			
32 mm bend (galv) (2 x Bend)			*
32 mm M&F bend (2 x Bend)	9		
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)			
.2. Bothetheletsa (S - 27. 436460350; E 23. 838736774)			
indmill location: S - 27. 436460350; E 23. 838736774			
pply and installation of Windmill (1 x windmill)			5.50
cludes all equipment, materials, transport and labour required)	ļ	[
Install 9 m high windmill tower with a 3.0m Ø wheel with a			
gearbox, tail brake system, fork rod, bucket rod (pitman),	Ì		
wood rod x 3 meters and force head.		j	.i
40mm Ø x 3.0m galvanized medium screwed/socket pipe			į
SABS (13x Pipe)			
12 mm Ø x 3.0m electro plated pump rods with socks and			
protectors (14 x Rod)			i
rehole specification (Pump depth = 39 meters)			
Borehole depth: 78 m	ĺ	34	
Water level: Before test: 2.6 m			[
After test : 43.1m	Ì		1
Delivery: 8000 l/h	Section 2		
Water abstraction limit at 60 % of delivery : 4800 l/h		ĺ	

		COM	PLY
	YES	NO	REMARKS
Stainless steel borehole cylinder diameter 60 mm tube length 550			
mm (1 x Cylinder)			
Cylinder make:			
Cylinder model:			ĺ
Cylinder size: mm	ĺ		
Specify delivery of cylinder:Liters/ hour			
Total head: meters			77
Windmill Tower Foundation (2.8 m³)		120	
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	1		1
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)			
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 valve (strainer) (1 x Valve) 		Î	
40 mm Ø base plate (1 x Plate)		Í	i
 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		į	
(2mm thick) with 20mm brass gate valve (1 x Air chamber)	ŀ	ŀ	
40 mm nipple (galv) (3 x Nipple)			
40 mm T-piece (galv) (2x T/piece)	1		
40 mm x 0.5 meter standpipe (galv) (1x Pipe)			
40 mm male adaptor (nylon) (1 x Adaptor)			
40 mm male bend (galv) (2 x Bend)			
40 mm pipe clamp (1 x Clamp)	1	ļ	ļ
• 40 mm LDPE pipe (30 Meter)	Ì	į	1
Reservoir location: Approximately 5m away from the windmill			
ποσοί του Ισσαμοτί. Αρρισχιπιαισίу στι away ποπι της windmill		1 1 2 2	
Construction of concrete records with the deleter to		į	
Construction of concrete reservoir with the drinking trough around. (1 x reservoir and 1 x drinking trough)		1	40
(1 × 100011011 that 1 × attrixting trough)			
Circular reinforced concrete reservoir, diameter 4.5 m, height 2.1		ļ	
m wall thickness 225 mm consists 32 5 -322 5 LD Th	1	İ	
m , wall thickness 225 mm, capacity 33.5 m³(33.5 kl). The wall			Program.
should be reinforced horizontally and vertically and the floor			Ì
horizontally. Reservoir should be supply with inlet and outlet.			en februaria

	YES	COMP	
The dripking trough well should be seet about 1	TES	NO	REMARKS
The drinking trough wall should be cast simultaneously with the			
first lift of the reservoir wall. The inner formwork of the trough wall	1		
should be 500mm wide and 22m length and 700mm wide and			
23m length for the outer formwork.			
	į		
The steel plate to cover the float valve in the drinking trough	1		
should be included.	Till Manager		
			Carried Control
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			The state of the s
Thickness of apron: 15 cm			Der v. 1 17 Jah
Width of apron: 3 meter			
Size of apron: 96 m²			
Concrete strength: 30 MPa			į
• Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of			
19mm stone)	-		ĺ
Provide concrete test cubes			
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) 			
40 mm male adaptor (galv) (2x 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)	To the second		i
0.5 meter x 40 mm standpipe (galv) (1 x Pipe)		ĺ	· · · · · · · · · · · · · · · · · · ·
 40 mm brass gate valve (brass) (1 x 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)			
 40 mm x 32 mm reducing bush (galv) (1x R/Bush) 	Î		
 32 mm male adaptor (1 x Adaptor) 			3
DRINKING TROUGHS: 1 ST LOCATION: Approximately 120m away	from the	reserve	
2 ND LOCATION: Approximately 120m away	v from th	a recense	ie
Supply and installation of concrete casted drinking troughs	<i>y 11 0111 011</i>	- / C3 C / / C	-
(2 x trough)			!
Drinking troughs specifications	9 1		
Concrete casted drinking troughs with cover to protect ball	[98 1 0 0 2
valve	ĺ	1	Ì
W. A manufacture of the state o			The state of the s

		COMP	PLY
	YES	NO	REMARKS
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 slab)			
Slab specification for drinking troughs			
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			- Principal
• Size: 62 m ² (9.45 m ³ concrete)			Ī
Provide concrete test cube results for slab (2x 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 Adapter)			
32 mm x 0.8 m standpipe (2 x Pipe)	Ì		
32 mm nipple (galv) (2 x Nipple)			
32 mm bend (galv) (2 x Bend)	ļ		
32 mm M&F bend (2 x Bend)			
32 mm ball valve (2 x Valve)			
32 mm brass gate valve (2 x Valve)	i		
32 mm float valve (control water level) (2 x Valve)		ĺ	
32 mm clamp (wire type) (24 x Clamp)	i		
32 mm class 3 LDPE pipe. (300 Meter)			
Thread tape (20 Roll)	ĺ	[1
			The second secon
1.1.3. Charlesdale (S - 27° 13' 16.9"; E 23° 23' 07.1")			
Vindmill location: S - 27° 13' 16.9"; E 23° 23' 07.1"			1
Supply and installation of Windmill (1 x Windmill)	white or the Con-	i i	İ
			A. Carrier
Includes all equipment , materials, transport and labour equired)			Î
. ,			
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 heads.	İ	[i i
		į	ľ
40 mm Ø x 3.0m galvanized medium screwed/socket pipe SABS (10 x Pipe)	i		
12 mm Ø x 3.0m electro plated pump rods with socks and			
protectors (11 x Rod)		in the second	ĺ
orehole specification (Pump depth = 30 meters)			or to proper and
Borehole depth: 59.5 m	2		ļ

Water level: Before test: 3.5 m	
After test: 26 m Delivery: 3 789 I/h Water abstraction limit at 60 % of delivery: 2 273 I/h Stainless steel borehole cylinder diameter 60 mm tube length 550 mm (1 x Cylinder) Cylinder make:	S
Delivery: 3 789 I/h Water abstraction limit at 60 % of delivery: 2 273 I/h Stainless steel borehole cylinder diameter 60 mm tube length 550 mm (1 x Cylinder) Cylinder make: Cylinder model: Cylinder size:	
Water abstraction limit at 60 % of delivery: 2 273 l/h Stainless steel borehole cylinder diameter 60 mm tube length 550 mm (1 x Cylinder) Cylinder make: Cylinder model: Cylinder size:	
Stainless steel borehole cylinder diameter 60 mm tube length 550 mm (1 x Cylinder) Cylinder make: Cylinder model: Cylinder size:	
mm (1 x Cylinder) Cylinder make: Cylinder model: Cylinder size:	
Cylinder make: Cylinder model: Cylinder size: mm	
Cylinder model: mm	
Cylinder size: mm	
	j
	İ
Specify delivery of cylinder: Liters/ hour	
Total head: meters	
Windmill Tower Foundation (2.8 m ³)	7
Concrete strength: 30 MPa	, earner
Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of	İ
19 mm stone)	
Size: see attached specification in Appendix A	1
Provide concrete test cube results	Sher
Supporting concrete block around casing (0.3 m³)	Ť
Concrete strength: 30 MPa	
Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of	
19 mm stone)	
Size: 800mm diameter x 600mm high 4x12mm bolts and	
nuts	e: John
Provide concrete test cube results	
Fittings from windmill to reservoir	
40 mm Ø brass foot valve (strainer) (1 x Valve)	İ
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)	7
40 mm Ø inlet air chamber (150mm Ø x 900mm steel pipe (2mm)	
thick) with 20mm brass gate valve) (1x Air chamber)	
• 40 mm nipple (galv) (3 x Nipple)	1
40 mm T-piece (galv) (2 x T/piece)	
40 mm x 0.5 meter standpipe (galv) (1x 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)	ĺ

		COME	PLY
Description of the second of t	YES	NO	REMARKS
Repair and sealing of existing reservoir and 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 drinking troughs needs to be sealed with geotextiles matt (90-100 g/m²) and polymer anionic bitumen emulsion sealant.	and the second section of the section of the second section of the secti		
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 area to be seal with sealant and			7 (100 m) (100
apply the matt to the area and paint the matt 3 x coats with sealant.		T. da benefit.	A COLUMN TO THE PARTY OF THE PA
Size of reservoir			
Diameter : 5.09 meter			
Height: 2.4 meters	ļ		
Circumference: 16 meters		į	al al
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 m ²)			
Size of drinking trough around reservoir	W.		
Width: 40 cm	į	j	
Depth: 50 cm		-	1
Circumference: 18 meters	ļ		
Total m² to be sealed: 35 m²	į	į	
Construction of new apron around existing reservoir:			
(1 x apron)			i
Three (3) meter apron should be constructed around the		į	
existing reservoir.	ĺ	1	
• Inner circumference apron: 23 meters			
outer discussive of aprofit. 42 meters		ĺ	
Thickness of apron: 15 cmWidth of apron: 3 meter		100	
• Size of apron: 96 m ²			
Concrete strength: 30 MPa		į	
	4	FF E.L. Markeyan	

j		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			
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)	ĺ		
40 mm male adaptor (galv) (2 x adaptor)			
40 mm pipe clamp for LDPE pipe (1 x Clamp)			i i
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)	İ		
40 mm bend (galv) (1 x bend)			
40 mm x 32 mm reducing bush (galv) (1 x R/Bush)			
40 mm nipple (galv) (1 x Nipple)			
32 mm male adaptor (1 x Adaptor)	j	ĺ	
DRINKING TROUGHS: 1 ST LOCATION: Approximately 120m awa	y from th	e reservo	ir
2ND LOCATION : Approximately 120m awa	y from th	e reservo	ir
supply and installation of concrete casted drinking troughs			
2 x trough)			
Orinking 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	ļ		Ī
Capacity : 1000 litres per trough			
lab specification for drinking troughs (2 x slabs)			N
Concrete strength: 30 MPa	3	ľ	
Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of		ļ	S. 44 man
19mm stone)	ļ	And the state of t	
Slab size: 9 meter x 7 meter x 0.15 meter	-	Ī	ļ
Size: 62 m ² (9.45 m ³ concrete)			
Provide concrete test cube results for slab (2 x Cube)			40 min
ne trench specification (240 meters)	-		-
Size: The pipe should be buried in a trench of 0.5m deep with		1	li i
ne width of 0.3m			Î
ittings for troughs		***************************************	
32 mm inserts T-piece (nylon) (4 x T-piece)	İ		
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 Rend)	ĺ		
AT THE POLICE (AGIA) (TY POLICE)			

		COM	PLY
	YES	NO	REMARKS
 32 mm M&F bend (2 x Bend) 32 mm ball valve (2 x Valve) 32 mm brass gate 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) 	gradient er vergreien der stellen der stel	The state of the s	
Thread tape (20 Roll)			, Table 1
4.1.4. Churchill 2 (S - 27°13' 43.9"; E 23°24'25.7") Windmill Location: S - 27°13' 43.9"; E 23°24'25.7"		TO THE STATE OF TH	
Supply and installation of Windmill (1 x Windmill) (Includes all equipment, materials, transport and labour required) Install 6 m high windmill tower with a 2.5 m Ø wheel with a gearbox, tail brake system, fork rod, bucket rod (pitman), wood rod 3 meter and force head. 40mm Ø x 3.0m galvanized medium screwed/socket pipe SABS (7 x Pipe) 12 mm Ø x 3.0m electro plated pump rods with socks and protectors (8 x Rod) Borehole specification (Pump depth = 21 meters) Borehole depth: 17 m Water level: Before test: 10 m After test: 18 m Delivery: 1200 I/h Water abstraction limit at 60 % of delivery: 720 I/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			The state of the s
Windmill Tower Foundation (2.8 m ³)			
Concrete strength: 30 MPa Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of			Con Comments
19 mm stone) Size: See attached specification in Appendix A Provide concrete test cube results	The state of the s		
Supporting concrete block around casing (0.3 m³)			DE MARIE

			COMP	LY
		YES	NO	REMARKS
C	oncrete strength: 30 MPa		AVE.	
	atio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm one)			
S	ize: 800mm diameter x 600mm high 4 x 12mm bolts and nuts			
	rovide concrete test cube results	i		
F	ttings from windmill to reservoir			
•	40 mm Ø brass foot valve (strainer) (1 x Valve)			
	40 mm Ø base plate (1 x Plate)	Ì		
•	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	ĺ		
	thick) with 20mm brass gate valve)(1 x Air chamber)			İ
	40 mm nipple (galv) (3 x Nipple)			
٠	40 mm T-piece (galv) (2 x T/piece)			
	40 mmx 0.5 meter standpipe (galv) (1 x Pipe)			Ì
•	40 mm male adaptor (nyloл) (1 x Adaptor)	Ì		
	40 mm male bend (galv) (2 x Bend)			
	40 mm pipe clamp (1 x Clamp)			
•	40 mm LDPE pipe (30 Meter)			· .

	· · · · · · · · · · · · · · · · · · ·	COM	PLY
	YES	NO	REMARKS
Repair and sealing of existing reservoir and 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 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:	Control of the second of the s		And the second 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 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	TORNING S. T.Y. and the least a symmetry and the least a symmetry and the least a symmetry and the least and the l		
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	THE C. C. STATES IN COMPANY TO PERSON. C. LEWIS AND ADMINISTRATION OF THE PERSON.		
Construction of new apron around existing 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 Width of apron: 3 meter Size of apron: 96 m² Concrete strength: 30 MPa			



		COMF	PLY
	YES	NO	REMARKS
Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm			
stone)			1
Provide concrete test cube result			
inlet pipe fittings (40 mm)			
2.5 meter x 40 mm standpipe (galv) (1x Pipe)			
0.3 meter x 40 mm standpipe (galv) (1 x Pipe)	ĺ		
40 mm bend (galv) (3 x Bend)			
 40 mm male adaptor (galv) (2 x Adaptor) 			age of the last
 40 mm pipe clamp for LDPE pipe (1 x Clamp) 			
Outlet pipe fittings (40 mm)			
40 mm outlet screen (stainless steel) (1xScreen)			
0.5 meter x 40 mm standpipe (galv) (1 x Pipe)			İ
40 mm brass gate valve (brass) (1 x Valve)			1
40 mm bend (galv) (1 x Bend)			3
40 mm nipple (galv) (1 x Nipple)			
40 mm x 32 mm reducing bush (galv) (1x R/Bush)			
32 mm male adaptor (1 x Adaptor)	,		
DRINKING TROUGHS: 1ST LOCATION: Approximately 120m awa			
2 ND LOCATION: Approximately 120m awa	ay from th	ie reserv	o <i>ir</i>
Supply and installation of concrete casted drinking troughs			
2 x troughs)	ì		
Prinking traugha angaifications			
Orinking troughs specifications			
Concrete casted drinking troughs with cover to protect ball valve			
	W		
Size: length 2.4 meter x width 1.10 meter x depth 0.8 meter Capacity: 1000 liters per trough		į	
Glab 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	Ì		
Size: 62 m ² (9.45 m ³ concrete)			
Provide concrete test cube results for slab (2 x Cube test)			
he trench specification (240 meters)			
Size: The pipe should be buried in a trench of 0.5m deep with		į	
ne width of 0.3m	The state of the s		
Ittings for troughs			his company and the company an
32 mm inserts T-piece (nylon) (4 x T/piece)	i i		
32 mm male adaptor (nylon) (2 x Adaptor)	and depth of the second		
32 mm x 0.8 m standpipe (2 x Pipe)			
32 mm nipple (galv) (2 x Nipple)		İ	
32 mm bend (galv) (2 x Bend)		Í	j
The state of the s	Contraction		

		COM	PLY
	YES	NO	REMARKS
32 mm M&F bend (2 x Bend)	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
32 mm ball valve (2 x Valve)	Ì]
32 mm brass gate valve (2 x Valve)			W Market
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)	1		
Thread tape (20 Roll)			and the second s
4.1.5. Clifton (2) (S - 26.324222199; E 23. 040913445)			
7110. Oniton (2) (0 - 20.024222199, E 23. 040913443)			
Windmill Location: S - 26.32421; E 23.04096			
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 meter Ø wheel with 	į		
a gearbox, tail brake system, fork rod, bucket rod (pitman),			
wood rod 3 meters and force head.			
• 40 mm Ø x 3.0m galvanized medium screwed/socket pipe			
SABS (34 x Pipe)			
• 12 mm Ø x 3.0m electro plated pump rods with socks and	1		
protectors (35 x Rod)	1		
Borehole specification (Pump depth = 102 meters)			The second secon
Borehole depth: 120 m	[
Water level: Before test: 88.4 m			
After test: 101.3m			
Delivery: 382 l/h			
Water abstraction limit at 60 % of delivery: 229,2 l/h			
Stainless steel borehole cylinder diameter 60 mm tube length 550			FR. F. VETV. C.
mm (1 x Cylinder)	i		
Cylinder make:			
Cylinder model:			
Cylinder size: mm		ļ	
Specify delivery of cylinder : Liters/ hour			
Total head:meters Windmill Tower Foundation (2.8 m³)		and the same of the same of	
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	To Complete to]	
Provide concrete test cube results		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
Supporting concrete block around casing (0.3 m³)			· ************************************
Concrete strength: 30 MPa		ŀ	risultur./II
ACTION OF AN ALIGNMENT OF THE OR			and the second areas as name



į		COMF	PLY
	YES	NO	REMARKS
Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm	5		
stone)	-		9 4 d 196
Size: 800mm diameter x 600mm high 4 x 12mm bolts and nuts			
Provide concrete test cube results			
Fittings from windmill to reservoir			
40 mm Ø brass foot valve (strainer) (1 x Valve)			ery position :
 40 mm Ø base plate (1 x Plate) 			Ì
40 mm Ø brass non return valve (1 x Valve)	ŀ		
40 mm Ø brass force head (1 x F-head)			ŀ
 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) 			1
40 mm male bend (galv) (2 x Bend)	į		j
40 mm pipe clamp (1 x Clamp)	i		
40 mm LDPE pipe (30 Meter)]
Reservoir location: Approximately 5m away from the windmill			
Construction of concrete reservoir with the drinking trough			4
around (1 x trough 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 wall		1	
should be reinforced horizontally and vertically and the floor	[
norizontally. Reservoir should be supply with inlet and outlet.			
	ŀ	İ	
The drinking trough wall should be cast simultaneously with the	ļ		
irst lift of the reservoir wall. The inner formwork of the trough wall			
hould be 500mm wide and 22m length and 700mm wide and	-		
ism length for the outer formwork.		-	
3m length for the outer formwork.		i	
	Mary Company of the last of th		
he steel plate to cover the float valve in the drinking trough	M., 1994 part — In the April — In 1994		
he steel plate to cover the float valve in the drinking trough	M Egypt death and and a death and a segment		
he steel plate to cover the float valve in the drinking trough hould be included.	M		
The steel plate to cover the float valve in the drinking trough hould be included. Provide concrete test cube results (10 x Test cube)			1
The steel plate to cover the float valve in the drinking trough hould be included. Provide concrete test cube results (10 x Test cube) Construction of new apron around reservoir: (1 x apron)			
The steel plate to cover the float valve in the drinking trough hould be included. Provide concrete test cube results (10 x Test cube)			,
The steel plate to cover the float valve in the drinking trough hould be included. 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.			· · · · · · · · · · · · · · · · · · ·
The steel plate to cover the float valve in the drinking trough should be included. 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			
existing reservoir.			

