



agriculture & rural development

Department:
agriculture
& rural development
PROVINCE OF KWAZULU-NATAL

KWAZULU-NATAL DEPARTMENT OF AGRICULTURE AND RURAL DEVELOPMENT

BID No: ZNB 4280/18A

DESCRIPTION OF SERVICE: SUPPLY, DELIVERY, OFFLOAD AND CONSTRUCT 1 X 100 LAYER UNITS AT MAZULU PROJECT, UMHLATHUZE MUNICIPALITY AT KING CETSHWAYO DISTRICT

NAME OF BIDDER: _____

Compulsory briefing session

Venue	Department of Agriculture Owen Sithole College
Date	18 September 2018
Time	11:00

PREQUALIFICATION CRITERIA

Only tenderers who meet the following prequalification criteria may respond: -

- (i) BBBEE level 1 (as per the provisions of section 4(1) (a) of the PPPFA Regulations, 2017); and
- (ii) EME (as per the provisions of section 4(1) (b) of the PPPFA Regulations, 2017)
- (iii) CIDB 3 GB

Return of Bid:

Bid must be deposited in the bid box situated at Department of Agriculture and Rural Development, Supply Chain Management, 1 Cedara Road, Cedara, 3200 or send by post to The Director: Supply Chain Management, Private Bag X9059, Pietermaritzburg, 3200. Tel: **(033) 343 8225** before **11:00** am on the closing date: **04 October 2018**

Issued by:

The Department of Agriculture and Rural Development
1 Cedara Road
Cedara
3200

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Bidders are to check that all pages and forms are included in the bid documentation and notify the Department immediately if any pages or sections are missing

**PART A
INVITATION TO BID**

YOU ARE HEREBY INVITED TO BID FOR REQUIREMENTS OF THE (NAME OF DEPARTMENT/ PUBLIC ENTITY)					
BID NUMBER:	ZNB 4280/18A	CLOSING DATE:	04/10/2018	CLOSING TIME:	11:00 AM
DESCRIPTION	SUPPLY, DELIVERY, OFFLOAD AND CONSTRUCT 1 X 100 LAYER UNITS				
BID RESPONSE DOCUMENTS MAY BE DEPOSITED IN THE BID BOX SITUATED AT (STREET ADDRESS)					
Bid must be deposited in the bid box situated at Department of Agriculture and Rural Development					
Supply Chain Management					
1 Cedara Road					
Cedara, 3200					
BIDDING PROCEDURE ENQUIRIES MAY BE DIRECTED TO			TECHNICAL ENQUIRIES MAY BE DIRECTED TO:		
CONTACT PERSON	Mr M Ndlela		CONTACT PERSON	S Shandu	
TELEPHONE NUMBER	033 343 8225		TELEPHONE NUMBER	035 794 2381	
FACSIMILE NUMBER	n/a		FACSIMILE NUMBER	n/a	
E-MAIL ADDRESS	Mandla.ndlela@kzndard.gov.za		E-MAIL ADDRESS	n/a	
SUPPLIER INFORMATION					
NAME OF BIDDER					
POSTAL ADDRESS					
STREET ADDRESS					
TELEPHONE NUMBER	CODE		NUMBER		
CELLPHONE NUMBER					
FACSIMILE NUMBER	CODE		NUMBER		
E-MAIL ADDRESS					
VAT REGISTRATION NUMBER					
SUPPLIER COMPLIANCE STATUS	TAX COMPLIANCE SYSTEM PIN:		OR	CENTRAL SUPPLIER DATABASE No:	MAAA
B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE	TICK APPLICABLE BOX] <input type="checkbox"/> Yes <input type="checkbox"/> No		B-BBEE STATUS LEVEL SWORN AFFIDAVIT	[TICK APPLICABLE BOX] <input type="checkbox"/> Yes <input type="checkbox"/> No	
[A B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE/ SWORN AFFIDAVIT (FOR EMES & QSEs) MUST BE SUBMITTED IN ORDER TO QUALIFY FOR PREFERENCE POINTS FOR B-BBEE]					
ARE YOU THE ACCREDITED REPRESENTATIVE IN SOUTH AFRICA FOR THE GOODS /SERVICES /WORKS OFFERED?	<input type="checkbox"/> Yes <input type="checkbox"/> No [IF YES ENCLOSE PROOF]		ARE YOU A FOREIGN BASED SUPPLIER FOR THE GOODS /SERVICES /WORKS OFFERED?	<input type="checkbox"/> Yes <input type="checkbox"/> No [IF YES, ANSWER PART B:3]	
QUESTIONNAIRE TO BIDDING FOREIGN SUPPLIERS					
IS THE ENTITY A RESIDENT OF THE REPUBLIC OF SOUTH AFRICA (RSA)?				<input type="checkbox"/> YES <input type="checkbox"/> NO	
DOES THE ENTITY HAVE A BRANCH IN THE RSA?				<input type="checkbox"/> YES <input type="checkbox"/> NO	
DOES THE ENTITY HAVE A PERMANENT ESTABLISHMENT IN THE RSA?				<input type="checkbox"/> YES <input type="checkbox"/> NO	
DOES THE ENTITY HAVE ANY SOURCE OF INCOME IN THE RSA?				<input type="checkbox"/> YES <input type="checkbox"/> NO	
IS THE ENTITY LIABLE IN THE RSA FOR ANY FORM OF TAXATION?				<input type="checkbox"/> YES <input type="checkbox"/> NO	
IF THE ANSWER IS "NO" TO ALL OF THE ABOVE, THEN IT IS NOT A REQUIREMENT TO REGISTER FOR A TAX COMPLIANCE STATUS SYSTEM PIN CODE FROM THE SOUTH AFRICAN REVENUE SERVICE (SARS) AND IF NOT REGISTER AS PER 2.3 BELOW.					

PART B TERMS AND CONDITIONS FOR BIDDING

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

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

SIGNATURE OF BIDDER:

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

DATE:

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

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

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

PRICING SCHEDULE

NAME OF BIDDER: _____	BID NO.: ZNB 4280/18A
CLOSING DATE: 04 October 2018	CLOSING TIME 11:00

OFFER TO BE VALID FOR 120 DAYS FROM THE CLOSING DATE OF BID.

BID NUMBER	DESCRIPTION	BID PRICE IN RSA CURRENCY *(All applicable taxes included)
ZNB 4280/18A	SUPPLY, DELIVERY, OFFLOAD AND CONSTRUCT 1 X 100 LAYER UNITS AT MAZULU PROJECT, UMHLATHUZE MUNICIPALITY AT KING CETSHWAYO DISTRICT	

Official company
stamp

Signature

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

2. **In order to give effect to the above, the following questionnaire must be completed and submitted with the bid.**
 - 2.1 Full Name of bidder or his or her representative:.....
 - 2.2 Identity Number
.....
 - 2.3 Position occupied in the Company (director, trustee, shareholder²):
.....
 - 2.4 Company Registration Number:
.....
 - 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.

¹"State" means –

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

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

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

2.7.1 If so, furnish the following particulars:

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 attached proof of such authority to the bid document? **YES / NO**

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

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

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

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

2.8.1 If so, furnish particulars:

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

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

2.9.1 If so, furnish particulars.

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

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

2.10.1 If so, furnish particulars

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

2.11 Do you or any of the directors / trustees / shareholders / members **YES/NO** of the company have any interest in any other related companies whether or not they are bidding for this contract?

2.11.1 If so, furnish particulars.....
.....
.....

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

Full Name	Identity Number	Personal Tax Reference Number	State Number / Employee Peral Number

4 DECLARATION

I, THE UNDERSIGNED (NAME).....
CERTIFY THAT THE INFORMATION FURNISHED IN PARAGRAPHS 2 and 3 ABOVE IS CORRECT. ACCEPT THAT THE STATE MAY REJECT THE BID OR ACT AGAINST ME IN TERMS OF PARAGRAPH 23 OF THE GENERAL CONDITIONS OF CONTRACT SHOULD THIS DECLARATION PROVE TO BE FALSE.

Signature

Date

Position

Name of bidder

SBD 6.1

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

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

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

1. GENERAL CONDITIONS

1.1 The following preference point systems are applicable to all bids:

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

1.2

- 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;

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:

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

Where

- P_s = Points scored for price of bid under consideration
- P_t = Price of bid under consideration
- P_{min} = Price of lowest acceptable bid

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

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

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

5. BID DECLARATION

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

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

6.1 B-BBEE Status Level of Contributor: = (maximum of 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	<input type="checkbox"/>	NO	<input type="checkbox"/>
-----	--------------------------	----	--------------------------

7.1.1 If yes, indicate:

- i) What percentage of the contract will be subcontracted%
- ii) The name of the sub-contractor.....
- iii) The B-BBEE status level of the sub-contractor.....
- iv) Whether the sub-contractor is an EME or QSE

(Tick applicable box)

YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
-----	--------------------------	----	--------------------------

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 least 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.....

8.8 I/we, the undersigned, who is / are duly authorised to do so on behalf of the company/firm, certify that the points claimed, based on the B-BBE status level of contributor indicated in paragraphs 1.4 and 6.1 of the foregoing certificate, qualifies the company/ firm for the preference(s) shown and I / we acknowledge that:

- i) The information furnished is true and correct;
- ii) The preference points claimed are in accordance with the General Conditions as

indicated in paragraph 1 of this form;

- iii) In the event of a contract being awarded as a result of points claimed as shown in paragraphs 1.4 and 6.1, the contractor may be required to furnish documentary proof to the satisfaction of the purchaser that the claims are correct;
- iv) If the B-BBEE status level of contributor has been claimed or obtained on a fraudulent basis or any of the conditions of contract have not been fulfilled, the purchaser may, in addition to any other remedy it may have –
 - (a) disqualify the person from the bidding process;
 - (b) recover costs, losses or damages it has incurred or suffered as a result of that person's conduct;
 - (c) cancel the contract and claim any damages which it has suffered as a result of having to make less favourable arrangements due to such cancellation;
 - (d) recommend that the 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.
2.

..... SIGNATURE(S) OF BIDDERS(S)
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.**

4.1	<p>Is the bidder or any of its directors listed on the National Treasury's Database of Restricted Suppliers as companies or persons prohibited from doing business with the public sector? (Companies or persons who are listed on this Database were informed in writing of this restriction by the Accounting Officer/Authority of the institution that imposed the restriction after the <i>audi alteram partem</i> rule was applied).</p> <p>The Database of Restricted Suppliers now resides on the National Treasury's website(www.treasury.gov.za) and can be accessed by clicking on its link at the bottom of the home page.</p>	Yes <input type="checkbox"/>	No <input type="checkbox"/>
4.1.1	If so, furnish particulars:		
4.2	<p>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)? The Register for Tender Defaulters can be accessed on the National Treasury's website (www.treasury.gov.za) by clicking on its link at the bottom of the home page.</p>	Yes <input type="checkbox"/>	No <input type="checkbox"/>
4.2.1	If so, furnish particulars:		
4.3	<p>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?</p>	Yes <input type="checkbox"/>	No <input type="checkbox"/>
4.3.1	If so, furnish particulars:		

4.4	Was any contract between the bidder and any organ of state terminated during the past five years on account of failure to perform on or comply with the contract?	Yes <input type="checkbox"/>	No <input type="checkbox"/> +
4.4.1	If so, furnish particulars:		

CERTIFICATION

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

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

.....
Signature

.....
Date

.....
Position

.....
Name of Bidder

CERTIFICATE OF INDEPENDENT BID DETERMINATION

- 1 This Standard Bidding Document (SBD) must form part of all bids¹ invited.
- 2 Section 4 (1) (b) (iii) of the Competition Act No. 89 of 1998, as amended, prohibits an agreement between, or concerted practice by, firms, or a decision by an association of firms, if it is between parties in a horizontal relationship and if it involves collusive bidding (or bid rigging).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. disregards the bid of any bidder if that bidder, or any of its directors have abused the institution's supply chain management system and or committed fraud or any other improper conduct in relation to such system.
 - b. cancel a contract awarded to a supplier of goods and services if the supplier committed any corrupt or fraudulent act during the bidding process or the execution of that contract.
- 4 This SBD serves as a certificate of declaration that would be used by institutions to ensure that, when bids are considered, reasonable steps are taken to prevent any form of bid-rigging.
- 5 In order to give effect to the above, the attached Certificate of Bid Determination (SBD 9) must be completed and submitted with the bid:

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 Description)

in response to the invitation for the bid made by:

(Name of Institution)

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

I certify, on behalf of: _____ that:

(Name of Bidder)

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

6. The bidder has arrived at the accompanying bid independently from, and without consultation, communication, agreement or arrangement with any competitor. However, communication between partners in a joint venture or consortium³ will not be construed as collusive bidding.
7. In particular, without limiting the generality of paragraphs 6 above, there has been no consultation, communication, agreement or arrangement with any competitor regarding:
 - (a) prices;
 - (b) geographical area where product or service will be rendered (market allocation)
 - (c) methods, factors or formulas used to calculate prices;
 - (d) the intention or decision to submit or not to submit, a bid;
 - (e) the submission of a bid which does not meet the specifications and conditions of the bid; or
 - (f) bidding with the intention not to win the bid.
8. In addition, there have been no consultations, communications, agreements or arrangements with any competitor regarding the quality, quantity, specifications and conditions or delivery particulars of the products or services to which this bid invitation relates.
9. The terms of the accompanying bid have not been, and will not be, disclosed by the bidder, directly or indirectly, to any competitor, prior to the date and time of the official bid opening or of the awarding of the contract.
10. I am aware that, in addition and without prejudice to any other remedy provided to combat any restrictive practices related to bids and contracts, bids that are suspicious will be reported to the Competition Commission for investigation and possible imposition of administrative penalties in terms of section 59 of the Competition Act No 89 of 1998 and or may be reported to the National Prosecuting Authority (NPA) for criminal investigation and or may be restricted from conducting business with the public sector for a period not exceeding ten (10) years in terms of the Prevention and Combating of Corrupt Activities Act No 12 of 2004 or any other applicable legislation.

Signature

Date

Position

Name of Bidder

COMPULSORY OFFICIAL BRIEFING SESSION CERTIFICATE

N. B.: THIS FORM MUST BE COMPLETED AND INCLUDED IN THE BID.

Bid No: ZNB 4280/18A

Service: SUPPLY, DELIVERY, OFFLOAD AND CONSTRUCT 1 X 100 LAYER UNITS AT MAZULU PROJECT, UMHLATHUZE MUNICIPALITY AT KING CETSHWAYO DISTRICT

THIS IS TO CERTIFY THAT (NAME):

ON BEHALF OF:

ATTENDED THE COMPULSORY BRIEFING SESSION ON.....
(DATE)

AND IS THEREFORE FAMILIAR WITH THE CIRCUMSTANCES AND THE SCOPE OF THE SERVICE TO BE RENDERED.

.....
NAME AND SIGNATURE OF BIDDER OR AUTHORISED REPRESENTATIVE

DATE:

.....
NAME AND SIGNATURE OF DEPARTMENTAL REPRESENTATIVE

DATE:

DEPARTMENTAL OFFICIAL STAMP:

AUTHORITY TO SIGN A BID

A. COMPANIES

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

AUTHORITY BY BOARD OF DIRECTORS

By resolution passed by the Board of Director.....20.....,

Mr/Mrs.....

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

(Name of Company)

IN HIS/HER CAPACITY AS:

SIGNED ON BEHALF OF COMPANY:

.....
(PRINT NAME)

SIGNATURE OF SIGNATORY: **DATE:**

WITNESSES: 1.....

2.....

B. SOLE PROPRIETOR (ONE - PERSON BUSINESS)

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

.....

SIGNATURE..... **DATE**.....

C. PARTNERSHIP

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

Full name of partner	Residential address	Signature
.....
.....
.....

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

.....
SIGNATURE **SIGNATURE** **SIGNATURE**

.....
DATE **DATE** **DATE**

D. CLOSE CORPORATION

In the case of a close corporation submitting a bid, a certified copy of the Founding Statement of such corporation

shall be included with the bid, together with the resolution by its members authorising a member or other official of

the corporation to sign the documents on their behalf.

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

at..... Mr/Ms....., whose signature

appears below, has been authorised to sign all documents in connection with this bid on behalf of

(Name of Close Corporation).....

.....

SIGNED ON BEHALF OF CLOSE CORPORATION:

.....
(PRINT NAME)

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

SIGNATURE OF SIGNATORY:

WITNESSES: 1.....

2.....

E CO-OPERATIVE

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

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

at.....

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

SIGNATURE OF AUTHORISED REPRESENTATIVE/SIGNATORY:

IN HIS/HER CAPACITY AS:

DATE:

SIGNED ON BEHALF OF CO-OPERATIVE:

NAME IN BLOCK LETTERS:

WITNESSES: 1.....

2.....

F JOINT VENTURE

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

AUTHORITY TO SIGN ON BEHALF OF THE JOINT VENTURE

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

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

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

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

IN HIS/HER CAPACITY AS:

SIGNED ON BEHALF OF (COMPANY NAME):
(PRINT NAME)

SIGNATURE: DATE:

IN HIS/HER CAPACITY AS:

SIGNED ON BEHALF OF (COMPANY NAME):
(PRINT NAME)

SIGNATURE: DATE:

IN HIS/HER CAPACITY AS:

SIGNED ON BEHALF OF (COMPANY NAME):
(PRINT NAME)

SIGNATURE: DATE:

IN HIS/HER CAPACITY AS:

G. CONSORTIUM

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

AUTHORITY TO SIGN ON BEHALF OF THE CONSORTIUM

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

Mr/Mrs.....

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

(Name of Consortium).....

IN HIS/HER CAPACITY AS:

SIGNATURE: **DATE:**

SECTION B
GENERAL CONDITIONS OF CONTRACT

DEFINITIONS: The following terms shall be interpreted as indicated:

- (a) "Closing time" means the date and hour specified in the bidding documents for the receipt of bids.
- (b) "Contract" means the written agreement entered into between the Province and the Contractor, as recorded in the contract form signed by the parties, including all attachments and appendices thereto and all documents incorporated by reference therein.
- (c) "Contract price" means the price payable to the Contractor under the contract for the full and proper performance of his contractual obligations.
- (d) "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.
- (e) "Countervailing duties" are imposed in cases where an enterprise abroad is subsidized by its government and encouraged to market its products internationally.
- (f) "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 recognised new product results that is substantially different in basic characteristics or in purpose or utility from its components.
- (g) "Day" means calendar day.
- (h) "Delivery" means delivery in compliance with the conditions of the contract or order.
- (i) "Delivery ex stock" means immediate delivery directly from stock actually on hand.
- (j) "Delivery into consignees store or to his site" means delivery and unloaded in the specified store or depot or on the specified site in compliance with the conditions of the contract or order, the Contractor bearing all risks and charges involved until the supplies are so delivered and a valid receipt is obtained.
- (k) "Dumping" occurs when a private enterprise abroad market its goods and services 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.
- (l) "Force majeure" means an event beyond the control of the Contractor and not involving the Contractor's fault or negligence and not foreseeable. Such event may include, but is not restricted to, acts of the Province in its sovereign capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions and freight embargoes.
- (m) "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.

- (n) "GCC" means the General Conditions of Contract.
- (o) "Goods" means all the equipment, machinery, and/or other materials that the supplier is required to supply to the purchaser under the contract.
- (p) "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 Contractor 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 supplies covered by the bid will be manufactured.
- (q) "Local content" means that portion of the bidding price which is not included in the imported content provided that local manufacture does take place.
- (r) "Manufacture" means the production of products in a factory using labour, materials, components and machinery and includes other related value-adding activities.
- (s) "Order" means an official written order issued for the supply of goods or works or the rendering of a service.
- (t) "Project site" where applicable, means the place indicated in bidding documents.
- (u) "Province" means the procuring Department, incorporating the KwaZulu-Natal Provincial Legislature.
- (v) "Republic" means the Republic of South Africa.
- (w) "SCC" means the Special Conditions of Contract.
- (x) "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 Contractor covered under the contract.
- (y) "Written" or "in writing" means handwritten in ink or any form of electronic or mechanical writing.

1. CESSION OF CONTRACTS

- 1.1 The Contract is personal to the Contractor who shall not sub-let, assign, cede or make over the Contract or any part thereof, or any share of interest therein, to any other person without the written consent of the Province, and on such conditions as it may approve.
- 1.2 This sub-clause shall not apply to sub-contracts given to regular suppliers of the Contractor for materials and minor components relating to the goods or services supplied. The Province reserves the right to require the Contractor to submit, for noting, the names of such sub-contractors in order to ascertain their registration on the Provincial Suppliers Database and they must be legal entities.

2. DISCREPANCIES

Should there appear to be any discrepancies, ambiguities or want of agreement in description, dimensions, qualities or quantities in the Contract, the Contractor shall be obliged to refer the matter to the Provinces' Representative for a decision, before proceeding to execute the Contract or part thereof in respect of which the said discrepancies, ambiguities or want of agreement appear to exist.

3. QUALITY AND GUARANTEE

- 3.1 All Goods supplied shall be equal in all respects to samples, patterns or specifications where such are provided. Any changes to quality or brands will have to be approved by the Province, as this is a change to the conditions of the contract.
- 3.2 Should the Province, after the award of the Contract and/or during the manufacture of the goods specified, decide on a variation or alteration to the specification, either at the suggestion of the Contractor or otherwise, which will be to the Province's advantage, such variation or alteration shall be performed to the Province's satisfaction. Any variation in the Contract Price arising there from shall be subject to agreement between the Province and the Contractor.
- 3.3 The Contractor shall not be relieved of his obligations with respect to the sufficiency of the materials and workmanship and the quality of the Goods supplied by the reason of no objection having been taken thereto by the Province's Representative at the time the Goods were delivered.
- 3.4 The Contractor 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 Contractor 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 Contractor, that may develop under normal use of the supplied goods in the conditions prevailing in the country of the final destination.
- 3.5 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 the Special Conditions of Contract.
- 3.6 The Province shall promptly notify the Contractor in writing of any claims arising under this warranty. The Contractor shall immediately remedy the said defect free of cost to the Province. Should the Contractor delay remedial work in excess of time stipulated by the Province's representative, the Province may have such remedial work executed at the

Contractor's expense. Should the Province decide that the defect is such that it cannot be remedied, the Goods may be rejected. Such rejected goods shall be held at the risk and expense of the Contractor and shall, on request of the Province, be removed by him immediately on receipt of notification of rejection. The Contractor shall be responsible for any loss the Province may sustain by reason of such action as the Province may take, in terms of this clause.

- 3.7 The risk in respect of the Goods purchased by the Province under the contract shall remain with the Contractor until such goods have been delivered to the Province.
- 3.8 The principle feature of the Goods and Work are described in the Goods or Services Information, but the Goods or Services Information does not purport to indicate every detail of construction, fabrication or arrangements of Goods and Works necessary to meet the requirements. Omission from the Goods or Services information of reference to any part or parts shall not relieve the Contractor of his responsibility for carrying out the Work as required under the Contract.
- 3.9 If any dispute arises between the Province and the Contractor in connection with the quality and guarantee of the Goods, either party may give the other notice in writing of the existence of such dispute, and the same shall thereupon be referred to arbitration in South Africa by a person mutually agreed upon by both parties. The submission shall be deemed to be a submission to arbitration within the meaning of the terms of the arbitration laws in force in the Republic of South Africa.

