



FREE STATE DEPARTMENT OF AGRICULTURE AND RURAL DEVELOPMENT

CONTRACT: DARD/RFT 04/2023

UPGRADE OF THE OLD NURSERY/HATCHERY BUILDING FOR MULTI-SPECIES BREEDING INCLUSIVE OF TILAPIA AND FRIES

TENDER CLOSING DATE: 24 November 2023
TENDER DOCUMENT

Issued by:

Department of Agriculture and Rural Development
Glen Agricultural College
Chemistry Building 1st Floor
Gielie Joubert Street
Bloemfontein
9301

Prepared by:

Engineering and Facilities Management

Name of Tenderer:	Tender amount:



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PART T: TENDER

T1 Tendering Procedures

Free State Department of Agriculture and Rural Development

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T1.1 Tender Notice and invitation to Tender

<p>Free State Department of Agriculture and Rural Development invites tenders from Contractors for UPGRADE OF THE OLD NURSERY/HATCHERY BUILDING FOR MULTI-SPECIES BREEDING INCLUSIVE OF TILAPIA AND FRIES. This project is in the province of the FREE STATE and in the district municipality of XHARIEP. The approximate duration of the project is 3 months.</p> <p>The extent of scope entails the appointment of Mechanical Engineering Contractors to supply, deliver, install and commission Recirculating Aquaculture System (RAS) with its associated heating, filtration, etc., as well as hatching systems and fingerling packaging, broodstock and quarantine facilities in the old nursery/hatchery building with some building modifications for Tilapia and Fires production at ATDC.</p>
<p>Only cidb registered service providers with grading of four (4) ME (Mechanical Engineering) or higher or a contractor grading designation equal to or higher than a contractor grading designation determined in accordance with the sum tendered will be considered. Service providers must have the necessary capacity, capability, experience and qualifications to undertake implementation of the works as specified for the Free State Department of Agriculture and Rural Development.</p>
<p>Preferences will be given to tenderers with 51% or more ownership who are woman or youth and are from the Free State.</p>
<p>Only tenderers who meet the eligibility criteria as contained in the tender data are eligible to submit tenders.</p>
<p>The physical address for collection of tender documents is: Free State Department of Agriculture and Rural Development Room no. 149, Cashier's Office, ground floor, Administration Building, Gielie Joubert Street, Glen.</p>
<p>Documents may be collected during working hours: 9:00 – 15:30 Mondays to Fridays.</p>
<p>A non-refundable tender deposit of R427.00 payable in cash or EFT (proof of payment required) made out in favour of the Department is required on collection of bound hard copies of the tender documents (Banking details as indicated in the tender advertisement).</p>
<p>Queries relating to the issue of these documents may be addressed in writing to Ms F. Khumalo, e-mail: khumalof@dard.gov.za</p>
<p>A compulsory clarification meeting will be held at the Gariep ATDC old hatchery, Gariep dam on Friday 10 November 2023 at 14:00 hrs.</p>
<p>The closing time for receipt of tenders is 11:00 hrs on Friday 24 November 2023. Telegraphic, telephonic, telex, facsimile, e-mail and late tenders will not be accepted.</p>
<p><i>It is the responsibility of the tenderer/s to ensure that bid documents / proposals are submitted on or before closing time at the correct location as the department will not take responsibility for wrong delivery. Tenderers using courier services for delivery of their bid documents must ensure the delivery is at the correct place / location and time as the department will not be held responsible for wrong delivery. The Department will not accept responsibility if bids received by officials OR security personnel are not timely deposited in the Bid Box.</i></p>
<p>Only original hard copies of the tenders received from the Department or down-loaded from e-tender website may be submitted together with the electronic copy of the BOQ in excel format on a flash drive.</p>
<p>Requirements for sealing, addressing, delivery, opening and assessment of tenders are stated in the Tender Data.</p>

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T1.2 Conditions of Tender

Notes to tenderer:

1. The conditions of tender are the standard conditions of tender as contained in Annexure C of the CIDB STANDARD FOR UNIFORMITY IN ENGINEERING AND CONSTRUCTION WORKS CONTRACTS as per Government Notice No. 423 published in Government Gazette No. 42622 of 08 AUGUST 2019 and as amended from time to time. (see www.cidb.org.za).

<https://www.cidb.org.za/wp-content/uploads/2021/07/Standard-for-Uniformity-August-2019.pdf>

2. The standard conditions of tender make several references to the tender data for details that apply specifically to this tender. The tender data shall have precedence in the interpretation of any ambiguity or inconsistency between the tender data and the standard conditions of tender.