		COMF	PLY
	YES	NO	REMARKS
Size of apron: 96 m²			
Concrete strength: 30 MPa			
 Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 	4		
19mm stone)			
Provide concrete test cubes			
Inlet pipe fittings (40 mm)			
2.5 meter x 40 mm standpipe (galv) (1 x Pipe)	and the state of t		114
0.3 meter x 40 mm standpipe (galv) (1 x Pipe)			# 1 mm
40 mm bend (galv) (3 x Bend)			İ
40 mm male adaptor (galv) (2 x Adaptor)			
40 mm pipe clamp for LDPE pipe (1x Clamp)			
Outlet pipe fittings (40 mm)			
40 mm outlet screen (stainless steel) (1x 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 T/piece)			
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)	ļ		
PRINKING TROUGHS: 1 ST LOCATION: Approximately 120m awa	v from th	a rasanii	vir .
2 ND LOCATION: Approximately 120m awa	ev from ti	ne reserv	nı oir
supply and installation of concrete casted drinking troughs			<u> </u>
2 x troughs)			
Prinking troughs specifications	-		
Concrete casted drinking troughs with cover to protect ball			
valve	1	4	
Size: length 2.4 meter x width 1.10 meter x depth 0.8 meter			
Capacity: 1000 liters per trough			
lab specification for drinking troughs (2 x slabs)			
	were the second	ļ	
Concrete strength: 30 Mpa	# 00000		
Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of	TO MESSAGE	A The Comment of	
19mm stone)		2	
Slab size : 9 meter x 7 meter x 0.15 meter			
Size: 62 m ² (9.45 m ³ concrete)		Í	
Provide concrete test cube results for slab (2 x Cubes test)			
he trench specification (240 Meters)			KC
ze: The pipe should be buried in a trench of 0.5m deep with the			
		To year Authorities	
idth of 0.3m			

		COME	LY
	YES	NO	REMARKS
Fittings for troughs			
32 mm inserts T-piece (Nylon) (4 x T/piece)			
 32 mm male adaptor (nylon) (2 x Pipe) 			
32 mm x 0.8 m standpipe (2 x Pipe)			
32 mm nipples (gaiv) (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)			l l
32 mm ball valve (2 x Valve)	ŀ		
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)			
14.300			
4.1.6. Dutton (S - 26 .561173900; E 23 .032210107)	THE PERSON NAMED IN COLUMN TWO		1 2
Windmill location: S - 26°33'40.3"; E 23°01'55.4"			İ
]
Supply and installation of Windmill (1 x Windmill)	į		
(Includes all equipment, materials ,transport and labour required)	Ì		
 Install 9 m high windmill tower with a 4.3m Ø wheel with a 			
gearbox, tail brake system, fork rod, bucket rod (pitman),			
wood rod and force head.		ĺ	
• 40 mm Ø x 3.0m galvanized medium screwed/socket pipe			
SABS (28 x Pipe)	i		
• 12 mm Ø x 3.0m electro plated pump rods with socks and			
protectors (31 x Rod)			
Borehole specification (Pump depth = 84 meters)			
Borehole depth: 125 m		į	· 74
Water level: Before test: 82 m		Ì	
After test: 84.25 m			- H
Delivery: 6000 l/h			
Water abstraction limit at 60 % of delivery: 3600 l/h		ĺ	
Stainless steel borehole cylinder diameter 60 mm tube length 550			
mm (1 x Cylinder)			
Cylinder make:			1
Cylinder model:	ļ		İ
Cylinder size: mm			
Specify delivery of cylinder:Liters/ hour		İ	
Total head:meters		Ì	
Windmill Tower Foundation (2.8 m³)			
Concrete strength: 30 MPa		į	3

•		COMF	PLY
	YES	NO	REMARKS
Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm			
stone)			
Size: See attached specification in Appendix A	2000		
Provide concrete test cube results	ĵ		
Supporting concrete block around casing (0.3 m³)			
Concrete strength: 30 MPa	ļ		
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	Í		
Provide concrete test cube results			
Fittings from windmill to reservoir			
 40 mm Ø brass foot valve (strainer) (1 x Valve) 	į		
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)			į.
• 40 mm Ø inlet air chamber (150mm Ø x 900mm steel pipe (2mm			
thick) with 20mm brass gate valve) (1 x Air chamber)			
40mm 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)			
Repair and sealing of existing reservoir and trough			
(1 x reservoir and 1 x trough)			
į.			
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	Ī		
drinking trough needs to be sealed with geotextiles matt (90-100	P.	l,	
g/m²) and polymer anionic bitumen emulsion sealant.)	
		ŀ	
Specification type of matt:			
Specification type of sealing:	1		
Coating layers recommended:		į	
The sealing matt should go over the wall of the reservoir down	and the state of t		
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			

		COMP	PLY
	YES	NO	REMARK
Size of reservoir	ĺ		
Diameter : 5.09 meter			
Height: 2.4 meters			
Circumference: 16 meters	ĺ		
Total m² to be sealed : 67 m² (floor 19.6 m², side wall 40 m²top			
of wall and outside wall 9.6 m²)			
Size of drinking trough around reservoir			
Width: 40 cm	İ		
Depth: 50 cm			
Circumference: 18 meters	-		
Total m² to be sealed : 35 m²			ĺ
Construction of new apron around existing reservoir:			
(1 x apron)			1
Construction of new apron around existing reservoir:			ĺ
Three (3) meter apron should be constructed around the existing	ļ		
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	ļ		
Concrete strength: 30 MPa	j		
Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm			
stone)	Ì		
Provide concrete test cube result			
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)		ļ	
40 mm bend (galv) (3 x Bend)		1	
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)		ĺ	
0.5 meter x 40 mm standpipe (galv) (1 x Pipe)	1		
40 mm brass gate valve (brass) (1 x Valve)	1		
40 mm bend (galv) (1 x Bend)		ť	
40 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 state of the s			
DRINKING TROUGHS: 1 ST LOCATION: Approximately 120m away	from the	100007	20 mm
2 ND LOCATION: Approximately 120m away	II UIII (II)	16861VOI	1

	YES	·	
	1 1	NO	REMARKS
Supply and installation of concrete casted drinking troughs (2 trough)		,	
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 			
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)			
Provide concrete test cube results for slab (2 x Cube test)			
The trench specification (240 Meters)		a contrarentalistica all	
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)	A		
32 mm male adaptor (nylon) (2 x Adaptor)			e
32 mm x 0.8 m standpipe (2 x Pipe)			
32 mm nipples (galv) (2 x Nipple)]
32 mm bend (galv) (2 x Bend)			
32 mm M&F bend (2 x Bend)			
32 mm ball valve (2 x Valve)			
32 mm brass gate valve (2 x Valve)			
32 mm float valve (control water level) (2 x Valve)	[2. 2.2 8
32 mm clamps (wire type) (24 x Clamp)	ļ		2.0
32 mm class 3 LDPE pipe. (300 Meter)			
Thread tape (20 Roll)			
		İ	

	COMPLY		
	YES	NO	REMARKS
4.1.7. Eiffel (S - 26.574147436; E 22. 9075037827)			
Windmill location: S -26°34'27,1" ; E 22°54'27.0"			T OF STATE O
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 and force head.			TO POPULATION OF THE POPULATIO
40 mm Ø x 3.0m galvanized medium screwed/socket pipe			
SABS(27 x Pipe)			
12 mm Ø x 3.0m electro plated pump rods with socks and			
protectors (30 x Rod)			
Borehole specification (Pump depth = 81 meters)			
Borehole depth: 115 m			
Water level: Before test: 28 m			
After test: 83.7 m			
Delivery: 4000 l/h			
Water abstraction limit at 60 % of delivery: 2400 l/h			
Stainless steel borehole cylinder diameter 60 mm tube length 550			
mm (1 x Cylinder)	1		
Cylinder make:			
Cylinder model:	ĺ		
Cylinder size: mm			:
Specify delivery of cylinder : Liters/ hour			
Total head:meters Windmill Tower Foundation (2.8 m³)			I W F (Mildr Inc.
Concrete strength: 30 MPa	ĺ	j	
Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of			
19mm stone)	!		
Size: see attached specification in Appendix A		ļ	
Provide concrete test cube results			
Supporting concrete block around casing (0.3 m³)			
Concrete strength: 30 MPa			9
Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm			
stone)			
Size: 800mm diameter x 600mm high 4 x 12mm bolts and nuts		A	
Provide concrete test cube results	and the second		
Fittings from windmill to reservoir			
40 mm Ø brass foot valve (strainer) (1 x Valve)			
40 mm Ø base plate (1 x Plate)		ļ	
 40 mm Ø brass non return valve (1 x Valve) 			77.4
 40 mm Ø brass force head (1 x F-head) 			Î

 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) 	YES	NO	DELLA SIL
thick) with 20mm brass gate valve) (1 x Air chamber)			REMARKS
thick) with 20mm brass gate valve) (1 x Air chamber)			
• 40 mm ninnin (galy) (2 v Niemin)			
1 min nippie (gaiv) (3 x Mpbie)	İ		
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)	İ		
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 trough)			
t a same i x si oughi)			
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	İ		
	ļ		
drinking trough needs to be sealed with geotextiles matt (90-100	É		
g/m²) and polymer anionic bitumen emulsion sealant.			
Specification tune of metty			
Specification type of matt:			ļ
Specification type of sealing:			
Coating layers recommended:	Agent Agent		1
The specified world as a second with the second sec	j		
The sealing matt should go over the wall of the reservoir down	ļ		
the outside wall for 30 cm and where the matt is joined the overlap			ļ
should be 30 cm. Where the inner wall meet the floor the overlap			
should be 30 cm.		j	
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	İ		
0:	ļ	İ	1
Size of reservoir	1		
Diameter : 5.09 meter	j		1
Height: 2.4 meters	1		
Circumference: 16 meters		ľ	
Total m² to be sealed: 67 m² (floor 19.6 m², side wall 40 m² top			
of wall and outside wall 9.6 m²)			2
Cina of delable at a set	1		
Size of drinking trough around reservoir	i		
Width: 40 cm	-	!	Ť
Depth: 50 cm			
Circumference: 18 meters			
Total m² to be sealed : 35 m²			İ
Construction of new apron around existing reservoir:			
(1 x apron)	3	ì	ĺ

	COMPLY		
	YES	NO	REMARKS
 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	2		
Size of apron: 96 m²			
Concrete strength: 30 MPa			
 Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm stone) 	- wilding Cole of Cole and Cole		
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)	14 Marie 14 Control 14		
40 mm bend (galv) (3 x Bend)	ĺ	į	
40 mm male adaptor (galv) (2 x Adaptor) 40 mm pine clamp for LDPE pine (1x clamp)			
 40 mm pipe clamp for LDPE pipe (1x clamp) Outlet pipe fittings (40 mm) 			
40 mm outlet screen (stainless steel) (1 x Screen)			
0.5 meter x 40 mm standpipe (galv) (1x Pipe)			
40 mm brass gate valve (brass) (1 x Valve)	ŀ	-	Andre, iss as
40 mm bend (galv) (1 x Bend)		-]
40 mm nipple (galv) (1 x Nipple)	1	of one of	
40 mm x 32 mm reducing bush (galv) (1 x R/Bush)	Ì	1	
32 mm male adaptor (1 x Adaptor)		- Advantage and A	(III)
DRINKING TROUGHS: 1 ST LOCATION: Approximately 120m awa	v from th	e reservo	ir -
2 ND LOCATION: Approximately 120m awa			
Supply and installation of concrete casted drinking troughs		T	
(2 x troughs)	:		1.
			N
Drinking troughs specifications		į	
 Concrete casted drinking troughs with cover to protect ball valve 			9
• Size: length 2.4 meter x width 1.10 meter x depth 0.8 meter			ļ
Capacity : 1000 liters per trough	ľ		
Slab specification for drinking troughs (2x Slab)			1977
Concrete strength: 30 MPa			ĺ
 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	Í		
• Size: 62 m ² (9.45 m ³ concrete)			WAY . I.
Provide concrete test cube results for slab (2 x Cube test)			
The trench specification (200 meters)			



		COMP	LY
	YES	NO	REMARKS
Size: The pipe should be buried in a trench of 0.5m deep with the width of 0.3m			
Fitting for troughs			
1			
• 32 mm inserts T-piece (nylon) (4 x T/piece) • 32 mm male adaptor (nylon) (2 x Adaptor)			
 32 mm male adaptor (nylon) (2 x Adapter) 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)	Tage Car		
32 mm ball valve (2 x Valve)	Ī		
32 mm brass gate valve (2 x Valve)			
32 mm float valve (control water level) (2 x Valve)			ļ I
32 mm clamp (wire type) (24 x Clamp)			
32 mm class 3 LDPE pipe. (300 Meter)	1		
Thread tape (20 Roll)	1		
			(), <u>()</u>
4.1.8. Gasehubane (S - 27. 281436054; E 23 .272609812)			
(DOA 4852)			
Windmill location: S - 27. 28139; E 23.27257	1		
Supply and installation of Windmill (1 x Windmill)	i		
(Includes all equipment, materials transport and labour required)	j	Î	
 Install 6 m high windmill tower with a 2.5m Ø wheel with a 			
gearbox, tail, brake system, fork rod, bucket rod (pitman),		1	
wood rod 3 meter and force heads.		-	
• 40 mm Ø x 3.0m galvanized medium screwed/socket pipe			
SABS (9 x Pipe)			
• 12 mm Ø x 3.0m electro plated pump rods with socks and	1	}	
protectors (10 x Rod)	ĺ		l.
Borehole specification (Pump depth = 27 meters)			
Borehole depth: 33 m			į.
Water level: Before test: 23.10 m			ł
After test: 23.22m			-
After test: 23.22m Delivery: 6 545 l/h	1		
Delivery: 6 545 l/h Water abstraction limit at 60 % of delivery: 3 927 l/h		ę.	
Delivery: 6 545 I/h Water abstraction limit at 60 % of delivery: 3 927 I/h Stainless steel borehole cylinder diameter 60 mm tube length 550			A A A A A A A A A A A A A A A A A A A
Delivery: 6 545 I/h Water abstraction limit at 60 % of delivery: 3 927 I/h Stainless steel borehole cylinder diameter 60 mm tube length 550 mm (1 x Cylinder)			T AND AND
Delivery: 6 545 I/h Water abstraction limit at 60 % of delivery: 3 927 I/h Stainless steel borehole cylinder diameter 60 mm tube length 550 mm (1 x Cylinder) Cylinder make:			
Delivery: 6 545 I/h Water abstraction limit at 60 % of delivery: 3 927 I/h Stainless steel borehole cylinder diameter 60 mm tube length 550 mm (1 x Cylinder) Cylinder make: Cylinder model:			
Delivery: 6 545 I/h Water abstraction limit at 60 % of delivery: 3 927 I/h Stainless steel borehole cylinder diameter 60 mm tube length 550 mm (1 x Cylinder) Cylinder make: Cylinder model: Cylinder size:		The state of the s	A
Delivery: 6 545 I/h			

		COMI	PLY
	YES	NO	REMARKS
Windmill Tower Foundation (2.8 m³)			
Concrete strength: 30 MPa			and the section of
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)			
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 x 12mm bolts and nuts			
Provide concrete test cube results			
Fittings from windmill to reservoir	3		
40 mm Ø brass foot valve (strainer) (1 x Valve)			1
• 40 mm Ø base plate (1 x Plate)	1		
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 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 trough			
(1 x reservoir and 1 x trough)	- Marie 124 M		
The existing reconneis and debut a transfer of the			
The existing reservoir and drinking trough around the reservoir			
on the site need to be cleaned, and the cracks to be repaired			
inside and outside with sand/cement filler. The inside of the	ĺ		
reservoir and drinking trough needs to be sealed with geotextiles		1/	1
matt (90-100 g/m²) and polymer anionic bitumen emulsion sealant.			
scalant.			1
Specification type of matt:	ļ		
Specification type of sealing:			
Coating layers recommended:			
oodang lajora 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.			
CITCHIA DE SE OTILI			



		COMP	PLY
	YES	NO	REMARKS
Method of application: Paint area to be seal with sealant and			5° N. 30
apply the matt to the area and paint the matt anther two coats	Ī		
with sealant.			
Size of reservoir	į		
Diameter: 5.09 meter	1		
Height: 2.4 meter	ĺ		Ì
Circumference: 16 meter			
Size 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			
Diameter: 40 cm	Ì		
Height: 50 cm			
Circumference: 18 meters	1		
Size to be sealed: 35 m ²			
Construction of new apron around existing reservoir:		EVERON-	
(1 x apron)			
Three (3) meter apron should be constructed around the existing			THE COLUMN TWO IS NOT THE COLUMN TWO IS NOT
reservoir.	į		
Inner circumference apron : 23 meters	1		
Outer circumference of apron : 42 meters			
Thickness of apron : 15 cm			
Length of apron : 3 meter		16	
Size of apron: 96 m ²	Ì		
Concrete strength: 30 MPa			
Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm	DE		
stone)			
Provide concrete test cube results			
nlet 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)		1	
To min male adapter (gally) (2 x Adapter)			
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)		4	
40 mm bend (galv) (1 x Bend)		V.Clagae	
40 mm nipple (galv) (1 x Nipple)			j
40 mm x 32 mm reducing bush (galv) (1 x R/Bush)			
32 mm male adaptor (1 x Adaptor)		00.	

		COMPLY		LY
		YES	NO	REMARKS
DRI	NKING TROUGHS: 1 ST LOCATION: Approximately 120m aw			
	2 ND LOCATION: Approximately 120m av	vay from	the reserv	oir
	ply and installation of concrete casted drinking troughs			
-	troughs)	[[
	king 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 liters per trough	To Manager		
	specification for drinking troughs (2 x slabs)			
	Slab specification for drinking troughs			
	Concrete strength: 30 MPa			
	Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of \dot{i}			
1	9mm stone)		3 5 1	
	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 Cube test)			
	trench specification (240 meters)			
Size:	: The pipe should be buried in a trench of 0.5m deep with the	İ	•	
width	n of 0.3m			
Fittir	ngs for troughs			
• 3	2 mm inserts T-piece (nylon) (4 x T/piece)			
• 3	2 mm male adaptor (nylon) (2 x Adapter)		İ	
• 3	2 mm x 0.8 m standpipe (2 x Pipe)	i	1	
• 3	2 mm nipples (galv) (2 x Nipple)			
• 3	2 mm bend (galv) (2 x Bend)			
• 3	2 mm M&F bend (2 x Bend)			
• 3	2 mm ball valve (2 x Valve)			
	2 mm brass gate valve (2 x Valve)		i di	
3:	2 mm float valve (control water level) (2 x Valve)		Ì	
	2 mm clamps (wire type) (24 x Clamp)			
	2 mm class 3 LDPE pipe (300 Meter)			
	hread tape (20 Roll)			



		COMP	PLY
	YES	NO	REMARKS
4.1.9. Glenred (S - 26°57′16.7"; E 23°54′40.7")	10 m		d a
Windmill location: S - 26°57'16.7"; E 23°54'40.7"			
Supply and installation of Windmill (1 x Windmill)	Web.		
(Includes all equipment , materials, transport and labour	Ì		
required)	}		1
 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 3 meter and force head.			
• 40 mm Ø x 3.0m galvanized medium screwed/socket pipe			
SABS (20 x 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: 78.3 m			Market September September September September September September September September September September Sep
Water level : Before test: 44.7 m			
After test: 61.5 m	Ţ		
Delivery: 3 600 liter/hour			I 1
Water abstraction limit at 60 % of delivery: 2160 liter/hour			
Stainless steel borehole cylinder diameter 60 mm tube length 550 mm (1 x Cylinder)			
Cylinder make:			
Cylinder model:			
Cylinder size: mm		j	
Specify delivery of cylinder : Liters/ hour			
Total head:meters		ļ	
Windmill Tower Foundation (2.8 m ³)			
Concrete strength: 30 MPa			
Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of	į		
19mm stone)			
Size: see attached specification in Appendix A			
Provide concrete test cube results		ļ	
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	ĺ		
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 valve (strainer) (1x Valve) 	C. A. A. A. A. A. A. A. A. A. A. A. A. A.		
• 40 mm Ø base plate (1 x Plate)		1	
40 mm Ø brass non return valve (1 x Valve)	*	In Contains	
40 mm Ø brass force head (1x F-head)			

		COM	PLY
	YES	NO	REMARKS
• 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)	1		The state of the s
40 mm x 0.5 meter standpipe (galv) (1 x Pipe)			
40 mm male adaptor (nylon) (1 x Adaptor)			
40 mm male bend (gaiv) (2 x Bend)			
40 mm pipe clamp (1 x Clamp)	1		
40 mm LDPE pipe (30 x Meter)	Í		
Reservoir location: Approximately 5m away from the windmill			1
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	1		
m , wall thickness 225 mm, capacity 33.5 m³(33.5 kl). The wall	- 1		
should be reinforced horizontally and vertically and the floor	ŀ		
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	Í		
should be 500mm wide and 22m length and 700mm wide and			
23m length for the outer formwork.	i		
	1		
The steel plate to cover the float valve in the drinking trough			
should be included.			
Provide concrete test cube results (10 x Test cube)			2
Construction of new apron around reservoir: (1 x apron)			
 Three (3) meter apron should be constructed around the 	1		
existing reservoir.	1		CITED SHOW
Inner circumference apron: 23 meters			
Outer circumference of apron: 42 meters			
Thickness of apron: 15 cm			Į
Width of apron: 3 meter		Contract of the Contract of th	LAMBA I HALIF
• Size of apron: 96 m ²			1
Concrete strength: 30 MPa	ĺ	1	-
 Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 		ŀ	
19mm stone)	25.00		i
Provide concrete test cubes	i	-	i
Inlet pipe fittings (40 mm)			
2.5 meter x 40 mm standpipe (galv) (1 x Pipe)	V. Abrahaman	-	
0.3 meter x 40 mm standpipe (galv) (1 x Pipe)	H 100	ł	
40 mm bend (galv) (3 x Bend)	ì		

	F	COMI	PLY
	YES	NO	REMARKS
40 mm male adaptor (galv) (2 x Adaptor)			
 40 mm pipe clamp for LDPE pipe (1 x Clamp) 	- 1		· ·
Outlet pipe fittings (40 mm)	V (87.4)	A STATE OF THE STA	
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 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)			
 40 mm x 32 mm reducing bush (galv) (1 x R/Bush) 			
32 mm male adaptor (1 x Adaptor)			Party Co.
DRINKING TROUGHS: 1 ST LOCATION: Approximately 120m at			
2 ND LOCATION: Approximately 120m at	way from tl	he reserv	oir
Supply and installation of concrete casted drinking troughs			
(2 x troughs)			4
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		C. Marie de La companya de Carres	
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 1 1
• 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) (4x T/piece)			
 32 mm male adaptor (nylon) (2 x Nipple) 32 mm x 0.8m standpipe (2 x Pipe) 			
32 mm nipple (galv) (2 x Nipple)32 mm bend (galv) (2 x Bend)			1
• 32 mm M&F bend (2 x Bend)	Acceptance of the Control of the Con		
32 mm ball valve (2 x Valve)	1		
• 32 mm brass gate valve (2 x Valve)			Ì
32 mm float valve (control water level) (2 x Valve)			
32 mm clamps (wire type) (24 x Clamp)			
- man outling (and the Art your and the	11	*F4	