4. FAILURE TO COMPLY WITH CONDITIONS AND DELAYED EXECUTION

- 4.1 If a bidder amends or withdraws his/her/their bid after the closing time but before the bidder is notified that his/her/their bid has been accepted, or when notified that his/her/their bid has been accepted, he/she/they fail/fails, within the period stipulated in the conditions of bid or such extended period as the Province may allow, to sign a contract or to provide security when requested to do so, he/she/they shall, unless the Province decides otherwise, and without prejudice to any other right which the Province may have under paragraphs 4.2 and 4.4, including the right to claim damages if a less favourable bid is accepted or less favourable arrangements are to be made, forfeit any deposit which may have been made with the bid.
- 4.2 Should the contractor fail to comply with any of the conditions of the contract, the Province shall be entitled, without prejudice to any of its other rights, to cancel the contract.
- 4.3 Upon any delay beyond the contract period in the case of a supplies contract, the Province shall, without canceling the contract, be entitled forthwith 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 supplies delivered later at the contractor's expense and risk, or forthwith to cancel the contract and buy such supplies as may be required to complete the contract, and without prejudice to its rights, be entitled to claim damages from the contractor.
- 4.4 Upon any delay beyond the contract period in the case of a service contract, the Province shall, without prejudice to any other right and without canceling the contract, be entitled forthwith to arrange the execution of the service not rendered in conformity with the contract or to cancel the contract, and without prejudice to its other rights, be entitled to claim damages from the contractor.
- 4.5 In the event of the Province availing itself of the remedies provided for in paragraph 4.2-
 - 4.5.1 the contractor shall bear any adverse difference in price of the said supplies services and these amounts plus any other damages which may be suffered by the Province, shall be paid by the contractor to the Province immediately on demand, or the Province may deduct such amounts from moneys (if any) otherwise payable to

the contractor in respect of supplies or services rendered or to be rendered under the contract or under any other contract or any other amounts due to the contractor; or

- 4.5.2 if the Contractor fails to supply the goods or render the service within the period stipulated in the contract, the Province shall have the right, in its sole discretion, to claim any damages or loss suffered.
- 4.6 No damages shall be claimed in respect of any period of delay which the contractor can prove to be directly due to a state of war, sanctions, strikes, lockouts, damage to machinery as a result of accidents, fire, flood or tempest or act of God, which could not be foreseen or overcome by the contractor, or to any act or omission on the part of persons acting in any capacity on behalf of the Province.
- 4.7 If the delivery of the supplies or the rendering of the service is likely to be delayed or is in fact being delayed on account of any of the reasons mentioned in paragraph 4.6, full particulars of the circumstances shall be reported forthwith in writing to the Province and at the same time the contractor shall indicate the extension of the delivery period which is desired.

5. PATENTS

- 5.1 The Contractor shall pay all royalties and expenses and be liable for all claims in respect of the use of patent rights, trademarks or other protected rights, and hereby indemnifies the Province against any claims arising there from.
- 5.2 The Contractor shall indemnify the Province against all third-party claims of infringement of patent, trademark, or industrial design rights arising from the use of the goods or any part thereof by the Province.

6. PACKAGING, MARKING AND DELIVERY

- 6.1 All goods shall be crated, packed or battened securely in such a manner as to prevent damage during loading, transport and off-loading. Unless otherwise specified, packing cases and packing materials are included in the Contract Price, and shall be and remain the property of the Province.
- 6.2 All goods shall be clearly marked in the manner stated in the Goods or Services Information.
- 6.3 Goods shall be delivered to the address within the Province's area of jurisdiction as set out in the Special Conditions of Contract or Goods and Services Information.
- 6.4 Goods shall be delivered on Weekdays between 08:00 and 16:00, free of all charges, only when ordered upon an official letter or form of order issued by the Province. No goods will be received on Saturdays, Sundays and public holidays. This paragraph (6.4) is applicable only when not excluded in the Special Conditions of Contract.
- 6.5 Goods delivered shall in all cases be accompanied by delivery notes in duplicate, one which will be retained by the Province. The Contractor shall be responsible for the safe delivery as to the quality, quantity and condition of the goods.
- 6.6 Delivery, unless otherwise provided for in the Special Conditions of Contract, shall be affected within seven (7) days from receipt of the order. The Contractor shall advise the Province upon receipt of an order in writing of any anticipated delays, citing reasons therefore and put forward a new anticipated delivery date. The Province may then extend the delivery date, if and as it deems fit.

- 6.7 Should the Contractor fail to supply the material within the time stated in his bid, or within the extended time allowed to him in terms of clause 6.6 hereof, the Province reserves the right (after giving the Contractor seven days notice in writing) to cancel the contract and purchase the materials elsewhere and the bidder shall refund to the Province any extra cost incurred over and above the contract price. No liability shall, however, be attached to the Contractor if delivery of materials is rendered impossible or delayed by reason of circumstances beyond the Contractor's control.
- 6.8 If the Contractor cannot produce proof satisfactory to the Province that the delay was due to circumstances beyond his control, no price increase after the due date will be recognized.
- 6.9 If at any time the Province ascertains that, due to negligence of the Contractor or for reasons beyond his control:
- 6.9.1 No work on the order has been commenced and in the opinion of the Province, there is little or no prospect of work being commenced in reasonable time;
- 6.9.2 Delivery of any materials is being or is likely to be delayed beyond the delivery date promised, and/or
- 6.9.3 There is little or no prospect of the order being completed within a reasonable time after the promised date; the Province may, by notice to the Contractor in writing, cancel as from the future date specified in such notice, the whole or any part of the order in respect of which material has not been delivered by that date without incurring any liability by reasons of such cancellation. The cases where circumstances beyond the control of the Contractor have delayed commencement or completion of the order, cancellation of the order will be effected by mutual arrangement or where this is not possible by the decision of the Province. The Contractor shall then as soon as possible after such date deliver to the Province that part of the order which has been completed, and payment is to be effected is for the part performance on a proportional basis, subject to the uncompleted part not being an integral or essential part of the contract.
- 6.10 Should a price other than an all-inclusive price be required, this shall be specified in the SCC.

7. CONSIGNMENT OF GOODS

- 7.1 Goods, if delivered by Spoornet may be consigned carriage paid in the Contractor's name, care of the Province to the place of delivery stipulated, but not in the name of the State. Goods consigned to stores located in areas which Spoornet may refuse to deliver, must be done so care of a local agent or to a local depot from which they may be re-delivered by road to such stores.
- 7.2 Contractors shall arrange with Spoornet to deliver goods to the Province's stores during the hours and on the days that the stores are open.
- 7.3 The Province will not be responsible for any damage, re-delivery charges or any other charges raised by Spoornet.
- 7.4 Claims on the South African Transport Services or on any other carrier in respect of weight, quantity, damage or loss, shall be made by the Contractor.

8. PAYMENT

- 8.1 The Contractor shall furnish the Province with an invoice accompanied by a copy of the delivery note upon fulfilment of other obligations stipulated in the contract.
- 8.2 Payments shall be made promptly by the Province, but in no case later than thirty days (30) days after submission of an invoice or claim by the Contractor.
- 8.3 Payments will be made in Rand unless otherwise stipulated.
- 8.4 Payments for goods are made by the Province only. Any disputes regarding late or delayed payments must be taken up with the department and if a problem persists, the Supply Chain Management Office can be requested to investigate the delays.

9. INVOICES

All invoices submitted by the Contractor must be Tax Invoices indicating quantity ordered and quantity delivered, the amount of tax charged and the total invoice amount.

10. CONTRACT PRICE ADJUSTMENT

- 10.1 Firm contract prices shall not be subject to adjustment. Contract prices which are not firm shall be increased or reduced by the amount of variation between the Cost to Bidder and the actual cost to the Contractor, such variations to be subject to the following conditions:-
 - 10.1.1 Where the Cost to Bidder was based on a printed catalogue or list price, the variation shall be the difference between that price list and the price list actually charged. Should it transpire that the Cost to Bidder was not based on the latest available price list at the Date of Bid, the Province shall have the right to elect the price list on which any variation shall be based.
 - 10.1.2 Where the Cost to Bidder was based on a quotation by the manufacturer, or where the Contractor is the manufacturer, and the Contract Price was based on the cost of materials and labour ruling at a certain date, the variation in the Contract Price shall be calculated by means of the Steel and Engineering Industries Federation of South Africa (SEIFSA) formula if this is stipulated in the Contract, or if the Province's representative considers it to be appropriate. Where the use of the SEIFSA formula is not appropriate, the variation shall be calculated by means of another formula acceptable to the Province, which shall be indicated in the Special Conditions of Contract. Only those cost increases due to wage increases prescribed by regulating measures having the force of law, or increases in the cost of materials and railage as may be proven by documentary evidence, or published data, will be considered in determining Contract Price variation.
 - 10.1.3 Any difference between Rates and Charges ruling at the time of bid and those actually paid by the Contractor will be for the account of the Province. The Contract Price adjustment arising from any variation in Rates and Charges shall, in every instance, be applied to the appropriate value, or tonnage, of the Goods shipped. Where a variation in the Cost to bidder has been allowed, the contract price shall be adjusted by the product of such variation and every component of Rates and Charges which is based on the value of the Goods, whether or not the costs of such components have varied.

- 10.1.4 No claim for increased costs will be entertained if the Contractor is unable to produce documentation to substantiate Cost to Bidder and Rates and Charges on which the contract price was based and documentation to support his claim. Such documentation must, in the opinion of the Province, adequately support the Contractor's claim. No claim for increased costs to the Contractor arising from negligence on his part, or that of the manufacturer, will be considered.
- 10.1.5 The Contractor shall, in respect of every consignment or shipment of Goods delivered, supply to the Province's Representative documentary evidence of variation, if any, in Cost to Bidder and Rates and Charges.
- 10.1.6 Claims for increased cost shall be submitted with the invoice for the Goods in respect of which the claim is made, or as soon thereafter as possible. Claims shall not be considered if received more than 90 days after the expiry of the Contract unless notice of intention to claim has been given to the Province before such date.
- 10.1.7 In the event of there being no claim by the Contractor for increased costs, the Contractor shall not be entitled to full payment under the Contract before he has submitted to the Province, in his own name or in the name of the manufacturer, a certificate declaring that there have been no adjustments in the cost of manufacture which entitle the Employer to a reduction in the Contract Price as provided for in this clause.

11. REMEDIES IN THE CASE OF DEATH, SEQUESTRATION, LIQUIDATION OR JUDICIAL MANAGEMENT

- 11.1 In the event of the death of a contractor or the provisional or final sequestration of his/her/their estate or of his/her/their cession or transfer of a contract without the approval of the Province or of the surrender of his/her/their estate or of his/her/their reaching a compromise with his/her/their creditors or of the provisional or final liquidation of a contractor's company/closed corporation or the placing of its affairs under judicial management, the Province may, without prejudice to any other rights it may have, exercise any of the following options :
 - 11.1.1 Cancel the contract and accept any of the bids which were submitted originally with that of the contractor or any offer subsequently received to complete the contract. In such a case the estate of the contractor shall not be relieved of liability for any claim which has arisen or may arise against the contractor in respect of supplies not delivered or work not carried out by the contractor, under the contract.
 - 11.1.2 Allow the executor, trustee, liquidator or judicial manager, as the case may be, for and on behalf of and at the cost and expense of the estate of the contractor to carry on with and complete the contract.
 - 11.1.3 For and on behalf of and at the cost and expense of the estate of the contractor, itself carry on with and complete the contract and in that event the Province may take over and utilize, without payment, the contractor's tools, plant and materials in whole or in part until the completion of the contract.
- 11.2 Should the Province elect to act in terms of paragraph 11.1.3 it shall give notice of its requirements to the executor, trustee, liquidator or judicial manager of the contractor's estate and should the said executor, trustee, liquidator or judicial manager fail within 14 days of the dispatch of such notice to make provision to the satisfaction of the Province for the fulfillment of such requirements, or should no trustee, liquidator or judicial manager be appointed within 14 days of the occurrence mentioned in paragraph 11.1, the Province may apply any remedy open to it in terms of the contract as if a breach thereof had taken place.

11.3 Should the Province act in terms of paragraph 11.1.3 the contractor must leave the premises immediately and may not occupy such premises on account of retention or any other right.

12. LAW TO APPLY

The Contract shall in all respects be construed in accordance with the law of the Republic of South Africa, and any difference that may arise with the law of the Republic of South Africa, and any difference that may arise between the Province and the Contractor in regard to the Contract, shall be settled in the Republic of South Africa.

13. OFFERING OF COMMISSION OR GRATUITY

If the Contractor, or any person employed by him, is found to have either directly or indirectly offered, promised or given to any office bearer of the Province or person in the employ of the Province, any commission, gratuity, gift or other consideration, the Province shall have the right, summarily and without recourse to law and without prejudice to any other legal remedy which it may have in regard to any loss or additional cost or expenses, to cancel the Contract without paying any compensation to the Contractor.

14. PREFERENCES

14.1 Should the Contractor apply for preferences in the submission of his bid, and it is found at a later stage that these applications were incorrect or made under false pretences, the Province may, at its own right:-

14.1.1 Recover from the Contractor all costs, losses or damages incurred or sustained by the Province as a result of the award of the Contract; and / or

14.1.2 Cancel the contract and claim any damages which the Province may suffer by having to make less favourable arrangements after such cancellation.

14.1.3 The Province may impose penalties, however, only if provision therefore is made in the Special Conditions of Bid.

15. WEIGHTS AND MEASURES

The quantities of goods offered or delivered shall be according to South African standard weights and measures.

16. SECURITY

16.1 Special Conditions of Contract relating to Surety/Guarantee requirement must be dealt with in strict compliance with the Conditions of Bid set out herein.

16.2 In respect of contracts less than R 500 000, the guarantees and sureties required may be based on a risk evaluation conducted by the Province inviting the bid.

16.3 No deposits are required for bid applications for contracts below R 500 000.

17. ORDERS

17.1 Goods shall be delivered and services rendered only upon receipt of a written official order or the signing of a contract with the Province, and accounts shall be rendered as indicated on the official order or in the contract, as the case may be.

17.2 The Province reserves the right to call upon any Contractor during the contract period to make known the following details:

17.2.1 Name of Institution placing order;

17.2.2 Provincial official order number;

17.2.3 Quantity ordered; and

17.2.4 List of items ordered.

18. EXPORT LICENCES

18.1 When orders are placed for goods in respect of which an export licence from the country of origin of supplies is required, the Contractor shall:

18.1.1 Not incur any direct or indirect costs in connection with the supply or dispatch of such supplies before he has obtained such licence;

18.1.2 If the government of the country from which the supplies are to be exported refuses, or fails to grant such licence within three months of the placing of the order, the order shall be considered to be cancelled and no liability will be accepted for any loss or expenses irrespective of the nature thereof, including loss or expenditure suffered or incurred by the Contractor or any other person in respect of the production, supply, transportation or delivery of such supplies.

19. INSURANCE

19.1 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.

19.2 Any insurance policies taken out by a Contractor to cover goods delivered for a contract must be taken out with a company registered in South Africa in terms of relevant insurance and companies acts.

20. INSPECTION, TESTS AND ANALYSES

20.1 In terms of Provincial policy, inspections of a Bidder's goods and services are permitted. Bidders and Contractors must allow reasonable access to premises to officials from the department inviting the bid, or person specially appointed by the Province to carry out inspection or tests. There are two main categories: Firstly, where the bid conditions call for goods to be inspected during the contract period. Secondly, where the inspection results are to be submitted with the bid document.

20.2 If it is a bid condition that goods to be produced should at any stage during production or on completion be subject to inspection, the premises of the Contractor shall be open, at all reasonable hours, for inspection by a representative of the Province or of an organization acting on its behalf.

20.3 Inspections tests and analyses may be carried out prior to dispatch in regard to such contract goods as may be deemed necessary by the Province, and the Contractor shall provide, if required, all the required facilities for the inspection, tests and analyses of the goods free of charge and shall, if required, provide all the materials, samples and labour and available apparatus which may be required for the purposes of such inspection, tests and analyses free of charge, unless otherwise specified.

20.4 If there are no inspection requirements in the bid documents and no mention thereof is made in the letter of acceptance, but during the contract it is decided that inspections shall be carried out, the Province shall itself make the necessary arrangements, including payment arrangements, with the testing authority concerned. The premises of the Bidder Contractor must be open and accessible at all reasonable times for the purposes of these tests.

20.5 If the inspection, tests and analyses show the goods or service to be in accordance with contract requirements, the cost of the inspection, tests and analyses shall be defrayed by the Province calling for such tests or analyses. Where the supplies or services do not comply with the contract, the costs shall be defrayed by the Contractor and the Province shall have the right, without prejudice to any other legal remedy it may have, to deduct such costs from payments due to the Contractor under the contract or under any other contract.

20.6 Goods and services which do not comply with the contract requirements may be rejected.

20.7 Any goods may on or after delivery be inspected, tested or analysed and may be rejected if found not to comply with the requirements of the contract, and such rejected goods shall be held at the cost and risk of the Contractor who shall, when called upon, remove them immediately at his own cost and forthwith substitute them for goods which do comply with the requirements of the contract, failing which such rejected goods shall be returned at the Contractor's cost and risk. Should the Contractor fail to provide the substitute goods forthwith,

the Province may, without giving the Contractor a further opportunity to substitute the rejected goods, purchase such supplies as may be necessary at the expense of the Contractor, for example, the transport costs and other expenses regarding the rejected goods must be refunded by the Contractor.

- 20.8 Where imported goods are to be inspected before delivery, the Contractor shall notify his suppliers abroad of the conditions applicable to inspections.
- 20.9 Provisions contained in sub-clause 20.1 and 20.8 shall not prejudice the right of the Province to cancel the contract on account of a breach of the conditions thereof.

21. RESTRICTION OF BIDDING

Without prejudice on any other legal remedies, the Province may impose restrictions on a Bidder in terms of which bids to the Province will not be accepted for such period as determined by the Province. This information may be passed to other provinces or State organisations in the Republic of South Africa. These restrictions may be imposed in terms of the breach of any of the requirements to be met in terms of the accepted bid or contract. The Province may also make a restriction on a bidder from another province or State institution applicable to this Province.

22. CONTRACTOR'S LIABILITY

- 22.1 In the event of the contract being cancelled by the Province in the exercise of its rights in terms of these conditions, the Contractor shall be liable to pay to the Province any losses sustained and/ or additional costs or expenditure incurred as a result of such cancellation, and the Province shall have the right to recover such losses, damages or additional costs by means of set-off from moneys due or which may become due in terms of the contract or any other contract or from guarantee provided for the due fulfilment of the contract and, until such time as the amount of such losses, damages or additional costs have been determined, to retain such moneys or guarantee or any deposit as security for any loss which the Province may suffer or may have suffered.
- 22.2 The Contractor may be held responsible for any consequential damages and loss sustained which may be caused by any defect, latent or otherwise, in supply or service rendered or if the goods or service as a result of such defect, latent or otherwise, does not conform to any condition or requirement of the contract.

23. PRICE LISTS

Price lists which are part of the contract shall not be amended without the approval of the Province, unless the SCC specify otherwise.

24. SUBMISSION OF CLAIMS

- 24.1 Claims must be submitted within 90 days of the delivery date of items, but the delivery date will be calculated according to the delivery period stipulated in terms of the contract, unless an extension for late delivery has been granted by the Province.
- 24.2 For period contracts, no price increase will be granted within the first 180 days of the contract period. No price increase applications which are submitted later than 90 days after the contract period expired will be considered. The claims shall be accompanied by documentary proof and, if required, an auditor's report sustaining the claim shall be provided.
- 24.3 Claims referring to formulae and indices must be clearly set out in terms of indices or formulae values used to calculate the bid price, and the adjusted indices or values.

25. PROVINCIAL PROPERTY IN POSSESSION OF A CONTRACTOR

25.1 Province's property supplied to a Contractor for the execution of a contract remains the property of the Province and shall at all times be available for inspection by the Province or its representatives. Any such property in the possession of the Contractor on the completion of the contract shall, at the Contractor's expense, be returned to the Province forthwith.

25.2 The Contractor shall be responsible at all times for any loss or damages to the Province's property in his possession and, if required, he shall furnish such security for the payment of any such loss or damages as the Province may require.

26. RIGHTS TO PROCURE OUTSIDE THE CONTRACT

26.1 The Province reserves the right to procure goods outside the contract in cases of urgency or emergency or if the quantities are too small to justify delivery costs, or if the goods are obtainable from another organ of Province or if the Contractor's point of supply is not situated at or near the place where the goods are required or if the Contractor's goods are not readily available.

26.2 No provision in a contract shall be deemed to prohibit the obtaining of goods or services from a Province or local authority.

27. AMENDMENT OF CONTRACT

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 that the agreement to amend or vary shall be in writing.

28. NOTICES

28.1 Every written acceptance of a bid shall be posted to the supplier/bidder concerned by registered or certified mail and any other notice to him/her/it shall be posted by ordinary mail to the address furnished in his bid or to the address notified later by him/her/it in writing and such posting shall be deemed to be proper service of such notice.

28.2 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 such notice.

29. INCIDENTAL SERVICES

29.1 The Contractor may be required to provide any or all of the following services, including additional services, if any, specified in the Special Conditions of Bid:

- (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 Contractor of any warranty obligations under this contract; and
- (e) training of the Province's personnel, at the Contractor's plant and/or on-site, in assembly, start-up, operation, maintenance, and/or repair of the supplied goods.

29.2 Prices charged by the Contractor 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 Contractor for similar services.

30. USE OF CONTRACT DOCUMENTS AND INFORMATION INSPECTION

- 30.1 The Contractor shall not, without the Province'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 Province in connection therewith, to any person other than a person employed by the Contractor 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.
- 30.2 The Contractor shall not, without the Provinces prior written consent, make use of any document or information mentioned in GCC clause 30.1 except for purposes of performing the contract.
- 30.3 Any document, other than the contract itself mentioned in GCC clause 30.1 shall remain the property of the Province and shall be returned (all copies) to the Province on completion of the Contractor's performance under the contract of so required by the Province.
- 30.4 The Contractor shall permit the Province to inspect the Contractor's records relating to the performance of the Contractor and to have them audited by auditors appointed by the Province, if so required by the Province.

31. SPARE PARTS

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

32. PENALTIES

- 32.1 Subject to GCC Clause 4, if the Contractor fails to deliver any or all of the goods or to perform the services within the period(s) specified in the contract, the Province 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 delayed goods or unperformed services, using the current prime interest rate calculated for each day of the delay until actual delivery or performance. The Province may also consider termination of the contract in terms of the GCC.

ANTI-DUMPING AND COUNTERVAILING DUTIES AND RIGHTS

- 33.1 When, after the date of bid, provisional payments are required, or anti-dumping or countervailing duties are imposed, or the amount of a provisional payment or anti-dumping or countervailing right is increased in respect of any dumped or subsidized import, the State is not liable for any amount so required or imposed, or for the amount of any such increase. When, after the said date, such a provisional payment is no longer required or any such anti-dumping or countervailing right is abolished, or where the amount of such provisional payment or any such right is reduced, any such favorable 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.

34. GOVERNING LANGUAGE

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.

35. TAXES AND DUTIES

- 35.1 A foreign Contractor shall be entirely responsible for all taxes, stamp duties, licence fees, and other such levies imposed outside the Province's country.
- 35.2 A local Contractor shall be entirely responsible for all taxes, duties, license fees, etc., incurred until delivery of the contracted goods to the Province.
- 35.3 No contract shall be concluded with any bidder whose tax matters are not in order. Prior to the award of a bid the Province 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.



**BID SPECIFICATIONS FOR THE
CONSTRUCTION OF A 1000 BIRDS LAYER HOUSE WITH CURTAINS
MAZULU PROJECT | UMHLATUZE LM | KING CETSHWAYO DM**

DISCLAIMER

1. This document must be read in conjunction with the following 7 drawings:
 - 1.1. RDN/2014/06R/ANS: 1000 Birds Layer House
 - 1.2. RDN/2015/009/ANS: 1000 Birds Layer Shed - Electrical Reticulation
 - 1.3. Detail Electrical Connections Db Corner
 - 1.4. RDN/2016/030/ANS: Cross section 1000 birds layer shed (Curtains)
 - 1.5. RDN/2014/02/NUR: Masonry Tank Stand (A3)
 - 1.6. RDN/2010/001/TOI: Ventilated Improved Pit Latrine (not always required)
 - 1.7. RDN/2016/012/ANS: Installation schedule for pressure tanks for layer sheds

2. If the contractor has the impression that the information provided in the drawing(s) and the technical specifications/Schedule of quantities contradict each other or are perceived to be ambiguous, (s)he should point this out to the Engineer and ask for clarification at an early stage, but not later than before the commencement of any construction. The same applies for purported differences between the technical specifications and schedule of quantities.