3. Each item of data given below is cross-referenced to the clause marked "C" in the above-mentioned Standard Conditions of Tender.

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UPGRADE OF THE OLD NURSERY/HATCHERY BUILDING FOR MULTI-SPECIES BREEDING
INCLUSIVE OF TILAPIA AND FRIES**T1.3 Tender Data**

(Pink forms) Applicable conditions of tender and rules applying from tender invitation to tender award.

The Standard Conditions is the **standard conditions of tender as contained in Annexure C of the CIDB STANDARD FOR UNIFORMITY IN ENGINEERING AND CONSTRUCTION WORKS CONTRACTS** and the Employer's Special Conditions of Tender for Procurement make several references to the Tender Data for details that apply specifically to this tender.

The Tender Data shall have precedence in the interpretation of any ambiguity or inconsistency between it and the standard/special conditions of tender.

Each item of data given below is cross-referenced to the clause marked "C" in the above-mentioned Standard Conditions of Tender and Special Conditions of Tender to which it mainly applies

Clause Number	Tender Data				
C.1	GENERAL				
C.1.1	<p>Actions</p> <p>The Employer is:</p> <p>Free State Department of Agriculture and Rural Development. The Employer's <i>domicilium citandi et executandi</i> (permanent physical business address) is:</p> <table border="1"> <tr> <td>POSTAL</td><td>DELIVERY</td></tr> <tr> <td>Private Bag X02, Bloemfontein, 9300</td><td>Gielie Joubert Street GLEN 9301</td></tr> </table>	POSTAL	DELIVERY	Private Bag X02, Bloemfontein, 9300	Gielie Joubert Street GLEN 9301
POSTAL	DELIVERY				
Private Bag X02, Bloemfontein, 9300	Gielie Joubert Street GLEN 9301				
C.1.2	<p>Tender Documents</p> <p>The tender documents issued by the Employer will be both in hardcopy and electronic format (e-tender website) and comprise the following: (The use of specific page colours will only be applicable to the final signed contract document.)</p> <p>Part T1: Tendering Procedures</p> <ul style="list-style-type: none"> • T1.1 Tender notice and invitation to tender • T1.2 Standard and Special Conditions of Tender • T1.3 Tender data <p>Part T2: Returnable Schedules</p> <ul style="list-style-type: none"> • T2.1 List of returnable documents • T2.2 Tender schedules <p>Part C1: Agreements and contract data</p> <ul style="list-style-type: none"> • C1.1 Form of offer and acceptance (Yellow) • C1.2 Contract data (Yellow) • C1.3 Other contract forms (Yellow) <p>Part C2: Pricing data</p>				

	<ul style="list-style-type: none"> • C2.1 Pricing instructions (Yellow) • C2.2 Pricing Schedules / Bills of Quantities (Yellow) <p>Part C3: Scope of work</p> <ul style="list-style-type: none"> • C3 Scope of work (Blue) <p>Part C4: Site Information</p> <ul style="list-style-type: none"> • C4 Site Information (Green) <p>Part C5: Annexure (White)</p>
C.1.3	<p>Interpretation</p> <p>Wherever reference is made in the documentation to Bill of Quantities it shall also mean Pricing Schedule.</p> <p>Wherever reference is made in the documentation to Contractor it shall also mean Service Provider.</p>
C.1.4	<p>Communication and employer's agent</p> <p>The Employer's agent can be contacted at:</p> <p>The Employer's agent can be contacted at:</p> <p><u>Tender Administrative:</u></p> <p>DARD SCM Me Fikile Khumalo 078 451 6529 khumalof@dard.gov.za</p> <p><u>Technical:</u></p> <p>DARD Engineering Hennie Grobler 082 762 1847 groblerh@dard.gov.za</p>
C.1.6	<p>Procurement Procedures</p> <p>The PP2B Open Procedure will be followed.</p>
C.2	Tenderer's Obligations
C.2.1	<p>Eligibility</p> <p>Only those tenderers who satisfy the following criteria are eligible to submit tenders:</p> <ul style="list-style-type: none"> (a) The tenderer is registered on the <u>Central Supplier Database (CSD)</u> for the South African government (see https://secure.csd.gov.za/) unless it is a foreign supplier with no local registered entity. In the event of a Joint Venture, each member of the Joint Venture, shall be registered on the CSD at the closing date for tender submissions. If not registered as verified online at tender closing, the tenderer will be declared non-responsive. (b) the tenderer is in <u>good standing with SARS</u> according to the CSD; a Valid Tax status PIN must be provided to verify compliance. (c) the tenderer is registered with the <u>Construction Industry Development Board</u> in an appropriate contractor grading designation; (d) the tenderer or any of its directors/shareholders is <u>not listed on the Register of Tender Defaulters</u> in terms of the Prevention and Combating of Corrupt Activities Act of 2004 as a person prohibited from doing business with the public sector;