İ		LY	
	YES	NO	REMARKS
32 mm class 3 LDPE pipe (300 Meter)			
Thread tape (20 Roll)			
			77.75
4.1.10. Klein Eira (S 27° 17' 35.4"; E 23° 25' 02.2")		······	
	j		
windmill location: S - 27° 17' 35.4"; E 23° 25' 02.2"			
Supply and installation of Windmill (1 x Windmill)			Picture and the second
(Includes all equipment , materials, transport and labour			
required)	j		
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 and force head.			
40mm Ø x 3.0m galvanized medium screwed/socket pipe			
SABS (5 x Pipe)	1		
• 12 mm Ø x 3.0m electro plated pump rods with socks and	Ī		ĺ
protectors (7 x Rod)	Even year		
Borehole specification (Pump depth = 15 meters)	-		
Borehole depth: 85 m			
Water level: Before test: 9 m			
After test: 15.4 m			
Delivery: 9000 l/h			
Water abstraction limit at 60 % of delivery: 5400 l/h		ĺ	
Stainless steel borehole cylinder diameter 60 mm tube length 550			, , , , , , , , , , , , , , , , , , ,
mm (1 x Cylinder)	-		
Cylinder make:			
Cylinder model:		į	
Cylinder size: mm	í	-	
Specify delivery of cylinder: Liters/ hour	İ	ļ	
Total head:meters			
Windmill Tower Foundation (2.8 m ³)	i		
Concrete strength: 30 MPa	İ		
Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm stone)			
· · · · · · · · · · · · · · · · · · ·		Ì	
Size: see attached specification in Appendix A Provide concrete test cube results			
Supporting concrete block around casing (0.3 m³)			The Charles of the Ch
Concrete strength: 30 MPa			27
Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of			
19mm stone)			
Size: 800mm diameter x 600mm high 4 x 12mm bolts and nuts			William Co.
Provide concrete test cube results			
Fittings from windmill to reservoir			

		COM	PLY
	YES	NO	REMARKS
40 mm Ø brass foot (strainer) valve (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)	1		
40 mm nipple (galv) (3 x Nipple)			
40 mm T-piece (galv) (2 x T/piece)			7 Y
40 mm x 0.5 meter standpipe (galv) (1x Pipe)			
40 mm male adaptor (nylon) (1 x Adaptor)			
0 mm Male bend (galv) (2x Bend)			
• 40 mm pipe clamp (1 x Clamp)	-		
40 mm LDPE pipe (30 Meter)			
Reservoir location: Approximately 5m away from the windmill	KV: compage		
Construction of concepts recognitive that	ļ		l i
Construction of concrete reservoir with the drinking trough			*
around (1 x Reservoir and 1 Drinking trough)			İ
Circular rainforced paragrata reconscis, diameter 4.5 m. height 0.4			
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.	1		
nonzontaliy. Neservoir should be supply with linet 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	Ī		
should be included.			
45712			
Provide concrete test cube results (10 x Test cube)		2 1 d 2 d 2 d 2 d 2 d 2 d 2 d 2 d 2 d 2	
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		1	
Thickness of apron: 15 cm		1	
Width of apron: 3 meter		i	
Size of apron: 96 m ²	Į	-	li li
Concrete strength: 30 MPa			
Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of			
19mm stone)		ì	
Provide concrete test cubes		Ì	



		COMP	PLY
	YES	NO	REMARKS
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 (1x Clamp)			Į Į
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)			į
 40 mm brass gate valve (brass) (1 x 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)			
40 mm x 32 mm reducing bush (galv) (1 x R/Bush)			
32 mm male adaptor (1x Adaptor)			
DRINKING TROUGHS: 1 ST LOCATION: Approximately 120m aw	av from ti	oe recenu) ir
2 ND LOCATION: Approximately 120m aw	ay irom ti av from ti	io receivo la receivo	oir
Supply and installation of concrete casted drinking troughs	uy 110111111		<i>711</i>
(2 x troughs)			
, J,			
Drinking troughs specifications			
Concrete casted drinking troughs with cover to protect ball			1
valve	į		j
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	1		
Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of	Ī		
19mm stone)		41.0	
Slab size : 9 meter x 7 meter x 0.15 meter			1
• Size: 62 m ² (9.45 m ³ concrete)	1		
Provide concrete test cube results for slab (2 x Cubes test)	the second secon	1	
The trench specification (240 meters)			
Size: The pipe should be buried in a trench of 0.5m deep with	1		1
the width of 0.3m		1	
Fittings for troughs		-1 -1	
32 mm inserts T-piece (nylon) (4 x T/piece)		İ	
32 mm male adaptor (nylon) (2 x Adaptor)		ł	
32 mm x 0.8 m standpipe (2 x Pipe)	gal also		
32 mm nipples (galv) (2 x Nipple)			
32 mm bend (galv) (2 x Bend)	į.		
32 mm M&F bend (2 x Bend)	ŧ		
THE TOTAL POINT			

		COM	PLY
	YES	NO	REMARKS
32 mm ball valve (2 x Valve)			
32 mm brass gate valve (2 x Valve)			4
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)			
		······································	
4.1.11. Lokaleng (S - 27. 235332025; E 23 .159988135)			
(DOA 4838)			
Windmill location: S - 27. 235332025; E 23 .159988135			
Supply and installation of Windmill (1 x windmill)			
(Includes all equipment, materials, transport and labour required)			1
 Install 9m high windmill tower with a 3.0 m Ø wheel with a 			N E
gearbox, tail, brake system, fork rod, bucket rod (pitman),			n /
wood rod 3 meters and force heads.			
• 40 mm Ø x 3.0m galvanized medium screwed/socket pipe			
SABS (13 x Pipe)			
• 12 mm Ø x 3.0m electro plated pump rods with socks and			
protectors (14 x Rod)			
Borehole specification (Pump depth = 39 meters)			
Borehole depth: 60 m			1
Water level: Before test: 36.1 m			
After test: 36.1 m	1		
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)			
Cylinder make:			
Cylinder model:			
Cylinder size: mm			
Specify delivery of cylinder : Liters/ hour			0
Total head: meters			
Windmill Tower Foundation (2.8 m³)			1 W 1 W 1 W 1 W 1 W 1 W 1 W 1 W 1 W 1 W
Concrete strength: 30 MPa	* -		
Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm	ŀ		
stone)	:		0
Size: see attached specification in Appendix A	-		11
Provide concrete test cube results	1	ĺ	
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			10 mm
stone)) () And definition
WIND IN THE RESERVE THE PROPERTY OF THE PROPER			and desired and a second second second second second second

		COMP	PLY
	YES	NO	REMARKS
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 valve (1 x Valve)			
40 mm Ø base plate (1x 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)			
Repair and sealing of existing reservoir and trough		19000	
(1 x reservoir and 1 x trough)			
The existing reservoir and drinking trough around the reservoir	į		
on the site, 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:	Î		
Specification type of sealing:	2.7		
Coating layers recommended:			
The sealing matt should go over the wall of the reservoir down			
he outside wall for 30 cm and where the matt is joined the overlap	enchant carried		
hould be 30 cm. Where the inner wall meets the floor the overlap			
hould be 30 cm.			
flethod of application: Paint area to be seal with sealant and		-	
pply the matt to the area and paint the matt anther two coats	1		
rith sealant.	į		
	}		
ize of reservoir	f	**************************************	
Diameter: 5.09 meter	ł	ĺ	
leight: 2.4 meters			
ircumference: 16 meters			
ize to be sealed: 67 m² (floor 19.6 m², side wall 40 m² top of wall			
nd outside wall 9.6 m²)			

	1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	COMP	PLY
	YES	NO	REMARKS
Size of drinking trough around reservoir			
Diameter: 40 cm			
Depth: 50 cm			
Circumference: 18 meters			
Size to be sealed: 35 m ²			
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			
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			
Inlet pipe fittings (40 mm)			
2.5 meter x 40 mm standpipe (galv) (1x Pipe)			
	ļ		
 0.3 meter x 40 mm standpipe (galv) (1x Pipe) 40 mm bend (galv) (3 x Bend) 	111		
	Î		
40 mm male adaptor (galv) (2 x Adaptor)	a.		
40 mm pipe clamp for LDPE pipe (1 x Clamp) Outlet pipe fittings (40 mm)			
40 mm outlet screen (stainless steel) (1 x Screen) 5 meter x 40 mm standaine (galv) (1 x Bino)			Ì
o.o moto: x 40 mm standpipe (gaty) (1 x Fipe)			į
io min blass gate valve (blass) (1 x valve)			İ
40 mm bend (galv) (1 x Bend) 40 mm pipple (galv) (1 x Nipple)	1	2000	
To min hippie (gale) (TX Nippie)			
40 mm x 32 mm reducing bush (galv) (1 x R/Bush)		ļ	-
32 mm male adaptor (1 x Adaptor) PRINCIPLE (ST. CONTINUE) PRINCIPLE (ST. CONTINUE)			
DRINKING TROUGHS: 18T LOCATION: Approximately 120m awa	ay from the	reservo	ir
2 ND LOCATION: Approximately 120m awa	y from the	e reservo	ir
Supply and installation of concrete casted drinking troughs		l.	
(2 x troughs)	Î		
Drinking troughs specifications	İ		
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		2	
Capacity : 1000 liters per trough		7	
Slab specification for drinking troughs (2 x slabs)		1	199 Crowler Washington Maria

		COM	PLY
	YES	NO	REMARKS
Concrete strength: 30 MPa			
Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19	1		
mm stone)	i		
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)			İ
The trench specification (240 meters)			
Size: The pipe should be buried in a trench of 0.5m deep with			
the width of 0.3m	}		The state of the s
Fittings for troughs			i
32 mm inserts T-piece (nylon) (4 x T/piece)			
32 mm male adaptor (nylon) (2 x Adaptor)	ļ		
32 mm x 0.8m standpipe (2 x Pipe)			
32 mm nipple (galv) (2 x Nipple)			
32 mm bend (galv)(2 x Bend)	İ		
32 mm M&F bend (2 x Bend)			
32 mm ball valve (2 x Valve)			
32 brass gate 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 Roli)	1		
The state of the s			-
.1.12. Maphiniki (S - 27°01'40.8"; E 23° 13' 38.6")			The state of the s
findmill location: S - 27°01'40.8"; E 23° 13' 38.6"			
upply and installation of Windmill (1 x windmill)			
ncludes all equipment , materials, transport and labour	ĺ		
equired)		and the second second	
Install 9 m high windmill tower with a 3.0 m Ø wheel with a		440	
gearbox, tail, brake system, fork rod, bucket rod (pitman),	- A		
wood rod 3 meter and force heads.			
40mm Ø x 3.0m galvanized medium screwed/socket pipe			
SABS (5 x Pipe)			
12 mm Ø x 3.0m electro plated pump rods with socks and		1	
protectors (6 x Rod)		#. ()	
orehole specification (Pump depth = 15 meters)		1	The Marie be, et at its eq. at the
Borehole depth: 77.4 m			
Water level: Before test: 3.8 m		ļ	
After test: 7.5 m	3	Í	
Delivery: 10 285 I/h	N.		
	2		

į		COM	PLY
	YES	NO	REMARKS
Stainless steel borehole cylinder diameter 60 mm tube length 550			
mm (1 x Cylinder)			
Cylinder make:			
Cylinder model:	[
Cylinder size: mm	ļ		
Specify delivery of cylinder : Liters/ hour			
Total head: meters	ĺ		
Windmill Tower Foundation (2.8 m³)		-	The second section of the second seco
Concrete strength: 30 MPa			
Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of			
19mm stone)	į		
Size: see attached specification in Appendix A	ĺ		
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 19 mm	ST In The Control of the Control of		
stone)	1		
Size: 800mm diameter x 600mm high 4 x12mm bolts and nuts			1
Provide concrete test cube results			
Fittings from windmill to reservoir			
40 mm Ø brass foot valve (strainer) (1 x Valve)			
40 mm Ø base plate (1 x Plate)	1		
40 mm Ø brass non return valve (1x 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)	i		
40 mm T-piece (galv) (2 x T/piece)			
40 mm x 0.5 meter standpipe (galv) (1 x Pipe)	ļ		1
	ļ		
40 mm male adaptor (nylon) (1 x Adaptor) 40 mm male bond (selv) (3 x Bond)		İ	a-report
• 40 mm male bend (galv) (2 x Bend)		}	
40 mm pipe clamp (1 x Clamp)			
40 mm LDPE pipe (30 Meter) Penalty and applies of soliding and applies of solid applies of soliding and applies of solid applies of sol			
Repair and sealing of existing reservoir and trough		1 N	
(1 x reservoir and 1 x trough)		K**- 7999-4	3
The existing appropriate and deletion () to 1	ė į		
The existing reservoir and drinking trough around the reservoir			
on the site need to be cleaned, and the cracks to be repaired		ĺ	
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		7.7	
sealant.	i	The Arms	
Specification time of mate	# D T T T T T T T T T T T T T T T T T T		
Specification type of matt:			

İ		COM	PLY
	YES	NO	REMARKS
Specification type of sealing:			Confidence of the second secon
Coating layers recommended:	1		
The seally week to be a seal	i		
The sealing matt should go over the wall of the reservoir down	ļ		
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 anther two coats	į		
with sealant	Ī		
Size of reservoir			
Diameter: 5.09 meters			
i i			
Height: 2.4 meters Circumference: 16 meters			were control
Size to be sealed: 96 m² (floor 19.6 m², side wall 40 m² top of			
wall and outside wall 9.6 m²)			
Size of drinking trough around reservoir			
Diameter: 40 cm	ĺ		
Height: 50 cm			
Circumference: 18 meters			
Size to be sealed: 35 m ²			
Construction of new apron around existing reservoir:			
(1 x apron)	1		
Three (3) meter apron should be constructed around the existing	-		
reservoir.			
Inner circumference apron : 23 meters	i		
Outer circumference of apron : 42 meters			
Thickness of apron: 15 cm]	1
Length of apron : 3 meter		1	
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)		ĺ	
Provide concrete test cube results			25
Inlet pipe fittings (40 mm)			The same of the sa
2.5 meter x 40 mm standpipe (galv) (1 x Pipe)		ļ	
0.3 meter x 40 mm standpipe (galv) (1 x Pipe)			
40 mm bend (galv) (3 x Bend)	C Smaller Ville.	and the state of t	į
40 mm male adaptor (galv) (2 x Adaptor)	William Control		
40 mm pipe clamp for LDPE pipe (1 x Clamp)	The same of the sa		

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) 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) ORINKING TROUGHS: 1st LOCATION: Approximately 120m awas apply and installation of concrete casted drinking troughs	YES	NO e reserv	REMARK
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) 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 120m awa	ay from th	e reserv	
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) 40 mm x 32 mm reducing bush (galv) (1 x R/Bush) 32 mm male adaptor (1 x Adaptor) PRINKING TROUGHS: 1 ST LOCATION: Approximately 120m awa	ay from th	e reserv	
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: 1 ST LOCATION: Approximately 120m awa 2 ND LOCATION: Approximately 120m awa	ay from th	e reserv	
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) PRINKING TROUGHS: 1 ST LOCATION: Approximately 120m awa 2 ND LOCATION: Approximately 120m awa	ay from th	e reserv	
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) PRINKING TROUGHS: 1 ST LOCATION: Approximately 120m awa 2 ND LOCATION: Approximately 120m awa	ay from th	e reserv	
40 mm x 32 mm reducing bush (galv) (1 x R/Bush) 32 mm male adaptor (1 x Adaptor) PRINKING TROUGHS: 1 ST LOCATION: Approximately 120m awa 2 ND LOCATION: Approximately 120m awa	ay from th	e reserv	
32 mm male adaptor (1 x Adaptor) PRINKING TROUGHS: 1 ST LOCATION: Approximately 120m awa 2 ND LOCATION: Approximately 120m awa	ay from th	e reserv	
DRINKING TROUGHS: 1 ST LOCATION: Approximately 120m awa 2 ND LOCATION: Approximately 120m awa	ay from th ay from th	e reserv	
LOCATION: Approximately 120m awa	ay from th ay from th	e reserv	
iupply and installation of concrete casted drinking troughs	ay from th		oir
supply and installation of concrete casted drinking troughs		e reserv	oir e
) v travela)			
2 x troughs)			
Pinking from he as a life at the			
Prinking troughs specifications			
Concrete casted drinking troughs with cover to protect ball valve	f		
Size: length 2.4 meter x width 1.10 meter x depth 0.8 meter			
Capacity: 1000 liters per trough			
lab specification for drinking troughs (2 x slabs)			
Company to the control of the contro	ļ	;	
Concrete strength: 30 Mpa	,	Š	
Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of			
19mm stone)	Ì		
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 Cube test)		1	
e trench specification (240 meters)			1-0-1
ize: The pipe should be buried in a trench of 0.5m deep with	i.		
width of 0.3m			
tings for troughs			
32 mm inserts T-piece (nylon) (4x T/piece)		ĺ	
32 mm male adaptor (nylon) (2 x Adaptor)	-	[
32 mm x 0.8m standpipe (2 x Pipe)			
32 mm hippie (galv) (2 x Nippie)	1	-	
32 mm bend (galv) (2 x Bend) 32 mm M&F bend (2 x Bend)			
32 mm brass gate valve (2 x Valve)	-	100	
	ĺ	ĺ	: II
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)	. 1		
Thread tape (20 Roll)		1	
	1		

		COM	PLY
The same of the sa	YES	NO	REMARKS
4.1.13. Morotobolo (S - 27°19' 25.4"; E 23°29'15.4")			
(T 10625)			Siles 1
Windmill location: S - 27°19' 25.4"; E 23°29'15.4"			
Supply and installation of Windmill (1 x windmill)			
(Includes all equipment , materials, transport and labour			
required)			
• Install 9m high windmill tower with a 3.0m Ø wheel with a			
gearbox, tail brake system, fork rod, bucket rod (pitman),	Ì		
wood rod and force head.			
40mm Ø x 3.0m galvanized medium screwed/socket pipe			
SABS (21 x Pipe)			
• 12 mm Ø x 3.0m electro plated pump rods with socks and	}		
protectors (22 x Rod)			
Borehole specification (Pump depth = 64 meters)	D. C	***	
Borehole depth: 95 m			
Water level: Before test: 12.5 m	1		
After test: 60 m	1		
Delivery: 1 200 l/h	İ		
Water abstraction limit at 60 % of delivery: 720 l/h	İ		
Stainless steel borehole cylinder diameter 60 mm tube length 550			
mm (1 x Cylinder)	1		
Cylinder make:	İ	j	
Cylinder model:	ĺ		
Cylinder model			
-			
Specify delivery of cylinder:Liters/ hour			
Total head:meters Windmill Tower Foundation (2.8 m³)			
	į.		Ī
Concrete strength: 30 MPa	Í		'a phear the
Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19 mm			
stone)	İ		<u> </u>
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)		j	
Size: 800mm diameter x 600mm high 4 x 12 mm bolts and nuts			; - 1-46s
Provide concrete test cube results			
Fittings from windmill to reservoir	!		
 40 mm Ø brass foot valve (strainer) (1 x Valve) 		ļ	
40 mm Ø base plate (1 x Plate)			
 40 mm Ø brass non return valve (1 x Valve) 		ij	
No. of the last of			

		COM	PLY
	YES	NO	REMARKS
 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)	ì		
40 mm nipple (galv) (3 x Nipple)	ĺ		
• 40 mm T-piece (galv) (2 x T/piece)			İ
40 mm x 0.5 meter standpipe (galv) (1 x Pipe)	į		
40 mm male adaptor (nylon) (1 x Adaptor)			
40 mm male bend (galv) (2 x Bend)			
40 mm pipe clamp (1x Clamp)			r k
40 mm LDPE pipe (30 x Meter)			
Repair and sealing of existing reservoir and trough			
(1 x reservoir and 1 x trough)			
The existing reservoir and drinking trough around the reservoir			
on the site, 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.			
ocaiai it.			
Specification type of matt:	ļ		and between
Specification type of sealing:			
Coating layers recommended :			
ocating 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 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 anther two coats			
with sealant	Ì		
		1	
Size of reservoir	İ		
Diameter: 5.09 meter			
Height: 2.4 meters			
Circumference: 16 meters	1		
Size to be sealed: 96 m² (floor 19.6 m², side wall 40 m² top of	i F		
walf and outside walf 9.6 m²)	100		
Size of drinking trough around reservoir		, rep. Lea	
Diameter: 40 cm			
Height: 50 cm			
Circumference: 18 meters		1	
Size to be sealed: 35 m ²			

		COMP	LY
	YES NO REM		REMARKS
Construction of new apron around existing 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 m2	ì		
Concrete strength: 30 Mpa			
Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm]		
stone)	1		
Provide concrete test cube result			
Inlet pipe fittings (40 mm)		-	
2.5 meter x 40 mm standpipe (galv) (1 x Pipe)	Ì		
0.3 meter x 40 mm standpipe (galv) (1 x Pipe)	1	4	
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 pipe fittings (40 mm)			
40 mm outlet screen (stainless steel) (1 x Screen)	1	4	
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 x R/Bush)	Ì		
• 32 mm male adaptor (1 x Adaptor)	ř		
DRINKING TROUGHS: 1 ST LOCATION: Approximately 20m away	from the	sala dasili	
2 ND LOCATION: Approximately 100m away	IIOIII UI O	winamiii	
3RD LOCATION: Approximately 100m away	y Iromi un	e reservoi	
4 TH LOCATION: Approximately 50m away			
Supply and installation of concrete casted drinking troughs	rrom me	reservoir	
4 x troughs)	1		7
- A troughs/	1	#	
Drinking troughs ensailigations	İ	ĺ	
Orinking troughs specifications			
Concrete casted drinking troughs with cover to protect ball		Profilered at	
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 (4 x slabs)			
	Section 1	4	4
Concrete strength: 30 Mpa		į	Thread I'.