3. The Engineering Services Directorate (ESD) takes no responsibility for sheds built on the basis of this document alone without any prior involvement of ESD before (partial) completion. This involvement consists of, but is not necessarily restricted to:
 - 3.1. Verification of the bid/quote document and Drawings by ESD before procurement;
 - 3.2. Presence of ESD at the handover of the site to the contractor and at the commencement of the work. The contractor is to make sure that ESD is informed of his/her intention to commence the work so that ESD presence can be assured.
 - 3.3. The drawings supplied with this document are for quoting/bidding purposes only and no construction should take place before the contractor has received the large scale building plans.
 - 3.4. Regular site inspections by ESD and the processing of invoices on the basis of achieved progress.

FOR OFFICIAL USE ONLY

SUBMITTED BY

NAME:..... PHONE NUMBER.....

OFFICE:.....DATE.....

CHECKED BY ENGINEERING SERVICES DIRECTORATE

NAME.....PHONE NUMBER.....

OFFICE..... DATE.....



A | TERMS OF REFERENCE

1. BACKGROUND

- 1.1. Achieving and maintaining high levels of growth in the agricultural sector is a key national policy objective that holds a high priority in the programmes of the KwaZulu-Natal Department of Agriculture and Rural Development (herein after referred to as Department). The Department endeavours to contribute to economic growth within the agricultural sector and in the process promote commercialization in the smallholder farm sector, increase opportunities for skilled and relatively unskilled employment, and increase food security. The Department has therefore prioritized the need to assist resource-poor and emerging farmers with tunnels and irrigation requirements.

2. OBJECTIVES

- 2.1. To appoint a suitably qualified Service Provider for the construction of one (1) 1000 birds layer house; To ensure the timely realization of cost effective poultry housing of good quality to resource-poor and emerging farmers.
- 2.2. To create sustainable food production in poverty-stricken rural communities.

3. SCOPE OF SERVICES

- 3.1. The contract covers the supply of all material and fittings and construction of one 1000 birds layer house(s) and associated/optional & additional works.
- 3.2. Documents to accompany this bid specification are listed in the Table of Contents.

4. PROJECT LOCATION

- 4.1. The site is situated in Ward 13 of the uMhlathuze Local Municipality in the King Cetshwayo District Municipality, southwest of Richardsbay.
- 4.2. Site Coordinates:



B | SPECIAL TERMS & CONDITIONS

APPOINTMENT OF A SERVICE PROVIDER TO CONSTRUCT A 1000 BIRDS LAYER HOUSE AND SUPPLY AND INSTALL LAYER CAGES FOR 1040 BIRDS FOR MAZULU PROJECT IN WARD 13 IN UMHLATUZE LM | KING CETSHWAYO DM

1. INTRODUCTION

- 1.1. Bidders must ensure that they are fully aware of all the Terms and Conditions contained in this bid document. Only bidders that fully meet the prequalification shall be considered.
- 1.2. The Bidder is required to check the number of consecutively numbered pages. Should any found to be missing or in duplicate, or the text of figures indistinct, or should there be any doubt or obscurity as to the meaning of any part of these documents, the Bidder must ascertain the true meaning or intent of the same prior to the submission of his/her Bid. No claims arising from any incorrect interpretation will be admitted.

2. ACCEPTANCE OF BID

- 2.1 The Departmental Bid Adjudication Committee is under no obligation to accept any bid.

3. AMENDMENT OF CONTRACT

- 3.1 Any amendment to or renunciation of the provisions of the contract shall at all times be done in writing and shall be signed by both parties, subject to the Departmental Bid Adjudication Committee approval.

4. AWARD

- 4.1 Bidders who meet the prequalification shall be scored on functionality and only bidders with a minimum score of 70 shall be evaluated on price and preference points.

5. BASIS OF QUANTITIES

- 5.1 Quantities are as reflected on the Bill of Quantities.

6. BBBEE CERTIFICATE

- 6.1 A bidder claiming BBBEE points must submit a valid BBBEE certificate or a sworn affidavit together with the bid.

7. CHANGE OF ADDRESS

- 7.1 Bidders must advise the Departmental Supply Chain Management, Contract Administration should their ownership or address (domicilium citandi et executandi) details change from the time of bidding to the expiry of the contract.

8. COMPETENCY OF THE SERVICE PROVIDER

- 8.1. This bid is open for contractors with a Construction Industry Development Board (CIDB) data base grading of **at least 3 GB**. The contractor is to submit evidence of his/her OWN **Active** registration.
- 8.2. For evaluation processes, the Department shall apply the evaluation criteria as outlined in the Bid Evaluation Criteria of this bid.
- 8.3. It shall be vital for the appointed supplier to have sufficient financial resources and capacity to finance and execute as per terms and conditions of the contract.



9. COMPULSORY SITE BRIEFING

- 9.1 A compulsory site-briefing meeting will be held with prospective Bidders. Attendance at the meeting will be compulsory and non-attendance shall invalidate any bid. The date and time of the meeting will be published in the Bid Advertisement or, in the case of a quote, be communicated when the prospective service provider is invited to quote.

10. COUNTER OFFERS

- 10.1 Counter offers shall not be considered.

11. DELIVERY CONDITIONS

- 11.1 Delivery of services must be made in accordance with the instructions appearing on the official purchase order.
- 11.2 All deliveries or dispatches must be accompanied by a delivery note stating the official purchase order number against the delivery that has been affected.
- 11.3 In respect of items awarded to them, contractors must adhere strictly to the delivery periods stipulated by them in their bid document.
- 11.4 The instructions appearing on the official purchase order form regarding the supply, dispatch and submission of invoices must be strictly adhered to.
- 11.5 All invoices submitted must be original.
- 11.6 Deliveries not complying with the order form shall be returned to the contractor at the contractor's expense.
- 11.7 No locally manufactured product may be substituted during the contract period with an imported product, and vice versa, without prior approval of the Departmental Bid Adjudication Committee.

12. DETAILS OF CONSTRUCTION CONTRACTS AWARDED TO THE BIDDER PAST/CURRENT (ANNEXURE C3)

- 12.1 The bidder must furnish the following details of all verifiable past and current construction contracts.
- 12.1.1. Date of commencement of contract/s;
 - 12.1.2. Value per contract; and
 - 12.1.3. Contract details; that is, with whom held, phone number and Address/s of the companies.

13. ENTERING OF DEPARTMENTAL OFFICES

- 13.1 No representative from a company shall be permitted to enter Departmental premises, buildings or containers where stores are kept unless he/ she is accompanied by the responsible official in charge of stores.

14. EQUAL BIDS

- 14.1 If two or more bidders score an equal total number of points, the contract must be awarded to the bidder that scored the highest points for BBBEE.
- 14.2 If functionality is part of the evaluation process and two or more bidders score equal total points and equal preference points for BBBEE, the contract must be awarded to the bidder that scored the highest points for functionality.



- 14.3 If two or more bidders score equal total points in all respects, the award shall be decided by the drawing of lots.

15. INVOICES

- 15.1 All invoices submitted by the Contractor must be Tax Invoices indicating quantity ordered and quantity delivered, the amount of tax charged and the total invoice amount.
- 15.2 A tax invoice shall be in the currency of the Republic of South Africa and shall contain the following particulars:
- 15.1.1. The name, address and registration number of the supplier;
 - 15.1.2. The name and address of the recipient;
 - 15.1.3. An individual serialized number and the date upon which the tax invoice is issued;
 - 15.1.4. A description of the goods or services supplied;
 - 15.1.5. The quantity or volume of the goods or services supplied;
 - 15.1.6. The value of the supply, the amount of tax charged and the consideration for the supply; or
 - 15.1.7. Where the amount of tax charged is calculated by applying the tax fraction to the consideration for the supply and either the amount of the tax charged, or a statement that it includes a charge in respect of the tax and the rate at which the tax was charged.

16. IRREGULARITIES

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

17. JOINT VENTURES

- 17.1 In terms of the Preferential Procurement Regulations, 2017 pertaining to the Preferential Procurement Policy Framework Act 5 of 2000, a trust, consortium or joint venture must submit a consolidated BBBEE Status Level Verification Certificate for every separate bid.
- 17.2 Should this bid be submitted by a joint venture, the joint venture agreement must accompany the bid document before the closing date and time of bid. The joint venture agreement must clearly specify the percentage of the contract to be undertaken by each company participating therein.
- 17.3 The non-submission of a BBBEE Certificate by a trust, consortium or joint venture shall result in zero (0) preference points being allocated for evaluation purposes.
- 17.4 Each party to a Joint Venture/ Consortium must submit an original valid Tax Clearance Certificate together with the bid before the closing date and time of bid.
- 17.5 The joint venture or consortium must submit a formal agreement that outlines the roles and responsibilities of each member of the joint venture or consortium, nomination of an authorised person to represent the joint venture or consortium in all matters relating to this bid and the details of the bank account for payments to be effected.
- 17.6 The joint venture or consortium must comply with Central Suppliers Database (CSD) registration requirements as per National Treasury directive.

18. LATE BIDS

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



19. NOTIFICATION OF AWARD OF BID

19.1. The successful bidder shall be notified via an advert in the same media as the invitation to tender.

20. PAYMENT FOR SUPPLIES AND SERVICES

20.1 A contractor shall be paid by the Department in accordance with supplies delivered and services rendered.

20.2 Should a contractor indicate a special discount on his/her account provided payment is made within a certain time, the Department shall make every effort to take advantage of such discount.

20.3 Any query concerning the non-payment of accounts must be directed to the Department. The following protocol shall apply if accounts are queried:

20.3.1 Contact must be made with the officer-in-charge of the District Office;

20.3.2 If there is no response from the District Office, the Director: Finance must be contacted;

20.4 Information as contained on the Central Suppliers Database must be valid/correct. Non-compliance with Tax Requirements shall affect payment.

21. PERIOD OF CONTRACT

21.1 The contract is ad hoc / once off.

22. PRE-QUALIFICATION CRITERIA

22.1 Only bidders who meet both of the following prequalification criteria may respond:-

22.1.1. **BBBEE level 1 (as per the provisions of section 4(1)(a) of the PPPFA Regulations, 2017); and**

22.1.2. **EME (as per the provisions of section 4(1)(b) of the PPPFA Regulations, 2017)**

22.2 Bidders must submit documentary proof of compliance with the above prequalification criteria.

22.3 Bidders who fail to comply with the above-stipulated prequalification criteria or fail to submit documentary proof of the compliance with the prequalification criteria shall not be considered for this bid.

23. QUALITY CONTROL/ TESTING OF PRODUCTS

23.1 The Department reserves the right to inspect and verify the quality and specifications of the supplied materials and equipment, as well as other items listed on the Bill of Quantities, **before** construction and/or installation. In case of deviations in terms of dimensions, strength, numbers or otherwise, the Contractor shall replace these goods for the correct ones at his/her own expense.

23.2 The same replacement obligation to the Contractor would apply during installation and during and after commissioning.

23.3 In the case of sustained or repeated non-adherence to the specifications of the materials and/or equipment, as well as in the case of general negligence during the implementation process, the contract may be cancelled. The Department will in such cases seek compensation from the contractor for the estimated costs for completion.

23.4 In cases of deliberate negligence or unwillingness to adhere to the Departmental specifications, the Service provider will be reported to the Provincial and/or National Treasury for listing on the Restricted section of the Central Suppliers database.



24. ORDER OF PRECEDENCE

24.1 This invitation to bid/quote is issued in accordance with the provisions of the Public Finance Management Act (PFMA), Chapter 16 A of the *Treasury Regulations* and shall be subject to the provisions of the *National Treasury Government Procurement General Conditions of Contract* (July 2010). The *Special Terms and Conditions* are supplementary to that of the *General Conditions of Contract*. Where, however, the *Special Terms and Conditions* are in conflict with the *General Conditions of Contract*, the *Special Terms and Conditions* shall prevail.

25. SUPPLIERS DATABASE REGISTRATION

25.1 A bidder submitting an offer must be registered on the Central Suppliers Database at National Treasury. A bidder who has submitted an offer and is not registered on the Central Suppliers Database shall not be considered at the time of award. No pending registrations shall be considered.

25.2 A Joint Venture/Consortium must be registered on the Central Suppliers Database at the time of submitting the bid.

NB: If a bidder is found to be employed by the State and is on the Central Suppliers database, the bidder shall be disqualified.

26. TAX AND DUTIES

26.1 During quotation stage, prices offered and paid must include all customs, excise and import duties, and any other tariffs or taxes levied by the government or statutory body having jurisdiction on the goods provided under this contract, including Value Added Tax (applicable at the current rate).

27. TAX COMPLIANCE PIN

27.1 The bidder must submit a valid Tax Compliance Pin with the bid. Bidders should note that their tax compliance status shall be verified through the Central Supplier Database and SARS.

27.2 Where a Tax Compliance Pin is not submitted with the bid, the Department shall use the Central Supplier Database to verify the tax matters of the bidder.

28. UNSATISFACTORY PERFORMANCE

28.1. Unsatisfactory performance occurs when performance is not in accordance with the contract conditions.

28.2. The Departmental official shall warn the contractor in writing that action shall be taken in accordance with the contract conditions unless the contractor complies with the contract conditions and delivers satisfactory supplies or services within a specified reasonable time (7 days minimum).

28.3. If the Contractor fails to commence the Works or to proceed with and complete the Works in compliance with the projected timeframes, the Head of Department or his/her representative shall take action in terms of its his/her delegated powers and adopt and exercise one of the following courses wholly or partly, viz: -

28.3.1. To direct the Contractor, in writing, on any day named therein to suspend and discontinue the execution of the Works, and to withdraw himself and his workmen from the said Site or Sites,

28.3.2. To make a recommendation to the Accounting Officer for cancellation of the contract concerned.

28.3.3. To Contract or Contracts by calling for Bids or otherwise with any other Contractor or Contractors for the completion of the Works, or any part thereof, at such times and upon such terms as to the Department shall deem best.



28.4. In relation to the foregoing provisions the Department shall charge any sums of money which may be paid by the Department for completing the said Contract against the Contractor and if such amount shall exceed this Contract, then the Department shall have the right to recover such excess or any balance thereof from the Contractor by legal proceedings.

28.5. When correspondence is addressed to the contractor, reference shall be made to the contract number/ item number/s and an explanation of the complaint.

29. VALIDITY PERIOD OF BID AND EXTENSION THEREOF

29.1 The validity (binding) period for the bid shall be 120 days from close of bid. However, circumstances may arise whereby the Department will request bidders to extend the validity (binding) period. Should this occur, the Department shall request bidders to extend the validity (binding) period under the same terms and conditions as originally offered for by bidders. This request shall be done before the expiry of the original validity (binding) period.

30. VALUE ADDED TAX (VAT)

30.1 Bid prices must be inclusive of 15% VAT.

30.2 Bidders who make taxable supplies in excess of R1 million in any 12-month consecutive period are liable for compulsory VAT registration, but a person may also choose to register voluntarily provided that the minimum threshold of R50 000 (as of 1 March 2010) has been exceeded in the past 12-month period. Bidders who meet the above requirement must register as VAT vendors, if successful, within one month of award of the bid.

30.3 For the purposes of calculating preference points, VAT shall not be considered during quotation process.

31. SERVICE LEVEL AGREEMENT

31.1 The successful Bidder and the Department will sign a Service Level Agreement (SLA) prior to commencement of works. A proposed schedule of works must be provided by the contractor for the approval of the Engineer within two weeks of receiving notification of a successful bid.

31.2 The *Special Terms and Conditions (STC)*, the *Standard Technical Specifications (STS)* and the *Project Specific Specifications (PSS)* as listed in this bid document, together with the *Drawings*, are deemed to form part of the SLA.

32. COMMENCEMENT OF THE WORK

32.1. Site establishment must start within two (2) weeks, and the actual works within three weeks after hand-over of the site, provided that;

32.1.1. An official order has been issued;

32.1.2. The contractor is in possession of all relevant documentation required for works execution;

32.1.3. No exceptional circumstances such as inclement weather or other outside the control of either party to the contract prevail.

32.2. In case work has not commenced within two (2) weeks of the site hand-over and no attenuating circumstances for the delay can be provided, the Department reserves itself the right to cancel the contract

33. HANDOVER OF SITE TO CONTRACTOR

33.1. The Department will organize a site hand-over to the contractor who will then be introduced to the project stakeholders and participants.



- 33.2. The site will be handed back at works completion after a final inspection by the Engineer revealed no outstanding patent defects.
- 33.3. The Contractor will control the site for the contract duration. Only the Contractor's own employees, Contractor's local labour and Departmental Representatives will be allowed on site.
- 33.4. The Contractor is responsible in the administration, control and security on the site at all times during the contract duration.

34. WATER AND POWER

- 34.1. The Contractor shall make the necessary arrangements for the provision of any water and power. No payment will be made for the provision or use of these services and the cost of these shall be included in the Bid/quoted amount.

35. LOCATION OF CAMP

- 35.1. The Contractor's camp may be erected on the site of the works but must meet the approval of the Engineer, project beneficiaries and landowners.
- 35.2. No persons other than a night watchman may sleep in the camp, without the approval of the local relevant Stakeholder.

36. HOUSING OF CONTRACTOR'S EMPLOYEES

- 36.1. The Contractor shall make his own arrangement for housing, payment and feeding his employees and transporting them to and from the site. However, it may be possible to arrange temporary local accommodation for the Contractor's staff with the participants.
- 36.2. The Contractor is in all respects responsible for the housing and transporting of his employees, and for the arrangement thereof, and no extension of time due to any delays resulting from this, will be granted.

37. LABOUR SOURCE & CAPACITY

- 37.1. The Contractor will be required to satisfy the Department that a sufficient and experienced labor force is employed or that sufficient experienced labour can be acquired to complete the services and produce an acceptable quality of workmanship.
- 37.2. The contractor is encouraged to source unskilled labour from the project participants or local community. The Contractor and the Departmental representative (Engineer or local Agricultural adviser) may negotiate with the participants in this regard to establish all the conditions for the utilization of the local labour.
- 37.3. The Contractor will be responsible for all hiring, payment, housing and transport of all labour used for the duration of the contract.

38. SECURITY & RISK

- 38.1. No one shall be allowed on the construction site after normal working hours except for the necessary security personnel.
- 38.2. The Contractor shall also be responsible for safeguarding all plants, machinery, equipment and materials on site. The Engineer shall not be responsible for any lost, damaged or stolen property or materials. Should any of these situations arise, no allocations will be made in terms of finances or time.



39. MATERIALS: DELIVERY, ON & OFF-LOADING, STORAGE & RESPONSIBILITY

- 39.1. The Contractor shall be responsible for the safe delivery, loading, off-loading, handling and storage of any equipment and materials on site.
- 39.2. All equipment, materials and plant stored on site must be suitably protected against damage or loss by theft or otherwise.
- 39.3. The Contractor shall remain fully responsible for all material and plant etc. until the completed works are handed over and have been officially accepted by the Department.

40. EXISTING ROADS, MUNICIPAL PAVEMENTS, ETC.

- 40.1. The Contractor is advised that he will be held responsible for any damage to the existing pavings, roads, municipal pavements, fences, boundary walls, etc., and will have to repair such damage at his expense.

41. DAMAGE TO PROPERTY

- 41.1. If the Contractor or his/her employees, while engaged in the execution of the contract, shall break, deface, injure, destroy or allow to fall into disrepair any part of the Works or property belonging to the Department, or any private property including: buildings, pavings, roads, fences, walls or grounds contiguous to the premises of the Department on which he or they may be employed, the Contractor will be required to repair, in a perfect and workmanlike manner, at own expense all damage to the approval of the Department. The Completion Certificate will not be issued until the Department is satisfied that all necessary remedial work has been satisfactorily completed
- 41.2. The Contractor shall take every precaution against damage or nuisance being caused by dust both to the properties of the Employer and all surrounding properties and shall indemnify the Employer against any claim that might arise there from.

42. UNDERGROUND CABLES AND PIPES

- 42.1. If such services are discovered, immediate notification must be made to the Employer and all work in the vicinity of such cables, pipes, etc., shall cease until safe to proceed.
- 42.2. Should the Contractor damage underground cable or pipes, such damage shall be repaired as soon and safely as possible by the Contractor.
- 42.3. The cost of making good such damage will be met by the Contractor as this must be covered by the Contractors works insurance.

43. DAILY RAINFALL RECORDS

- 43.1. Submission of rainfall figures is required for the granting of permission of extending the contract period on the basis of inclement weather. If none are kept, the Engineer is under no obligation to grant extension of the completion period for inclement weather.

44. INSPECTION OF WORK

- 44.1. The Departmental representative may at all reasonable times have access to the site where work is being executed for inspection purposes.
- 44.2. The Engineer may request that evidence of the quality or strength of any materials be supplied by the contractor wherever necessary.

45. NOTICE OF COVERING WORK

- 45.1. The Contractor shall give due notice to the engineer whenever any work or materials are



intended to be covered in with earth or otherwise in order that their correct dimensions and quality may be ascertained before being covered.

- 45.2. If any such work or materials are covered without such notice having been given, the work or materials shall be uncovered at the Contractor's expense on instructions given by the Engineer.

46. SUB-CONTRACTED WORK

- 46.1. **The contractor shall not sub-contract the entire contract.** The contractor must indicate in **Annexure C2 – Additional Information: Subcontracted works** which part(s), if any, (s)he intends to subcontract

- 46.2. Sub- contracting shall not relieve the contractor from any liability or obligation under the contract and his/her shall be liable for the acts, defaults and neglects of any sub-contractor, his/her agent or employees as fully as if they were the acts, defaults or neglects of the contractor, his agents or employees.

47. INSURANCE

- 47.1. All accepted approved contractors would be required to provide the following insurance's for the project awarded to them:

- 47.1.1. Insurance against damage, destruction or loss to 50% of the value of the contract.
- 47.1.2. Public Liability insurance.
- 47.1.3. All risks (works) policy and Political.

48. PROTECTION OF THE PUBLIC

- 48.1. The Contractor shall be responsible for the protection of the public in terms of the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993). The Contractor shall pay particular attention to watching and warning lighting and must provide any necessary barriers, etc., required for the protection of the public in terms of the Act.

49. INJURY TO PERSONS

- 49.1. The Contractor shall be liable for and shall indemnify the department in respect of any liability, loss, claim or proceedings whatsoever, whether arising in Common Law or by Statute in respect of personal injuries to or death of any person whomsoever arising out of or in the course of or caused by the execution of the Works.

50. DISAGREEMENTS

- 50.1. **Notice of disagreement.** The Contractor has the right by written notice to the Engineer to require him to consider any disagreement which he raises with the Engineer provided the said written notice shall be given within 14 days after the cause of disagreement has arisen.
- 50.2. **Ruling on disagreements.** The Engineer shall give a ruling on the disagreement in writing to the Contractor no later than 14 days after his receipt of a written request from the Contractor requiring him to do so. The Engineer shall provide such a ruling with as little delay as possible. During the response time the Contractor shall not alter the status of the works under contention.

54. FIXED PRICE CONTRACT

- 54.1. The contract shall **not** be subject to contract price adjustment.