	<p>(e) the tenderer has not:</p> <ol style="list-style-type: none"> abused the Employer's Supply Chain Management System; or failed to perform on any previous contract and has been given a written notice to this effect; <p>(f) the tenderer has <u>completed the Compulsory Declaration</u> and there are no conflicts of interest which may impact on the tenderer's ability to perform the contract in the best interests of the employer or potentially compromise the tender process;</p> <p>(g) Valid <u>COIDA Certificate</u> in compliance with the Compensation for Occupational Injuries and Diseases Act, 1993 (Act No. 130 of 1993)</p> <p>(h) <u>Bill of Quantities</u> (Bidders are required to complete the Bill of Quantities).</p> <p>(i) <u>Compulsory clarification meeting</u> certificate duly signed by the bidder or representative. The clarification meeting certificate will be verified against the attendance register.</p> <p>(j) Joint Ventures or Consortia are eligible to submit bids provided that:</p> <ol style="list-style-type: none"> (1) each member of the joint venture is registered with the CIDB, (2) the lead partner has a contractor grading designation in ME four (4) class or higher or a contractor grading designation equal to or higher than a contractor grading designation determined in accordance with the sum tendered of construction work; and (3) the combined contractor grading designation calculated in accordance with the Construction Industry Development Regulations (according to the CIDB website Joint Venture Grading Designation Calculator) is equal to or higher than a contractor grading designation determined in accordance with the sum tendered for a ME class of construction work (Estimate ME4). (4) Each individual party to the Joint Venture or Consortium must be registered on the CSD. (5) Each individual party to the Joint Venture or Consortium must be in good standing with SARS. (6) A signed JV or consortium agreement specific to the tendered Contract and clearly showing the percentage contribution of each partner to the Joint Venture must be submitted. <p>Failure to satisfy the eligibility criteria will result in a non-responsive tender.</p>
C.2.2	<p>Cost of tendering</p> <p>Tender documents are available from Department of Agriculture and Rural Development</p> <p>Room no. 149, Cashier's Office, ground floor, Administration Building, Gielie Joubert Street, Glen.</p> <p>A non-refundable tender deposit of R427.00 payable in cash or EFT (proof of payment required) made out in favour of the Department is required on collection of bound hard copies of the tender documents. Alternatively documents can be down-loaded from the e-tender website for free.</p>
C.2.6	<p>Acknowledge addenda</p> <p>Failure to apply instructions contained in addenda may render a tenderer's offer non-responsive in terms of condition of tender C.3.8.</p>
C.2.7	<p>Clarification meeting</p> <p>A compulsory clarification meeting will be at the Gariep ATDC old hatchery, Gariep dam on Friday 10 November 2023 at 14:00 hrs.</p>
C.2.8	<p>Seek clarification</p> <p>Request clarifications at least 5 (five) working days before the closing date.</p>