		COME	PLY
	YES	NO	REMARKS
 Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm stone) 		77.6	
Slab size : 9 meter x 7 meter x 0.15 meter	ļ		
• Size: 62 m ² (9.45 m ³ concrete)	į		
Provide concrete test cube results for slab (4 x Cubes test)			
The trench specification (400 Meters)			-
Size: The pipe should be buried in a trench of 0.5m deep with			
the width of 0.3m			4
Fittings for troughs	<u> </u>		
32 mm inserts T-piece (nylon) (4 x T/piece)			
32 mm male adaptor (nylon) (4 x Adaptor)			
32 mm x 0.8m standpipe (4 x Pipe)	1		
32 mm nipple (galv) (4 x Nipple)			
32 mm bend (galv) (4 x Bend)			
32 mm M&F bend (4 x Bend)			
32 mm ball valve (4 x Valve)			
32 mm brass gate valve (4 x Valve)			
32 mm float valve (control water level) (4 x Valve)			
32 mm clamps (wire type) (48 x Clamp)			
32 mm class 3 LDPE pipe (500 Meter)			
Thread tape (20Roll)			
.1.14. Mapoteng (S - 27° 22' 28.4; E 23° 30' 37.6")			
Vindmill location: S -27° 22' 50.8"; E 23° 30' 23.8"			
Supply and installation of Windmill (1 x windmill)		ĺ	
Includes all equipment , materials, transport and labour	Í	1	
equired)	2	İ	
Install 9 m high windmill tower with a 3.0 m Ø wheel with a			
gearbox, tail, brake system, fork rod, bucket rod (pitman),		į	
wood rod and force heads.			
40 mm Ø x 3.0m galvanized medium screwed/socket pipe		-	
SABS (18 x Pipe)			
12 mm Ø x 3.0m electro plated pump rods with socks and protectors (19 x Rod)	ļ	-	
protectors (19 x Rod)	İ	ļ	
orehole specification (Pump depth = 54 meters)	·		Marie Company
Borehole depth: 83.5m			
		-	
vvater level: Before test: 10 5m	1		
Water level: Before test: 10.5m		1	
After test: 51.9m Delivery: 960 I/h			
After test: 51.9m	É	1	

	COMPLY		PLY
	YES	NO	REMARKS
Stainless steel borehole cylinder diameter 60 mm tube length 550			evenil.
mm (1 x Cylinder)	ĺ		
Cylinder make:			
Cylinder model:			
Cylinder size: mm			
Specify delivery of cylinder : Liters/hour			-
Total head: meters			
Windmill Tower Foundation (2.8 m³)		- Marie orași	-
Concrete strength: 30 MPa			7,146,1
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 4 x 12mm bolts and nuts			
Provide concrete test cube results			
Fittings from windmill to reservoir			
40 mm Ø brass foot valve (strainer) (1 x Valve)			,
40 mm Ø base plate (1 x Plate)	Ť		1
40 mm Ø brass non return valve (1 x Vaive)			
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)			
to thirt hippic (gala) (o x talphie)			
is till i piece (gally) (2 x 1/piece)		į	ļ
is mind of the total standpipe (gally) (1 x Fipe)		,	
40 mill male adapter (hylori) (1 x Adapter)		l j	į
• 40 mm male bend (galv) (2 x Bend)		i i	2
40 mm pipe clamp (1 x Clamp)	-	ĺ	į
40 mm LDPE pipe (3 Meter)			
Repair and sealing of existing reservoir and trough			
(1 x reservoir and 1 x trough)		dayar,	
		100	
The existing reservoir and drinking trough around the reservoir		ĺ	1
on the site, need to be cleaned and the cracks to be repaired			į
inside and outside with sand/cement filler. The inside of the			1
reservoir and drinking trough needs to be sealed with geotextiles			
matt (90-100 g/m²) and polymer anionic bitumen emulsion			
sealant.		1	
		7	
Specification type of matt:		a. A. Transfer	

1	COMPLY		PLY
	YES	NO	REMARKS
Specification type of sealing:	IJ.		
Coating layers recommended:	İ		
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	- Total		Amin'ny fivondronan'i Amin'ny fivondronan'i
should be 30 cm. Where the inner wall meets the floor the overlap should be 30 cm.	Ì		
Method of application: Paint area to be seal with sealant and apply the matt to the area and paint the matt another two coats with sealant.	en en en en en en en en en en en en en e		
Size of reservoir Diameter: 5.09 meter Height: 2.4 meter	To be the state of		
Circumference: 16 meters			
Size 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			
Diameter: 40 cm			
Depth: 50 cm			1
Circumference: 18 meters	ļ		
Size to be sealed: 35 m ²			
Construction of new apron around existing 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 m²			
Concrete strength: 30 MPa	,		į
Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm	200		į.
stone)	ì	Ì	
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)	i i		

		COME	PLY
	YES	NO	REMARKS
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)			5
40 mm nipple (galv) (1 x Nipple)			
40 mm brass gate valve (brass) (1 x Valve)			
40 mm bend (galv) (1 x Bend)			
40 mm x 32 mm reducing bush (galv) (1 x R/Bush)			
32 mm male adaptor (1 x Adaptor)	1		A Comment
DRINKING TROUGHS: 1 ST LOCATION: Approximately 120m av	vay from ti	he reserv	oir
2 ND LOCATION: Approximately 120m av			
Supply and installation of concrete casted drinking troughs			
(2 x troughs)			
Drinking troughs specifications	4		
 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)		1	
 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		ļ	
the width of 0.3m			
Fittings for troughs			
32 mm inserts T-piece (nylon) (4 x T/piece)		ļ	
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)			
32 mm M&F bend (2 x Bend)	1	İ	
32 mm brass gate valve (2 x Valve)			
32 mm ball valve (2 x Valve)		, i	
32 mm float valve (control water level) (2 x Valve)			į
32 mm clamp (wire type) (24 x Clamp)	1	i	
	ì		
32 mm class 3 LDPE pipe (300 Meter)	Š.		
			1.4

i	COMPLY		
	YES NO R		REMARKS
4.1.15. Mogonate (S - 26. 684836115; E 23. 318061683)			
Windmill location: S -26° 41′ 04.2″; E 23° 19′ 05.4″			
Supply and installation of Windmill (1x windmill)	1		
(Includes all equipment, materials transport and labour required)			The second of th
 Install 9 m high windmill tower with a 4.3 m Ø wheel with a 	ĺ		à de la companya de l
gearbox, tail brake system, fork rod, bucket rod (pitman),	1		
wood rod and force head.			
• 40 mm Ø x 3.0m galvanized medium screwed/socket pipe			
SABS (30 x Pipe)			
12 mm Ø x 3.0m electro plated pump rods with socks and protectors (33 x Rod)			
protectors (55 x Rod)			
Borehole specification (Pump depth = 90 meters)			
Borehole depth: 172 m			
Water level: Before test: 89 m			
After test: 91.6 m			
Delivery: 6000 l/h			
Water abstraction limit at 60 % of delivery : 3600 l/h			
Stainless steel borehole cylinder diameter 60 mm tube length 550 mm (1 x Cylinder)	1		
Cylinder make:			
Cylinder model:	ļ		
Cylinder size: mm			
Specify delivery of cylinder : Liters/hour	ŀ	ļ	
Total head: meters			:
Windmill Tower Foundation (2.8 m³)		V. V. V.	
Concrete strength: 30 MPa			ļ
Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm stone)		j	
Size: see attached specification in Appendix A.	A AMERICA		į
Provide concrete test cube results		ļ	ĺ
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)	The state of the s	1	1
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 valve (strainer) (1 x Valve)			
40 mm Ø base plate (1 x Plate)			
			3 3 10 10 M 10

	-	COM	PLY
	YES	NO	REMARKS
 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			1
thick) with 20mm brass gate valve) (1 x Air chamber)			
40 mm nipple (galv) (3 x Nipple)	į		
40 mm T-piece (galv) (2 x T/piece)			
40 mm x 0.5 meter standpipe (galv) (1x Pipe)			
 40 mm male adaptor (nylon) (1 x Adaptor) 			
 40 mm male bend (galv) (2 x Bend) 	Î		
40 mm pipe clamp (1 x Clamp)			
40 mm LDPE pipe (30 Meter)			
Reservoir location: Approximately 5m away from the windmill			
Construction of concrete reservoir with drinking trough			
around. (1 x reservoir and 1 x drinking trough)			15.40.
Construction of concrete reservoir with drinking trough around			
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.			É
			4 A
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			i
23m length for the outer formwork.			
The steel plate to cover the float valve in the drinking trough	1		
should be included.	F-		
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		ĺ	
reservoir.			
Inner circumference apron : 23 meters	5	İ	a de la companya de l
Outer circumference of apron : 42 meters	5		
Thickness of apron: 15 cm	. Orania de la composition della composition del	ĺ	
Length of apron : 3 meter			!
Size of apron: 96 m ²		İ	
Concrete strength: 30 MPa			
Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm		į	
stone)	1	-	1
Provide concrete test cube results	a	İ	

		COM	PLY
	YES	NO	REMARKS
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)			A I Caucas
40 mm bend (galv) (3 x Bend)			i
40 mm male adaptor (galv) (2 x Adaptor)			
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)	in the state of th		
0.5 meter x 40 mm standpipe (galv) (3 x Pipe)			
40 mm float valve (1 x Valve)			
40 mm T-piece (1 x T/piece)			
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)			
RINKING TROUGHS: 1st LOCATION: Approximately 120	n away from th	ie reserv	oir
2 ND LOCATION: Approximately 120	m away from t	he reserv	oir
upply and installation of concrete casted drinking troug	hs	*****	
2 x troughs)			
rinking 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 me	eter		
Capacity: 1000 liters per trough	F.		
lab specification for drinking troughs (1 x slab)			· · · · · · · · · · · · · · · · · · ·
	The second	ř	
Concrete strength: 30 Mpa		ļ	
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)		1	
Provide concrete test cube results for slab (2 x Cubes tes	t)		
he trench specification (240 meters)			
ze: The pipe should be buried in a trench of 0.5m deep with	the	-	
dth of 0.3m			
ttings for troughs		ļ	
32 mm inserts T-piece (nylon) (4 x T/piece)		İ	
32 mm male adaptor (nylon) (2 x Adaptor)		ļ	
32 mm x 0.8 m standpipe (2 x Pipe) 32 mm nipple (gaiv) (2 x Nipple)	PPART. 22.1		

		COMPLY		
		YES	NO	REMARKS
	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)			
•	32 mm class 3 LDPE pipe (300 Meter)			a de la companya de l
•	Thread tape (20 Rolls)			

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?

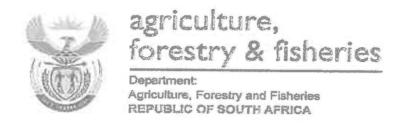
Ensure that all relevant documentation are completed in full or signed and submitted.

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.

MAME AND CAPACITY:
SIGNATURE OF SUPPLIER:
DATE:
NAME OF COMPANY.

MARKE AND GARAGITA



SPECIFICATION FOR CONSTRUCTION OF NEW WINDMILL RESERVOIR AND REPAIR OF DRINKING TROUGHS IN NORTHERN CAPE

COMPILED

BY

RAMAGOSHI N.T

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1. PRELIMINARY AND GENERAL

DESCRIPTION		Unit	Price/Unit	Total Price
			VAT Inci	VAT Incl
e establishment				
Office and storage shed	1	Sum		
Ablution and latrine facilities	2	Sum		
No water and electricity available				
cupational health and safety measures				
Cost of health and safety measures required in terms of the	1	Sum		
Construction Regulations (2003) of the Occupational Health and Safety		The second secon		
act				
Compilation and maintenance of a Health and Safety Plan, including	1	Sum		
Risk Assessments, Safe Work Procedures and Method Statements				
Compilation and maintenance of a Health and Safety File	1	Sum		
	e establishment Office and storage shed Ablution and latrine facilities No water and electricity available 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 Compilation and maintenance of a Health and Safety Plan, including Risk Assessments, Safe Work Procedures and Method Statements	e establishment Office and storage shed Ablution and latrine facilities No water and electricity available cupational health and safety measures Cost of health and safety measures required in terms of the 1 Construction Regulations (2003) of the Occupational Health and Safety act Compilation and maintenance of a Health and Safety Plan, including 1 Risk Assessments, Safe Work Procedures and Method Statements	e establishment Office and storage shed Ablution and latrine facilities No water and electricity available Cupational health and safety measures Cost of health and safety measures required in terms of the 1 Construction Regulations (2003) of the Occupational Health and Safety act Compilation and maintenance of a Health and Safety Plan, including 1 Risk Assessments, Safe Work Procedures and Method Statements	VAT Incl e establishment Office and storage shed Ablution and latrine facilities No water and electricity available Cupational health and safety measures Cost of health and safety measures required in terms of the 1 Sum Construction Regulations (2003) of the Occupational Health and Safety act Compilation and maintenance of a Health and Safety Plan, including Risk Assessments, Safe Work Procedures and Method Statements

2. PROJECTS SPECIFICATIONS

2.1 Adderly (S- 27° 10'21.2"; E 23° 17'10.6")

				1		
-					VAT Incl	VAT Incl
	WINDMILL LOCATIO	N: S - 27°10'21.2"; E 23°17'1	0.6"			
	Supply and installation of Windmill					
	(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			Windmill		
	system, fork rod, bucket rod (pitman), wood rod x 3 meter and force head.					
	40mm Ø x 3.0m Galvanized medium screwed/soci	ket pipe SABS	14	Pipe		
L	 12 mm Ø x 3.0m Electro plated pump rods with so 	cks and protectors	15	Rod		
	Borehole specification (Pump depth = 42 meters)					
	Digitativite darpti	86.5 m			100	
	Water level	Before test :14,5 m				
		After test : 46,45 m				į
	Delivery	2057 l/h				
L	Water abstraction limit at 60 % of delivery	1234.2 l/h				
	Stainless steel borehole cylinder diameter 60	mm tube length 550 mm	1	Cylinder		
	Cylinder make:	************************				1
	Cylinder model:	****************				9
اُ	Cylinder size: mm					ŀ
	Specify delivery of cylinder : Liters/ hou	ır			1	-
	Total head:meters					

	Windmill Tower Foundation			I
	Concrete strength: 30 MPa	2.8	m ³	
	Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm stone)	2.0		
1	Size: See attached specification in Appendix A	!		
	Provide concrete test cube results		The state of the s	
	Supporting concrete block around casing	0.3	m ³	-
	Concrete strength: 30 MPa	0.0	- Control of the cont	
İ	Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm stone)	1		
21 Marin 2	Size: 800mm diameter x 600mm high 4 x12mm bolts and nuts			
Í	Provide concrete test cube results	ľ		
The second second	Fittings from windmill to reservoir			
	40 mm Ø brass foot valve (strainer)	1	Valve	
	40 mm Ø base plate	1	Plate	-
Ì	40 mm Ø brass non return valve	1	Valve	
	40 mm Ø brass force head	1	F/head	
	40 mm Ø inlet air chamber (150mm Ø x 900mm steel pipe (2mm thick) with	1	Air	
	20mm brass gate valve		chamber	
	40 mm nipple (galv)	3	Nipple	
	40 mm T-piece (galv)	2	T/piece	
	40 mm x 0.5 meter standpipe (galv)	1	Pipe	
	40 mm male adaptor (nylon)	1	Adaptor	
	40 mm male bend (galv)	2	Bend	
	40 mm pipe clamp	1	Clamp	
	40 mm LDPE pipe	30	Meter	
2.	REPAIR OF RESERVOIR WITH DRINKING TROU	1	weter	A A
	Repair and sealing of existing reservoir and trough.	1 7		
	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 need to be sealed with geotextiles			and the same of th
	matt (90-100 g/m²) and polymer anionic bitumen emulsion sealant.		N	į
				. A
	Specification type of matt:			
				100
	Specification type of sealing:			
	Coating layers recommended:			į
	The sealing matt should go over the wall of the reservoir down the outside wall		S (* -)	
,	for 30 cm, where the matt is joined the overlap should be 30 cm.			İ
	Where the inner wall meets the floor, the overlap should be 30 cm.			1
ļ	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	To the same of the		
				Ì
		ľ		
	William Table To The State of t			1

	Size of reservoir	1	
	Diameter: 5.09 meter Helght: 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)		Reservoir
	Size of drinking trough around reservoir Width: 40 cm Depth: 50 cm Circumference: 18 meters Total m² to be sealed: 35 m²	1	Drinking trough
	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	1	
ı	Thickness of apron: 15 cm		
	Width of apron: 3 meter		
	Size of apron: 96 m ²		
	Concrete strength: 30 MPa		
and Special	Ratio: 1:3:3 (1 cernent, 3 parts coarse sand and 3 parts of 19mm stone)	1	Apron
	Provide concrete test cube result		
	Inlet pipe fittings(40 mm)	4,494	
	2.5 meter x 40 mm standpipe (gaiv)	1 4	Pipe
	0.3 meter x 40 mm standpipe (galv) 40 mm Bend (galv)	1	Pipe
	• 40 mm Bend (galv)	3	Bend
-	40 mm male adaptor (galv)	2	Adaptor
A AMAGE	40 mm pipe clamp for LDPE pipe	1	Clamp
	Outlet pipe fittings(40 mm)		
	40 mm outlet screen (stainless steel)	1	Screen
	0.5 meter x 40 mm standpipe (galv)	1:4	Pipe (1.1.)
	40 mm brass gate valve (brass)	1	Valve
	• 1. 40 mm bend (galv) 1812 1815, 18	1	Bend
	40 mm nipple (gaiv)	1	Bend
	40 mm x 32 mm reducing bush (galv)	1	R/Bush
	• 14 32 mm male adaptor = 555	1	Adaptor
	DRINKING TROUGHS: 18T LOCATION: Approximately 120m away		
-	2 ND LOCATION: Approximately 120m away fi		
	Supply and installation of concrete casted drinking troughs	2	Trough
	Drinking troughs specifications Congrete control drinking troughs with source to protect hell unlike	1	
1	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 Capacity: 1000 liters per trough		
-	Slab specification for drinking troughs	2	01-1
1	Concrete strength: 30 MPa	2	Slab
1	Journage Stielifiti' on Mica		i i

SI	ab size : 9 meter x 7 meter x 0.15 meter		
Si	ze: 62 m ² (9.45 m ³ concrete)		
Pr	ovide concrete test cube results for slab	2	Cube test
Th	e trench specification	240	Meter
Siz	ze: The pipe should be buried in a trench of 0.5m deep with the width of 0.3m	4	
Fit	tings for troughs		
•	32 mm inserts T-piece (nylon)	4	T/piece
•	32 mm male adaptor (nylon)	2	Adaptor
0	32 mm x 0.8m standpipe	2	Pipe
3	32 mm nipple (gaiv)	2	Nipple
	32 mm bend (galv)	2	Bend
	32 mm M&F bend	2	Bend
_	32 mm brass gate valve	2	Valve
•	32 mm ball valve	2	Valve
	32 mm float valve (control water level)	2	Valve
)	32 mm clamp (wire type)	24	Clamp
1	32 mm class 3 LDPE pipe	300	Meter
)	Thread tape	20	Roll
LO.	TAL	1	

2.2 Bothetheletsa (S - 27, 436460350; E 23, 838736774)

Ohn seedles	DESCRIPTION		Qty	Unit	Price/Unit VAT Incl	Total Price
	WINDMILL LOC	ATION: S - 27. 436460350; E 23	3. 8387	36774		<u> </u>
	Supply and installation of Windmill (Includes all equipment, materials, transport a install 9 m high windmill tower with a 3.0m brake system, fork rod, bucket rod (pitman), head.	and labour required) Ø wheel with a gearbox, tail		Windmill		
	40mm Ø x 3.0m Galvanized medium scre	wed/socket pipe SABS	13	Pipe		
-	12 mm Ø x 3.0m Electro plated pump rod	s with socks and protectors	14	Rod		
	Borehole specification (Pump depth = 39 met					
	Borehole depth	78 m				
	Water level	Before test: 2.6 m After test : 43.1m			Agenda	
	Delivery Water abstraction limit at 60 % of delivery	8000 l/h			And any state of the state of t	
	Cylinder make:		l			
	Cylinder model: Cylinder size: mm Specify delivery of cylinder : L Total head:r	iters/ hour				
	Cylinder size: mm Specify delivery of cylinder : L	iters/ hour neters d 3 parts of 19mm stone)	2.8	m³		
	Cylinder size: mm Specify delivery of cylinder: L Total head:	iters/ hour neters d 3 parts of 19mm stone)	0.3	m³		
F	Cylinder size:	iters/ hour neters d 3 parts of 19mm stone)				
F	Cylinder size:	iters/ hour neters d 3 parts of 19mm stone)		m³		The first of the second of the
F	Cylinder size:	iters/ hour neters d 3 parts of 19mm stone)	0.3			
	Cylinder size:	iters/ hour neters d 3 parts of 19mm stone)	0.3	m ^a		
C F S F	Cylinder size:	iters/ hour neters d 3 parts of 19mm stone)	0.3	m³ Valve Plate		
	Cylinder size:	iters/ hour neters d 3 parts of 19mm stone) d 3 parts of 19mm stone) n bolts and nuts	0.3	m³ Valve Plate Valve		

40 mm T-piece (galv)	2	T/piece	
40 mm x 0.5 meter standpipe (galv)	1	Pipe	
40 mm male adaptor (nylon)	1	Adaptor	
40 mm male bend (galv)	2	Bend	, manurage
40 mm pipe clamp	1	Clamp	37 47
40 mm LDPE pipe	30	Meter	
RESERVOIR WITH DRINKING TROUGH LOCATION: Approxima	ately 51	n away from t	the windmill
Construction of concrete reservoir with the drinking trough around			
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	8		
horizontally and vertically and the floor horizontally. Reservoir should be supply with inlet and outlet.	Î	Reservoir	
The drinking trough wall should be cast simultaneously with the first lift of		Drinking	
the reservoir wall. The inner formwork of the trough wall should be 500mm	1	trough	
wide and 22m length and 700mm wide and 23m length for the outer		a cogn	
formwork.			1
The steel plate to cover the float valve in the drinking trough should be		7	7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7
included.			
Provide concrete test cube results	10	Test cube	
Construction of new apron around reservoir:			
Three (3) meter apron should be constructed around the existing reservoir.			7
Inner circumference apron: 23 meters	1	Apron	
Outer circumference of apron: 42 meters	1		
Thickness of apron: 15 cm			
Width of apron: 3 meter		l l	, k
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 cubes			
nlet pipe fittings(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	
40 mm male adaptor (galv)	2	Adaptor	
40 mm pipe clamp for LDPE pipe	1	Clamp	
Outlet pipe 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 Float valve	1	Valve	
		T/1	
40 mm T-piece	1	T/piece	