55. PRICING - COMPLETENESS OF BID

- 55.1. Bidders are required to Bid for all services, products and commissioning as specified in this document and associated plans. This includes those optional items that will be pointed out as required at the



bid briefing (e.g. VIP toilet(s), fencing and others). If he/she does not bid on all items, his/her bid will be rejected.

55.2. All bid/quoted prices for separate items are to be in South African currency and must **exclude** VAT.

55.3. All items as described in the project specification are to be priced in full.

55.4. Transport/Delivery costs must be included in the pricing if the Pricing Schedule does not list them separately.

55.5. VAT must be filled in as the sub total followed by the complete price for the entire project.

55.6. The Bid price page must be signed by a person legally authorized to do so.

56. QUANTITIES OF WORK

56.1. The Contractor shall receive payment only for the works actually executed and approved by the Engineer.

57. PROGRESS PAYMENTS

57.1. Payment shall only be made for claims that are commensurate with the works actually executed and complete.

57.2. Payment will only be made against the construction progress as pertaining to **built /installed** items. Movable items and materials on site are generally excluded from progress payments until they have been fully installed or fitted or built up.

57.3. If any item or part of an item in an invoice is disputed by the Engineer, the Engineer shall give notice of such with reasons.

57.4. The Engineer may elect to use a payment schedule that apportions a weighting for the various work phases, in those cases where the actual pricing schedule is not available or lacks balance.

57.5. The contractor shall be paid in up to a minimum of seven part payments. The Contractor is strongly advised to request at least five payments when being notified of him/her being awarded the contract.

57.6. Part payments will be made after the Engineer has approved the work and will be made in accordance with the Retention clause (57).

57.7. The penultimate payment occurs after practical works completion. The final payment will be made after the 12 months liability period when the contractor has dealt with all defects, if any.

58. COMPLETION OF THE WORKS

58.1. Work completion will be established over three stages, in line with the JBCC.

58.1.1. Practical completion

This is defined as the stage when the works are found to be substantially complete and can be used for the purposes intended. This assessment will be solely made by the Engineer. When the Contractor thinks he has completed the works, an inspection will be made by the Engineer who will draw up a list of patent defects, commonly known as a "snag list", if any. *Patent defects* are defects that are visible or discoverable upon an ordinary and proper inspection.

58.1.2. Works completion

This stage will be reached after the Contractor has, to the sole assessment of the Engineer, fixed all defects listed on the snag list. It is at works completion that the Contractor will be paid out 50% of his/her retention money.



57.1.3. Final completion

Final Completion occurs 12 months after Works completion, after expiry of the liability period.

59. RETENTION

- 59.1. A 10% retention will be withheld on payment for duration of the construction.
- 59.2. The Department will pay out half of this retention, or 5% of the bid value as part of the second last payment at **practical completion** of the works. The remainder, viz 5%, will be paid out at **final completion** after expiry of the defect liability period 12 months after practical completion), the bidder having eliminated all defects.
- 59.3. In some instances, the Engineer may decide to shorten this period order to allow all payments to be completed within the financial year. However, this is **not** a given and the Contractor will be notified during the course of the construction if such would be the case.

57. DEFECT LIABILITY PERIOD

- 57.1. The defect liability period is 12 calendar months calculated from the date of Practical Completion.
- 57.2. The contractor shall unconditionally guarantee all materials, workmanship related to the works for that period. The guarantee shall cover any defects due to inferior materials and/or workmanship of the Contractor, or any of his sub-contractors, fair wear and tear excepted. The Contractor shall repair, remedy or replace any such defects, part or complete works without delay and at his own cost.

58. CONTINGENCIES

- 58.1. An amount of 10% of the subtotal for all materials, equipment and services has been set aside for Contingencies. This allowance will only be accessed for unforeseen additional expenditure not covered in the contract. Such approval must be in line with SCM Delegations.

59. PERIOD OF COMPLETION & RATE OF PROGRESS

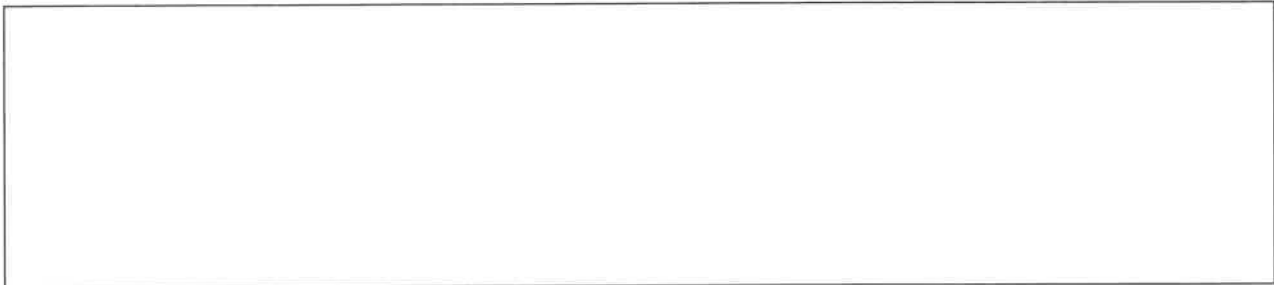
- 59.1. The project has to reach practical completion within 4 months of award of the contract (120 calendar days).
- 59.2. If the Works are delayed by any cause beyond the Contractor's control, the Contractor shall have the right within twenty-one days of any such cause of delay arising, to apply in writing to the Department to extend the date of completion, stating the cause of delay and period of extension applied for.
- 59.3. The Department upon receipt of such written application may by order in writing extend such date of completion by a period to be determined, or may refuse to extend such date of completion, or may postpone giving a decision upon such application until completion of the Contract period set out in sub-clause (a) of this clause.
- 59.4. The date of completion will be extended only to the extent approved by the Department.
- 59.5. Should the Contractor fail to apply in writing for an extension within the time set out above, or should the Department refuse to grant any extension in writing, then the Contract period provided shall not be exceeded.
- 59.6. When the Works are completed the Department will give a completion certificate and the date of such certificate shall be the date of commencement of the guarantee period.

60. PENALTY CLAUSE / FINES FOR LATE OR NON-COMPLETION

- 60.1. If the contractor does not complete the work within the time stipulated and no extenuating circumstances can be given for the delay, the Department may impose a fine as detailed below. The total will be subtracted from the retention allowance.



- 60.2. If the contractor fails to complete the works and the Department is forced to employ another contractor to complete the works, the defaulting contractor will be held liable for the costs as far they exceed the original total Bid value.
- 60.3. The department will deduct a penalty for late completion of up to **0.05% of the contract value per working day delay**. This will be deducted from the retention.



61. BID EVALUATION CRITERIA

61.1. Compliance with Special terms and Conditions

Only bids that meet the Special Terms and Conditions in all aspects as stipulated in the bid document shall be considered.

61.1. Correctness of information

All information required in the bid document must be accurate and duly completed including all the appropriate signatures. The Department reserves the right to verify all information submitted. Non-compliance with the above shall result in elimination from further processes

61.2. Compulsory administrative compliance documents that must be submitted with the bid:

- 61.2.1. Central Suppliers Database registration number;
- 61.2.2. Proof of valid and active CIDB 3 GB registration where applicable;
- 61.2.3. Certified Copies of the Identity documents for company members/service providers;
- 61.2.4. A certified copy of a valid BBBEE certificate or valid sworn affidavit for purposes of confirmation of the bidder being a Level 1 BBBEE;
- 61.2.5. Documentary proof of bidder being an EME (e.g. Financial Statement) ;
- 61.2.6. Documentary proof of bidder's experience in support of Annexure B
- 61.2.7. Documentary proof of credit facility with manufacturer and/or Registered Financial Institution or evidence of access to any legal funding instrument.

61.3. Non-submission of any of the above documents shall result in disqualification.

61.4. Where copies of original documentation are submitted, those copies must be certified and must not be copies of certified copies. Original certification should not be older than three (3) months. Failure to comply with this requirement shall invalidate the bid submitted.

62. FUNCTIONALITY EVALUATION

62.1. The bid documents shall be evaluated individually on score sheets, by a representative evaluation panel, according to the below mentioned evaluation criteria.

62.2. All service providers who score less than minimum functionality score of (70%) shall not be considered for the work

62.3. The evaluation criteria are as in Table 1 below.



TABLE 1: BID EVALUATION CRITERIA

	FUNCTIONALITY EVALUATION CRITERIA	Max Points	Evidence	Bidders Score
1.	<p>Bidder's experience in the construction of Buildings for Agricultural, domestic, industrial, institutional or commercial occupancies</p> <p>1 – 3 projects = 15 points >3 projects = 25 points</p>	25	<p>Completion Certificate (Works or other) In support of Annexure C3</p>	
2.	<p>Financial Capacity</p> <p>Total Credit Facility (with financial institution and/or manufacturer of irrigation material)</p> <p>R250 000.00 - R500 000.00 = 15 points >R500 000.00 = 25 points</p>	25	<p>Evidence of credit facility with manufacturer/supplier and/or Registered Financial Institution Or Evidence of access to any legal funding instrument (e.g. Letter of intent)</p>	
3.	<p>Access to a transportation facility/ Light Delivery Vehicle (LDV) / Truck</p>	10	<p>List under Annexure C1 Letter of commitment from fleet company Or Confirmation from producer that delivery shall also be undertaken Or Documentary proof of transport or transportation facility (Log Books/ Letter of agreement supported by Log book)</p>	
4.	<p>Proof of Physical address</p> <p>Office of Bidder outside borders of KZN = 5 pts Office of Bidder within borders of KZN = 20 pts</p>	20	<p>Lease agreement; Municipal Utility Bill; or Copy of Bank Statement (first page only) with address</p>	
5.	<p>Company Ownership/ Business Or Shareholding</p> <p>≥ 50% Women = 10 points ≥ 50% Youth = 5 points ≥ 50% People with disabilities = 5 points ≥ 50% Military Veterans = 5 points</p>	20	<p>CIPRO Registration</p> <p>(Ck documents or share certificates) Or Certificate issued by Department of Defence and Military Veterans</p>	
	TOTAL	100		
	Minimum Functionality Threshold	70%		



C | STANDARD TECHNICAL SPECIFICATIONS

1. PRELIMINARIES & GENERAL

The contractor is to note that all insurances (UIF, workmen compensation, works, public liability etc.); site and equipment safety; site establishment and security; services (water and electricity); testing of materials and any specialist services are for the contractor's responsibility and attention throughout the contract duration until handover of the project. This item also includes Occupational Health & Safety Act requirements. The Department reserves the right to stop progress of the works in case of non-compliance until these conditions are complied with.

2. APPLICABLE STANDARDS: SPECIFICATIONS & MATERIALS

2.1. For the purpose of this Contract the relevant SANS specifications shall apply- specifically SABS 1200: *Standardized Specification for Civil Engineering Construction* specifications shall apply. The following sections shall in particular apply here:

2.1.1. **SABS 1200 AA - 1986** (General - Small Works),

2.1.1.1. Materials: SABS 1200 AA (3);

2.1.1.2. Testing: SABS 1200 AA (7);

2.1.2. **SABS 1200 DA -1988** (Earthworks - Small Works)

2.1.3. **SABS 1200GA – 1982** (Concrete - Small Works).

2.1.3.1. Materials SABS 1200 GA (3)

2.1.3.2. Mixing, pouring and curing of concrete: SABS 1200 GA (5.4)

2.1.3.3. Testing: SABS 1200 GA (7)

2.1.4. **SANS 50197-1:** Cement: Common cement 32,5N or R to SANS 50197-1

3. APPLICABLE STANDARDS: EARTHWORKS AND SITE PREPARATION

3.1. Normal regulations regarding safety, municipal by-laws, contamination of water sources, erosion, siltation etc. will still apply.

3.1.1. **SABS 1200 AA - 1986** (General - Small Works),

3.1.1.1. Site preparations & establishment: SABS 1200 AA (4).

3.1.1.2. Setting out of works: SABS 1200 AA (5.1.1)

4. APPLICABLE STANDARDS: STANDARD (ABRIDGED) PREAMBLE FOR ALL TRADES

4.1. All materials to be SANS approved and installed to applicable standards specified by SANS, NBR, or the manufacturer. The Bid shall refer to "the Standard (Abridged) Preamble for all trades", which covers the following (only the items in italics apply to this contract):

STANDARD (ABRIDGED) PREAMBLES TO ALL TRADES

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5. MATERIALS AND CONSTRUCTION

5.1. All materials must be newly purchased and conform to SABS specifications for the products. This includes all items such as bricks, blocks, brick reinforcement, damp proofing, lintels, glazing, plumbing and drainage, curtains, etc... All construction works must conform to the applicable standard specifications and installation requirements as per NBR requirements and manufacturers recommendations. All concrete works to conform to CNCI standards and recommendations

6. STANDARD CONCRETE MIXES

- 6.1. Cement and aggregates shall be mixed by volume and the contents of a 50kg sack of cement shall be taken to be 0,033m³.
- 6.2. Water addition should be kept to a minimum. Only sufficient water should be used to produce a workable mix of 60-100mm slump. A recommended maximum water : cement ratio is 1 for a 10MPa; 0.8 for a 15MPa; 0.65 for a 20MPa; 0.59 for a 25MPa; 0.53 for a 30MPa mix, however the lower the ratio the better the durability of the concrete. Approximately 210 litres per m³ of concrete is required for an average quality sand and optimum quantity 19mm stone.
- 6.3. Concrete for non-structural purposes shall be "Prescribed mix concrete" produced in accordance with the requirements indicated in Table 2.

Class of Concrete	Min. Compressive Strength in MPA at 28 Days	Max. Nominal Size of Coarse Aggregate in mm	Proportion of Constituents >> 1 Wheelbarrow = 2 bags of cement		
			Cement (Parts)	Sand (Parts)	Stone (Parts)
A	10	37,5	1	4	5
B¹	15	19,0	1	3	4
C²	20	19,0	1	2.5	3.5
D	25	19,0	1	2	3
E	30	19,0	1	2	2½
¹ This project: foundations + pole bases			1 (=2 bags)	4	4
² Shed floor, tank stand floor, apron			1 (=2 bags)	3	3

7. STANDARD PLASTER & MORTAR MIXES

7.1. The standard plaster mixes are as listed in Table 3:

PLASTER CLASS:	MIX RATIO: (By Volume)	MASONRY CEMENT: kg	LIME: L	SAND: (loose and damp) L (max)
Rich mix (fdns, wet areas)	1 : 4	50	0-10	130
General purpose	1 : 5	50	0-40	165

7.2. The standard mortar mixes are as listed in Table 4:

**TABLE 4: STANDARD MORTAR MIXES**

MORTAR CLASS	MIX RATIO: (By Volume)	MASONRY CEMENT: kg	LIME: L	SAND: (loose and damp) L (max)
I	1 : 4	50	0-10	130
II	1 : 6	50	0-40	200
This project	1 : 5	50	0-25	165

8. FINISHES TO IN-SITU CONCRETE

8.1. Class U1 Ordinary Finish

Immediately after placing, the concrete shall be finished rough by screeding with the edge of a wooden board of straight and true line and working between guides set accurately to level. No mortar shall be added and noticeable surface irregularities caused by the displacement of coarse aggregate shall be made good by re-screeding after removing or tamping down the offending aggregate.

8.2. Class U2 Wood Float Finish

The concrete surface shall first be brought to the standard Class U1 ordinary finish and then floated with a wood float. Floating shall be started as soon as the screed finish is stiffened sufficiently and bleed water has evaporated or been removed and it shall be the minimum necessary to produce a surface free from screed marks and uniform in texture.

8.3. Class U3 Coarse Brush Surface Finish

The concrete surface shall first be brought to a Class U1 ordinary finish. A coarse brush finish is then applied with a coarse bristle brush. "Brushing" shall be started soon after screeding to produce a uniform patterned coarse surface finish with a rough surface texture in the direction of the desired drainage direction.

8.4. Class U4 Steel Float Finish

The concrete surface shall first be brought to the standard Class U1 ordinary finish and then floated with a steel power float. Floating shall be started as soon as the screeded finish is stiffened sufficiently and bleed water has evaporated or been removed and it shall be the minimum necessary to produce a surface free from screed marks and uniform in texture.



D | PROJECT SPECIFIC SPECIFICATIONS

TABLE 5 - SCOPE OF WORKS

#	Description	Specs No.	BOQ No.	
STANDARD ITEMS				
1	Construction of the layer house proper	PSS		STANDARD ITEMS
1.1	Site establishment and lay out.	1	72	
1.2	Earthworks: Remove 150mm of topsoil over an area of 50m x 15m	2	53	
1.3	Level the site and compact soil to 95% ModAASHTO over an area of 42m x 12m (building footprint plus 3.0m).	2	54	
1.4	Setting out of shed, digging of the foundations & holes for the poles;	2	55	
1.5	Storm water drain above the house(s). V-drain app.100m x 2.0m x 0.5m	2	56	
1.6	Supply all materials required for the structure and entire works (throughout contract).	STS 5	ALL	
1.7	Concrete pole footing; timber structure as per specs & drawings.	5 STS 6-7	1,2,3,7,8,9	
1.8	Prepare and cast strip foundation for walls	3	1,2,3,	
1.9	Brick up foundation walls up to floor level;	3	1,2,4,5,6	
1.10	Floor base concrete floor and apron as per with drawings & specifications	4,7	1,2,3,7	
1.11	Finish all walls up to roof height;	9	1,2,4,5,6,	
1.12	Plaster, paint and bag wash	9 STS 8	1,2,4 49-51	
1.13	Complete roof structure with gutter	6,7,8	9 - 13, 20- 24, 29 - 34	
1.14	Install Isoboard insulation under roof.	8	35	
1.15	Closures: weld mesh	11	26 - 28	
1.16	Supply and install PVC curtains	10	57 - 70	
1.17	Build tank stand, place & secure 3 tanks & connect 2 tanks to gutter;	3,4,8,13,	1-6, 36, 45	
1.18	Install door(s)	12	20 - 27	
1.19	Supply of other equipment (trestle table, laundry trolley for feed, ladder)	14,15	81 - 87	
1.20	Install water reticulation and bulk water connection	16	36 - 46, 78, (95)	

**TABLE 5 - SCOPE OF WORKS (CTD)**

OPTIONAL ITEMS				
#	Description	Specs No.	BOQ No.	Required YES/NO
17	Supply & installation of battery cages, troughs & nipple drinkers	17	74 – 77, 79, 80	YES
18	Install electrical reticulation and lighting. No connection to the grid is required.	18	88 - 94	YES
19	<u>Alternative water supply:</u> Supply & installation of electrical surface pump (only in absence of existing municipal water supply)	19	95	NO
20a	Supply fencing materials according to drawing & specs.	20	96	NO
20b	Erect fencing according to drawing & specifications	20	97	NO
21	Construction of VIP latrines	21	98	NO
22	Supply & installation of circulation fans	22	99	NO
23	Supply and delivery of feed	23	100	NO
24	Supply & Installation of bulk feed storage bins + concrete slabs	24	101	NO
25	Access road and turn circle	25	102	NO
26	Soil Conservation works / Embankment Toe Protection	26	103	NO
27	Supply of vaccinated point-of-lay pullets (15-20 weeks old) from certified stock	27	104	NO
28	Medication And Insect Control	28	105	NO
29	Egg Cartons	29	106	NO
30	Egg Grading Machine	30	107	NO
31	Sorting/Packing/Storage Shed	31	108	NO

ADDITIONAL ITEMS SPECIFIC FOR THIS PROJECT

32			109	YES
33			110	YES
34			111	YES
35			112	YES
36			113	YES

**D1 | PROJECT SPECIFIC SPECIFICATIONS – STANDARD ITEMS****1) SITE ESTABLISHMENT AND LAY OUT**

- .1 **Orientation:** The longitudinal axis of the building shall be placed in an **east-west direction** with the higher side of the mono pitch roof facing north, unless the prevailing wind would be from that direction, in which case the building may be turned up to 45 degrees.
- .2 **Spacing** between 2 units: 20 metres.

2) SITE CLEARING & EARTH WORKS

- .1 The site, including an area extending to at least 5 meters longitudinally and 7m in front of front and back gable must be cleared and stripped of all plant materials, roots and topsoil prior to site leveling. Total area 50m x 12m for 1 house.
- .2 The cleared and stripped material is to be stockpiled away from the construction site and is to be leveled/replaced once all construction is complete.
- .3 The site is to be entirely leveled prior to any construction.
- .4 Compaction of the site shall take place at optimum moisture content (OMC) to a maximum dry density of at least 95% of Mod. AASHTO. The Contractor shall arrange independent compaction testing, before the floor slabs are cast. Four (4) distributed places per site shall be tested, once off, after completion of the compaction of the floor base. (**test results are to be provided**). The floor is to be **inspected** prior to the pouring of any concrete.
- .5 A **storm water cut off drain** is to be dug above the shed(s) diverting runoff away from the house(s).

3) FOUNDATIONS (See Drawing 4: 1000 Birds Layer Shed Cross Section & Detail)

- .1 House foundations: **Trench** depth is 500mm for strip foundation for walls and 700mm for poles. Dimensions for strip foundations are 500 x 250mm. Strip foundations to extend under doorstep.
- .2 **Foundation wall:** 3 courses of M150 cement blocks on top of strip foundation. First 300mm (1.5 courses) are underground.
- .3 Pole bases are 400mm (l) x 400mm (w) x 600mm(d).
- .4 Tank stands (3x): Trench depth is 350mm with same foundations as shed. Only 1st course is under ground.

4) FLOORS (See figure 1/Drawing RDN/2016/026/ANS)

- .1 **Sub-Base:** **The backfill of soil** (300mm thick) under the floor slab is to be well and uniformly compacted to minimum 95% Mod AASHTO – Contractor to supply test results proving compaction results – Departmental Engineer to be notified of test and observe test procedures. Backfilling & soil compaction to SABS 1200 DA (3.2;5.2.3.2). On top of the compacted fill will be a **50mm thick river sand base** for the concrete floor slab. The floors are to be on a leveled base and well compacted. The base is to be inspected prior to laying of the damp proofing or pouring of any concrete. See Drawing RDN/2015/08R/ANS.



- .2 Pest control soil poisoning is to be applied under floor by reputable pest control specialists (registered with the Department of Agriculture and members of the pest control association). **Certification is to be provided.**
- .3 Damp proof USB sheeting (green or black, minimum 250 micron thickness) is required throughout the structure. It is to be laid on the compacted sub-base and ending on top of 2nd row above strip foundation (see Drawing RDN/2015/008/ANS-Section) above floor level.
- .4 **Reinforcement:** No reinforcement is required.
- .5 **Floor:**
 - (1) Finished floor level must be 300mm above ground level ;
 - (2) Class C concrete and surface finishes as per drawing (min U2): $\geq 25\text{MPa}/19\text{mm}$, 1:2:3 mix, slump to SABS 1200GA (5.4.1.2). Contractor to take cubes and have concrete strength tested in a lab. **Three cubes per pouring session** if no premix is used.
 - (3) The floor and aprons are to be 100mm thick with a class U2 finish. Floors should be level. Apron slope 5%.
- .6 An **inspection** is required just before pouring of the concrete.
- .7 **Screed:** a 25mm screed (mix 1:4 river sand) is to be applied within seven days after pouring of the concrete in such a way that water can be drained at the back of the structure. *Screed must be shaped in such a way that the inside door can open freely.*
- .8 **Curing:** The floor slabs (2.8 x 2.5m) are to be properly cured for a minimum period of seven days by keeping moist and covered over this time or by applying a concrete curing compound (applied as per manufacturer's specifications). The curing compound is to be applied after the floating process.
- .9 **Apron:** A concrete apron is to be constructed around the entire structure 750mm wide. The slab will be 100mm thick and slope away (5%) from the building.