C.2.9	Insurance No insurance is provided by the Employer.						
C.2.10	Pricing the tender offer Tenderers are required to state the rates and currencies in Rand.						
C.2.12	Alternative tender offers Alternative offers are generally not acceptable due to possible manipulation of the tender process and resulting complexity of the evaluation. Therefore, the submission of alternative tenders is strongly discouraged. Acceptable alternative offers will only be considered from a tenderer with the highest number of evaluation points for the main offer.						
C.2.13	Submitting a tender offer						
C.2.13.1	If a tenderer, including key persons, a joint venture partner or a Targeted Enterprise, submits or participates in more than one tender for the same project, then all such tenders shall be disqualified.						
C.2.13.2	The returnable documents shall be completed in hard copy with black ink.						
C.2.13.3	Only submit one hardcopy of the fully completed and signed tender document. <u>An electronic version of the Bill of Quantities in excel must be submitted on a flash drive with the tender document.</u>						
C.2.13.6	Submission in the tender box Tenders must be submitted at Department of Agriculture and Rural Development, Room no. 149, Cashier's Office, ground floor, Administration Building, Gielie Joubert Street, Glen.						
C.2.15	Closing time						
C.2.15.1	<p>Submission in Tender box:</p> <p>Electronic submissions will not be accepted. The Employer's address for delivery of tender offers and identification details to be shown on each tender offer package are:</p> <table border="1"> <tr> <td>Location of tender box:</td><td>Department of Agriculture and Rural Development, Administration Building, Ground floor, SCM component, Gielie Joubert Street, Glen.</td></tr> <tr> <td>Physical address:</td><td>Administration Building, Gielie Joubert Street, Glen (Mangaung Metro)</td></tr> <tr> <td>Identification details: <i>(Place the signed original tender offer in a package marked)</i></td><td>TENDER DARD/RFT 04/2023 UPGRADE OF THE OLD NURSERY/HATCHERY BUILDING FOR MULTI-SPECIES BREEDING INCLUSIVE OF TILAPIA AND FRIES</td></tr> </table> <p>Tenders must be submitted during office hours 08h00 and 15h30 on weekdays at the Employer's address.</p> <p>It is in the tenderer's interest to ensure that the delivery of the tender offer is recorded in the Employer's tenders received register and deposited in the tender box.</p>	Location of tender box:	Department of Agriculture and Rural Development, Administration Building, Ground floor, SCM component, Gielie Joubert Street, Glen.	Physical address:	Administration Building, Gielie Joubert Street, Glen (Mangaung Metro)	Identification details: <i>(Place the signed original tender offer in a package marked)</i>	TENDER DARD/RFT 04/2023 UPGRADE OF THE OLD NURSERY/HATCHERY BUILDING FOR MULTI-SPECIES BREEDING INCLUSIVE OF TILAPIA AND FRIES
Location of tender box:	Department of Agriculture and Rural Development, Administration Building, Ground floor, SCM component, Gielie Joubert Street, Glen.						
Physical address:	Administration Building, Gielie Joubert Street, Glen (Mangaung Metro)						
Identification details: <i>(Place the signed original tender offer in a package marked)</i>	TENDER DARD/RFT 04/2023 UPGRADE OF THE OLD NURSERY/HATCHERY BUILDING FOR MULTI-SPECIES BREEDING INCLUSIVE OF TILAPIA AND FRIES						

C.2.15.2	<p>The closing time for submission of tender offers is 11:00 hrs on 24 November 2023.</p> <p>Where closing date was extended, documents that were valid at the original closing date, remain valid for the extended closing date.</p>
C.2.16.	Tender offer validity
C.2.16.1	The tender offer validity period is 120 days.
C.2.17	Clarification of tender offer after submission <p>Any clarification requested under this clause must be provided within 1 (one) working day of date of request.</p>
C.2.18	Provide other material <p>Any additional information requested under this clause must be provided within 5 (five) working days of date of request.</p>
C.3	The Employer's undertakings
C.3.2	Issue Addenda <p>The employer shall issue addenda until 3 (three) working days before tender closing date.</p>
C.3.4 C.3.4.1	Opening of tender submissions <p>The time for opening of the tenders is:</p> <p>Time: 11:00 on Friday, 24 November 2023.</p> <p>Location:</p> <p>SCM BOARDROOM Administration Building, Gielie Joubert Street, Glen (Mangaung Metro)</p>
C.3.5	Two-envelope system <p>Does not apply.</p>
C.3.7	Grounds for rejection and disqualification <p>Prior to disqualification in terms of section 9(1) of PPR 2022, the Employer shall inform the tenderer and give the tenderer an opportunity to make representations within 14 days as to why the tender submitted should not be disqualified and as to why the tenderer should not be restricted by the National Treasury from conducting any business with any organ of state for a period not exceeding 10 years.</p> <p>In the event of disqualification, the Employer may, at its sole discretion, claim damages from the tenderer and impose a specified period during which tender offers will not be accepted from the offending tenderer and, the Employer shall inform the National Treasury and the CIDB in writing.</p>
C.3.8 C.3.8.2	Test for responsiveness <p>A Substantially responsive tender is a tender in which all of the material information and documentation submitted at close of tender contains non-material and non-conformities to the bid specifications but are not related to price. The correction of any such documentation or information, or the condoning for the non-inclusion of any such document or information may not be prejudicial towards the offer and claimed preference of any responsive tender or be construed to be giving an unfair advantage to any tender.</p> <p>A responsive tender is also one that conforms to all the terms, conditions, and scope of work of the tender documents, without material omissions. The test for a material omission is the same as the test for a material deviation or qualification.</p>