	40 mm nipple (galv)	1	Nipple			
	40 mm x 32 mm reducing bush (galv)	1	R/Bush			
	32 mm male adaptor	1	Adaptor		4	
	DRINKING TROUGHS: 18T LOCATION: Approximately 1201	m awa	y from the res	servoir		
ACT IN COMPA	2 ND LOCATION: Approximately 120m	away.	from the rese	ervoir		
	Supply and installation of concrete casted drinking troughs	2	Trough			
	Drinking troughs specifications					
	Concrete casted drinking troughs with cover to protect ball valve	F		-		
1	Size: length 2.4 meter x width 1.10 meter x depth 0.8 meter					
	Capacity: 1000 liters per trough	1		1		
	Slab specification for drinking troughs	2	Slab			-Mea. a. m
	Concrete strength: 30 MPa				İ	
W-100	Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm stone)				1	
1	Slab size : 9 meter x 7 meter x 0.15 meter			ĺ		
	Size: 62 m ² (9.45 m ³ concrete)					
	Provide concrete test cube results for slab	2	Cube test		l l	-
	The trench specification	240	Meter	in your same a second		
	Size: The pipe should be buried in a trench of 0.5m deep with the width of	-				
	0.3m					
	Fittings for troughs					
L	32 mm Inserts T-piece (nylon)	4	T/piece			
Ŀ	32 mm male adaptor (nylon)	2	Adapter			
1	32 mm x 0.8 m standpipe	2	Pipe			CT Stern vision
-	32 mm nipple (galv)	2	Nipple			
Ŀ	32 mm bend (galv)	2	Bend			
4	32 mm M&F bend	2	Bend			ethyldesis i a
9	32 mm ball valve	2	Valve			
a	32 mm brass gate valve	2	Valve			
	32 mm float valve (control water level)	2	Valve		-	
٠	32 mm clamp (wire type)	24	Clamp			P. (Million, S
	32 mm class 3 LDPE pipe.	300	Meter			
•	Thread tape	20	Roll			
	TOTAL					

2.3 Charlesdale (S - 27° 13′ 16.9″; E 23° 23′ 07.1″)

	DESCRIPTION		Qty	<u>Unit</u>	Price/Unit	Total Pi
	WINDMILL LOCK	TION: 8 079 421 46 05. E 009	201.0	7.47	VALING	VALIR
	WINDMILL LOCATION: S - 27° 13' 16.9"; E 23° Supply and Installation of Windmill		23 0	7.1	1	
	(Includes all equipment, materials, transport and	d lahour required)				
	Install 9 m high windmill tower with a 3.0 m @		1	Windmill		
	brake system, fork rod, bucket rod (pitman), wo		1	AAMIGITAIII		
	heads.	ACTION A DIMERCI BING TOTOLE				
	40 mm Ø x 3.0m Galvanized medium screwe	d/socket pine SABS	10	Pipe		
İ	• 12 mm Ø x 3.0m Electro plated pump rods wi		11	Rod		
1	Borehole specification(Pump depth = 30 meters					
-	Foreable depth	59.5 m				
	Water level	* * * * * * * * * * * * * * * * * * *				
		Before test: 3.5 m				
	Delivery	After test: 26 m				
Mirely January		2 109 (/)				
	Water abstraction limit at 60 % of delivery	2 273 l/h				
1	Cylinder size: mm Specify delivery of cylinder: Liters Total head:mete Windmill Tower Foundation Concrete strength: 30 MPa					
1			2.8	m ³		
1	Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts coarse sand and 3 parts Size: See attached specification in Appendix A	parts of 19mm stone)				
1	Provide concrete test cube results					
ļ	Supporting concrete block around casing		0.3	m³		
1	Concrete strength: 30 MPa	PA ATT A	0.0	'''		
1	Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 p	parts of 19mm stone)				
	Size: 800mm diameter x 600mm high 4 x12 mm bo			į		
;	Provide concrete test cube results				i	
	ittings from windmill to reservoir					
ı						
ı			1	Valve		
ı	40 mm Ø brass foot valve (strainer)		1	Valve Plate		
-	40 mm Ø brass foot valve (strainer)					
-	40 mm Ø brass foot valve (strainer) 40 mm Ø base plate 40 mm Ø brass non return valve		1	Plate		
- 4	40 mm Ø brass foot valve (strainer) 40 mm Ø base plate 40 mm Ø brass non return valve 40 mm Ø brass force head	mm steel pipe (2mm thick)	1	Plate Valve		3/200
4 4	40 mm Ø brass foot valve (strainer) 40 mm Ø base plate 40 mm Ø brass non return valve 40 mm Ø brass force head	mm steel pipe (2mm thick)	1 1	Plate Valve F-head		
4 4	40 mm Ø brass foot valve (strainer) 40 mm Ø base plate 40 mm Ø brass non return valve 40 mm Ø brass force head 40 mm Ø inlet air chamber (150mm Ø x 900m with 20mm brass gate valve		1 1	Plate Valve F-head Air		

1005(·		1
40 mm x 0.5 meter standpipe (galv)	1	Pipe		
40 mm male adaptor (nylon)	1	Adaptor		
40 mm male bend (galv)	2	Bend		
40 mm pipe clamp	1	Clamp		
40 mm LDPE pipe	30	Meter		
2. REPAIR OF RESERVOIR WITH DRINKING	TROUG	H:		}
Repair and sealing of existing reservoir and trough.				
The existing reservoir and drinking trough around the reservoir, need to t	be			
cleaned and the cracks to be repaired inside and outside with sand/ceme				
filler. The inside of the reservoir and drinking troughs needs to be sealed wi				
geotextiles matt (90-100 g/m²) and polymer anionic bitumen emulsic sealant.	on			
Specification type of matt:				
Specification type of sealing:				
Coating layers recommended :				
The sealing matt should go over the wall of the reservoir down the outsid	i i		-	
wall for 30 cm and where the matt is joined the overlap should be 30 cm	n.			
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 th	е			
matt to the area and paint the matt 3 x coats with sealant				
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)	d a	Reservoir	And the state of t	
Size of drinking trough around reservoir	1	Drinking		
Width: 40 cm	,	trough		
Depth: 50 cm Circumference: 18 meters		uougn		
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	1	Apron		
Width of apron: 3 meter	Pyridia.			
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)			3	
Provide concrete test cube result	I. T's different		The state of the s	
Inlet pipe fittings (40 mm)	27.1%			
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		
40 mm male adaptor (galv)	2	adaptor		
• 40 mm pipe clamp for LDPE pipe	1	Clamp		1
Outlet plpe fittings (40 mm)	ar at a			
40 mm outlet screen (Stainless steel)	3.8 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 x 32 mm reducing bush (galv)	1.5	R/Bush		
40 mm nipple (galv)	11.	Nipple	N	
32 mm male Adaptor	1	Adaptor		
DRINKING TROUGHS: 15T LOCATION: Approximately			rvoir	j
2 ND LOCATION: Approximately				
Supply and installation of concrete casted drinking troughs	2	Trough		
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 0.6 meter				
Capacity: 1000 litres per trough			Per	
Slab specification for drinking troughs	2	Slab		
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	Cube		
The trench specification	240	Meter		
Size: The pipe should be buried in a trench of 0.5m deep with the wid		INICIOI		
0.3m		:		
Fittings for troughs				
32 mm inserts T-piece (nylon)	4	T-plece		
32 mm male adaptor (nylon)	2	Adaptor		
32 mm x 0.8 m standpipe	2	Pipe	THE REAL PROPERTY AND ADDRESS OF THE PERTY ADDRESS OF THE PERTY ADDRESS OF THE PERTY AND ADDRESS OF THE PERTY ADDRESS OF THE PERTY ADDRESS OF THE PERTY ADDRESS OF THE PERTY ADDRESS OF THE PERTY ADDRESS OF THE PERTY ADDRESS OF THE PERTY ADDRESS OF THE PERTY ADDRESS OF THE PERTY ADDRESS OF THE PERTY ADDRESS OF THE PERTY ADDRESS OF THE PERTY ADDRESS OF THE PERTY ADDRESS OF THE PERTY ADDRESS OF THE PERTY ADDRESS OF THE PERTY ADDRESS OF THE PERTY ADDRESS OF THE PERTY ADDR	
32 mm nipple (galv)	2	Nipple		
32 mm bend (galv)	2	Bend		
32 mm M&F bend	2	Bend		
32 mm ball valve	2	Valve		
32 mm brass gate valve	2	Valve		
32 mm float valve (control water level)	2	Valve		
32 mm clamp (wire type)	24	Clamp		
	300	Meter		
32 mm class 3 LDPE pipe.		141744441		
 32 mm class 3 LDPE pipe. Thread tape 	20	Roll		

2.4. Churchill 2 (S - 27°13' 43.9"; E 23°24'25.7")

	DESCRIPTION		Qty	Unit	Price/Unit VAT Inci	Total Price
	WINDMILL LOC	ATION: S - 27°13' 43.9"; E	23°24'2	5.7"	1	2711 1100
	Supply and installation of Windmill (Includes all equipment, materials, transport and labour required) Install 6 m high windmill tower with a 2.5 m Ø wheel with a gearbox, tail brake system, fork rod, bucket rod (pitman), wood rod 3 meter and force head.		1	Windmill		
and the second s	40mm Ø x 3.0m Galvanized medium screwer	d/socket pipe SABS	7	Pipe		
	12 mm Ø x 3.0m Electro plated pump rods with socks and protectors			Rod		
	Borehole specification (Pump depth = 21 meters)				- ALANA - C
ŀ	Borejoje danij	17.m				
	Water level Delivery	Before test: 10 m After test: 18 m 1200 l/h				
	Water abstraction limit at 60 % of delivery	700 1/6				
	Water abstraction limit at 60 % of delivery 720 l/h Stainless steel borehole cylinder diameter 60 mm tube ler Cylinder make: Cylinder model: Cylinder size:	mm tube length 550 mm	1	Cylinder		,
	Nindmill Tower Foundation Concrete strength: 30 MPa Ratlo: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts: See attached specification in Appendix A Provide concrete test cube results	parts of 19mm stone)	2.8	rn ³	T Parl	
	Supporting concrete block around casing Concrete strength; 30 MPa		0.3	m³		
S	Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 p size: 800mm diameter x 600mm high 4x12mm bol Provide concrete test cube results					
F	ittings from windmill to reservoir					
•	40 mm Ø brass foot valve (strainer)			Valve		
9	40 mm Ø base plate		1	Plate		
	40 mm Ø brass non return valve		1	Valve		4
ŀ	40 mm Ø brass force head		1	F-head		
•	40 mm Ø inlet air chamber (150mm Ø x 900m with 20mm brass gate valve	nm steel pipe (2mm thick)	1	Air chamber		
•	40 mm nipple (galv)	- Committee	3 [Nipple	Į	

			,	
40 mmx 0.5 meter standpipe (galv)	1	Pipe		
40 mm male adaptor (nylon)	1	Adaptor		
40 mm male bend (galv)	2	Bend		
40 mm pipe clamp	1	Clamp		
40 mm LDPE pipe	30	Meter		
REPAIR OF RESERVOIR WITH DRINKING	3 TROUG			<u>+</u>
Repair and sealing of existing reservoir and trough.				T
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	1			
with geotextiles matt (90-100 g/m²) and polymer anionic bitumen emulsion	1			
sealant.	j			
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 area to be seal with sealant and apply the				
matt to the area and paint the matt 3 x coats with sealant			N.	
	<u> </u>			
Size of reservoir				
Diameter: 5.09 meter	1	Reservoir		
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		1		
and outside wall 9.6 m²)				
Size of drinking trough around reservoir		Drinking		
Width: 40 cm Depth: 50 cm	1	trough		
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.	Ī			
Inner circumference apron: 23 meters				
Outer circumference of apron: 42 meters				
Thickness of apron: 15 cm			in the state of th	
Width of apron: 3 meter				
Size of apron: 96 m ²				
Concrete strength: 30 MPa	İ			
Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm stone)	1	Apron	TT TO SERVE STATE OF THE SERVE S	
Provide concrete test cube result				
Inlet pipe fittings (40 mm)	Tight see I		and the state of t	

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 pipe fittings(40 mm)			
40 mm outlet screen (stainless steel)	1:3	Screen	
0.5 meter x 40 mm standpipe (galv)	1	Pipe	
40 mm brass gate valve (brass)	1.94	Valve	
40 mm bend (galv)	1:5	Bend	
40 mm nipple (galv)	1 : :	Nipple	
40 mm x 32 mm reducing bush (galv)	1	R/Bush	
32 mm male adaptor	1	Adaptor	
DRINKING TROUGHS: 18T LOCATION: Approximately 12	Om awa		ervoir
2 ND LOCATION: Approximately 120			
Supply and installation of concrete casted drinking troughs	2	Troughs	l' I
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			
Slab specification for drinking troughs	2	Slab	
Concrete strength: 30 Mpa			i
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)	The state of the s	-	
Provide concrete test cube results for slab	2	Cube test	
The trench specification	240	Meter	
Size: The pipe should be buried in a trench of 0.5m deep with the width of	1	indioi	
0.3m			
Fittings for troughs			
32 mm inserts T-piece (nylon)	4	T/piece	
32 mm male adaptor (nylon)	2	Adaptor	
32 mm x 0.8 m standpipe	2	Pipe	
32 mm nipple (galv)	2	Nipple	
	2	Bend	
32 mm bend (gaiv)	2	Bend	
32 mm bend (gaiv) 32 mm M&F bend			
32 mm M&F bend	-	Valve	
32 mm M&F bend 32 mm ball valve	2	Valve Valve	
32 mm M&F bend 32 mm ball valve 32 mm brass gate valve	2	Valve	
32 mm M&F bend 32 mm ball valve 32 mm brass gate valve 32 mm float valve (control water level)	2 2 2	Valve Valve	
32 mm M&F bend 32 mm ball valve 32 mm brass gate valve 32 mm float valve (control water level) 32 mm clamp (wire type)	2 2 2 24	Valve Valve Clamp	
32 mm M&F bend 32 mm ball valve 32 mm brass gate valve 32 mm float valve (control water level)	2 2 2	Valve Valve	

2.5 Clifton (2) (S - 26.324222199; E 23. 040913445)

i	DESCRIPTION		Qty	<u>Unit</u>	Price/Unit	Total Price
	WINDMILL LO	CATION: S - 26.32421; E 2	23 040	96	773.1103	1777 1884
	Supply and installation of Windmill (Includes all equipment, materials, transport and Install 9 m high windmill tower with a 4.3 meter brake system, fork rod, bucket rod (pitman), wo head.	d labour required) Ø wheel with a gearbox, tail	1	Windmill		
	40 mm Ø x 3.0m Galvanized medium screwer	ed/socket pipe SABS	34	Pipe		
[• 12 mm Ø x 3.0m Electro plated pump rods w	ith socks and protectors	35	Rod		
Î	Borehole specification (Pump depth = 102 mete	rs)				W
	Borehwie dept	120 m				
	Water level Delivery	Before test: 88.4 m After test: 101.3m 382 l/h	WWW. Assumation and a state of the state of			
College Lines	Minima shadowallan Busta as sin pri as a si				i	
	Stainless steel borehole cylinder dlameter 60 Cylinder make: Cylinder model: Cylinder size:	mm tube length 550 mm	1	Cylinder		
	Windmill Tower Foundation Concrete strength: 30 MPa Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 Size: See attached specification in Appendix A Provide concrete test cube results	parts of 19mm stone)	2.8	m³		vali 2 u Wile lakkali
i	Supporting concrete block around casing Concrete strength: 30 MPa Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3		0.3	m³	, , , , , , , , , , , , , , , , , , ,	
F.	Size: 800mm diameter x 600mm high 4x12mm bo	Its and nuts				
- Paris	Provide concrete test cube results					
	Fittings from windmill to reservoir					
1 5	40 mm Ø brass foot valve (strainer)		1	Valve		
			1	Plate		
4	40 mm (4 hrace non return color	1	1	Valve		
•	10 1111 10 11200 11011 101211 12110		. 1		3	
-	40 mm Ø brass force head 40 mm Ø inlet air chamber (150mm Ø x 900)	mm steel pipe (2mm thick)	1	Air chamber	The second secon	
•	40 mm Ø brass force head 40 mm Ø inlet air chamber (150mm Ø x 900) with 20mm brass gate valve	mm steel pipe (2mm thlck)				

40 mm x 0.5 meter standpipe (galv)	1	Pipe
40 mm male adaptor (nylon)	1	Adaptor
40 mm male bend (galv)	2	Bend
40 mm pipe clamp	1	Clamp
40 mm LDPE pipe	30	Meter
RESEVIOR WITH DRINKING TROUGH LOCATION: Approximate	ely 5r	n away from the windmill
Construction of concrete reservoir with the drinking trough around	Ī	
Circular reinforced concrete reservoir, diameter 4.5 m, height 2.1 m, wall		i i
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	1	Reservoir
supply with inlet and outlet.		44
The drinking trough wall should be cast simultaneously with the first lift of		Drinking
the reservoir wall. The inner formwork of the trough wall should be 500mm	1	
wide and 22m length and 700mm wide and 23m length for the outer	'	trough
formwork.		
The steel plate to cover the float valve in the drinking trough should be		
included.		
Provide concrete test cube results	10	Test cube
Construction of new apron around reservoir:		
Three (3) meter apron should be constructed around the existing reservoir.		
Inner circumference apron: 23 meters	1	Apron
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 cubes		
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
Outlet pipe 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 Float valve	1	Valve
40 mm T-piece	1	T/piece
40 mm bend (galv)	1	Bend
40 mm nipple (galv)	1	Nipple

	40 mm x 32 mm reducing bush (galv)	1	R/Bush	
	32 mm male adaptor	1	Adaptor	
	DRINKING TROUGHS: 18T LOCATION: Approximately 120	Om aw	ay from the re	servoir
	2 ND LOCATION: Approximately 120r.			
	Supply and installation of concrete casted drinking troughs	2	Trough	
	Drinking troughs specifications			7.0
	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	-		
Mildon S - Cara	Slab specification for drinking troughs	2	Slab	
	Concrete strength: 30 Mpa	4		
MINISTER STATES	Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm stone)	Š		
İ	Slab size: 9 meter x 7 meter x 0.15 meter	}		
- Bellinia	Size: 62 m ² (9.45 m ³ concrete)	Î		
	Provide concrete test cube results for slab	2	Cube test	
1	The trench specification	240	Meter	
	Size: The pipe should be buried in a trench of 0.5m deep with the width of	1	MICICI	
N. T.	0.3m			
	Fittings for troughs			
	32 mm inserts T-piece (Nylon)	4	T/plece	
	32 mm male adaptor (nylon)	2	Pipe	
	32 mm x 0.8 m standpipe	2	Pipe	
7	• 32 mm nipples (galv)	2	Nipple	V.W
	32 mm bend (galv)	2	Bend	1 AMAGE - 1 AMAG
	32 mm M&F bend	2	Bend	
	32 mm brass gate valve	2	Valve	· · · · · · · · · · · · · · · · · · ·
-	32 mm bail valve	2	Valve	
•	32 mm float valve (control water level)	2	Valve	
		24	Clamp	
	32 mm class 3 LDPE pipe.	300	Meter	
		20	Roll	
1	TOTAL			

2.6 Dutton (S - 26 .561173900; E 23 .032210107)

	DESCRIPTION		Qty	Unit	Price/Unit	Total P
	WINDMILL LO	OCATION: S - 26°33'40.3"; E 2	23°01'5	55.4")
	Supply and installation of Windmill (Includes all equipment, materials transport at Install 9 m high windmill tower with a 4.3m (brake system, fork rod, bucket rod (pitman), we	owheel with a gearbox, tail	1	Windmill		
	• 40 mm Ø x 3.0m Galvanized medium scre	wed/socket pipe SABS	28	Pipe		
	• 12 mm Ø x 3.0m Electro plated pump rods	with socks and protectors	31	Rod		
	Borehole specification (Pump depth = 84 meter	ers)				************
	Porstraia depitr	125 m				
	Water level Delivery Water abstraction limit at 60 % of delivery	Before test: 82 m After test: 84.25 m 6000 l/h 3600 l/h	T ÜNEVEREN		Topological designation of the second of the	
	Stainless steel borehole cylinder diameter Cylinder make: Cylinder model: Cylinder size: mm Specify delivery of cylinder: Total head: meters	ers/hour	7	Cylinder		
	Windmill Tower Foundation					************
1	Concrete strength: 30 MPa		2.8	m ³	1	
	Ratio: 1:3:3 (1 cement, 3 parts coarse sand and	3 parts of 19mm stone)				
1	Size: See attached specification in Appendix A Provide concrete test cube results					
⊢						
ı	Supporting concrete block around casing Concrete strength: 30 MPa		0.3	m ³		
	Ratio: 1:3:3 (1 cement, 3 parts coarse sand and Size: 800mm diameter x 600mm high 4x12mm Provide concrete test cube results Fittings from windmill to reservoir					
-			1	Valve		····
			1	Plate		
•			1	Valve		
		(m-000-00-00-00-00-00-00-00-00-00-00-00-0	1	F-head		
•	40 mm Ø inlet air chamber (150mm Ø x 9	00mm steel pipe (2mm thick)	1	Air		
	with 20mm brass gate valve			chamber	A Arrest	
٠	40mm nipple (galv)		3	Nipple	1	
•	40 mm T-piece (galv)		2	T/piece		
	40 mm x 0.5 meter standpipe (galv)		1	Pipe		VP-04