5) TIMBER STRUCTURE: POLES (*See figure 1/Drawing RDN/2016/026/ANS*)

- .1 Poles to be \varnothing 125-150mm, 3.90m long in front and 3.30m at the back. All rafter-poles connections to cross at right angles and to be joined with \varnothing 15mm threaded steel bars (*handibars*) cut to size. Use hexagonal nuts and washers (min. 2mm thick).
- .2 Purlins to be joined longitudinally with hurricane clips to rafter beams.
- .3 Rafter to be placed against posts fixed with **threaded bars (\varnothing 15mm)**. The rafters are further supported by 150 x 50mm support beams running along the length of the house against the poles on the inside.
- .4 Poles to be spaced 1.56m apart in concrete bases (400mm x 400mm x 600mm), 1:3:4 mix with Class U1 surface finish to be used for all concrete bases: 15MPa/19mm, slump to SABS 1200GA 5.4.1.2 mass concrete). Bases must be free draining (*no concrete footing for the bottom 50mm of the pole*).

6) ROOFING: SHEETING & INSULATION (*See figure 1/Drawing RDN/2016/026/ANS*)

- .1 The roof pitch is 8.5 degrees (15% - see drawings) with an overhang of 500mm on the sides and 500mm in front and at the back. *Roof pitch should be 20 degrees in areas with **snow loading**.*

- .2 Roof to be made of grade 10.5 full hard corrugated galvanized iron sheets 6000 x 760 x 0.5mm (eff. width 700mm). Corrugated galvanized sheeting is to be fixed to purlins with self-tapping roofing bolts (3 per sheet per purlin), hook bolts or equivalent, both as roofing and as cladding.
- .3 Purlins to be fastened to rafters with hurricane clips. 2 x 4 nails per clip.
- .4 All purlins to be fastened to the walls on both sides with 8 gauge wire running under third row of blocks from the top.
- .5 **Insulation:** 30mm thick Isoboard over the entire length and width of the structure held in place by 38 x 38mm timber battens to be attached to the purlins. Board to be placed snugly in between purlins. See drawing RDN/2016/026/ANS: CROSS SECTION 100 BIRDS LAYER SHED.

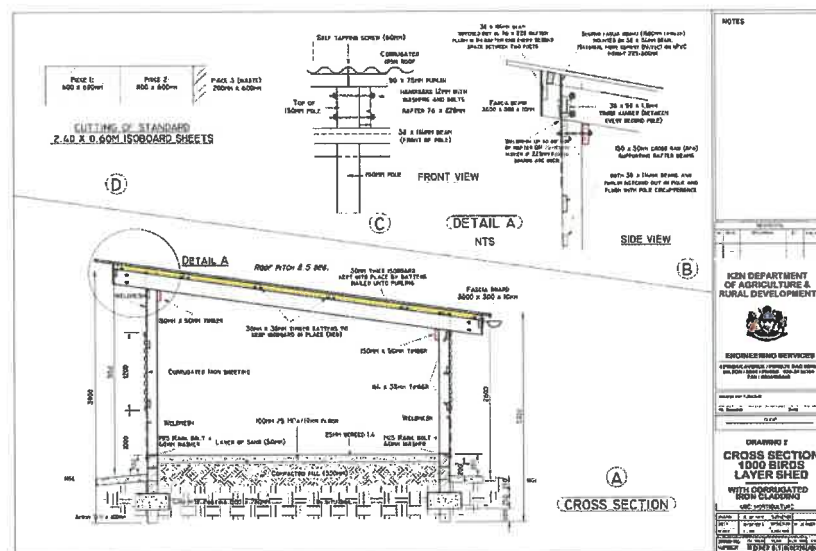


Figure 1: Cross section showing floor & floor base, timber frame & installation details for isoboard insulation
 Please note that the corrugated iron cladding should in fact be a curtain, as shown on the attached Drawing 4 : RDN/2016/030/ANS

ROOFING: TIMBER

- .1 All roofing timber to be TBTO treated and SABS approved.
- .2 Rafters are 228 x 76mm SA pine. Tie beams for gutters, curtains and weld mesh are 38 x 114mm. Longitudinal (cross) support beams are 150 x 50mm.

7) ROOFING: GUTTER AND FASCIA BOARDS (See Figure 2: Installation of water tanks)

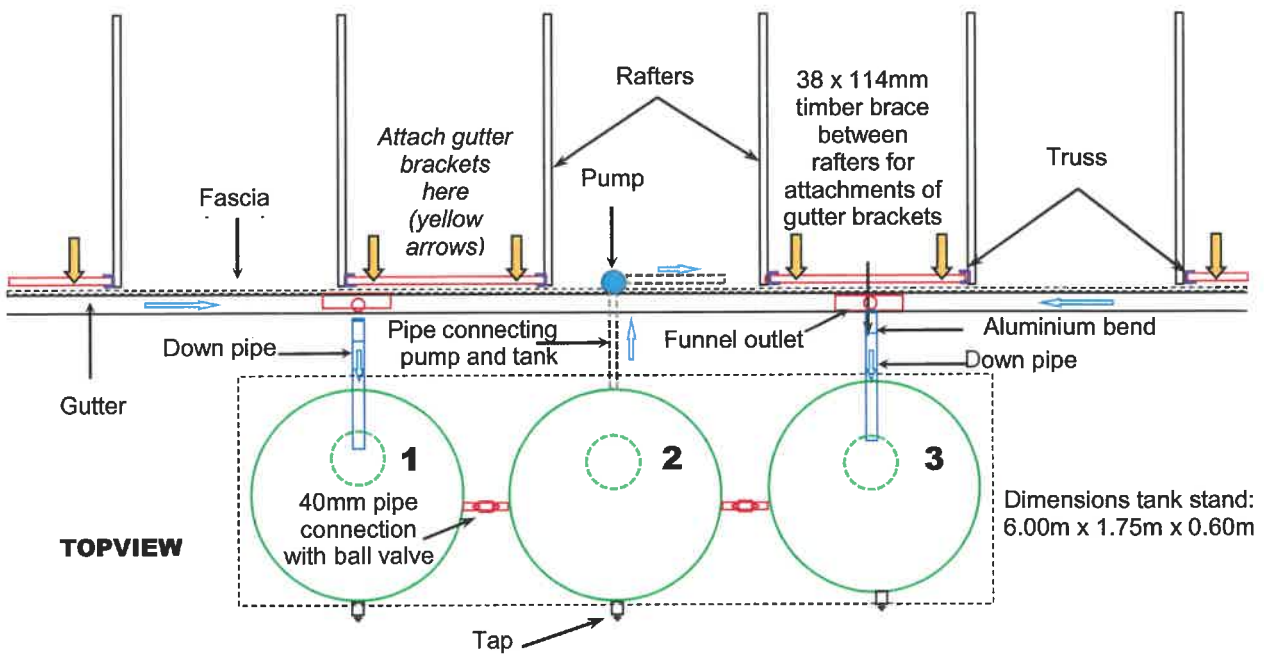
- .1 The roof shall be fitted with seamless 125mm OG aluminium guttering (use metal brackets), and 75 x 100mm aluminium down pipes for water collection into the supply tanks.
- .2 **Gutter** brackets to be mounted on 3000 x 300 x 12mm fascia boards which must be connected with fascia joiners or jointing plates.
- .3 Drill **fixing holes** to attach fascia boards to rafters to avoid breakage (Do not use hammer drills and masonry bits) and use two screws per rafter.
- .4 **Supporting timber** (i.e.38 x 114mm pine beam) must be fixed against the rafters in front and at the rear as additional support for the fascia boards. This is done by notching out the top of the rafter ends



so that the outside face of the beam will be flush with the uncut ends of the rafter (See Drawing Detail A).

- .5 300 x 10mm fibre cement/Nutec fascia boards on the sides of the building to be fitted on 38 x 150mm tie beams which in turn are joined against the purlin ends with nails and hurricane clips as indicated on the drawing(2 per connection).
- .6 Gaps between weld mesh top and roof to be closed with fibre cement or uPVC fascia boards. See also 12).

Figure 2: Installation of water tanks if pump is used.
Gutter connection to roof structure applies also if no pump is used



Only tanks 1 and 3 to be connected to gutter

8) WALLS

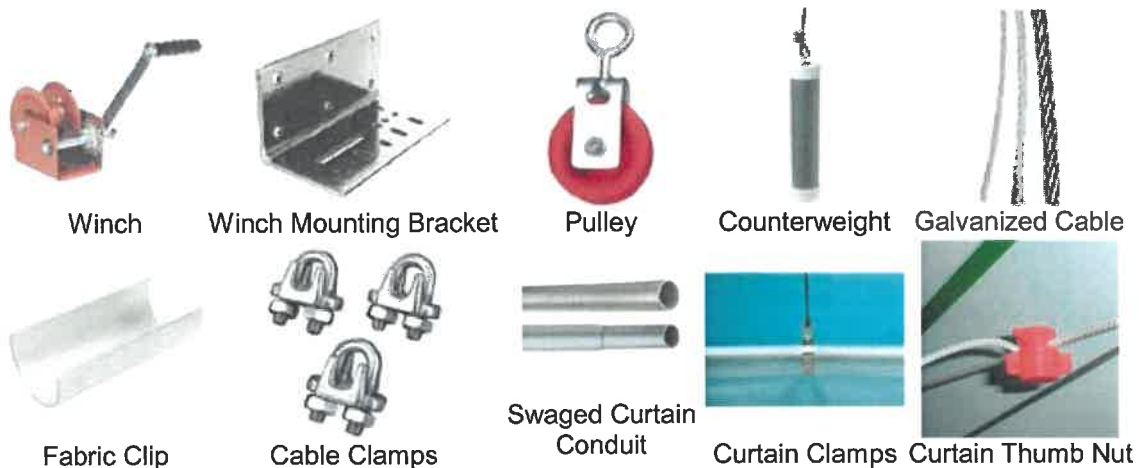
- .1 **Brickforce** to be used every **second** row of blocks. SABS damp proof course is required at the base course above the floor slab level throughout.
- .2 Blocks must be SABS approved. Use only SANS M150 blocks. The mortar is to be a 1:4 cement-building sand (*not* river sand) mix. Cement is to be Portland cement of normal setting quality, is to comply with SABS Specification 471, and must be used fresh. Cement containing more than 15% blast furnace slag will not be permitted to be used.
- .3 Inside of all walls of the layer area to be **plastered** with rich mix (1:4), plaster thickness 10-15mm, and painted with 1 coat of plaster primer followed by 2 coats of Superior exterior PVA paint (white) e.g. Wall & All, Micatex. Outside of walls to be bag washed
- .4 An inspection is required before the plastering of the walls.
- .5 Wall tops against roof sheeting to be neatly finished off (use steel float).
- .6 Entire front and back above finished floor level to be clad with weld mesh (See 12) horizontally attached to poles from 600mm height to 1.9m height (see drawing)



9) CURTAINS

1. Curtains to be installed by the supplier. If on inspection the curtains are found to be poorly installed, the contractor will be instructed to replace them by properly installed ones at his/her own costs.
2. The drop-down curtain configuration requires a winch and pulley system that uses various pieces of hardware to construct. Please note that the below figure explains the **principles** of the curtain's (the actual unit counts 2 x 17 poles on each side and not just 3) and is not to scale.
3. A manual Hand Winch and Winch Mounting Brackets are used to raise and lower the curtain. The cable is connected to the winch with a cable keeper. It is then run up and over the top of the curtain where the counterweight is hung. The counterweight will keep tension on the cable. It is tied off with one thimble and two cable clamps. The cable is threaded through the two corner cable pulleys that are attached with open eye hooks.
4. Use steel galvanized cable 1/8" in diameter and 7 x 19 for strength and flexibility. The length of cable required is equal to the length of your curtain plus four curtain widths (height). An additional pulley is required on which to hang the counterweight. The counterweight needs to be at least two curtain widths from the corner pulley to be able to open your curtain fully.
5. Attachment of the curtain shall be via screw type nails and washers hammered into the 38 x 114mm tie beam just above the walls at 400mm intervals. Alternatively it may fastened by a steel cable running through the bottom seam which is tensioned by a strainer attached to the wall.
6. Below are some of the items used for the curtains.

Figure 3: Items typically used for the installation of the PVC Curtains



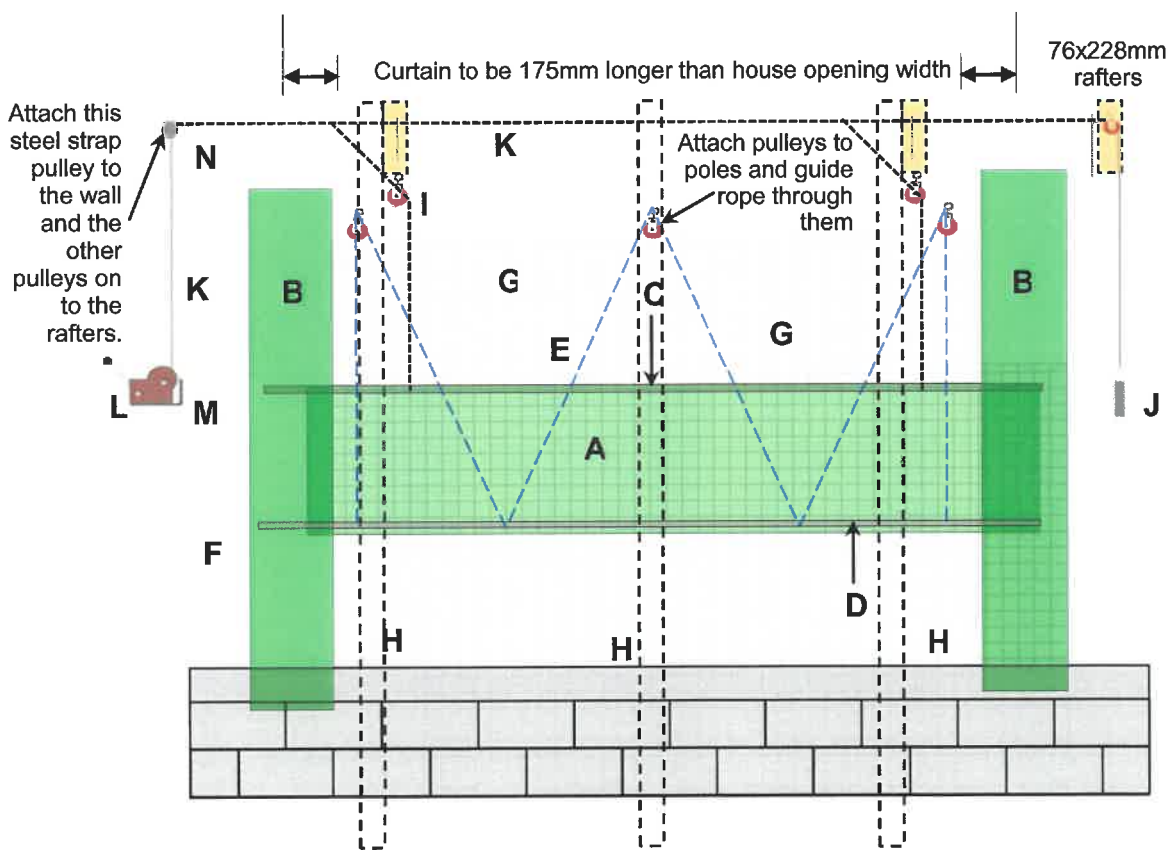
7. **Material:** use hoist up type UV resistance curtains made of 550 g/m² green or blue PVC.
Length to be covered by curtain: 32.15m. Actual curtain length: 32.50m
Final dimensions of finished curtain in front: 32.50m x 2.50m. **At back:** 32.50m x 1.50m.
 The **width** of the curtain *material* should be 150mm larger to allow for 75mm for a large hem (big enough to accommodate a 1.66" OD (40mm) swaged curtain conduit) and 75mm for overlap, bringing the total material width to 2.65m (front) and 2.00m (back) respectively.
Bottom of curtain to be **600mm above the floor level** to allow for a free flow of air under the cages attached.



Side envelopes: Use 750mm wide by 3.00m high (front) and 2.50m high (back) side envelopes of the same material to prevent billowing. Envelopes to be fastened to wall with screws + washers at 500mm intervals.

- .8 Place fabric clips are placed over the inserted conduit every meter length to prevent the conduit from spinning within the hem.
- .9 Use 3/16" diameter Poly Rope or curtain cord on the exterior of the installation to prevent the billowing of the curtain. The rope is woven in a zig-zag pattern through pulleys spaced at 1.6m intervals. The rope should be pulled firmly and tied to the conduit at the bottom of the curtain.

Figure 4: Diagram showing the various elements of the PVC Curtains



KEY

- A. PVC curtain 550g/m². Dimensions curtain front: 13.30 x 2.50m; rear 13.30 x 2.20m.
- B. PVC curtain envelopes (one on each side, 2x4=8 in total). Dimensions front: 0.75 x 3.0m. Rear: 0.75 x 2.70m. Attach to wall with self-tapping screws + washers (rubberized)
- C. Swaged curtain conduit: galvanized steel pipe with 3" long swage, 40mm (1.5"-1.6") OD;
- D. Swaged curtain conduit: galvanized steel 25-30mm (1-1.25") OD,
- E. Anti-billowing nylon rope to prevent the curtain from swaying;
- F. 38 x 114mm beam to which the weld mesh and curtain are fastened;
- G. Weld mesh 25 x 25 x 1.6mm. From floor to roof height.
- H. 100-125mm Ø CCA treated poles;
- I. 2" Nylon Pulley w/ Swivel Eye; use for steel hoisting cables AND nylon anti-billowing ropes.



- J. Counterweight 1.5-2kg.
- K. 7 x 19 type galvanized steel cable, 1/8" in diameter.
- L. Hand Winch 600 lb (Fulton or equivalent).SAE standard J1853 minimum.
- M. Winch Angle Mounting Bracket for 600lbs hand winch, gauge 0.315" (8mm)
- N. Primary 2-1/2" steel strap pulleys. Must be 15cm at least higher than highest curtain position

10) WELDMESH CLOSURES

- .1 Weld mesh sheets (25mm x 25mm x 1.6mm) to be installed *from floor level up to the roof*.
No chicken mesh may be used.
- .2 Fasten mesh against beams and poles with 25mm staples at 200mm intervals.
- .3 Overlap between weld mesh sheets 50mm. Bind overlapping sheets together with binding wire/clips at 500 mm intervals.

11) DOORS

- .1 One door at front gable, standard size door (813 x 2032 x 40mm) and frames (44 x 60mm) to be made of **meranti (not pine)**. *If a packing/grading shed is built onto the house, a second door will be required at the house end entering into the shed.*
- .2 Door(s) to be preserved by application of 3 coats of varnish (1st coat diluted with 10% mineral turpentine) applied 24 hours apart. Sand properly before 1st coat, then lightly between subsequent coats.
- .3 Doors must be fitted in such a way that they are swinging open freely and can be closed and locked without jarring of the doors in their frames or of the locks in their houses. See also par. 7.6: Screed.
- .4 **Locksets:** Door to be equipped with mortise Gower or Radius euro profile cylinder lock sets (NO lever type lockset);
- .5 Three brass hinges of the ball bearing butt type. See figure 5 on right.
Dimensions: H=100mm, W = 75mm T = 3mm, outer diameter of cylinder min. 7mm.

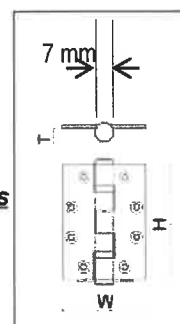


Figure 5: Door hinge specifications

12) TANKSTANDS (See also Figure 2)

- .1 Dimensions of tank stands if NO pump is used: 1.75m x 1.75m x 0.6m (0.4m + slab = 0.5m above ground).
- .2 Dimensions of the tank stand for the 3 tanks (if pump is used): 6.00 x 1.75 x 0.6m (above ground height: 0.5m).
- .3 Tanks to be placed in the middle of the house at the back as per drawing RDN/2014/006/ANS-D.
- .4 Three courses of blocks on 150 x 400mm 15 MPa strip foundation.



- .5 Tanks secured to stand with 4 twisted double strands of straining wire connected to 4 Y10 steel stirrups (length: 0.5m each) cast in floor concrete. Strands strained in such a way that they do not deform the tanks.
- .6 Only the two outside tanks will be connected with the gutter. Tanks will be linked at the bottom to enable them to fill up at the same pace. Connection pipes to have valves to enable isolation of individual tank. A tap will be installed in the middle tank whereas the lower tank exit points of the outside tanks will be capped to enable emptying of the tanks, but to prevent the direct access of water. This in order to force the use of the water of the middle tank, which will be cleaner since most impurities will be left in the outside tanks that are connected to the gutter. Each tank connection with the gutter will have two downpipe bends and three straight aluminium straight piece.

13) TRESTLE TABLES

- .1 Supply 2 stainless steel tables to grade and sort the eggs.
- .2 With bottom shelf and splash back.
- .3 Dimensions: 1.8m long – 600-700mm wide and 800mm high.



Figure 6: Trestle table with splash

14) FEED/ LAUNDRY TROLLEY

- .1 Pre-manufactured feed or laundry trolley (galvanized steel or fibre glass or polyethylene). Volume: 300 – 400L.
- .2 With 4 wheels, two of which at least two should be swinging wheels.



**Figure 7:
Feed trolley (left) and laundry trolley (right)**

15) WATER RETICULATION

- .1 Sheds to be equipped with 2 x 250L blue plastic drums to provide direct pressure to the drinking system.
- .2 Drums to be connected to municipal water pipeline. Installation as per Drawing RDN/2016/12/ANS: *Installation Schedule For Pressure Tanks For Layer Sheds. If the roof height is not sufficient to accommodate the drums inside the shed, the platform with the drums should be installed against the wall on the outside of the shed.*
- .3 Drum/Tank platform to be at 2.00 – 2.20m height depending on the FULL level of the highest placed drinking system cistern. Exit level of the blue drums should be at least 100mm above the FULL level of the header tank.
- .4 Instead of 2 x 250L drums, one 500L horizontal tank can be used that is 100-250mm lower than drums. In this case, the tank stand will be 900mm (6 planks) wide instead of 750mm (5 planks). Steel bracing will change to 900mm width as well.
- .5 If installation height is an issue, look for the LOWEST horizontal tank.
Dimensions of some horizontal 500L tank manufacturers:
JOJO: 1290 (l) 785 (w) x 830mm (h) ROTO: 1140 (L) X 840 (W) X 725mm (H)
NEL: 1180mm high. ATLAS: 1240 (L) x 800 (W) x 840mm (H)
- .6 Supply of an aluminium single ladder of 3.5 - 4.0m length.



D2 | PROJECT SPECIFIC SPECIFICATIONS – OPTIONAL ITEMS

16) LAYER/BATTERY CAGES

- .1 Pre-manufactured galvanised 2-tiered battery cages for in total 1000 birds. Cages to be supplied by reputable company specializing in poultry equipment. Contractor to submit brochure of supplier with his/her bid.
- .2 Maximum 13 birds/m², with 4 birds per cage. Minimum number of compartments/individual cages: 250. Minimum compartment size: 450 x 450 x 450mm.
- .3 Cages mounted on hot dip galvanized steel support frame, 2 tiers. Maximum height cage top: 1.50m. Maximum height header tank: 1.90mm. Battery cages placed staggered on A-type support frame to prevent soiling of lower tier cages, or, alternatively, layer cages placed vertically with galvanized refuse tray/drop board and deflectors. Galvanized metal floors with 25mm - 50mm high sides.
- .4 Positioning of the cages: somewhat ex-centric towards the higher side of the roof to reduce heat stress for the birds in the highest tier, 1.00m away from front of shed. There should be at least 1.00m walking space between walls and cages.
- .5 Drinking system: (supplied ONLY by of reputable companies specialised in poultry equipment)
 - Gravity fed stainless steel nipple drinking system (125 nipples minimum per 500 birds);
 - Water to aisle row end (PVC pipe on steel conduit, or all steel, 6 x 15m length) with one header tank per tier of cages); Further specs see Pricing Schedule for the supply and installation of battery cages.
 - Bidder to supply brochure of drinking system quoted for.
- .6 Continuous steel feed troughs (galvanized, 1.0mm minimum) with rounded edges to prevent injury. No rain gutters will be allowed! Cage stand (A-frame) to be made of galvanized material, to be equipped with pressure distributing footing. Cages to be delivered in parts and assembled and installed on site as door/wall openings are too small for some of the design to pass through preassembled.