	The Employer will cancel a tender should all tenders be non-responsive and no negotiations will be conducted.
C.3.9	<p>Arithmetical errors, omissions, discrepancies and imbalanced unit rates</p> <p>Check responsive tenders for discrepancies between amounts in words and amounts in figures. Where there is a discrepancy between the amounts in figures and the amount in words, the amount appearing in the summary to the Pricing Schedule shall govern.</p> <p>Check responsive tender offers for:</p> <ul style="list-style-type: none"> (a) the gross misplacement of the decimal point in any unit rate; (b) omissions made in completing the Pricing Schedule or Bills of Quantities; or (c) arithmetic errors in: <ul style="list-style-type: none"> (i) line item totals resulting from the product of a unit rate and a quantity in Bills of Quantities or Schedules of Prices; or (ii) the summation of the prices; (d) imbalanced unit rates. <p>Notify shortlisted tenderers of all errors, omissions or imbalanced rates that are identified in their tender offers.</p> <p>Where the tenderer elects to confirm the errors, omissions or re-balancing of imbalanced rates the tender offer shall be corrected as follows:</p> <ul style="list-style-type: none"> (a) if Bills of Quantities or Pricing Schedules apply and there is an error in the line item total resulting from the product of the unit rate and the quantity, the unit rate shall govern and the line item total shall be corrected. Where there is an obviously gross misplacement of the decimal point in the unit rate, the line item total as quoted and the unit rate shall be corrected. (b) Where there is an error in the total of the prices either as a result of other corrections required by this checking process or in the tenderer's addition of prices, the total of the prices shall be corrected. (c) Where the unit rates are imbalanced, the tenderer shall adjust such rates by increasing or decreasing them and selected others while retaining the total of the prices derived after any other corrections made under (a) and (b) above. <p>Where there is an omission of a line item, no correction is possible and the offer will be declared non-responsive.</p> <p>Declare as non-responsive and reject any offer from a tenderer who elects not to accept the corrections proposed and/or fails to justify or balance the imbalanced rates to the satisfaction of the employer.</p> <p>The tenderer is required to submit balanced unit rates for Rate Only items in the Pricing Schedule. The rates submitted for these items will be taken into account in the evaluation of tenders.</p>

<p>C.3.11</p>	<p>Evaluation of tender offers</p> <p>Evaluating functionality</p> <p>The Functionality criteria and maximum score in respect of each of the criteria are as follows:</p> <table border="1" data-bbox="383 324 1364 739"> <tr> <th data-bbox="383 324 1189 459">Functionality criteria</th><th data-bbox="1189 324 1364 459">Maximum number of points</th></tr> <tr> <td colspan="2" data-bbox="383 459 1364 526">Functionality Schedule</td></tr> <tr> <td data-bbox="383 526 1189 571">1.1 Experience in similar projects</td><td data-bbox="1189 526 1364 571">20</td></tr> <tr> <td data-bbox="383 571 1189 616">1.2 Quality</td><td data-bbox="1189 571 1364 616">30</td></tr> <tr> <td data-bbox="383 616 1189 660">1.3 Technical capacity and competence</td><td data-bbox="1189 616 1364 660">20</td></tr> <tr> <td data-bbox="383 660 1189 705">1.4 Financial Capacity</td><td data-bbox="1189 660 1364 705">30</td></tr> <tr> <td data-bbox="383 705 1189 739">Sub-total points (Quality Schedule A)</td><td data-bbox="1189 705 1364 739">100</td></tr> </table> <p>The minimum number of evaluation points for quality is not less than <u>70</u>.</p>	Functionality criteria	Maximum number of points	Functionality Schedule		1.1 Experience in similar projects	20	1.2 Quality	30	1.3 Technical capacity and competence	20	1.4 Financial Capacity	30	Sub-total points (Quality Schedule A)	100
Functionality criteria	Maximum number of points														
Functionality Schedule															
1.1 Experience in similar projects	20														
1.2 Quality	30														
1.3 Technical capacity and competence	20														
1.4 Financial Capacity	30														
Sub-total points (Quality Schedule A)	100														
<p>C.3.11</p>	<p>Evaluating price and preference</p> <p>The procedure for the evaluation of responsive tenders is Method 2 (Functionality, Price and Preference)</p> <ul style="list-style-type: none"> a) Score functionality, rejecting all tender offers that fail to score the minimum number of b) No tender must be regarded as an acceptable tender if it fails to achieve the minimum c) Tenders that have achieved the minimum qualification score for functionality must be evaluated further in terms of the preference points system prescribed in Form SDB 6.1. 														
<p>C.3.11</p>	<p>Determine acceptability of preferred tenderer</p> <p>Price negotiations.</p> <p>(a) If the price offered by a tenderer scoring the highest points is not market related, the Organ of state may not award the tender to that tenderer.</p> <p>(b) The Organs of state may –</p> <ul style="list-style-type: none"> i. Negotiate a market related price with the tender scoring the highest points or cancel the tender; ii. If the tenderer does not agree to a market related price, negotiate a market related price with the tenderer scoring the second highest points or cancel the tender; iii. If the tenderer scoring the second highest points does not agree to a market related price, negotiate a market related price with the tenderer scoring the third highest points or cancel the tender; <p>(c) If a market related price is not agreed as envisaged in paragraph b(iii), the organ of state must cancel the tender.</p>														
<p>C.3.13</p>	<p>Acceptance of tender offer</p> <p>The conditions stated in clauses C.3.13(a) to (f) of the Conditions of Tender as well as the following additional clauses C.3.13(g) to (k) shall be applied as objective criteria in terms of section 2(1)(f) of the Preferential Procurement Policy Framework Act, 2000 (Act No 5 of 2000) and as compelling and justifiable reasons not to award to the highest scoring tenderer:</p>														