	40 mm male adaptor (nylon)	1	Adaptor	I
	40 mm male bend (galv)	2	Bend	
	40 mm pipe clamp	1	Clamp	
	40 mm LDPE pipe	30	Meter	
	REPAIR OF RESERVOIR WITH DRINKING	TROL		
į	Repair and sealing of existing reservoir and 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	İ		İ
	with geotextiles matt (90-100 g/m²) and polymer anionic bitumen emulsion sealant.		And the state of t	
-	Specification type of matt:			:
	Specification type of sealing:			
	Coating layers recommended :			
i i	The sealing matt should go over the wall of the reservoir down the			
- 1	wall for 30 cm and where the matt is joined the overlap should be			
Ē	Where the inner wall meets the floor the overlap should be 30 cm.			
- 1	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			
	Olean of some 1			ĺ
1	Size of reservoir Diameter : 5.09 meter			
	Height: 2.4 meters	1	Reservoir	
	Circumference: 16 meters Total m² to be sealed : 67 m² (floor 19.6 m², side wall 40 m²top of wall			
	and outside wall 9.6 m²)			
l.			Delate	
	Size of drinking trough around reservoir Width: 40 cm	1	Drinking	
	Depth: 50 cm	i '	trough	
	Circumference: 18 meters Total m² to be sealed : 35 m²			
_	Construction of new apron around existing reservoir:			
1	Three (3) meter apron should be constructed around the existing reservoir.			
	nner circumference apron: 23 meters			
	Outer circumference of apron: 42 meters			
	Thickness of apron: 15 cm			
٧	Nidth of apron: 3 meter	İ		
1	Size of apron: 96 m ²			
C	Concrete strength: 30 MPa			
	Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm stone)	1	Apron	
	Provide concrete test cube result	Ì		
I	nlet pipe fittings (40 mm)	25,17		(
		1	Pipe	

0.3 meter x 40 mm standpipe (galv)	1 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 pipe 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 (gatv)	1	Bend		
40 mm nipple (galv)	1	Nipple	***	**************************************
40 mm x 32 mm reducing bush (galv)	1	R/Bush		
32 mm male adaptor	1	Adaptor		
DRINKING TROUGHS: 1 ST LOCATION: Approximately 12	Om awa		sennir	-MENTING COMPA
2 ND LOCATION: Approximately 120th				
Supply and installation of concrete casted 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		
Slab specification for drinking troughs	2	Slab		
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	Cube 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				
	†	T/plece		
32 mm inserts T-piece (nylon)	4	I I / DIEGE	1 i	
	-			
32 mm inserts T-piece (nylon)	2	Adaptor		
32 mm inserts T-piece (nylon) 32 mm male adaptor (nylon)	2	Adaptor Pipe		
32 mm inserts T-piece (nylon) 32 mm male adaptor (nylon) 32 mm x 0.8 m standpipe	2 2 2	Adaptor		
32 mm inserts T-piece (nylon) 32 mm male adaptor (nylon) 32 mm x 0.8 m standpipe 32 mm nipples (galv)	2 2 2 2	Adaptor Pipe Nipple Bend		
 32 mm inserts T-piece (nylon) 32 mm male adaptor (nylon) 32 mm x 0.8 m standpipe 32 mm nipples (galv) 32 mm bend (galv) 	2 2 2 2 2	Adaptor Pipe Nipple		
 32 mm inserts T-piece (nylon) 32 mm male adaptor (nylon) 32 mm x 0.8 m standpipe 32 mm nipples (galv) 32 mm bend (galv) 32 mm M&F bend 	2 2 2 2 2 2 2	Adaptor Pipe Nipple Bend Bend Valve		
 32 mm inserts T-piece (nylon) 32 mm male adaptor (nylon) 32 mm x 0.8 m standpipe 32 mm nipples (galv) 32 mm bend (galv) 32 mm M&F bend 32 mm ball valve 32 mm brass gate valve 	2 2 2 2 2 2 2 2	Adaptor Pipe Nipple Bend Bend Valve Valve		
32 mm inserts T-piece (nylon) 32 mm male adaptor (nylon) 32 mm x 0.8 m standpipe 32 mm nipples (galv) 32 mm bend (galv) 32 mm M&F bend 32 mm ball valve 32 mm brass gate valve 32 mm float valve (control water level)	2 2 2 2 2 2 2 2 2	Adaptor Pipe Nipple Bend Bend Valve Valve Valve		
32 mm inserts T-piece (nylon) 32 mm male adaptor (nylon) 32 mm x 0.8 m standpipe 32 mm nipples (galv) 32 mm bend (galv) 32 mm M&F bend 32 mm ball valve 32 mm brass gate valve 32 mm float valve (control water level) 32 mm clamps (wire type)	2 2 2 2 2 2 2 2 2 2 2	Adaptor Pipe Nipple Bend Bend Valve Valve Valve Clamp		
 32 mm inserts T-piece (nylon) 32 mm male adaptor (nylon) 32 mm x 0.8 m standpipe 32 mm nipples (galv) 32 mm bend (galv) 32 mm M&F bend 32 mm ball valve 32 mm brass gate valve 32 mm float valve (control water level) 32 mm clamps (wire type) 	2 2 2 2 2 2 2 2 2	Adaptor Pipe Nipple Bend Bend Valve Valve Valve		

2.7 Eiffel (S - 26.574147436; E 22. 9075037827)

	DESCRIPTION		Qh	Unit	Price/Unit VAT Incl	Total Pri
	WINDMILL	LOCATION: S -26°34'27,1"; E 2	22°54';	27.0"		Ļ
	Supply and Installation of Windmill (Includes all equipment, materials transport Install 9 m high windmill tower with a 4.3 m brake system, fork rod, bucket rod (pitman), v	and labour required) n Ø wheel with a gearbox, tail		Windmill		
	40 mm Ø x 3.0m Galvanized medium sci	All the second s	27	Pipe		
	12 mm Ø x 3.0m Electro plated pump rods with socks and protectors		30	Rod		
	Borehole specification (Purrip depth = 81 meters)		-	1100		
	Barehote deati	155 in				
	Water level	Before test: 28 m				
		After test: 83.7 m				
	Delivery	4000 l/h				
	Water abstraction limit at 60 % of delivery					
	Stainless steel borehole cylinder diamete		1	Cylinder		
	Cylinder make:			- J		
	Cylinder model:					
	Cylinder size: mm					
	Specify delivery of cylinder:	Liters/ hour				
	Total head:	meters				
	Windmill Tower Foundation					
	Concrete strength: 30 MPa		2.8	m ³		
	Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm stone)				Í	
	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 an					
1	Size: 800mm diameter x 600mm high 4x12mn	n bolts and nuts			***	
-	Provide concrete test cube results					
ı	Fittings from windmill to reservoir					
•	40 mm Ø brass foot valve (strainer)		1	Valve		
•	To that the plants		1	Plate		
٥	TO THE STATE OF TH		1	Valve		
۰			1	F-head		
•	TO THIS OF THE CHILD CONTINUE X	900mm steel pipe (2mm thick)	1	Air		
· · · ·	with 20mm brass gate valve			chamber		
•	io imit inplie (State)		3	Nipple		
•	(gara)		2	T/piece		
4	40 mm x 0.5 meter standpipe (galv)		1	Pipe		
	40 mm male adaptor (nylon)		1	Adaptor		

40 mm male bend (galv)	2	Bend		
40 mm pipe clamp	1	Clamp		
40 mm LDPE pipe	30	Meter		
REPAIR OF RESERVOIR WITH DRINKI	NG TRO	UGH:		
Repair and sealing of existing reservoir and trough.				
The existing reservoir and drinking trough around the reservoir, need to	be			
cleaned, and the cracks to be repaired inside and outside w				
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 bitume	en			
emulsion sealant.	1			
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.	ĺ			
Where the inner wall meet the floor the overlap should be 30 cm.			ĺ	
Method of application : Paint area to be seal with sealant and apply the				
to the area and paint the matt 3 x coats with sealant				
Size of reservoir Dlameter: 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)	-	Reservoir		
Size of drinking trough around reservoir	1	Drinking		
Width: 40 cm Depth: 50 cm		trough		
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			Web A com	
Outer circumference of apron: 42 meters				
Thickness of apron: 15 cm				
Width of apron: 3 meter	ļ	The state of the s		
Size of apron: 96 m ²			AND RECEIP	
Concrete strength: 30 MPa				
Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm stone)	1	Apron		
Provide concrete test cube result				
Inlet pipe fittings (40 mm)		44, 22		
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 pipe 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			
40 mm bend (galv)	1	Bend		
40 mm nipple (galv)	1	Nipple		
40 mm x 32 mm reducing bush (galv)	1	R/Bush		
32 mm male adaptor	1	Adaptor		
DRINKING TROUGHS: 1 ST LOCATION: Approximately 12		ou from the		
2 ND LOCATION: Approximately 12	20m au	ay irom ine n	eservoir	
Supply and installation of concrete casted drinking troughs	2		reservoir	
Drinking troughs specifications	1	Trough	1	
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				
Capacity: 1000 liters per trough	Ì			1
Slab specification for drinking troughs	2	Slab		
Concrete strength: 30 MPa		SIAD		
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 trench specification	2	Cube test		
Size: The pipe should be buried in a trench of 0.5m deep with the width of	240	Meter		ļ
0.3m				
ittings for troughs				
32 mm inserts T-piece (nylon)	4	T/piece		
This moores (Tyron)				5
32 mm male adaptor (nylon)	2	Adapter		
32 mm male adaptor (nylon) 32 mm x 0.8 m standpipe	2	Adapter Pipe		
32 mm male adaptor (nylon) 32 mm x 0.8 m standpipe 32 mm nipple (galv)	2 2 2	Adapter Pipe Nipple		
32 mm male adaptor (nylon) 32 mm x 0.8 m standpipe 32 mm nipple (galv) 32 mm bend (galv)	2 2 2 2	Adapter Pipe Nipple Bend		
32 mm male adaptor (nylon) 32 mm x 0.8 m standpipe 32 mm nipple (galv) 32 mm bend (galv) 32 mm M&F bend	2 2 2 2 2	Adapter Pipe Nipple Bend Bend		
32 mm male adaptor (nylon) 32 mm x 0.8 m standpipe 32 mm nipple (galv) 32 mm bend (galv) 32 mm M&F bend 32 mm ball valve	2 2 2 2 2 2	Adapter Pipe Nipple Bend		
32 mm male adaptor (nylon) 32 mm x 0.8 m standpipe 32 mm nipple (galv) 32 mm bend (galv) 32 mm M&F bend 32 mm ball valve 32 mm brass gate valve	2 2 2 2 2	Adapter Pipe Nipple Bend Bend		
32 mm male adaptor (nylon) 32 mm x 0.8 m standpipe 32 mm nipple (galv) 32 mm bend (galv) 32 mm M&F bend 32 mm balf valve 32 mm brass gate valve 32 mm float valve (control water level)	2 2 2 2 2 2	Adapter Pipe Nipple Bend Bend Valve		
32 mm male adaptor (nylon) 32 mm x 0.8 m standpipe 32 mm nipple (galv) 32 mm bend (galv) 32 mm M&F bend 32 mm ball valve 32 mm brass gate valve 32 mm float valve (control water level) 32 mm clamp (wire type)	2 2 2 2 2 2 2 2	Adapter Pipe Nipple Bend Bend Valve Valve		
32 mm male adaptor (nylon) 32 mm x 0.8 m standpipe 32 mm nipple (galv) 32 mm bend (galv) 32 mm M&F bend 32 mm ball valve 32 mm brass gate valve 32 mm float valve (control water level)	2 2 2 2 2 2 2 2 2 2	Adapter Pipe Nipple Bend Bend Valve Valve Valve		

2.8 Gasehubane (S - 27. 281436054; E 23 .272609812) (DOA 4852)

2	DESCRIPTION		Qty	Unit	Price/Unit VAT Incl	Total Prior
		OCATION: S - 27. 28139; E 2	23.2725	7		
	2.1 Supply and Installation of Windmill (Includes all equipment, materials transport and Install 6 m high windmill tower with a 2.5m Ø brake system, fork rod, bucket rod (pitman), wheads.	d labour required) wheel with a gearbox, tail,	1	Windmill		
	• 40 mm Ø x 3.0m Galvanized medium screw	ed/socket pipe SABS	9	Pipe		
I	 12 mm Ø x 3.0m Electro plated pump rods w 	ith socks and protectors	10	Rod		
	Borehole specification (Pump depth = 27 metern िराज्य पाउ राज्या) Water level Delivery	Before test 23.10 m After test 23.22 m 6 545 I/h	The state of the s			
	Water abstraction limit at 60 % of delivery Stainless steel borehole cylinder diameter 60 Cylinder make: Cylinder model: Cylinder size:	rs/ hour	-	Cylinder		
(F	Mindmill Tower Foundation Concrete strength: 30 MPa Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 Size: See attached specification in Appendix A. Provide concrete test cube results	parts of 19mm stone)	2.8	m³		
F	concrete strength: 30 MPa tatio: 1:3:3 (1 cement, 3 parts coarse sand and 3 ize: 800mm diameter x 600mm high 4x12mm bottovide concrete test cube results	- 1	0.3	m ³		
•	ittings from windmill to reservoir 40 mm Ø brass foot valve (strainer)		4	National State of the State of		
•	40 mm Ø base plate		1	Valve		
	40 mm Ø brass non return valve		1	Plate Valve		
•	40 mm Ø brass force head		1	F-head		
•	40 mm Ø inlet air chamber (150mm Ø x 900) with 20mm brass gate valve	mm steel pipe (2mm thick)	1	Air chamber		
•	40 mm nipple (galv)		3	Nipple		
•	40 mm T-piece (galv)		2	T/piece		
4	40 mmx 0.5 meter standpipe (galv)		1	Pipe		

ĺ	40 mm male adaptor (nylon)	1	Adaptor			
	40 mm male bend (galv)	2	Bend			
	40 mm pipe clamp	1	Clamp			
	40 mm LDPE pipe	30	Meter			
2.	REPAIR OF RESERVOIR WITH DRINKING	TROUG	H:			
	Repair and sealing of existing reservoir and drinking trough.			*		
	The existing reservoir and drinking trough around the reservoir on the site					
	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 sealing:					
	Coating layers recommended:				And the second second	
	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					
	to the area and paint the matt anther two coats with sealant					
	Size of reservoir	1	Reservoir			
	Diameter: 5.09 meter					
	Height: 2.4 meter					
	Circumference: 16 meter					
	Size to be sealed: 67 m² (floor 19.6 m², side wall 40 m² top of wall and				 	
	outside wall 9.6 m²)	1	Drinking			
	Cinc of divising fraugh average and annual		trough	The state of the s		
	Size of drinking trough around reservoir Diameter: 40 cm		Meet det activité			
	Height: 50 cm					}
	Circumference: 18 meters		Michigan			
	Size to be sealed: 35 m ²					
	OLD ID DE STEIDY. 30 HF	1	Į	ĺ		

	Construction of new apron around existing reservoir:	ļ		
	Three (3) meter apron should be constructed around the existing reservoir.			
	Inner circumference apron : 23 meters		7	
	Outer circumference of apron : 42 meters Thickness of apron : 15 cm			
	Length of apron : 3 meter			
	Size of apron: 96 m ²	1	Apron	1
	Concrete strength: 30 MPa			
	Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm stone)			THE STATE OF THE S
	Provide concrete test cube results			
		8.8,11		
	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 pipe fittings (40 mm)	200		
	40 mm outlet screen (stainless steel)	1	Screen	
	0.5 meter x 40 mm standpipe (galv)	1 14.2.	Pipe	·
	40 mm brass gate valve (brass)	1	Valve	
	40 mm bend (galv)	1	Bend	
	40 mm nipple (galv)	1 2	Nipple	
	40 mm x 32 mm reducing bush (galv)	1	R/Bush	
	32 mm male adaptor	1 (2)	Adaptor	
3.	DRINKING TROUGHS: 1ST LOCATION: Approximately 120n	า อเของ ก็	om the recensis	
	2 ND LOCATION: Approximately 120r			
	Supply and installation of concrete casted drinking troughs	2	Trough	
	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			
	Slab specification for drinking troughs	2	Slab	
	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	Cube test	
	The trench specification	240	Meter	

	lize: The pipe should be buried in a trench of 0.5m deep with the width of 3m		
	ttings for troughs		45
•	32 mm inserts T-piece (nylon)	4	T/piece
0	32 mm male adaptor (nylon)	2	Adapter
	32 mm x 0.8 m standpipe	2	Pipe
•	32 mm nipples (galv)	2	Nipple
•	32 mm bend (galv)	2	Bend
•	32 mm M&F bend	2	Bend
c	32 mm ball valve	2	Valve
	32 mm brass gate 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	300	Meter
6	Thread tape	20	Roll
TO	TAL		

2.9 Glenred (S - 26°57'16.7"; E 23°54'40.7")

DESCRIPTION		Qty	Unit	Price/Unit VAT Incl	Total Price
WINDMILL LO	OCATION: S - 26°57'16.7"; E	23°54'4) 0.7"		
Supply and installation of Windmill (Includes all equipment, materials transport at Install 9 m high windmill tower with a 3.0m for brake system, fork rod, bucket rod (pitman), head.	and labour required) Ø wheel with a gearbox, tail	1 1	Windmill	4.4	
40 mm Ø x 3.0m Galvanized medium scre	wed/socket pipe SABS	20	Pipe		
• 12 mm Ø x 3.0m Electro plated pump rods		21	Rod		
Borehole specification (Pump depth = 60 met	ers)	+			
. Botisholis alegali;	78.3 m				
Water level Delivery Water abstraction limit at 60 % of delivery	Before test: 44.7 m After test: 61.5 m 3 600 liter/hour 2 160 liter/hour	And of the contract of the con			
Stainless steel borehole cylinder diameter Cylinder make: Cylinder model: Cylinder size:	ers/ hour	1	Cylinder		
Windmill Tower Foundation Concrete strength: 30 MPa 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	m³		
Supporting concrete block around casing		0.3	m ³		
Concrete strength: 30 MPa Ratio: 1:3:3 (1 cement, 3 parts coarse sand and Size: 800mm diameter x 600mm high 4 x12mm Provide concrete test cube results		0.0	***	(ARC similarity	N Comments
Fittings from windmill to reservoir					
40 mm Ø brass foot valve (strainer)		1	Valve		
40 mm Ø base plate		1	Plate		
• 40 mm Ø brass non return valve		1	Valve	-	
 40 mm Ø brass force head 40 mm Ø inlet air chamber (160mm Ø x 90 with 20mm brass gate valve 	10mm steel pipe (2mm thick)	1	F-head Air chamber		
40 mm nipple (galv)		3	Nipple		
40 mm T-piece (galv)		2	T/piece		

40 mm male adaptor (nylon)	1	Adaptor	
40 mm male bend (galv)	2		
40 mm pipe clamp	1	Clamp	
40 mm LDPE pipe	3		
RESERVOIR WITH DRINKING TROUGH: Approximately	v 5m a	way from the u	vindmitt
Construction of concrete reservoir with the drinking trough around		Truly Alban the P	VIIIGITAII
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.	1	Reservoir	
The drinking trough wall should be cast simultaneously with the first lift of	. !	200	
the reservoir wall. The inner formwork of the trough wall should be	1	Deimlein	
500mm wide and 22m length and 700mm wide and 23m length for the	'	Drinking	
outer formwork,		trough	
The steel plate to cover the float valve in the drinking trough should be included.		William Co. of C	7
Provide concrete test cube results	10	Test cube	
Construction of new apron around reservoir:		1000000	
Three (3) meter apron should be constructed around the existing reservoir.			
Inner circumference apron: 23 meters	1	Apron	
Outer circumference of apron: 42 meters			
Thickness of apron: 15 cm			
Width of apron: 3 meter			
Size of apron: 96 m ²	Í	Ĭ.	
Concrete strength: 30 MPa		Î	
Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm stone)	-		-
Provide concrete test cubes			
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	
Outlet pipe 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 float valve	1	Valve	
40 mm T at a second	1	T/piece	
40 mm T-piece			
40 mm bend (galv)	1	Bend I	
40 mm bend (galv)	-	Bend Nipple	

	32 mm male adaptor	1	Adaptor	
	DRINKING TROUGHS: 18T LOCATION: Approximately 12	Om aw	ay from the reservoir	
	2 ND LOCATION: Approximately 120	m awa	y from the reservoir	
	Supply and installation of concrete casted drinking troughs	2	Trough	and the same
	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		V Administration of the state o	
	Slab specification for drinking troughs	2	Slab	
	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	Cube test	
	The tranch specification	240	Meter	
	Size: The pipe should be buried in a trench of 0.5m deep with the width of 0.3m		1) (I Am.)	
	Fittings for troughs			
	32 mm inserts T-piece (nylon)	4	T/piece	
,	32 mm male adaptor (nylon)	2	Nipple	
ĺ	32 mm x 0.8m standpipe	2	Pipe	
	32 mm nipple (galv)	2	Nipple	
	32 mm bend (galv)	2	Bend	
	32 mm M&F bend	2	Bend	
The state of the s	32 mm ball valve	2	Valve	
200	32 mm brass gate 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.	300	Meter	
1	Thread tape	20	Roll	
	TOTAL			

2.10 Klein Eira (\$ 27° 17' 35.4"; E 23° 25' 02.2")

	DESCRIPTION		Qty	Unit	Price/Unit VAT Incl	Total Pric
1	WINDMILL LOC	ATION: S - 27° 17' 35.4"; E 2	3° 25′	02.2"		1
	Supply and installation of Windmill (Includes all equipment, materials transport and Install 9 m high windmill tower with a 3.0 m strake system, fork rod, bucket rod (pitman), woo	d labour required) Ø wheel with a gearbox, tail		Windmill		
	40mm Ø x 3.0m Galvanized medium screw		5	Pipe		
	• 12 mm Ø x 3.0m Electro plated pump rods	with socks and protectors	7	Rod		
	Borehole specification (Pump depth = 15 meter	3)				
	Water level Delivery	Before test: 9 m After test: 15.4 m 9000 l/h				
	Water abstraction limit at 60 % of delivery	5400 l/h				
	Stainless steel borehole cylinder diameter 6 Cylinder make: Cylinder model: Cylinder size: mm Specify delivery of cylinder: Total head: meters		1	Cylinder		
F	Windmill Tower Foundation Concrete strength: 30 MPa 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	m³		
S	Supporting concrete block around casing Concrete strength: 30 MPa Statio: 1:3:3 (1 cement, 3 parts coarse sand and 3 size: 800mm diameter x 600mm high 4x12mm b	- 1	0.3	m³	- Parket	· · · · · · · · · · · · · · · · · · ·
	rovide concrete test cube results				Î	
F	ittings from windmill to reservoir					
	40 mm Ø brass foot (strainer) valve		1	Valve		
	40 mm Ø base plate		1	Plate		
•	40 mm Ø brass non return valve		1	Valve		
•	40 mm Ø brass force head		1	F-head		747.4
•	40 mm Ø inlet air chamber (150mm Ø x 9) with 20mm brass gate valve	00mm steel pipe (2mm thick)	1	Air chamber		
•	40 mm nipple (galv)		3	Nipple		
•	40 mm T-piece (galv)		2	T/piece		
•	40 mm x 0.5 meter standpipe (galv)		1	Pipe		-
•	40 mm male adaptor (nylon)		1	Adaptor		