17) ELECTRICAL RETICULATION & LIGHTING

- .1 **All electrical work to be subcontracted to a licensed electrician;**
- .2 All work to comply to the relevant SANS Standards for Electrical Installations:
 - SANS 60614 Specification for conduits for electrical installations
 - SANS 60884 Plugs and socket-outlets for household and similar purposes
 - SANS 61084 Cable trunking and ducting systems for electrical installations
 - SANS 61035 Specification for conduit fittings for electrical installationsand other relevant standards.
- .3 Connection to the power grid is **not** required for this contract. This will be done at a later stage after the beneficiaries have successfully applied for a connection with Eskom.
- .4 The shed's electrical reticulation is shown on *Drawing 2: Thousand Birds Layer shed electrical reticulation. (RDN/2015/09/ANS)* and *Drawing 3: Detail of distribution box and circuit connections of 1000 birds layer shed.*



- .5 **One triple light switch wall unit** to be installed inside against the wall 250-500mm from door.
 - One switch will operate the eight (8) south side T8 fixtures, plus the one on the left.
 - One will operate the eight (8) T8's on the north side of the shed, plus the one at the entry.
 - One will operate the outside security light (Metal, bulkhead type, energy saving, 60W or equivalent).
- .6 **A circuit breaker** shall be installed at the main switch. In the case of more than one layer unit, additional circuit breakers of appropriate capacity shall be installed at every second last unit. Alternatively, one bigger capacity circuit breaker at the take off point can be used. The choice of the capacity of the circuit breaker and between one or more, higher capacity circuit breakers is to the discretion of the electrician, who may overrule the calculated proposed capacities of Drawing 2.
- .7 Use 2 x 9 T8 fluorescent fixtures per house, each holding 2 x 1.2m long 25W tubes of 25mm diameter with electro-magnetic ballast, mounted in weatherproof fibre glass or plastic housing **with a continuous gasket between the lens and fixture. No open fixtures (without lens) or fixtures with lenses without gaskets will be allowed.** The fixture should have at least 6 clips to hold the lens on, or be appropriately sealed, in order to prevent water entering or barn air from getting into the fixture and polluting the tubes.
- .8 Each side of the unit to have 18 tubes in total = 900W. Supply 18 + 6 spares = 24 T8 tubes per unit.
- .9 **Security light above door:** metal, cage bulkhead type round fixture, with 60W or eq. energy saving bulb.

18) ALTERNATIVE/OPTIONAL WATER SUPPLY (NOT REQUIRED)

- .1 *In the absence of an existing water supply, water collected in the 3 tanks can be used. Tanks to be positioned in the centre of the building. See Figure 2, page 24.*
- .2 An **electrical surface pump** (0.4-0.6kW, 40-100L @ H=35m), with filter, connected to the middle tank and placed inside the shed will pump the water into the two 250L pressure drums.
- .3 An **extra switch** will have to be installed in that case. The total power requirement will in that case be: 950W + 400W-600W=1350-1550Watt. This translates to a total required Amperage for the shed of 7.5A net, or 8.6A gross (PF=0.9). Since the nearest connection was already 20A, this will not effect the connection size, even if also 2 ventilation fans would be connected.

19) FENCING (NOT REQUIRED)

- .1 Use 1.2m high mesh fencing with verticals maximum 150mm apart. (Bonnox or similar). Total fence height including barbed wire and 500mm razor coils: 1.80m.
- .2 Creosoted poles of 2.4m length (100-125mm), to be placed in 600mm deep augured holes. All corner poles in free draining (no concrete under pole) concrete (15Mpa/19mm) base. Concrete base dimensions: 300 x 300 x 600mm. Use 2.4m long poles 120-150mm in corners and for the gate.
Distance between poles: 3.00m. (Please note, drawing RDN/2013/21/FEN shows 5.0m spacing and does not show 500mm flat wrap razor coils)
- .3 Three straining wires (top, bottom, midway) to clip hinge joined fence on. Three strands of double stranded barbed wire to run above fence, properly fixed to poles and to the top of weld mesh. Coils to be affixed to barbed wire strands. Use 30mm wire staples (5 per pole) to affix fence to poles.
- .4 Entry gate in fence at front of shed to be 3.6 x 1.8m, pipe bore 40mm x 2mm.



Gate poles to be of 2.4 m length with concrete foot 300 x 300 x 600mm. Concerning locking, a combination of a hardened chain and padlock of the makes mentioned under 13) can be used as well.

5. **Approximate length for fencing for various house configurations.** Based on the fence erected at a distance of 5 m away from the house(s) in longitudinal direction and 7m away from the short sides of the house. Distance between the sheds at all sides is 20m. *Figure 8* shows possible the possible configurations for up to 4 houses. Table 6 lists the approximate BoQ per configuration type. Please note that if actual measurements of the fencing perimeter can be taken, these should be used instead

Figure 8: Typical configurations of poultry houses, with site footprints and fencing perimeters (red dashed line)

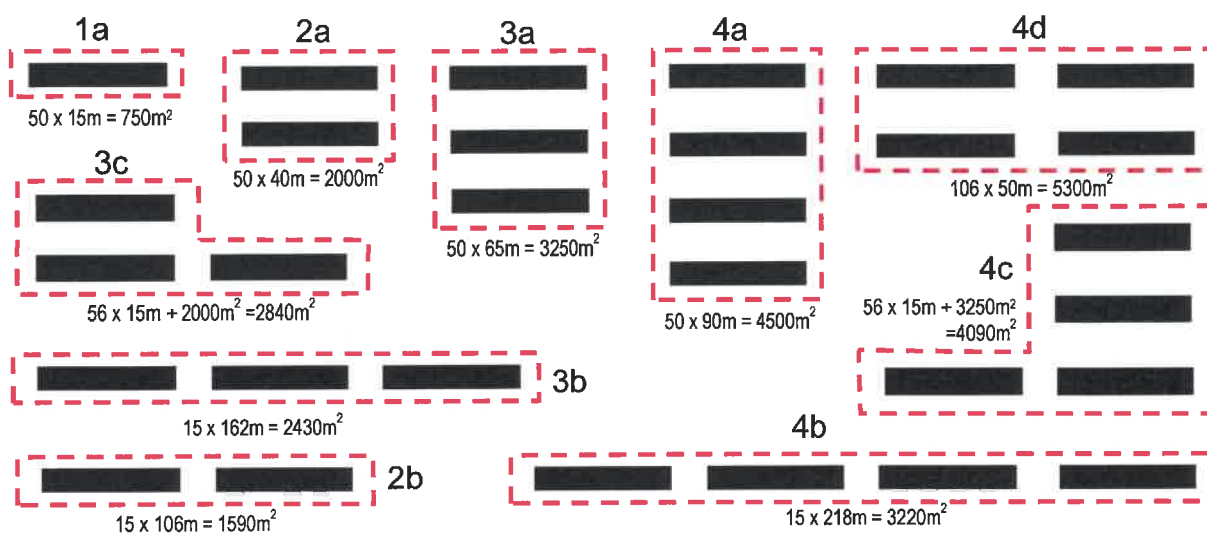


Table 6: Bill of Quantities for fencing materials at various layer house permutations

CONFIGURATION TYPE		1a	2a	2b	3a	3b	3c	4a	4b	4c	4d
TOTAL LENGTH OF FENCE (M)		130	180	246	230	354	238	270	438	346	296
Length with grading shed onto 1 building (m)		148	198	264	248	372	256	288	456	364	314
Mesh fencing (Bonnox or similar) 100m, 1.2m lgh, verticals at 150mm	Rolls	2	2	3	3	4	3	3	4	4	3 4
Barbed wire double strand. 845m rolls	No.	1	1	1	1	2	1	1	2	2	2
Razor wire flat wrap coils 500mm. 15m/roll	Rolls	9	12 14*	17 18*	16 17*	24 25*	16 17*	18 19*	24 25*	24 25*	20 21*
Creosoted poles 2.4m x 100-125mm	No.	57 67*	75 91*	93 103*	79 95*	93 103*	117 127*	94 104*	167 177*	121 131*	111 127*
Wire staples 32mm/500g/pack	No.	5	7	10	9	13	9	11	13	13	12
Straining wire 3.15mm-roles of 5kg (app. 80m)	No.	5 6	7 8	9	9	13 14	9	11	17 18	13 14	12
Binding wire 2mm- 5kg roles (±200m)	No.	1	1	1	1	1	1	1	1	1	1
Galv. steel gate 3.6m x 1.80m + hinges: round bar (35 x 2.0mm), with 500mm flat wrap razor wire on top razor wire on top	No.	1	1	1	1	1	1	1	1	1	1
Solid Brass or zinc padlock (Sobo/ Master/ Yale/ Union/Abus- no cheap ones), + chain.	No.	1	1	1	1	1	1	1	1	1	1

>> * Figures in italics indicate quantities in case a grading shed is built onto one of the later houses.



.8 Additional fencing specifications:

- 8.1. Three lines of straining line wire (3.15mm) at the top and bottom and in the middle of the fence (1200mm, 600mm and 25mm) to clip the hinged joint fence on.
- 8.2. Double boxes at corners and at gate. Boxes on both sides of the gate opening. Use binding wire (double up & twist) to cross-brace boxes and connect box poles. 10m of single wire/box.
- 8.3. Quantities based on the fence being placed 5.0m away from the houses (longitudinally) and 7.0m from the short ends. The inter house space is 20 meters.
- 8.4. Use Hinged Joint fencing Wizzard to calculate actual lengths for fencing if possible. Add razor wire coils to BoQ.

21) VENTILATED IMPROVED PIT LATRINE(S) (NOT REQUIRED)

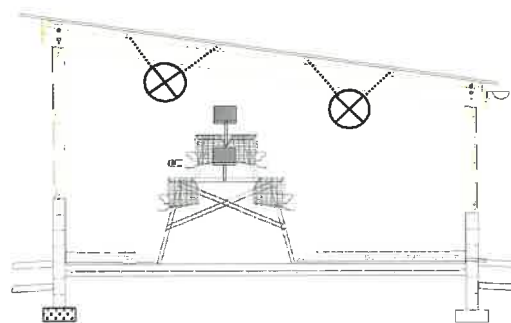
- .1 To be of the ventilated improved pit latrine type. Must be at least 10m away from layer house. Design, BoQ and specs as indicated on drawing RDN/2010/01/TOI.

22) CIRCULATION FANS (NOT REQUIRED)

- .1 *If the installation of two fans is required* (e.g. in areas with high summer temperatures and extended windless periods), an **additional double switch** will be installed against the wall, each operating one fan. The fans will be hung from the rafters or purlins with chains at approximately 10 meters from the shed ends, one each side of the row of cages. See figure 9.
- .2 **Fan specifications:** Blades and house to be stainless steel or aluminium, throat diameter 500-600mm, throat length 200-300mm, air replacement capacity app. 5300 m³ per hour at app 1500 RPM. Power: 100-120W.

Figure 9:

Cross section shed showing position of cages and installation of fans. Cages are placed slightly out of center to benefit from higher roof heights and reduced heat exposure for hens in the top tier of cages.



23) SUPPLY OF FEED (NOT REQUIRED)

- .1 If feed is required: supply of laying **mash** (one mash for ALL pullets) with 15-17% protein. Mash should be of grain products and pulses that contain no animal-by-products, fishmeal or hormones. Mash



must be ready mix from specialist feed company and come in bags of 50 kg (for smaller projects) or be delivered to site in bulk by truck (for those projects that have feed bins).

Two mix options: 1) One mix for all pullets 2) Two mixes: one for younger and one for older pullets.

- .2 **Feed delivery frequency** should be such that stored feed to be used within 4-6 weeks (coastal areas) and 8-10 weeks (inland). Recommended truck bulk feed delivery schedule: every 20-30 days.
- .3 **Feed delivery & payment conditions:** Contractor to submit delivery contract with feed company for the required amount and numbers and dates of delivery, plus proof of payment for the entire quantity of mash, before final completion of the project can be considered and the final payment can be made.
- .4 Ball park for pullet **mash consumption** rate is 125 grams of mash per pullet per day. Approximate feed quantities in tons per 1000 layers per month:

1 month	2 months	3 months	4 months	5 months	6 months
3.8 tons	7.5 tons	11.3 tons	15.0 tons	18.8 tons	22.5 tons

24) BULK FEED STORAGE BINS *(NOT REQUIRED)*

- .1 **The inclusion in the scope of works of the supply and installation of bulk feed bins is optional,** although recommended for 4 or more houses (≥4000 layers).
- .2 In the absence of bulk feed bins, a store room is required for the storage of feed if no other storage is available. Indicate as such in Table 1: Optional Items. The storage space can double up as egg grading and packaging room.
- .3 Technical Specification Feed bins:

Material: Galvanised corrugated steel. Steel thickness: 20 gauge (0.9mm) minimum.

Bin type: Storage bins are to be built with weather tight die-formed roofing and reinforcing ribs at the seams for added strength and ease of assembly. Warp-resistant top lid to close tight to keep out moisture. Bin bolts to have a built-in weather seal and a drip edge to keep water away from the taper hopper and unloading boot. Lid opener to fully open wide and to must be able to be opened from the ground.

Location of bins: right next to the house with funnel exit inside the house.

Funnel & closure: manual slide valve, rack and pinion with crank. Funnel boot at feedbin outside must be at such a height that the exit pipe that enters the house coming from the boot will enable a wheelbarrow or laundry trolley to be placed under it (700-800mm height).

Augur option: if an auger were to be required due to insufficient boot height or in case a hopper bin were to be installed inside for the purpose of (semi-) automation of the feeding process, this should be indicated as such in the ADDITIONAL ITEMS section of the pricing schedule..

Accessories: Must come with basic ladder + roof ladder bundle up to fill opening,

- .4 **Civils for feed bin:** 30 MPa concrete slabs of app. 3.5m x 3.0m x 250mm with Ref 395 reinforcement. Slab to extend 250mm beyond the bin legs.



- .5 **Size and number of feed bins.** The fact that one or more particular bins are listed does NOT make it mandatory to include them in the scope of works, although they are recommended for projects with 4000 or more birds. *Table 4* lists the required size of the feed bins per number of houses for a monthly feed delivery, for a feeding scheme incorporating one or two feed mixes.

Table 4: Number and size of bulk feed bins per number of layer houses			
HOUSE SIZE/ NUMBER OF BIRDS	Feed per day (kg) and per month (tons & m ³)SD = 0.70 t/m ³	REQUIRED FEED BINS	
		ONE MIX	TWO MIXES
1 house/1000 birds	125 kg/ 3.75 tons 5,3 m ³	1 x 4 ton	QUANTITIES TOO SMALL
2 houses/2000 birds	250 kg 7.50 tons 10,7 m ³	1 x 7 - 8 ton	2 x 4 ton
3 houses/3000 birds	375 kg 11.25 tons 16,1 m ³	1 x 7 ton + 1 x 4 - 5 ton OR 3 x 4 ton	3 x 4 ton
4 houses/4000 birds	500 kg 15 tons 21,4 m ³	1 x 14 - 16 ton OR 2 x 7 - 8 ton OR 4 x 4 ton	2 x 7 - 8 ton OR 4 x 4 ton
5 houses/5000 birds	625 kg 18.75 tons 26,8 m ³	1 x 17 - 20 ton 2 x 9 - 10 ton 5 x 4 ton	2 x 9 - 10 ton 5 x 4 ton
6 houses/6000 birds	750 kg 22.5 ton 32.1 m ³	2 x 10 - 11 ton 3 x 7 - 8 ton 6 x 4 ton	2 x 10 - 11 ton 3 x 7 - 8 ton 6 x 4 ton

25) ~~ACCESS ROAD AND TURN CIRCLE (NOT REQUIRED)~~

- .1 Specifications of the road to adhere to those used by the KZN Department of Transport Type 7A road 5.0m wide. See Drawing Road cross section.
- .2 Clearing and Grubbing - COLTO 1700
Clearing and grubbing of the road reserve and drainage area to COLTO specification 1700s and supplied drawing for a Type 7A Road. All topsoil removed during this process must be stockpiled in heaps not higher than 1m for later use during rehabilitation and landscaping. Clearing and grubbing must cover the entire extent of the construction width (app. 10m) and include all space to be taken by drains.
- .3 Cut to Fill – COLTO 3300, 1600
The dimensions of cuts shall be generally in accordance with the details of the typical cross sections of the drawings and shall further be defined or amended during the course of constructions from the Engineer.
- .4 Road base to be compacted to 95% Mod AASHTO
- .5 Pavement material will be G6 to be compacted to 93% Mod AASHTO in 1 layer of approximately 100mm.



.6 If feed delivery will be by truck, a big enough turn circle will be part of the scope of works.

26) SOIL CONSERVATION WORKS / EMBANKMENT TOE PROTECTION *(NOT REQUIRED)*

- .1 In case the site requires considerable amounts of cut and fill, the construction of embankment toe protection may be required. This could include the installation of gabion baskets on a gabion mattress or concrete foundation.
- .2 In most cases only two courses of gabion baskets are required on a foundation of Reno mattresses. Use baskets that are 1.00m high and 1.00m wide, filled with hand stone.

27) PULLETS *(NOT REQUIRED)*

- .1 Supply and delivery, including off-loading, of 1000 fully vaccinated point-of-lay (15-20 weeks old) white pullets (**Hy-line**) from certified stock. Submit proof of certification.
- .2 **No mortality during transport is allowed and dead animals will have to be replaced.**

28) MEDICATION AND INSECT CONTROL *(NOT REQUIRED)*

- .1 **Insecticide.** Supply of Efekto karbadust insecticide dusting powder. 20 bottles per 1000 pullets.
- .2 **Vaccines:** 5 x bottles of -30 ND Vaccine (B1-type, Lasota strain live virus) per 1000 pullets

29) EGG CARTONS *(NOT REQUIRED)*

- .1 Supply of 50 plastic egg trays (30 egg capacity) per 1000 pullets.
- .2 Supply of 50 bundles of eco 30 tray (170 units per bundle).
- .3 Supply of 50 bundles of 6 x 2 dozen trays (150 units per bundle).
- .4 Supply of 50 bundles of 18 x 1 tray.

30) EGG GRADING MACHINE *(NOT REQUIRED)*

- .1 Supply of an entry level, stainless steel hand picker grading machine able to grade up to 7 weight classes of eggs. Capacity: 1200 – 1800 eggs per hours. To be operated by one person.
- .2 Should have Candling installation - Accumulator - Protective cover over the balance units - Packing table.

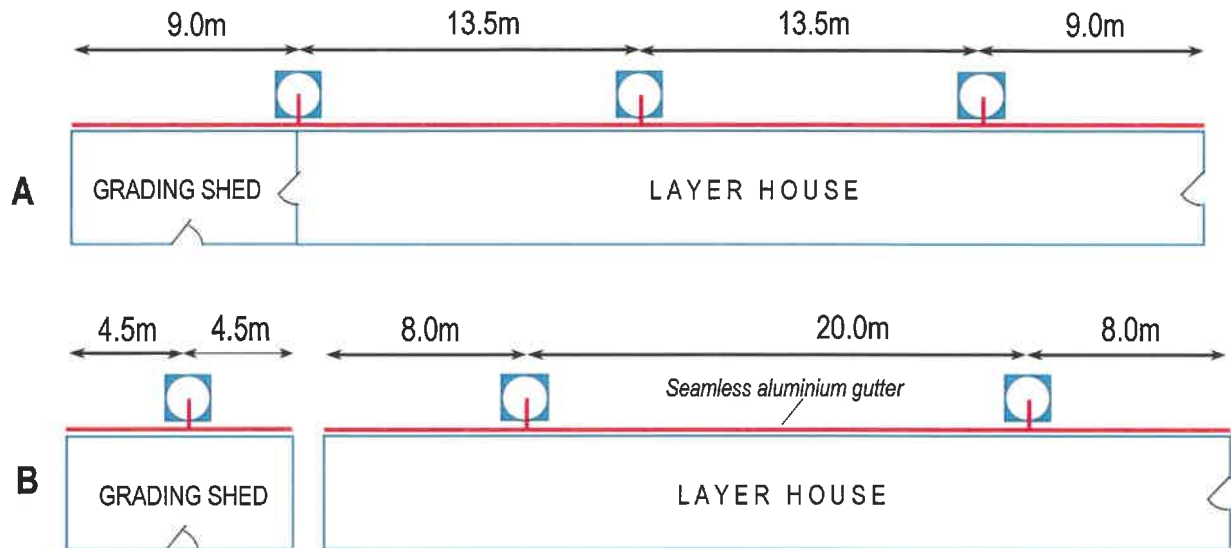
31) SORTING/PACKING/STORAGE SHED *(NOT REQUIRED)*

- .1 As per drawing RDN/2016/031/ANS. Technical specifications, including foundation and dimensions, will be largely the same as the layer house itself. This includes the installation of isoboard.
- .2 Dimensions: 9.00m x 4.50m x 3.20m (front)/2.60m (back). Total length layer house + sorting shed: 45.0m.



- .3 Depending on the space, the shed can be built onto the house (preferred), or separate. If the grading shed is built onto the layer house, the seamless aluminium gutter will be 45m long. The placement of the water tanks will be as in Figure 10 below.

Figure 10: Location of water tanks in case grading shed is built onto layer house (A) and when separate (B).



- .4 **Doors:** In case shed is built onto the layer house: **2**. One connecting door to layer house plus one outside door. In case the shed is a separate building: 1 door only. Specifications as in BoQ Page A1 – items C14-18
- .5 **Windows:** 4. Dimensions: 2.00m (L) x 1.50m (H). Steel frames with cottage panes. Glass panes 4mm thick.
- .6 **Lighting:** 4 sets/fixtures of T8. Refer to PTS Optional item No. 18 for detailed specifications for the lighting.