	<ul style="list-style-type: none">a) the tenderer or any of its directors is not listed on National Treasury's Register of Tender Defaulters or Restricted Suppliers, or the Employer's database, in terms of the Prevention and Combating of Corrupt Activities Act, 2004 (Act No 12 of 2004) as a tenderer or person prohibited from doing business with the public sector;b) the tenderer has not abused the Employer's supply chain management system; andc) the tenderer has not failed to perform on any previous contract and has not been given a written notice to this effect.d) the tenderer is tax compliant. The recommended tenderer who becomes non-compliant, prior to award, shall be notified and must become compliant within 7 working days of the date of being notified. A recommended tenderer who remains non-compliant after the 7 working days of being notified, shall be declared non-responsive.
C.3.16	Registration of the award Due to cost and other implications, names of successful bidders will only be availed on request. Any unsuccessful tenderer may request a debriefing in writing as specified in Clause C.3.18.
C.3.17	Provide copies of the contracts The number of paper copies of the signed contract to be provided by the Employer is 1.
C.3.18	Provide written reasons for actions taken All requests from tenderers shall be in writing.

Breakdown of Functionality Criteria point scoring:

CRITERIA	GUIDELINE FOR EVALUATION CRITERIA APPLICATION	MEANS OF VERIFICATION	POINTS	
1.1 Experience in similar projects.	Number of <u>similar projects</u> completed in the past five (5) years.	Specify when, where, and for which institutions the projects were undertaken within the last five (5) years. Provide proof of <u>contractual agreements</u> or <u>appointment letters</u> or sub – contracting letters which must include the following information:		20
	0 Contractual agreement or appointment letter	• contactable reference • date of appointment • value of work <i>(The above evidence must be attached to Form F1: Project reference list of the returnable documents and Form F2 of the returnable documents must be completed by the Client of each submitted project.)</i>	0	
	1 Contractual agreement or appointment letter		7	
	2 Contractual agreements or appointment letters		12	
	>2 Contractual agreements or appointment letters		20	
1.2 Quality	Corresponding Reference letters /sub-contracting letters and Completion Certificates of projects completed.	Corresponding <u>reference letters</u> or <u>final completion certificates</u> of projects indicated above (1.1) as per contractual agreement or appointment letter.		30
	0 reference letter or completion certificate containing information as indicated.	<i>(Form F2 of the returnable documents must be completed by the Client of each submitted project.)</i>	0	
	1 reference letter or completion certificate containing information as indicated.		10	
	2 reference letters or completion certificates containing information as indicated.		20	
	>2 reference letters or completion certificates containing information as indicated.		30	
1.3 Technical Capacity and Competence	Experience of minimum 2 key technical staff (Site Agent & Contracts Manager) in the employ of the company.	Provide short CVs with copy of ID, qualifications (minimum B degree in the build environment and appointment <u>or intention to appoint</u> letter).		20
	No proof		0	
	<ul style="list-style-type: none"> • Proof for one (1) key technical staff • Appointment letter (2 points) • Only relevant CV for 1 (2 points) • Minimum B degree in the built environment (2 points) 	General experience (total duration of work activity, level of education and training and positions held. Certified copies of certificates subject to verification.	10	
	Proof for two (2) key technical staff <ul style="list-style-type: none"> • Appointment letter (2 points) 		20	