	40 mm Male bend (galv)	2	Bend	
	40 mm pipe clamp	1	Clamp	
	40 mm LDPE pipe	30	Meter	
	RESEVIOR WITH DRINKING TROUGH LOCATION: Approximate	tely 5n	away from the windmill	
	Construction of concrete reservoir with the drinking trough around			n and distributions and
	Circular reinforced concrete reservoir, diameter 4.5 m, height 2.1 m, wall	ĺ		
	thickness 225 mm, capacity 33.5 m3(33.5 kl). The wall should be reinforced	ļ.		
	horizontally and vertically and the floor horizontally. Reservoir should be	1	Reservoir	
1	supply with inlet and outlet.			
-	The drinking trough wall should be cast simultaneously with the first lift of		Drinking	
	the reservoir wall. The inner formwork of the trough wall should be 500mm	1	trough	
1	wide and 22m length and 700mm wide and 23m length for the outer		Tough	
1	formwork.			
1	The steel plate to cover the float valve in the drinking trough should be			
	ncluded.			
F	Provide concrete test cube results	10	Test cube	
C	Construction of new apron around reservoir:		AC To The Control of the Control of	W W T T T T T
T	Three (3) meter apron should be constructed around the existing reservoir.			
lı	nner circumference apron: 23 meters	1 .	Apron	
C	Outer circumference of apron: 42 meters			
Т	hickness of apron: 15 cm			
٧	Vidth of apron: 3 meter		1	
S	ize of apron: 96 m ²			
C	Concrete strength: 30 MPa			
R	atio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm stone)			
P	rovide concrete test cubes			
lr	elet pipe fittings (40 mm)			
0	2.5 meter x 40 mm standpipe (galv)	1	Pipe	
•	0.3 meter x 40 mm standpipe (galv)	1	Pipe	
9	40 mm bend (gaiv)	3	Bend	
0	40 mm male adaptor (galv)	2	Adaptor	
•	40 mm pipe clamp for LDPE pipe	1	Clamp	
0	utlet pipe fittings (40 mm)			
9	40 mm outlet screen (stainless steel)	1	Screen	
8	0.5 meter x 40 mm standplpe (galv)	1	Pipe	
0	40 mm brass gate valve (brass)	1]	Valve	
6	40 mm float valve	1	Valve	- Little
•	40 mm T-piece	1	T/piece	
•	40 mm bend (galv)	1	Bend	
•	40 mm nipple (galv)	1	Nipple	
•	40 mm x 32 mm reducing bush (galv)	1	R/Bush	
•	32 mm male adaptor	1	Adaptor	

DRINKING TROUGHS: 1 ST LOCATION: Approximately 120			
2 ND LOCATION: Approximately 120a	n away	from the reservoir	
Supply and installation of concrete casted drinking troughs	2	Trough	
Drinking troughs specifications	ļ		
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		and the second s	
Slab specification for drinking troughs	2	Slab	
Concrete strength: 30 MPa	Î		
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		h	
Size: 62 m ² (9.45 m ³ concrete)			
Provide concrete test cube results for slab	2	Cube test	
The trench specification	240	Meter	
Size: The pipe should be buried in a trench of 0.5m deep with the width of		March Addition	
0.3m			
Fittings for troughs			-
32 mm inserts T-piece (nylon)	4	T/piece	
32 mm male adaptor (nylon)	2	Adaptor	#7 WM. (
32 mm x 0.8 m standpipe	2	Pipe	
32 mm nipples (galv)	2	Nipple	
32 mm bend (galv)	2	Bend	
32 mm M&F bend	2	Bend	W
32 mm bali valve	2	Valve	Arra da ba
32 mm brass gate 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	300	Meter	
Thread tape	20	Roll	
TOTAL			

2.11 Lokaleng (S - 27°. 235332025; E 23°.159988135) (DOA 4838)

DESCRIPTION	Qty	Unit	Price/Unit	Total Pi
WINDMILL LOCATION: S - 27°. 235332025	5; E 23°.159	988135		
Supply and installation of Windmill (Includes all equipment, materials transport and labour required) Install 9m high windmill tower with a 3.0 m Ø wheel with a gearbox, brake system, fork rod, bucket rod (pitman), wood rod 3 meters and heads.	, tail, 1	Windmill		
40 mm Ø x 3.0m Galvanized medium screwed/socket plpe SABS	13	Pipe		-
 12 mm Ø x 3.0m Electro plated pump rods with socks and protectors 	14	Rod		
Borehole specification (Pump depth = 39 meters) Storehole (poth Water level Before test: 36.1 m				and and an agent and an agent agent and an agent agent agent agent agent agent agent agent agent agent agent a
Delivery After test: 36.1 m Delivery 12 000 l/h Water abstraction limit at 60 % of delivery 7 200 l/h			4.36 A.	
Stainless steel borehole cylinder diameter 60 mm tube length 550 mm Cylinder make: Cylinder model: Cylinder size: mm Specify delivery of cylinder: Liters/ hour Total head: meters	n 1	Cylinder		
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	2.8	m³		
Supporting concrete block around casing 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	0.3	m³		Middle and a semi-side and principal programs.
Fittings from windmill to reservoir				
v 40 mm Ø brass foot valve	1	Valve		
40 mm Ø base plate	1	Plate		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
40 mm Ø brass non return valve	1	Valve		
40 mm Ø brass force head	1	F-head		
40 mm Ø inlet air chamber (150mm Ø x 900mm steel pipe (2mm thick) wa 20mm brass gate valve	ith 1	Air chamber		
40 mm nipple (galv)	3	Nipple		
• 40 mm T-piece (galv)	2	T/piece	6.	
40 mm x 0.5 meter standpipe (galv)	1	Pipe		

ř						
	40 mm male adaptor (nylon)	1	Adaptor			
	40 mm male bend (galv)	2	Bend			-
	40 mm pipe clamp	1	Clamp			-
entonerous	40 mm LDPE pipe	30	Meter			_
2.	REPAIR OF RESERVOIR WITH DRINKING	TROL	JGH:			-46
	Repair and sealing of existing reservoir and trough.	T			1	-
	The existing reservoir and drinking trough around the reservoir on the site,					
	need to be cleaned and the cracks to be repaired inside and outside with		ļ	N THE COLUMN TWO IS NOT THE COLUMN TWO IS NO		
	sand/cement filler. The inside of the reservoir and drinking trough needs to be			Web-tillinean		- 47
	sealed with geotextiles matt (90-100 g/m²) and polymer anionic bitumen emulsion sealant.		WINIA O'VIII tahahan peperum.	Adda diprogramming to the	TO THE PARTY OF TH	The second second
	Specification type of matt:	Control	Allega d'Arganisa de la companya de		77, 25	
	Specification type of sealing:		No.			
	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 overlap should be 30 cm.			7	1	
	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	1			į	
	matt to the area and paint the matt anther two coats with sealant					
46	Size of reservoir					
	Diameter: 5.09 meter					
-	Height: 2.4 meters			ĺ		
	Circumference: 16 meters	1	Reservoir			
	Size to be sealed: 67 m ² (floor 19.6 m ² , side wall 40 m ² top of wall and vall 9.6 m ²)		T G G G T V G II		The state of the s	
5	Size of drinking trough around reservoir					
	Diameter: 40 cm					
	Depth: 50 cm	1	Drinking		- The same same	
C	Circumference: 18 meters		trough			
S	ize 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			
Length of apron: 3 meter	1	Apron	
Size of apron: 96 m ²			
Concrete strength: 30 MPa			
Ratio: 1:3:3 (1 cernent, 3 parts coarse sand and 3 parts of 19mm stone)			
Provide concrete test cube results			
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	
Outlet pipe 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 nipple (gaiv)	1	Nipple	
40 mm x 32 mm reducing bush (galv)	1	R/Bush	
32 mm male adaptor	1	Adaptor	
DRINKING TROUGHS: 1 ST LOCATION: Approximately 120m	away	from the reserve	oir
2 ^{N□} LOCATION; Approximately 120m a	way fro	om the reservoir	*
Supply and Installation of concrete casted drinking troughs	2	Trough	
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 liters per trough			
Slab specification for drinking troughs		OL-I	
SED SPACEFORM OF CHINNING BODGING	2	Slab	
Concrete strength: 30 MPa			
9	ř		I I
Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm stone)			
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		7,000	
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 ^s concrete)	2	Cube	
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 ^s concrete)	2	Cube test	
Concrete strength: 30 MPa Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm stone) Glab size: 9 meter x 7 meter x 0.15 meter Size: 62 m 2 (9.45 m s 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	2 240		

Fit	ttings for troughs			
4	32 mm inserts T-piece (nylon)	4	T/piece	
•	32 mm male adaptor (nylon)	2	Adaptor	
•	32 mm x 0.8m standpipe	2	Pipe	ĺ
0	32 mm nipple (galv)	2	Nipple	
	32 mm bend (galv)	2	Bend	
æ	32 mm M&F bend	2	Bend	
	32 mm ball valve	2	Valve	
0	32 brass gate valve	2	Valve	
•	32 mm float valve (control water level)	2	Valve	
4	32 mm clamps (wire type)	24	Clamp	
0	32 mm class 3 LDPE pipe	300	Meter	7
0	Thread tape	20	Roll	
TC	DTAL			



2.12 Maphiniki (S - 27°01'40.8"; E 23° 13' 38.6")

	DESCRIPTION		Qty	Unit	Price/Unit VAT Incl	Total Price
1.	WINDMILL LOCATION: S - 27°01'40.8"; E 2:			38.6"	. !	1
THE PERSON NAMED AND PASSED OF THE PERSON NAMED AND PASSED PASSED OF THE PERSON NAMED AND PASSED PASSED PASSED PASSED PASSED	Supply and installation of Windmill (Includes all equipment, materials transport and Install 9 m high windmill tower with a 3.0 m Ø brake system, fork rod, bucket rod (pitman), wheads.	wheel with a gearbox, tail,	0	Windmill		
	 40mm Ø x 3.0m Galvanized medium screwe 	d/socket pipe SABS	5	Pipe		
	 12 mm Ø x 3.0m Electro plated pump rods w 	ith socks and protectors	6	Rod		1
	Borehole specification (Pump depth = 15 meter	3)				
	Bourbore death	77.4 m.	1		W V V V V V V V V V V V V V V V V V V V	
	Water level Delivery Water abstraction limit at 60 % of delivery	Before test: 3.8 m After test: 7.5 m 10 285 l/h 6 171 l/h	interest and the second		Applications of the state of th	
	Stainless steel borehole cylinder diameter 6 Cylinder make:	s/ hour	-	Cylinder		
	Vindmill Tower Foundation	The control of the co				
- 1	Concrete strength: 30 MPa		2.8	m³		
5	Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 size: See attached specification in Appendix A provide concrete test cube results	parts of 19mm stone)			The state of the s	
	upporting concrete block around casing		0.3	m ³		
	concrete strength: 30 MPa		0.3	III		
1	atio: 1:3:3 (1 cement, 3 parts coarse sand and 3	parts of 19mm stone)				
- 1	ize: 800mm diameter x 600mm high 4x12mm bo	- 1			İ	
- 1	rovide concrete test cube results				-	
F	ittings from windmill to reservoir					
•	40 mm Ø brass foot valve (strainer)		1	Valve		
•	40 mm Ø base plate		1	Plate		
0	40 mm Ø brass non return valve		1	Valve I		
	40 mm Ø brass force head		1	F-head		
•	40 mm Ø inlet air chamber (150mm Ø x 900mm	steel pipe (2mm thick) with	1	Air		
	20mm brass gate valve			chamber		
•	40 mm nipple (galv)		3	Nipple		
	40 mm T-piece (galv)		2	T/piece		

40 mm x 0.5 meter standpipe (galv)	1	Pipe		M
40 mm male adaptor (nylon)	1	Adaptor		. /
40 mm male bend (galv)	2	Bend		
40 mm pipe clamp	1	Clamp		
40 mm LDPE pipe	30	Meter		
REPAIR OF RESERVOIR WITH DRINKING	G TROUG	3H:	2	
Repair and sealing of existing reservoir and trough.				
The existing reservoir and drinking trough around the reservoir on the site	e			
need to be cleaned, and the cracks to be repaired Inside and outside with	h		7770	
sand/cement filler. The inside of the reservoir and drinking trough needs to	0		ile.	
be sealed with geotextiles matt (90-100 g/m²) and polymer anionic bitumer emulsion sealant.	n			
Specification type of matt:				
Specification type of sealing:	S. 70.			
Coating layers recommended :	••		11.00	
The sealing matt should go over the wall of the reservoir down the outside		TO THE REAL PROPERTY OF THE PR		
wall for 30 cm and where the matt is joined the overlap should be 30 cm.			4	
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				1
matt to the area and paint the matt anther two coats with sealant				
Size of reservoir	98	and the second	30	
Diameter: 5.09 meters	1	Reservoir		
Height: 2.4 meters	-			
Circumference: 16 meters				
Size to be sealed: 96 m ² (floor 19.6 m ² , side wall 40 m ² top of wall and wall 9.6 m ²)	a la la la la la la la la la la la la la			
Size of drinking trough around reservoir	T. C.		e distance of manager.	
Diameter: 40 cm			j	
Height: 50 cm		Deletie -		
Circumference: 18 meters	1	Drinking	All and a second	
Size to he sealed: 35 m ²		trough	ŀ	and the second

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				
Length of apron : 3 meter	1	Apron	Ī	
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)	9	1		
Provide concrete test cube results				
Inlet pipe fittings (40 mm)	1 1:52			
2.5 meter x 40 mm standpipe (galv)	S 1:	Pipe		
0.3 meter x 40 mm standpipe (galv)		Pipe		·
40 mm bend (galv)	3	Bend		·····
40 mm male adaptor (galv)	2	Adaptor		
40 mm plpe clamp for LDPE pipe	1	Clamp		
Outlet pipe fittings (40 mm)				
40 mm outlet screen (stainless steel)		Screen		
0.5 meter x 40 mm standpipe (galv)		Pipe		
40 mm brass gate valve (brass)	1	Valve		· · · · · · · · · · · · · · · · · · ·
40 mm bend (galv) 40 mm nipple (galv)	1	Bend		
40 may 22 may to during high (a.t.)	1	Nipple		
40 mm x 32 mm reducing bush (gaiv)	1	R/Bush .		
32 mm male adaptor	1	Adaptor		
DRINKING TROUGHS: 1 ST LOCATION: Approximately 1200 2 ND LOCATION: Approximately 1200				
Supply and installation of concrete casted drinking troughs	2	Trough	voir	
Orinking troughs specifications	_	i i odgi	The state of the s	
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		
Concrete strength: 30 Mpa			1	
Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm stone)			100 pt.	
Slab size : 9 meter x 7 meter x 0.15 meter	1			
Size: 62 m ² (9.45 m ³ concrete)				
Provide concrete test cube results for slab	2	Cube test		
he trench specification	240	Meter		
Size: The pipe should be buried in a trench of 0.5m deep with the width of		ĺ		
.3m				
Ittings for troughs				

•	32 mm inserts T-piece (nylon)	4	T/piece	
•	32 mm male adaptor (nylon)	2	Adaptor	
	32 mm x 0.8m standpipe	2	Pipe	
	32 mm nipple (galv)	2	Nipple	1
0	32 mm bend (galv)	2	Bend	
•	32 mm M&F bend	2	Bend	
	32 mm brass gate 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.	300	Meter	
•	Thread tape	120	Roll	
TO	TAL			

2.13 Morotobolo (S - 27°19' 25.4"; E 23°29'15.4") (T 10625)

	DESCRIPTION		Qty	Unit	Price/Unit	Total Pric
	WINDMILL LOCA	ATION: S - 27°19' 25.4"; E 2	3°29'1	5.4"		
	Supply and installation of Windmill (Includes all equipment, materials transport and install 9m high windmill tower with a 3.0m Ø whenever, fork rod, bucket rod (pitman), wood rod are	labour required) el with a gearbox, tail brake		Windmill		
1	40mm Ø x 3.0m Galvanized medium screwed/socket pipe SABS 12 mm Ø x 3.0m Electro plated pump rods with socks and protectors	l/socket pipe SABS	21	Pipe		
			22	Rod		
E	3 Borehole specification (Pump depth = 64 meters)					
	न्त्रहात्के इक्तम	95 m			ļ j	
Win a	Water level Delivery Water abstraction limit at 60 % of delivery	Before test: 12.5 m After test: 60 m 1 200 l/h 720 l/h			77, 120, 120, 120, 120, 120, 120, 120, 120	
*	Stainless steel borehole cylinder diameter 60 r Cylinder make: Cylinder model: Cylinder size: mm Specify delivery of cylinder : Liters Total head:mete	/ hour	1	Cylinder		n en en en en en en en en en en en en en
V	findmill Tower Foundation					
С	oncrete strength: 30 MPa		2.8	m ³		
	atio: 1:3:3 (1 cement, 3 parts coarse sand and 3 p ize: See attached specification in Appendix A	parts of 19mm stone)				
Į	rovide concrete test cube results					
	upporting concrete block around casing		0.3	m ³		
	oncrete strength: 30 MPa		0,0			
	atio: 1:3:3 (1 cement, 3 parts coarse sand and 3 p	earts of 19mm stone)				
	ze: 800mm diameter x 600mm high 4x12mm bolt	· I				
Pi	rovide concrete test cube results					
Fi	ttings from windmlll to reservoir					50//h=h-1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.
	40 mm Ø brass foot valve (strainer)		1	Valve		
٠	40 mm Ø base plate		1	Plate		
•	40 mm Ø brass non return valve		1	Valve		
	40 mm Ø brass force head		1	F-head		· · · · · · · · · · · · · · · · · · ·
٠	40 mm Ø inlet air chamber (150mm Ø x 900)	mm steel pipe (2mm thick)	1	Air		
	with 20mm brass gate valve			chamber	ļ	
•	40 mm nipple (galv)		3	Nipple		
٠	40 mm T-piece (galv)		2	T/plece	· ·	
٠	40 mm x 0.5 meter standpipe (galv)		1	Pipe		
	40 mm male adaptor (nylon)		1	Adaptor		

	40 mm male bend (galv)	2	Bend	
,	40 mm pipe clamp	1	Clamp	
	40 mm LDPE pipe	30	Meter	
2.	REPAIR OF RESERVOIR WITH DRINKING	TROL	JGH:	
A. B.	Repair and sealing of existing reservoir and trough.			
	The existing reservoir and drinking trough around the reservoir on the site,			
	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			
William Ches	emulsion sealant.			
-	Specification type of matt:		Visit and the second se	
	Specification type of sealing:		Addition of the state of the st	
	Coating layers recommended ;		;;; d. mana	
	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.			
1	Where the inner wall meet the floor the overlap should be 30 cm.	اُ		
	Method of application: Paint area to be seal with sealant and apply the	4		
F	natt to the area and paint the matt anther two coats with sealant	Í		
8	Bize of reservoir			
	Diameter: 5.09 meter			
ŀ	feight: 2.4 meters	1	Reservoir	
C	Circumference: 16 meters		:	
V	Size to be sealed: 96 m ² (floor 19.6 m ² , side wall 40 m ² top of wall and vall 9.6 m ²)			
S	ize of drinking trough around reservoir			
D	Nameter: 40 cm	1	Drinking	
Н	eight: 50 cm		trough	
C	ircumference: 18 meters			
3	ize to be sealed: 35 m ²	ĺ	Table 1	
C	onstruction of new apron around existing reservoir:			
T	hree (3) meter apron should be constructed around the existing reservoir.			
	ner circumference apron : 23 meters			
O	uter circumference of apron : 42 meters			
Th	nickness of apron: 15 cm	1	Apron	
Le	ength of apron : 3 meter			
Si	ze of apron; 96 m ²	-		
Co	oncrete strength: 30 Mpa	ĺ		
Ra	atio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm stone)	}		
	ovide concrete test cube result			

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	1.4	
# 40 mm male adaptor (galv)	2	Adaptor		
40 mm pipe clamp for LDPE pipe (1997)	1	Clamp	. 14.	Descrip
Outlet pipe fittings (40 mm)	itus .			
40 mm outlet screen (stainless steel)	1	Screen		15
0.5 meter x 40 mm standpipe (galv)	1	Pipe	176 - N	
40 mm brass gate valve (brass)	8 1	Valve		
40 mm bend (galv)	1	Bend	9.00	
40 mm nipple (galv)	1.	Nipple	The same	N TI
40 mm x 32 mm reducing bush (galv)	1 3 1 2		441 3	
	1	Adaptor	area in	1472
DRINKING TROUGHS: 18T LOCATION: Approximately	v 20m awa	2	ndmill	1
2 ND LOCATION: Approximately 1				
3RD LOCATION: Approximately				
4TH LOCATION: Approximately				
Supply and installation of concrete casted drinking troughs	4	Trough		
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				
Slab specification for drinking troughs	4	Slab		
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		ļ		
Size: 62 m ² (9.45 m ³ concrete)				
Provide concrete test cube results for slab	4	Cube test		
The trench specification				
Size: The pipe should be buried in a trench of 0.5m deep with the width	400	Meter		
olze: The pipe should be buried in a trench of 10.5m deep with the width 0.3m	n ot			
Fittings for troughs	\$			
32 mm inserts T-piece (nylon)		T/ml		
32 mm male adaptor (nylon)	4	T/plece		
- oz minimare adaptor (nyton)	4	Adaptor		
32 mm v 0 8m standning	4	Pipe		
		Nipple		
32 mm nipple (galv)	4		1	
32 mm nipple (galv) 32 mm bend (galv)	4	Bend		
32 mm nipple (galv) 32 mm bend (galv) 32 mm M&F bend	4	Bend Bend		
32 mm nipple (galv) 32 mm bend (galv) 32 mm M&F bend 32 mm ball valve	4 4 4	Bend Bend Valve		
32 mm nipple (galv) 32 mm bend (galv) 32 mm M&F bend	4	Bend Bend		