**ANNEXURE A BOQ 1000 BIRDS LAYER HOUSE(S) | CURTAINS | AUGUST 2018 PAGE A1****STANDARD ITEMS DIRECTLY RELATED TO NUMBER OF HOUSES (A – C)**

#	DESCRIPTION OF WORK	UNIT	QTY	RATE	TOTAL
A	MATERIALS FOR CONCRETE & WALLS (HOUSE ONLY)				
1	Cement 50kg pockets*	No.	250		
2	River sand (course)*	m ³	19		
3	Concrete stone*	m ³	16		
4	Building/Plaster sand*	m ³	12		
5	M 150 Cement blocks (<i>Quantity includes 5% breakage</i>)	No.	1250		
6	Brick force (M150 Block/20m roll)	rolls	32		
B	TIMBER PRODUCTS (HOUSE ONLY)				
7	Poles (CCA-treated) 100-125mm Ø x 3.9m	no.	17		
8	Poles (CCA-treated) 100-125mm Ø x 3.3m	no.	17		
9	Anti-split plates (70mm diameter)	No.	38		
10	75 x 50mm SA pine purlins (TBTO treated)	m	252		
11	38 x 114mm SA pine beams (TBTO treated)	m	256		
12	150 x 50mm SA pine beams (TBTO treated)	m	66		
13	76 x 228mm SA pine rafters (TBTO treated)	No.	19		
C	DOOR (HOUSE ONLY)				
14	Meranti (NOT pine) framed or ledged and batten door 2032 x 813 x 40mm thick with additional cross bracing on the inside (150mm wide)	no.	1		
15	ex44 x 60mm meranti doorframe	no.	1		
16	Gower or Radius euro profile cylinder lock set (Union, Yale or equivalent)	no.	1		
17	Ball bearing galv.steel butt hinges 100 x 75 x 7(min) x 3mm + 5mm screws	no.	3		
18	150mm galvanized steel padlock with gutter bolts	no.	1		
19	Solid Brass or zinc padlock (Sobo/ Master/Yale/ Union/Abus- <i>no cheap ones</i>)	no.	1		
D	ROOF & CLADDING (HOUSE ONLY)				
20	6.0m x 0.50mm corrugated aluzinc 10.5 grade (762mm eff. cover) (roof sheets)	No.	48		
21	Standard galvanized hurricane clips	No.	450		
22	90 x 38 x 1.0mm truss hangers	No.	40		
23	75mm wire nails	kg	15		
24	60mm std roofing screw including washer (100/box)	box	30		
25	1.25mm binding wire (56m/roll of 500g)	roll	2		
26	25mm galv. steel staples for fastening of weld mesh	kg	5		
27	30m roll of 1200 x 25 x 25 x 1.6mm weldmesh (fully galvanized)	No.	4		

SUBTOTAL PAGE A1 (TRANSFER TO SUMMARY PAGE A9 – LINE S1) > R

**ANNEXURE A BOQ 1000 BIRDS LAYER HOUSE(S) | CURTAINS | AUGUST 2018 PAGE A2****STANDARD ITEMS DIRECTLY RELATED TO NUMBER OF HOUSES (D – G)**

#	DESCRIPTION OF WORK	UNIT	QTY	RATE	TOTAL
D	ROOF & CLADDING (ctd)				
28	30m roll of 1200 x 25 x 25 x 1.6mm weldmesh (fully galvanized)	No.	4		
29	15mm Ø galvanized steel handibars (threaded bar) in 1m lengths	no.	34		
30	Zinc plated 15mm hexagonal nuts	no.	204		
31	Washers 12 x 45 x 1.5mm	no.	204		
32	Fibre cement/ Nutec fascia boards (3000 x 300 x 12mm) at ends of rafters	No.	26		
33	Fibre cement Nutec OR uPVC fascia boards (300mm x 12mm)	No.	26		
34	Fascia board joiners or jointer plates	No.	30		
35	Insulation: 30mm thick Isoboard.	m ²	180		
E	WATER PROVISIONING See Fig.1: Installation of tanks & gutter connection				
36	Water tank polypropylene 2500 L	No.	3		
37	30mm Ø PVC pipe (500-800mm in length) to connect tanks, with high density plastic on/off ball valve (30mmØ), plus fittings	No.	2		
38	Aluminium seamless 125mm OGEE gutters 0.7mm gauge	m	36		
39	Aluminium downpipes 100 x 75mm. 3 per tank, various lengths, 6 pieces in total	Sum	1		
40	Aluminium bends (A2) 100 x 75mm. Two per tank, 4 in total	No.	4		
41	Aluminium funnel outlets 290mm x 100mm x 75mm	No.	2		
42	Gutter end caps for 125mm OGEE profile gutter	No.	2		
43	Screw, pop rivets and other fixtures	Sum	1		
44	Silicon sealer (Tube) to seal entry of down pipe into tank	No.	1		
45	Water reticulation features, connections and fittings as per Section 22.	Sum	1		
46	BULKWATER CONNECTION – STANDARD OPTION (WITHOUT PUMP) <i>Price this item ONLY if the house(s) will be supplied with water via an existing pipeline. If this is not the case, do NOT price this item and go to section M (Optional works) to price the alternative option (water supply by outside tanks).</i> Connection of existing main water supply line to the in-house pressure tanks. Including supply & installation of water meter + valve inside a valve chamber, piping from the mainline to the house(s) and all other items featured on Drawing 7: Installation Schedule for Pressure Tanks for Layer Sheds RDN/2016/12/ANS).	Sum	1		
F	PLASTIC SHEETING				
47	(USB) Type C250 Micron plastic sheeting (Black/Green): Roll 3.00 x 30m SABS	Roll	2		
48	250 Micron plastic sheeting for damp proof course 150mm wide x 40m roll	Roll	3		
G	PAINT AND MISCELLANEOUS				
49	Plaster primer x 1 coat 6m ² /L coverage.	Litres	30		
50	Varnish (Dark) for door	Litres	2		
51	Superior ext.PVA paint (white) e.g. Wall &All, Micatex, etc. 2 coats. Cover 8m ² /L	Litres	50		

SUBTOTAL PAGE A2 (TRANSFER TO SUMMARY PAGE A9 – LINE S2) > R

**ANNEXURE A BoQ 1000 BIRDS LAYER HOUSE(S) | CURTAINS | AUGUST 2018 PAGE A3****STANDARD ITEMS DIRECTLY RELATED TO NUMBER OF HOUSES (H – J)**

#	DESCRIPTION OF WORK	UNIT	QTY	RATE	TOTAL
H	SOIL POISONING				
52	Soil poisoning by recognized pest control expert.(220m ²)	Sum	1		
I	EARTHWORKS				
53	Removal of 150mm of topsoil (50 x 15m), spill to agreed upon site & spread/level out	Sum	1		
54	Leveling of site 42m x 12m (building footprint plus 3.0m on all sides)	Sum	1		
55	Digging of the foundation trenches and pole holes	Sum	1		
56	Storm water drain above the house(s). 50-100m long V-drain 2.0m wide & 0.5m deep	Sum	1		
J	CURTAINS				
57	Green/ Blue PVC Tarpaulin curtains 550 g/m ² – 32.50m x 2.50m	m ²	81.3		
58	Green/ Blue PVC Tarpaulin curtains 550 g/m ² – 32.50m x 1.50m	m ²	48.8		
59	Green/ Blue PVC Tarpaulin curtain side envelopes 550 g/m ² , 0.75 x 3.00m x 2	m ²	4.5		
60	Green/ Blue PVC Tarpaulin curtain side envelopes 550 g/m ² , 0.75 x 2.00m x 2	m ²	3.0		
61	Swaged curtain conduit: HDG 25-30mm (1-1.25") OD, lengths of 3.4m (138")	No.	20		
62	Swaged curtain conduit: HDG 40-45mm (1.66"OD), lengths of 3.4m (138") each	No.	20		
63	Self-Drilling Tek Screws #12x1-1/2" Zinc	No.	0		
64	Black Polypropylene Rope - 5mm diam - roll of 100 m	No.	2		
65	2"Nylon Pulley w/swivel Eye	No.	60		
66	Primary 2-1/2" steel strap pulleys	No.	4		
67	Galvanized Aircraft Cable 3.2mm (1/8") thick Type 7x19 OR 4.8mm 3/16" thick.	m	120		
68	Galvanized Cable Clamp 3/16"	No.	30		
69	1" Neo Bonded Galvanized Washers. Packet of 100	No.	2		
70	Fabric Clip for 1.66" OD Pipe	No.	60		

SUB TOTAL PAGE A3 (TRANSFER TO SUMMARY PAGE A9 - LINE S3) > R

**ANNEXURE A BOQ 1000 BIRDS LAYER HOUSE(S) | CURTAINS | AUGUST 2018 PAGE A4****STANDARD ITEMS NOT DIRECTLY RELATED TO THE NUMBER OF SHEDS (K)**

#	DESCRIPTION OF WORK	UNIT	QTY	RATE	TOTAL
K	GENERAL				
71	Preliminary & General Fixed & time related costs for Insurances, Occupational Health & Safety expenditure, etc)	Sum	1		
72	Site establishment	Sum	1		
73	Labour & Supervision	Sum	1		

SUB-TOTAL PAGE A4 (TRANSFER TO SUMMARY PAGE A9 - LINE S6) >R
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**ANNEXURE A BoQ 1000 BIRDS LAYER HOUSE(S) | CURTAINS | AUGUST 2018 PAGE A5****OPTIONAL WORKS (L)***(Refer to OPTIONAL ITEMS Table on page 22 . Only SELECTED items in this table need to be costed..)*

NR.	WORK DESCRIPTION	UNIT	QTY	RATE	TOTAL
L	BATTERY CAGES 2-tier housing system in compliance with sections 1, 2 and 3 of the <i>Technical Specifications for Battery Cages</i> below. Total minimum number of partitions required: 250. >> Provide name of manufacturer:				
74	2-tier system with 16 (4 x 4) partitions per A- frame. Number of A-frames (Including 1 header frame):16	No.	16		
75	Transport of all cages.	Sum	1		
76	Installation of cages on site.	Sum	1		
	DRINKING SYSTEM				
77	Nipple valve gravity operated drinking system. One (1) nipple per partition with 4 layers. 250 stainless steel nipples. – ONLY from reputable company which specializes in cages and other poultry equipment– As per <i>Technical Specifications for Battery Cages</i> . With pressure regulators where required. Including all fittings.	Sum	1		
78	500 L pressure tank OR 2 x 250L blue plastic drums placed on wall mounted drum/tank stand as per drawing RDN/2016/12/ANS. Includes all fittings, installation and connection of tank to main water source and header tanks.	Sum	1		
79	Transport of nipple drinking system, tank and standard and all fittings.	Sum	1		
80	Installation of drinking system, tank, PLUS connection to main water source	Sum	1		
	EQUIPMENT				
81	Pre-manufactured 300-400L closable feed trolley/laundry trolley (galvanized steel, fibre glass or polyethylene) with 4 castor wheels of which at least 2 are swinging.	No.	1		
82	Stainless steel trestle table 1.80m (L) x 0.75m (W) x 0.80m (H)	No.	1		
83	Aluminium single ladder 3.5 – 4.0m high	No.	1		
84	Plastic Buckets 20L	No.	6		
85	Large plastic foot dip tray for disinfectants	No	2		
86	HDPE transport crates with locking gate catch	No.	15		
87	Cooler box (4L)	No.	2		

SUBTOTAL PAGE A5 (TRANSFER TO SUMMARY PAGE A9 – LINE S7) > R



ANNEXURE A BOQ 1000 BIRDS LAYER HOUSE(S) | CURTAINS | AUGUST 2018

ANNEXURE A BOQ 1000 BIRDS LAYER HOUSE(S) | CURTAINS | AUGUST 2018 PAGE A7

(Refer to **OPTIONAL ITEMS** Table on page 22. Only **SELECTED** items in this table need to be costed..)

OPTIONAL WORKS (T – AA)

#	DESCRIPTION OF WORK	UNIT	QTY	RATE	TOTAL
M	(24) BULK FEED STORAGE BINS (18) ELECTRICAL INSTALLATION AS PER ATTACHED SCHEDULE Supply and installation of bulk feed bins (drawing RDN/2016/031/ANS) See PTS Section 24. See this item only for the houses (s) which have a connection to the power grid.				
88	Number of to bins required:	No.		NOT	REQUIRED
89	18 TL fixtures. Closed, with poly-acrylic lens and water proofing gasket/seal.	No.		NOT	REQUIRED
90	Number of 7 ton bins required: Metal cage bulk head security light (above door). With energy saving bulb. Round	No.		NOT	REQUIRED
91	Stainless steel fan 500-600mm throat, 1500RPM, 5300 air replacement, 100-125W ²	No.		NOT	REQUIRED
92	Electrical reticulation for TL tubes, including conduits, switches, wall socket. Number of 14 ton bins required:	No.		NOT	REQUIRED
93	Distribution Box + 100m of cabling to nearest Eskom meter and transformer box ³	No.		NOT	REQUIRED
94	Electrical cabling to indoor units (20 m. between units, only if > 1 shed)	No.		NOT	REQUIRED
U	(19) BULK WATER CONNECTION - ALTERNATIVE OPTION WITH/ PUMP (25) ACCESS ROAD AND TURN CIRCLE This item will be supplied with water from the outside tanks in the absence of an existing water supply	Sum	1	NOT	REQUIRED
V	(26) SOIL CONSERVATION/OE PROTECTION WORKS Electrical surface pump 0,4 - 0,6KW, 40-100L/min @ 11 - 35m, with all fittings and pipes and including installation. To transfer water from middle tanks outside to pressure tanks (see drawing) in house. Connection of the outside collection tanks with the in house pressure tanks. Including all items featured on Drawing 7: Installation of Pressure Tanks for Layer Sheds (RDN/2016/12/ANS).	Sum	1	NOT	REQUIRED
W	(27) SUPPLY OF PULLETS Supply of vaccinated point-of-lay pullets (15-17 weeks old) from certified stock Number of pullets:.....	Sum	1	NOT	REQUIRED
X	(28) MEDICATION & INSECT CONTROL Supply of Fencing supply insecticide dusting powder.....bottles Supply of 30 ND Vaccine (B1-type, Lasota strain live virus).....bottles	Sum	1	NOT	REQUIRED
Y	(29) EGG CARTONS Supply of required length: 130m. >> See figure 8 – Configuration 1A.				
Z	(206) FENCING (ERECT) Supply of required length: 130m. >> See figure 8 – Configuration 1A.				
Q	(21) VIP LATRINES Construction of one or more Ventilated Improved Latrines. Number				
B	(30) EGG GRADING MACHINE Supply & installation of stainless steel handback (2 grading houses) able to grade up to 7 weight classes of eggs. Capacity: 1200 – 1800 eggs per hours.	Sum	1	NOT	REQUIRED
S	(31) CONSTRUCTION OF A SORTING/PACKING/STORAGE SHED Supply Duration.....Months As per drawing RDN/2016/031/ANS. Technical specifications, including foundation Supply Quantity.....tons and dimensions, will be largely the same as the layer house itself Number of feed mixes.....(One or two)	Sum	1	NOT	REQUIRED

SUBTOTAL PAGE A7 (TRANSFER TO SUMMARY PAGE A9 – LINE S9) >> R



ANNEXURE A BOQ 1000 BIRDS LAYER HOUSE(S) | CURTAINS | AUGUST 2018 PAGE A8

AB - ADDITIONAL WORKS

Works not listed but required due to project specific situations

#	DESCRIPTION OF WORK	UNIT	QTY	RATE	TOTAL
109	(32).....	Sum	1		
110	(33).....	Sum	1		
111	(34).....	Sum	1		
112	(35).....	Sum	1		
113	(36).....	Sum	1		

SUBTOTAL PAGE A8 (TRANSFER TO SUMMARY PAGE A9 – LINE S10)				R
>>PAGE A7 Transfer to SUMMARY PAGE A8 – LINE S10 >>				

**ANNEXURE A BOQ 1000 BIRDS LAYER HOUSE(S) | CURTAINS | AUGUST 2018 PAGE A9****>> PRICING SUMMARY <<**

LINE	BILL OF QUANTITIES - PAGES	TOTAL
S1	STANDARD ITEMS DIRECTLY RELATED TO NUMBER OF HOUSES TOTAL PAGE A1	R
S2	STANDARD ITEMS DIRECTLY RELATED TO NUMBER OF HOUSES TOTAL PAGE A2	R
S3	STANDARD ITEMS DIRECTLY RELATED TO NUMBER OF HOUSES TOTAL PAGE A3	R
S4	TOTAL OF LINES S1 + S2 + S3	R
S5	NUMBER OF SHEDS: 1 MULTIPLY TOTAL IN LINE S5 WITH NUMBER OF SHEDS >>>	R
S6	STANDARD ITEMS NOT DIRECTLY RELATED TO THE NUMBER OF SHEDS TOTAL PAGE A4	R
S7	OPTIONAL WORKS (I) - CAGES TOTAL PAGE A5	R
S8	OPTIONAL WORKS (II) - TOTAL PAGE A6	R
S9	OPTIONAL WORKS (III) - TOTAL PAGE A7	R
S10	ADDITIONAL WORKS TOTAL PAGE A8	R
S11	TOTAL EXCLUDING VAT SUM OF S5 + S6 + S7 + S8 + S9 + S10	R
S12	VAT 15%	R
S13	GRAND TOTAL	R

**ANNEXURE B:****PAYMENT SCHEDULE LAYER HOUSE(S)**

Please note that the below percentages are primarily related to the **volume of work** the phases constitute of the total project volume. The phases reflect a **maximum** number of payments, and not the exact amounts per payment as payment certificates are drawn up on the actual works done and often include payment for works done from more than one phase. **OPTIONAL WORKS are listed in italics**

PHASE #	PHASE DESCRIPTION	App. % of contract	Payment after completion of phase
1	<p>Preliminary and general/Site establishment + Levelling</p> <p>1) Insurances, project risk, workman's compensation, UIF Etc. 2) Project administration, services, external services, testing, safety, provision of all required equipment for works at required times etc 3) Site preparation (bush/veld clearing). 4) Levelling of the site according to specs. 5) Setting out of shed and digging of the foundations and holes for the poles; 6) Construction of storm water drain</p> <p><u>Optional Works (OW)</u> > Soil conservation works/embankment toe protection > Construction of access road & turn circle</p>	12%	10.8%
2*	<p>Poles, materials and flooring preparations</p> <p>7) Delivery to site of all building materials 8) Erection of poles, including concrete footings 9) Casting of the strip foundation 10) Brick up walls up to floor level (3 block courses) 11) Excavate to final floor levels-stockpile soil or dispose as ordered. 12) In-situ floor base material compacted to Engineer's approval. 13) Soil treatment (ant poisoning). Submit certificate. 14) Complete application and compaction of floor base.</p> <p><u>Optional Works</u> > Construction of sorting/grading shed - items 7-14). > Weighting 5% of 20%</p>	20%	18%
3	<p>Floor and walls</p> <p>15) Cast concrete floor in accordance with drawings and specs; 16) Finish all walls up to roof height and install doors;</p> <p><u>Optional Works</u> > Construction of sorting/grading shed - items 15/16 > Weighting 4% of 15%</p>	15%	13.5%
4	<p>Roof, gutter, weld mesh and fascia boards</p> <p>17) Complete roof structure with fascia board and mount fascia boards & gutter; 18) Install weld mesh 19) Supply & install curtains</p> <p><u>Optional Works</u> > Construction of sorting/grading shed - items 17/18. > Weighting 2% of 8%)</p>	8%	7.2%



PHASE #	PHASE DESCRIPTION	App. % of contract	Payment after completion of phase	
5	Fencing, VIP latrines and Site cleaning (20) Cleaning of site. <u>Optional Works (OW)</u> > Supply & erect fencing and install gates according to drawing & specs.> Construction of VIP Latrine(s)	2% Excl. OW	1.8%	
		7% Incl. OW	6.3%	
6	Water provisioning (21) Supply & installation off rain water tanks, including tank stands (22) Supply & installation of pressure tanks inside the house(s) (23) Connection to bulk water source	5%	4.5%	
7	Poultry equipment and pullets 24) Supply & installation of cages, and nipple drinkers 25) Supply & installation of and equipment <u>Optional Works</u> > Supply and installation of bulk feed storage bins + civils > Supply pullets > Supply feed mix, vaccines, egg trays > Supply & install egg grading machine	25%	22.5%	
8	Electrical Installations & Equipment 26) All fixtures installed and connected to grid, lamps & circuit breakers working <u>Optional Works</u> > Supply & Installation of surface pump > Supply & installation of circulation fans	8%	7.2%	12.2%
9	Retention money 5% at <u>practical</u> completion	--	5.0%	
10	Retention money 5% at <u>final</u> completion after 1 month	0% if no defects	5.0%	
	TOTAL	100%	100%	

**ANNEXURE C****ADDITIONAL INFORMATION****(1) EQUIPMENT & RESOURCES:**

Please provide an indication of the equipment and resources which will be available to execute the services required:

No	Equipment and resources available in order to execute the services:
1	
2	
3	
4	
5	

(2) SUB CONTRACTED WORKS: Please list which parts of the works will be sub-contracted.

No	Sub Contractor	Subcontracted Associated works
1		
2		
3		
4		
5		

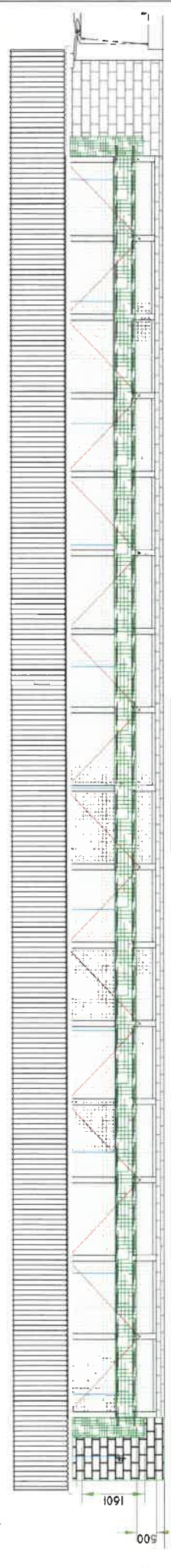
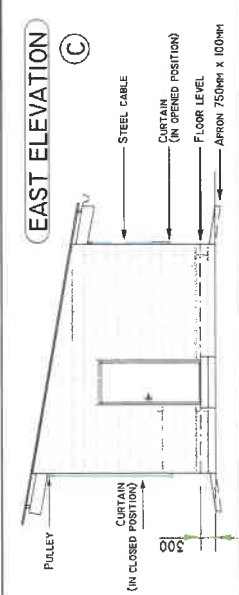
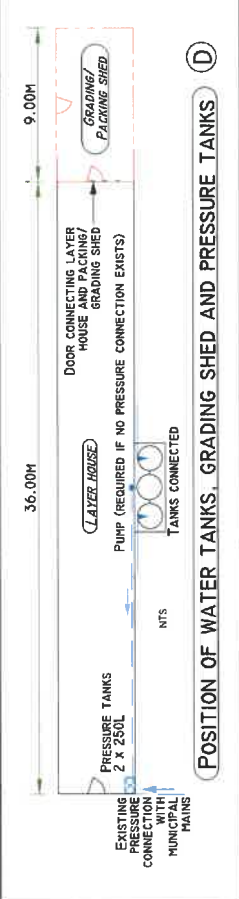
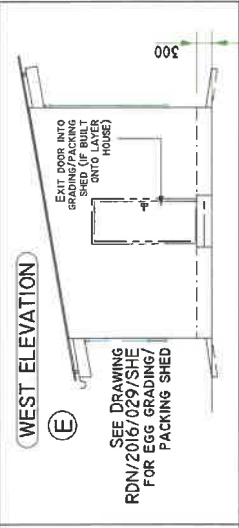
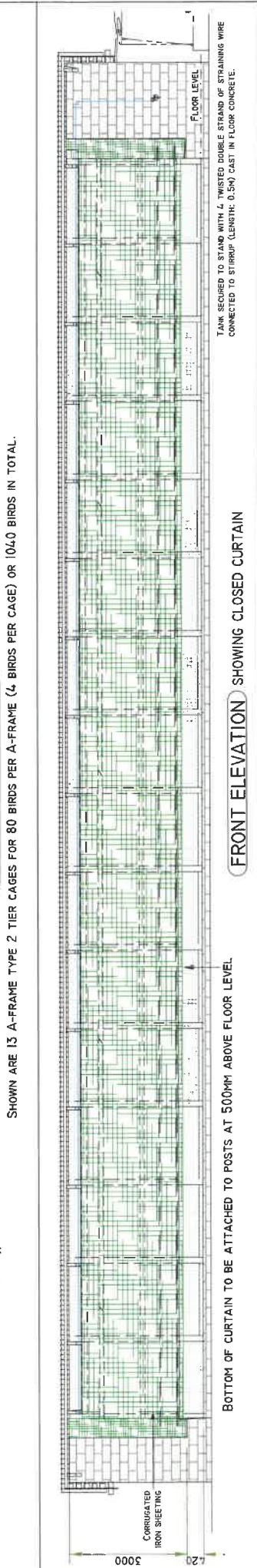
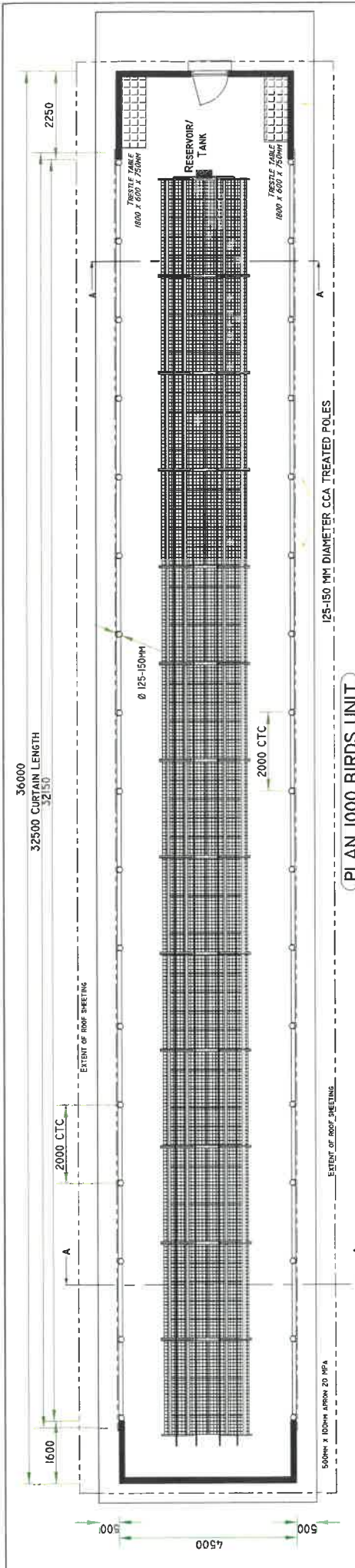