	<ul style="list-style-type: none">• Only relevant CV for 1 (2 points)• Minimum B degree in the build environment (2 points)			
1.4 Financial Capacity	Proof of credit facility or access to finances equivalent to contract value.	Attach proof of financial capacity: <ul style="list-style-type: none">• Credit letter from a registered service provider and/or a credit agreement or equivalent,• Amount that the supplier qualifies for,• Signed and stamped by the institution <i>(Evidence must be attached after Form A7 of the returnable documents)</i>		30
	No proof or less than 5% of contract value quoted		0	
	>=5% and < 30% of contract value quoted		12	
	>= 30% and < 70% of contract value quoted		18	
	>= 70% of contract value quoted		30	
TOTAL			100	

CONTRACT NO: DARD/RFT 04/2023

T2 Returnable Documents

T2.1 List of Returnable Documents

(Yellow forms) Ensures everything required to be submitted with the tender is included in the submission.

Notes to tenderer:

- 1) *Returnable schedules have been based on the CIDB Standard for Uniformity in Construction Procurement and incorporates National Treasury requirements within them. Returnable schedules are separated into the following categories:*
 - i. *Forms, certificates and schedules for completion by the tenderer for use in the quantitative and qualitative evaluation of the tender.*
 - ii. *A list of other returnable documents for completion by the tenderer and which will subsequently be incorporated into the contract.*
- 2) *Failure to fully complete the relevant returnable documents shall render such a tender offer to be declared non-responsive.*
- 3) *Tenderers shall note that their signatures appended to each returnable form represents a declaration that they vouch for the accuracy and correctness of the information provided, including the information provided by candidates proposed for the specified key positions.*
- 4) *Notwithstanding any check or audit conducted by or on behalf of the Employer, the information provided in the returnable documents is accepted in good faith and as justification for entering into a contract with a tenderer. If subsequently any information is found to be incorrect such discovery shall be taken as wilful misrepresentation by that tenderer to induce the contract. In such event the Employer has the discretionary right under contract condition 8.4 to terminate the contract.*

CONTRACT NO: DARD/RFT 04/2023**Free State Department of Agriculture and Rural Development****CONTRACT: DARD/RFT 04/2023****UPGRADE OF THE OLD NURSERY/HATCHERY BUILDING FOR MULTI-SPECIES BREEDING INCLUSIVE OF TILAPIA AND FRIES****Notes to tenderer:**

- 1) *This form has been created as an aid to ensure a tenderer's compliance with the completion of the returnable forms and schedules..*
- 2) *If the same document has been referred to more than once as a returnable document, it can only be attached at the first instance.*

FORM NO	FORM NAME	COMPLETED?	Part of Contract
	Company Authority Documents & Resolutions		
A1	Certificate of Authority for Signatory		
A2	Certificate of attendance at the compulsory bid clarification meeting and site visit		
A3	Schedule of Addenda to Tender Documents		Yes
A4	Schedule of Deviations or Qualifications by Tenderer		Yes
A5	Certificate of Compliance with Occupational Health and Safety Act, 1993 And Construction Regulations, 2014 As Well As COID Act, 1993		Yes
A6	Tenderer's Registered Financial Service Provider Credit letter		
A7	Preliminary Programme Including Understanding And Approach		
	Standard Bidding Documents (SBD)		
SBD 1	Invitation to bid		
SBD 4	Bidder's disclosure		
SBD 6.1	Preference points claim form in terms of the preferential procurement regulations 2022.		
	Returnable Documents for Compliance Assessment		
B1	B-BBEE Certificate Or Sworn Affidavit		
B2	Valid Certificate of CIDB Registration of Contractor.		
B3	Registration on National Treasury Central Supplier Database		
B4	Tax compliance		
B5	Specific goals		
	Returnable documents for Functionality Assessment		
F1	Project references List		
F2	Project References		
F3	Joint venture agreement		Yes
F4	Key Technical Staff		
SEE SECTION C	Returnable Documents pertaining to the Contract		
C1.1	Form of Offer and Acceptance		Yes
C1.2	Contract Data Employer data Contractor data		Yes
C1.3	Performance bond		Yes
C2.2	Bill of Quantities		Yes

T2.2 Returnable Schedules

(Yellow forms) Documents and schedules to evaluate tenders plus other schedules to be included in the contract.