32 mm clamps (wire type)	48	Clamp	
32 mm class 3 LDPE pipe.	500	Meter	
Thread tape	20	Roil	
TOTAL			

2.14 Mapoteng (S - 27° 22' 28.4; E 23° 30' 37.6")

	DESCRIPTION		Qty	Unit	Price/Unit VAT Inci	Total
	WINDMILL LO	OCATION: S -27° 22' 50.8"; E 23	3° 30'	23 8"		
(4 Ir	Supply and Installation of Windmill Includes all equipment, materials transport notall 9 m high windmill tower with a 3.0 reake system, fork rod, bucket rod (pitman),	t and labour required)		Windmill		
	' 40 mm Ø x 3.0m Galvanized medium so		18	Pipe		
	12 mm Ø x 3.0m Electro plated pump ro	ds with socks and protectors	19	Rod		
В	orehole specification (Pump depth = 54 m	aters)				
500	Borokus digari	\$J.5m				
	Water level Delivery Water abstraction limit at 60 % of delivery	Before test: 10.5m After test: 51.9m 960 l/h 576 l/h				
•	Stainless steel borehole cylinder diamete Cylinder make: Cylinder model: Cylinder size: mm Specify delivery of cylinder: Total head: met	Liters/hour	1	Cylinder		
Co Ra Siz	Indmill Tower Foundation concrete strength: 30 MPa atio: 1:3:3 (1 cement, 3 parts coarse sand a ze: See attached specification in Appendix a coulde concrete test cube results		2.8	LU ₃		
Co Ra Siz	upporting concrete block around casing oncrete strength: 30 MPa atio: 1:3:3 (1 cement, 3 parts coarse sand at 2e: 800mm diameter x 600mm high 4 x 12m		0.3	m³		
	ovide concrete test cube results					
	tings from windmill to reservoir					
•	40 mm Ø brass foot valve (strainer)		1	Valve		
•	40 mm Ø base plate 40 mm Ø brass non return valve		1	Plate		
•	40 mm Ø brass force head	7 100	1	Valve		
•	40 mm Ø inlet air chamber (150mm Ø x 9 thick) with 20mm brass gate valve	00mm steel pipe (2mm	1	F-head Air chamber	, , , , , , , , , , , , , , , , , , ,	· ,
•	40 mm nipple (galv)		3	Nipple		
	40 mm T-piece (galv)	\ \frac{1}{2}	2	T/piece		

-					
	40 mm male adaptor (nylon)	1	Adaptor		
	40 mm male bend (galv)	2	Bend		
	40 mm pipe clamp	1	Clamp		
	40 mm LDPE pipe	3	Meter		
2.	REPAIR OF RESERVOIR WITH DRINKING	TRO	UGH:		
	Repair and sealing of existing reservoir and trough.				
	The existing reservoir and drinking trough around the reservoir on the site,				-
	need to be cleaned and the cracks to be repaired inside and outside with		ļ	170	Ì
	sand/cement filler. The inside of the reservoir and drinking trough needs to		1		Í
	be sealed with geotextiles matt (90-100 g/m²) and polymer anionic bitumen emulsion sealant.				
	Specification type of matt:		N. C. P. C. Malder		The individual section is a second
	Specification type of sealing:				CA
	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 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 another two coats with sealant.				
	Size of reservoir			The second secon	
	Diameter: 5.09 meter		dir. Malaware		l
	Height: 2.4 meter				
	Circumference: 16 meters	ì	Reservoir		
	Size to be sealed: 67 m ² (floor 19.6 m ² , side wall 40 m ² top of wall and wall 9.6 m ²)	man and and and and and and and and and a	The state of the s	TELL SPAN	
	Size of drinking trough around reservoir	ĥ			South P. Co.
	Diameter: 40 cm			į.	
	Depth: 50 cm	4	Delation		4
	Circumference: 18 meters	1	Drinking		
	Size to be sealed: 35 m ²		trough		

Construction of new apron around existing reservoir:							
Three (3) meter apron should be constructed around the existing reservoir.				1			
Inner circumference apron : 23 meters							
Outer circumference of apron : 42 meters							
Thickness of apron: 15 cm							
Length of apron : 3 meter	1	Apron		To the state of th			
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)		The state of the s	:				
Provide concrete test cube results							
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	1 1 1				
40 mm bend (galv)	3	Bend					
40 mm male adaptor (galv)	2	Adaptor		134			
40 mm pipe clamp for LDPE pipe	1	Clamp	181				
Outlet pipe fittings (40 mm)				1774			
40 mm outlet screen (stainless steel)	1	Screen					
0.5 meter x 40 mm standpipe (galv)	1	Pipe	1 14				
• 40 mm nipple (galv)	1 *	Nipple		7 - 34			
40 mm brass gate valve (brass)	1	Valve	AP :				
• 40 mm bend (galv)	1	Bend					
 40 mm x 32 mm reducing bush (galv) 	1	R/Bush					
32 mm male adaptor	1	Adaptor					
DRINKING TROUGHS: 1 ST LOCATION: Approximately 120m away from the reservoir							
2 ND LOCATION: Approximately 120s Supply and installation of concrete casted drinking troughs	n away 2	from the res	servoir				
Drinking troughs specifications	-	Trough					
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	İ						
Capacity: 1000 liters per trough							
The state of the s	2	Slab		-			
	1 -	OldD					
Slab specification for drinking troughs			1				
Slab specification for drinking troughs Concrete strength: 30 Mpa			3				
Slab specification for drinking troughs Concrete strength; 30 Mpa Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm stone)							
Slab specification for drinking troughs 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		Wilder and the state of the sta	Opposite the second sec				
Slab specification for drinking troughs 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)	2	Cube test					
Slab specification for drinking troughs Concrete strength: 30 Mpa	2 240	Cube test		***			
Slab specification for drinking troughs 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) Provide concrete test cube results for slab The trench specification	2 240	Cube test Meter					
Slab specification for drinking troughs 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 The trench specification Size: The pipe should be buried in a trench of 0.5m deep with the width of	-		The state of the s	M			
Slab specification for drinking troughs 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	-			***			

32 mm male adaptor (nylon)	2	Adaptor	
32 mm x 0.8m standpipe	2	Pipe	
32 mm nipple (galv)	2	Nipple	
32 mm bend (galv)	2	Bend	
32 mm M&F bend	2	Bend	
32 mm brass gate valve	2	Valve	**************************************
32 mm ball valve	2	Valve	
 32 mm float valve (control water 	ievel) 2	Valve	
32 mm clamp (wire type)	24	Clamp	
32 mm class 3 LDPE pipe.	300	Meter	
Thread tape	20	Roll	
TOTAL	We contain the second of the s		

2.15 Mogonate (S - 26. 684836115; E 23. 318061683)

DESCRIPTION		Qty	Unit	Price/Unit VAT Inci	Total Pric
WINDMILL	LOCATION: S -26° 41' 04.2"; E 2	3° 19' (05.4"	J	
Supply and Installation of 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 and force head.			Windmill		
40 mm Ø x 3.0m Galvanized medium so	rewed/socket pipe SABS	30	Pipe		
 12 mm Ø x 3.0m Electro plated pump ro 	ds with socks and protectors	33	Rod		
Borehole specification (Pump depth = 90 me	eters)				
Scremats, Sept	172 m				
Water level Delivery Water abstraction limit at 60 % of delivery	Before test: 89 m After test: 91.6 m 6000 l/h		The state of the s		
Stainless steel borehole cylinder diameter Cylinder make:	Liters/ hour	1	Cylinder		÷
Windmill Tower Foundation Concrete strength: 30 MPa		2.8	m ³		
Ratio: 1:3:3 (1 cement, 3 parts coarse sand at Size: See attached specification in Appendix A Provide concrete test cube results	•			A	
Supporting concrete block around casing Concrete strength: 30 MPa		0.3	m³		
Ratio: 1:3:3 (1 cement, 3 parts coarse sand ar	ad 2 parts of 40mm atoms)			1	
Size: 800mm diameter x 600mm high 4 x 12 r					
Provide concrete test cube results	min boils and huls				
Fittings from windmill to reservoir					
40 mm Ø brass foot valve (strainer)		1	Value		
40 mm Ø base plate		1	Valve Plate		
40 mm Ø brass non return valve		1			
40 01		1	Valve		
		1	F-head Air		
20mm brass gate valve		•	chamber		
40 mm nipple (galv)	- Addition - Addition	3	Nipple		
40 mm T-piece (galv)					, , , , , , , , , , , , , , , , , , ,
40 mm x 0.5 meter standpipe (galv)		1	T/piece Pipe		
(Same)		1	Lihe }	3	

40 mm male bend (galv)	2	Bend	Į.	
40 mm pipe clamp	1	Clamp		
40 mm LDPE pipe	30			
RESEVIOR WITH DRINKING TROUGH LOCATION: Approxima	ately 5	m away from th	ae windmill	
Construction of concrete reservoir with drinking trough around			1	
Circular reinforced concrete reservoir, diameter 4.5 m, height 2.1 m, wall	1	Reservoir		
thickness 225 mm, capacity 33.5 ms (33.5 kl), The wall should be reinforced		1 1000, 10,		
horizontally and vertically and the floor horizontally. Reservoir should be				
supply with inlet and outlet.				
The delivery of the second				
The drinking trough wall should be cast simultaneously with the first lift of	1	Drinking		
the reservoir wall. The inner formwork of the trough wall should be 500mm		trough		
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	Test cube		
Construction of new apron around reservoir:	ì			
Three (3) meter apron should be constructed around the existing reservoir.	1	Apron		
Inner circumference apron : 23 meters				
Outer circumference of apron : 42 meters Thickness of apron: 15 cm			1	
Length of apron : 3 meter			1	
Size of apron: 96 m²		İ		
Concrete strength: 30 MPa	_		4	
Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm stone)				
Provide concrete test cube results		Í	ì	
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 (galy)	1	Pipe		
All mm male adapter (and A	3	Bend		THE BARBON AND ADDRESS OF THE PARTY OF THE P
40 mm pipe clamp for LDPE pipe	2	Adaptor		
Outlet pipe fittings (40 mm)	1	Clamp		
40 mm outlet screen (steinlann stock)	4	0		
0.5 meter v 40 mm standning (gab.)	1	Screen		
40 mm float valve	3	Pipe		
40 mm T-piece	1	Valve		
40 mm bress date valve (house)	-	T/piece		
		Valve		_
40 mm bend (galv)	1 7	Bend	-	
40 mm ninnie (gelv)		5.1: ·		
40 mm nipple (galv)	1	Nipple R/Bush	7.4 Million and Million (1984)	

DRINKING TROUGHS: 18T LOCATION: Approximately 12	0m aw	ay from the re	servoir	-
2 ND LOCATION: Approximately 120	m awa	y from the res	ervoir	
Supply and installation of concrete casted drinking troughs	2	Trough		
Drinking troughs specifications	1			
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		Î		ĺ
Capacity: 1000 liters per trough	İ			
Slab specification for drinking troughs	1	Slab		
Concrete strength; 30 Mpa				
Ratio: 1:3:3 (1 cement, 3 parts coarse sand and 3 parts of 19mm stone)				ĺ
Slab size: 9 meter x 7 meter x 0.15 meter				
Size: 62 m ² (9.45 m ³ concrete)		- Marian		
Provide concrete test cube results for slab	2	Cube test		
The trench specification	240	Meter		
Size: The pipe should be buried in a trench of 0.5m deep with the width of	240	INICIOI		
0.3m		į		
Fittings for troughs			THE TAXABLE PARTY.	
32 mm inserts T-piece (nylon)	4	T/piece		
32 mm male adaptor (nylon)	2	Adaptor		
32 mm x 0.8 m standpipe	2	Pipe		
32 mm nipple (galv)	2	Nipple		-
32 mm bend (galv)	2	Bend		
32 mm M&F bend	2	Bend		
32 mm brass gate valve	2		1)00	
32 mm ball valve		Valve	-	
32 mm float valve (control water level)	2	Valve		
32 mm clamp (wire type)	2	Valve		
32 mm class 3 LDPE pipe.	24	Clamp		
Thread tape	300	Meter		
OTAL	20	Rolls		



CONSTRUCTION DETAILS OF THE 4.5m DIAMETER REINFORCED CONCRETE RESERVOIR

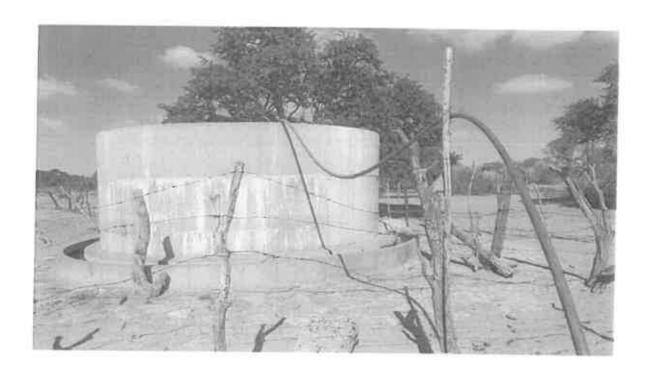




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PURPOSE OF THE DOCUMENT

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).





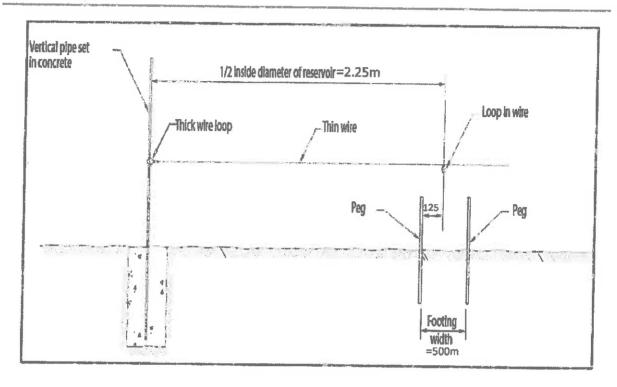


Figure 2.1: Setting out the circular reservoir footing

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.





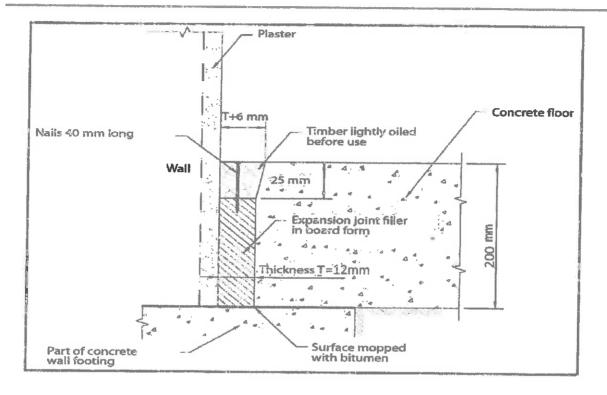


Figure 5.1 Joint between edge of floor and wall

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.



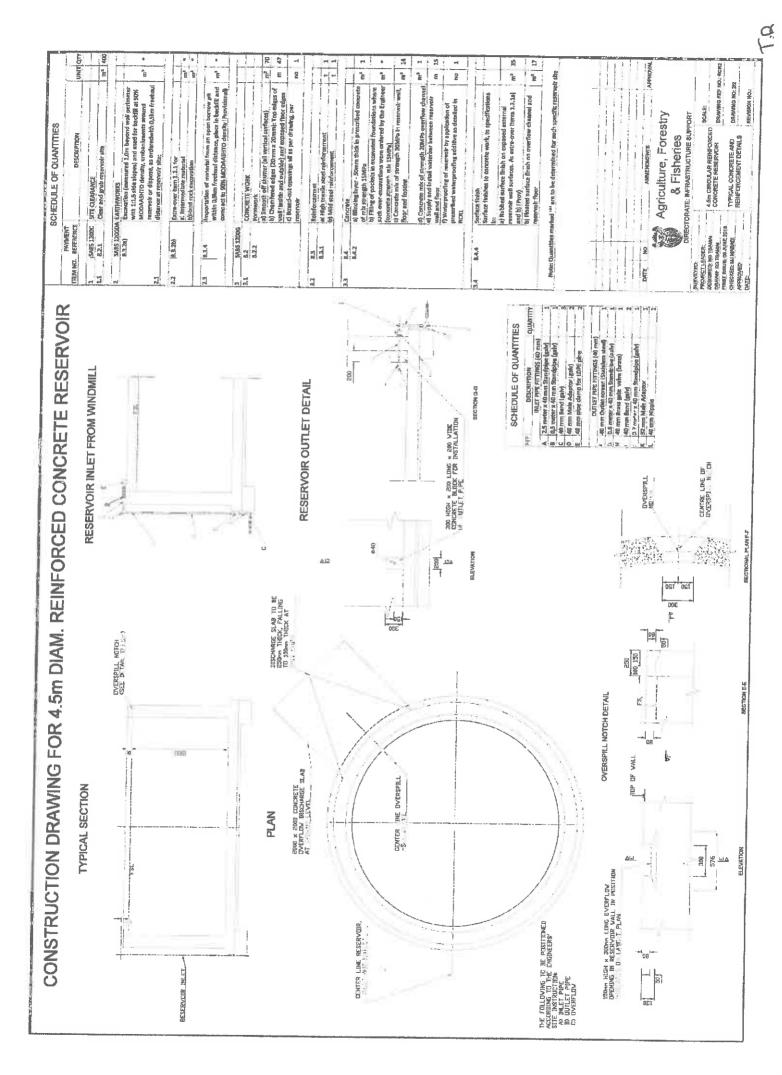


9. APPROVAL

Document compiled by:	
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Document approved / not approved.	
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Production Engineer	
Document approved / not approved.	
Ar DKM Motebejane (Pr. Eng.)	
acting Director: Infrastructure Support	

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agriculture, forestry & fisheries

Agriculturo, Forestry and Flanestra Republic of South Africa

IMPLEMENTATION PLAN GUIDELINE FOR THE EQUIPPING OF BOREHOLES

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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
- (e) training of the purchaser's personnel, at the supplier's plant and/or on-site, in assembly, start-up, operation, maintenance, and/or repair of the supplied goods.
- 13.2 Prices charged by the supplier for incidental services, if not included in the contract price for the goods, shall be agreed upon in advance by the parties and shall not exceed the prevailing rates charged to other parties by the supplier for similar services.

14. Spare parts

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

15. Warranty

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

such remedial action as may be necessary, at the supplier's risk and expense and without prejudice to any other rights which the purchaser may have against the supplier under the contract.

16. Payment

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

17. Prices

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

18. Contract amendments

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

19. Assignment

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

20. Subcontracts

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

21. Delays in the supplier's performance

- 21.1 Delivery of the goods and performance of services shall be made by the supplier in accordance with the time schedule prescribed by the purchaser in the contract.
- 21.2 If at any time during performance of the contract, the supplier or its subcontractor(s) should encounter conditions impeding timely delivery of the goods and performance of services, the supplier shall promptly notify the purchaser in writing of the fact of the delay, its likely duration and its cause(s). As soon as practicable after receipt of the supplier's notice, the purchaser shall evaluate the situation and may at his discretion extend the supplier's time for performance, with or without the imposition of penalties, in which case the extension shall be ratified by the parties by amendment of contract.
- 21.3 No provision in a contract shall be deemed to prohibit the obtaining of supplies or services from a national department, provincial department, or a local authority.
- 21.4 The right is reserved to procure outside of the contract small quantities or to have minor essential services executed if an emergency arises, the

supplier's point of supply is not situated at or near the place where the supplies are required, or the supplier's services are not readily available.

- 21.5 Except as provided under GCC Clause 25, a delay by the supplier in the performance of its delivery obligations shall render the supplier liable to the imposition of penalties, pursuant to GCC Clause 22, unless an extension of time is agreed upon pursuant to GCC Clause 21.2 without the application of penalties.
- 21.6 Upon any delay beyond the delivery period in the case of a supplies contract, the purchaser shall, without canceling the contract, be entitled to purchase supplies of a similar quality and up to the same quantity in substitution of the goods not supplied in conformity with the contract and to return any goods delivered later at the supplier's expense and risk, or to cancel the contract and buy such goods as may be required to complete the contract and without prejudice to his other rights, be entitled to claim damages from the supplier.

22. Penalties

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

23. Termination for default

- 23.1 The purchaser, without prejudice to any other remedy for breach of contract, by written notice of default sent to the supplier, may terminate this contract in whole or in part:
 - 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

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

34 Prohibition of Restrictive practices

- 34.1 In terms of section 4 (1) (b) (iii) of the Competition Act No. 89 of 1998, as amended, an agreement between, or concerted practice by, firms, or a decision by an association of firms, is prohibited if it is between parties in a horizontal relationship and if a bidder (s) is / are or a contractor(s) was / were involved in collusive bidding (or bid rigging).
- 34.2 If a bidder(s) or contractor(s), based on reasonable grounds or evidence obtained by the purchaser, has / have engaged in the restrictive practice referred to above, the purchaser may refer the matter to the Competition Commission for investigation and possible imposition of administrative penalties as contemplated in the Competition Act No. 89 of 1998.

34.3 If a bidder(s) or contractor(s), has / have been found guilty by the Competition Commission of the restrictive practice referred to above, the purchaser may, in addition and without prejudice to any other remedy provided for, invalidate the bid(s) for such item(s) offered, and / or terminate the contract in whole or part, and / or restrict the bidder(s) or contractor(s) from conducting business with the public sector for a period not exceeding ten (10) years and / or claim damages from the bidder(s) or contractor(s) concerned.

Js General Conditions of Contract (revised July 2010)