(3) EXPERIENCE: Please indicate your experience and expertise by completing the table:

No	Name of project + Period	Project description	Role (self or sub-contracted)	Project value	Name and contact number of referee
1					
2					
3					
4					
5					

**LIST OF DRAWINGS**

1	RDN/2014/06R/ANS: 1000 Birds Layer House
2	RDN/2015/009/ANS: 1000 Birds Layer Shed - Electrical Reticulation
3	Detail Electrical Connections Db Corner
4	RDN/2016/030/ANS: Cross section 1000 birds layer shed (Curtains)
5	RDN/2014/02/NUR: Masonry Tank Stand (A3)
6	RDN/2010/001/TOI: Ventilated Improved Pit Latrine (not always required)
7	RDN/2016/012/ANS: Installation schedule for pressure tanks layer sheds
8	RDN/2016/031/STO: Packing/Grading shed for layer houses (optional)



KZN DEPARTMENT OF AGRICULTURE AND RURAL DEVELOPMENT

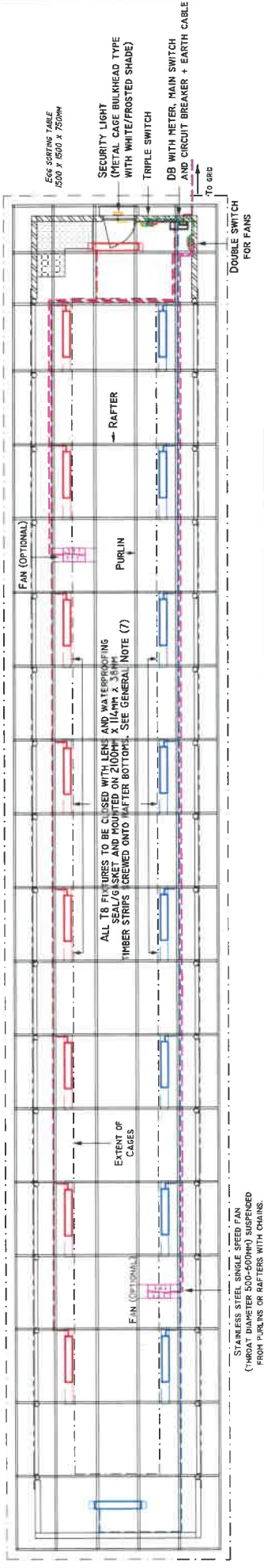
ENGINEERING SERVICES
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Phone: 033-3559100 | Fax: 033-3559122

Design: R. de Neef
Drawn by: R. de Neef
Date: August 2016
Revised: 17 August 2018

DRAWING NUMBER:
RDN/2016/025/ANS

SCALE 1 : 100 (A3)

1000 BIRDS LAYER HOUSE WITH CURTAINS



INSTALLATION PLAN ELECTRICAL RETICULATION FOR 1000 BIRDS LAYER SHED

SPECIFICATIONS ELECTRICAL RETICULATION

A) GENERAL

- 1) ALL ELECTRICAL WORK (CONNECTION TO THE GRID, INSTALLATION OF THE LAMPS AND SWITCHES) TO BE SUB-CONTRACTED TO A LICENSED ELECTRICIAN. AN ELECTRICAL CERTIFICATE IS TO BE SUBMITTED.
- 2) ALL WORK TO COMPLY TO THE RELEVANT SANS STANDARDS FOR ELECTRICAL INSTALLATIONS:
 - SANS 60614 SPECIFICATION FOR CONDUITS FOR ELECTRICAL INSTALLATIONS
 - SANS 60884 PLUGS AND SOCKET-OUTLETS FOR HOUSEHOLD AND SIMILAR PURPOSES
 - SANS 61084 CABLE TRUNKING AND DUCTING SYSTEMS FOR ELECTRICAL INSTALLATIONS
 - SANS 61035 SPECIFICATION FOR CONDUIT FITTINGS FOR ELECTRICAL INSTALLATIONS
 - AND OTHER RELEVANT STANDARDS.
- 3) CONNECTION TO THE GRID IS ONLY TO BE MADE FROM A LEGAL CONNECTION WHICH HAS NOT BEEN TAMPERED WITH AND WHICH HAS A SEALED AND WORKING METER MEASURING CONSUMPTION.
- 4) ONE TRIPLE LIGHT SWITCH WALL UNIT TO BE INSTALLED INSIDE AGAINST THE WALL ABOUT 500MM FROM DOOR.
 - ONE SWITCH WILL OPERATE THE SEVEN SOUTH SIDE T8 FIXTURES, PLUS THE ONE ON THE LEFT.
 - ONE WILL OPERATE THE SEVEN T8'S ON THE NORTH SIDE OF THE SHED, PLUS THE ONE AT THE ENTRY.
 - ONE WILL OPERATE THE OUTSIDE SECURITY LIGHT (METAL, BULKHEAD TYPE, ENERGY SAVING, 60W OR EQUIVALENT).
- 5) CIRCUIT BREAKER SHALL BE INSTALLED AT THE MAIN SWITCH WHERE THE EXTENSION TO THE LAYER UNIT(S) TAKES OFF. IN THE CASE OF MORE THAN ONE LAYER UNIT ADDITIONAL CIRCUIT BREAKERS OF APPROPRIATE CAPACITY SHALL BE INSTALLED AT EVERY SECOND LAST UNIT. ALTERNATIVELY ONE LARGER CAPACITY CIRCUIT BREAKER AT THE TAKE OFF POINT CAN BE USED. THE CHOICE OF THE CAPACITY OF THE CIRCUIT BREAKER AND BETWEEN ONE OR MORE, HIGHER CAPACITY CIRCUIT BREAKERS IS TO THE DISCRETION OF THE ELECTRICIAN.
- 6) ALL CABLING TO BE DUCTED AND FIXED ONTO PURLINS, TRUSSES OR AGAINST THE WALL AT 1.5M INTERVALS.
- 7) USE 2 x 9 = 16 T8 FLUORESCENT FIXTURES PER UNIT. EACH HOLDING 2 x 1.2M LONG 25W TUBES OF 25MM DIAMETER WITH ELECTRO-MAGNETIC BALLAST, MOUNTED IN WEATHERPROOF FIBRE GLASS OR PLASTIC HOUSING WITH A CONTINUOUS GASKET BETWEEN THE LENS AND FIXTURE. THE FIXTURE SHOULD HAVE AT LEAST 6 CLIPS TO HOLD THE POLYACRYLIC LENS ON, OR BE APPROPRIATELY SEALED, ON IN ORDER TO PREVENT BARN AIR FROM GETTING INTO THE FIXTURE AND POLLUTING THE TUBES.
- 8) EACH SHED TO HAVE 18 FIXTURES IN TOTAL = 900W. SUPPLY 2 x 18 + 4 SPARES = 40 T8 TUBES PER UNIT.

OPTIONAL: INSTALLATION OF TWO/FOUR AIR VENTILATION FANS

- 9) IF THE INSTALLATION OF TWO FANS IS REQUIRED, AN ADDITIONAL DOUBLE SWITCH WILL BE INSTALLED AGAINST THE WALL, EACH OPERATING ONE FAN
- 10) THE FANS WILL BE HUNG FROM THE RAFTERS OR PURLINS WITH CHAINS AT APPROXIMATELY 10 METERS FROM THE SHED ENDS, ONE ON EACH SIDE OF THE ROW OF CAGES.
- 11) SPECIFICATIONS: BLADES AND HOUSING TO BE STAINLESS STEEL OR ALUMINIUM, THROAT DIAMETER 500-600MM, THROAT LENGTH 200-300MM, AIR REPLACEMENT CAPACITY APP. 5300 CUBIC METER PER HOUR AT APP 1500 RPM, POWER: 100-120W

B) CALCULATION OF THE REQUIRED CONNECTION CAPACITY

1) IF NO FANS ARE USED, THE REQUIRED TOTAL POWER LOAD USED WILL BE FOR THE LIGHTS, 960 WATT. THE REQUIRED AMPERAGE FOR A SINGLE PHASE CONNECTION (POWER FACTOR PF = 1) WOULD IN THAT CASE BE (THE LOWER LIMIT OF THE 200V-250V RANGE IS USED AS THIS WILL RESULT IN THE HIGHEST AMPERAGE):

$$I (A) = P(W) / V(V) = 960W / 200V = 4.8 \text{ AMP.}$$

2) IF IN ADDITION 2 OR 4 VENTILATION FANS (4 x 150W) ARE USED, THE MAXIMUM TOTAL POWER REQUIREMENT WILL BE:

$$4 \times 150W + 960 \text{ W} = 1560W.$$

THE REQUIRED AMPERAGE FOR A SINGLE PHASE CONNECTION (PF = 1) WOULD IN THAT CASE BE:

$$I (A) = P(W) / V(V) = 1560 / 200 = 7.8 \text{ AMP.}$$

THE MINIMUM FOR THE CONNECTION FOR ONE SHED FANS WOULD BE 8.7 AMP WHICH ALLOWS FOR A POWER FACTOR OF 0.9, THE MINIMUM AVERAGE EFFICIENCY OF THE GRID. ROUNDED UP TO THE NEAREST STANDARD SIZE THIS WILL BE A 20 AMP CONNECTION.

3) IF THERE IS A POSSIBILITY OF EXTENDING THE PROJECT WITH ONE OR MORE SHEDS, THE CONNECTION SIZES WOULD BE AS FOLLOWS:

> 2 SHEDS: (15.6) 16 AMP/ 4 KVA	> 3 SHEDS: (23.4) 40 AMP/ 10 KVA	> 4 SHEDS: (31.2) 40 AMP/ 10 KVA
> 5 SHEDS: (39.0) 40 AMP/ 10 KVA	> 6 SHEDS: (46.8) 60 AMP/ 15 KVA	> 7 SHEDS: (54.6) 60 AMP/ 15 KVA.



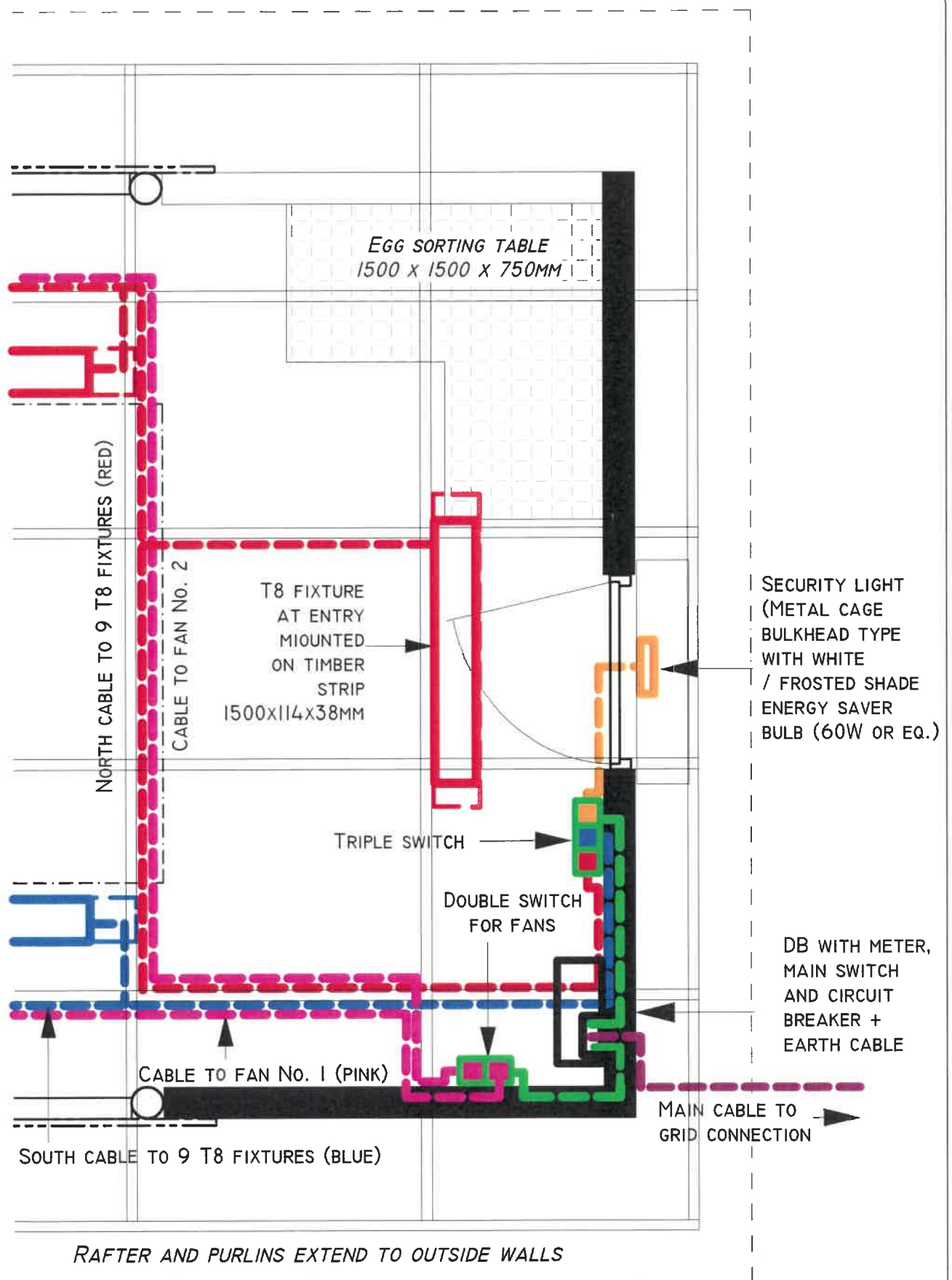
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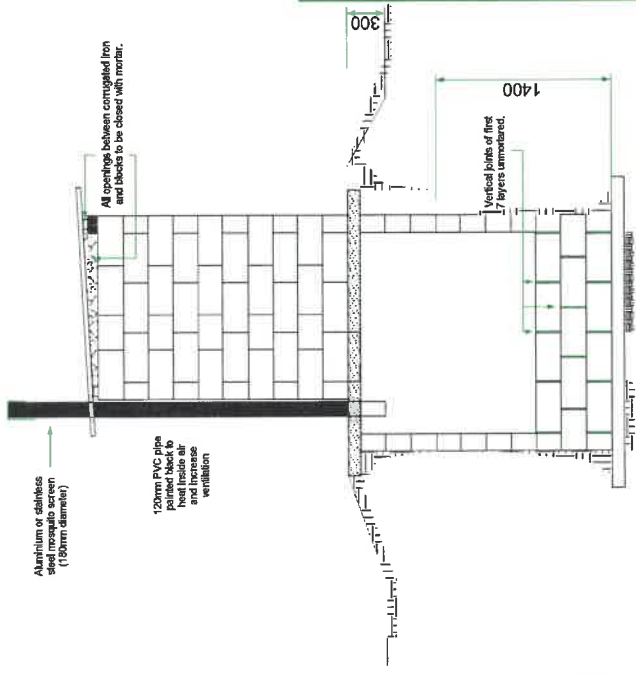
Design: R. de Neef
Drawn by: R. de Neef
Date: 28 April 2015

DRAWING NUMBER: RDN/2015/09/ANS
SCALE 1 : 100 (A3)

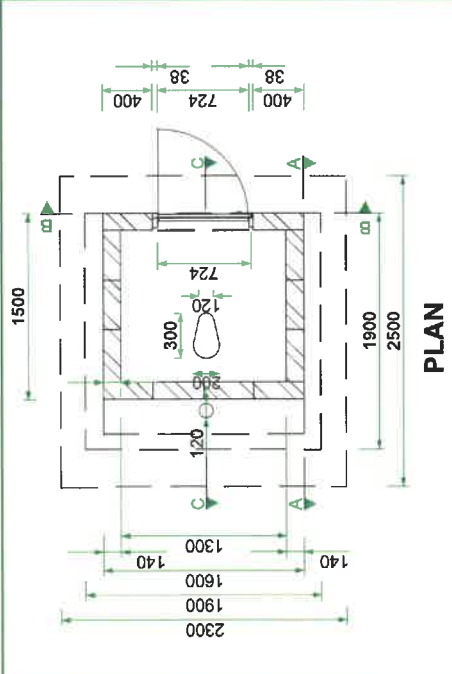
1000 BIRDS LAYER SHED ELECTRICAL RETICULATION



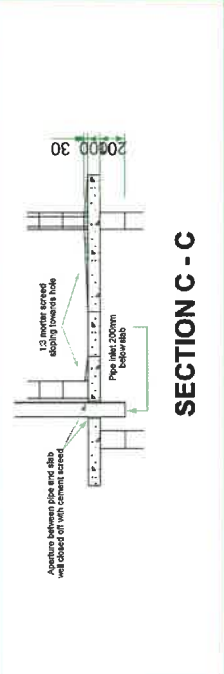
DETAIL OF DISTRIBUTION BOX AND CIRCUIT CONNECTIONS OF 1000 BIRDS LAYER SHED



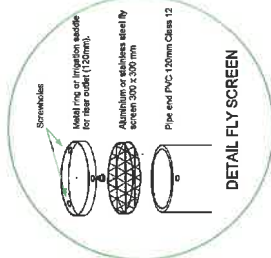
SECTION A - A



PLAN



SECTION C - C



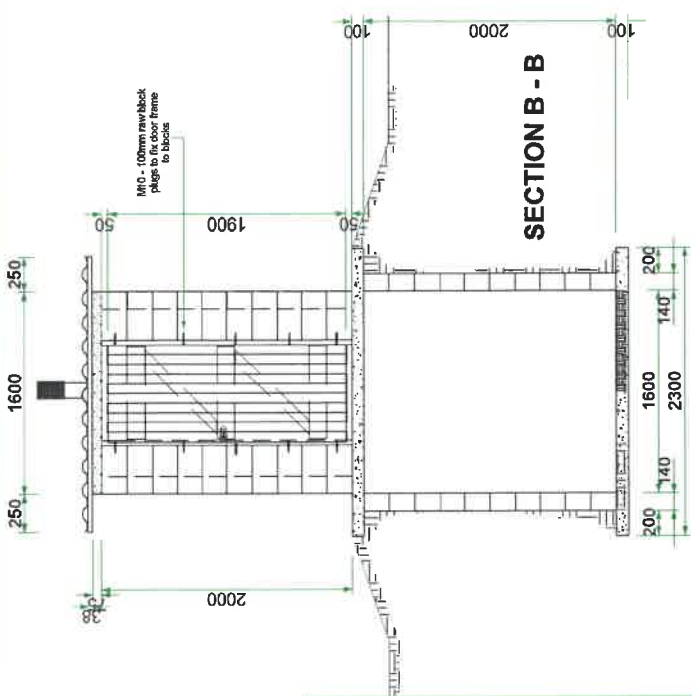
DETAIL FLY SCREEN

NOTES

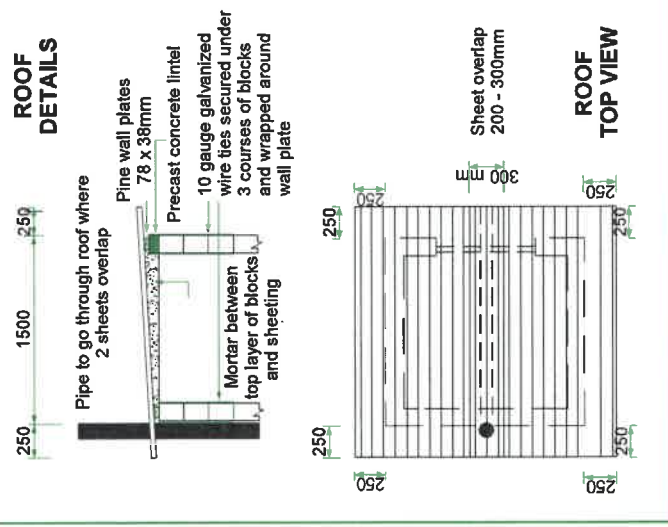
1. All dimensions in mm.
2. Mix for slabs to be 1 cement : 2 river sand : 2 stone.
3. Reinforcement with a grid of 6 mm bars at 150mm spacing.
4. Dimensions of cement blocks: 390 x 190 x 140 mm.
5. Bedding mortar mix: 1 cement : 5.5 sand. Joints 10-15mm thick.
6. Plaster mortar mix: 1 cement : 5.5 plaster sand. Thickness 15mm.
7. Door to open outside. Dimensions: 1900 x 780 x 20mm
8. Roof slopes away from door. Pine wall plates 2100 x 76 x 38mm tied to front and back wall as shown.
9. Galvanized corrugated iron roof sheets (minimum .25mm thickness) fixed to wall plates with standard roof screws.
10. Vent pipe on North side of structure as shown.
11. Wooden door and frame coated with three 3 coats of exterior varnish. Door to be provided with barrel bolt on exterior and hook and eye on inside.
12. Raw block plugs to be used to fix door frame to blocks- 5 on each side.

**VENTILATED IMPROVED PIT TOILET
BILL OF QUANTITIES**

MATERIALS	QUANTITY
Cement	14 sacks
River sand (coarse)	0.9 m3
Stone (20mm)	0.9 m3
Plaster sand (fine)	0.6 m3
Steel reinforcement bars 6m x 6 mm	6 bars
Cement blocks	270
Whitewash for exterior of structure	5L
DOOR	
Pine ledged and braced batten door 1900 x 760 x 20 mm	1
Steel barrel bolt to lock door from outside	1
Steel hook and eye to close door from inside	1
Steel hinges	3
Raw block plugs (M10 x 100mm) with screws	10
Exterior varnish for door and door frame	1L
ROOF	
Pine wall plates 6m x 76mm x 38mm for roof and door frame	2
Corrugated iron roof sheet 4m x 1.2m x 0.25mm	1
10 gauge galvanized steel wire	25m
PIPE	
uPVC pipe 120 mm diameter - class 12	3m
Metal ring or irrigation saddle - 120 mm internal diameter	1
Aluminium or stainless steel fly screen gauze	0.5m ²
Can of exterior black epoxy paint for pipe	0.25L



SECTION B - B



**ROOF
DETAILS**

**ROOF
TOP VIEW**