FORM A1 CERTIFICATE OF AUTHORITY FOR SIGNATORY

UPGRADE OF THE OLD NURSERY/HATCHERY BUILDING FOR MULTI-SPECIES BREEDING INCLUSIVE OF TILAPIA AND FRIES

Notes to tenderer:

1. The signatory for the tenderer shall confirm his/her authority thereto by attaching on the tendering company's letterhead a duly signed and dated copy of the relevant resolution of the board of directors/partners.
2. In the event that the tenderer is a joint venture, a certificate is required from each member of the joint venture clearly setting out:
 - authority for signatory,
 - undertaking to formally enter into a joint venture contract should an award be made to the joint venture,
 - name of the designated lead member of the intended joint venture, as required by tender condition
3. The resolution below is given as an example of an acceptable format for authorisation, but submission of this page with the example completed shall not be accepted as authorisation of the tenderer's signatory.
4. In the event that authorisation is for more than one project, then all projects shall be listed in the copy of the resolution of the Board of Directors/Partners.

By resolution of the board of directors/partners passed at a meeting held on

Mr/Ms

whose signature appears below, has been duly authorised to sign all documents in connection with the tender for contract no. DARD/RFT 04/2023 UPGRADE OF THE OLD NURSERY/HATCHERY BUILDING FOR MULTI-SPECIES BREEDING INCLUSIVE OF TILAPIA AND FRIES and any contract which may arise therefrom on behalf of *(enter name of tenderer in block capitals)*

.....

SIGNED ON BEHALF OF THE COMPANY:

.....

IN HIS/HER CAPACITY AS:.....

DATE:

SIGNATURE OF SIGNATORY:

WITNESSES:

SIGNATURE

SIGNATURE

.....

NAME (print)

.....

NAME (print)

FORM A2: CERTIFICATE OF ATTENDANCE AT THE COMPULSORY BID CLARIFICATION MEETING AND SITE VISIT

UPGRADE OF THE OLD NURSERY/HATCHERY BUILDING FOR MULTI-SPECIES BREEDING INCLUSIVE OF TILAPIA AND FRIES

This is to certify that I,
representative of (insert name of tenderer)

.....
Of (address)
.....

.....
.....
telephone number
fax number
e-mail

Attended the clarification meeting on (date)
conducted by
.....

in the presence of (Employer's representative)

TENDERER'S REPRESENTATIVE

(Signature)..... Date.....
EMPLOYER'S REPRESENTATIVE

(Signature)..... Date.....

FORM A3: SCHEDULE OF ADDENDA TO TENDER DOCUMENTS

Note to tenderer:

If an addendum containing material amendments is not incorporated by the tenderers in his tender offer, the tender will be declared non-responsive.

Annex F

Record of Addenda to Tender Documents

The undersigned confirm that the following communications received from the employer before the submission of this tender offer, amending the tender documents, have been taken into account in this tender offer:		
	Date	Title or Details
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		

Attach additional pages if more space is required.

Signed		Date	
Name		Position	
Tenderer			

FORM A4: SCHEDULE OF DEVIATIONS OR QUALIFICATIONS BY TENDERER

PAGE	DESCRIPTION

TENDERER'S REPRESENTATIVE

(Signature)..... Date.....

FORM A5: CERTIFICATE OF COMPLIANCE WITH OCCUPATIONAL HEALTH AND SAFETY ACT, 1993 AND CONSTRUCTION REGULATIONS, 2014 AS WELL AS COID ACT, 1993

Notes to tenderer:

1. *Discovery that the tenderer has failed to make proper disclosure may result in the Employer terminating a contract that flows from this tender on the ground that it has been rendered invalid by the tenderer's misrepresentation.*
2. *The tenderer shall attach to this form evidence that he is registered and in good standing with the Compensation Fund in terms of Section 80 of the Compensation for Injury and Disease Act (COID) (Act 130 of 1993).*
3. *The tenderer is required to disclose, by also attaching documentary evidence to this form, all inspections, investigations and their outcomes conducted by the Department of Labour into the conduct of the tenderer at any time during the 36 (thirty six) months preceding the date of the tender.*
4. *In the event of a joint venture enterprise, all members shall comply with the above requirement.*

FORM CONCERNING THE FULFILMENT OF THE CONSTRUCTION REGULATIONS, 2014

In terms of regulation 5(1)(g) and 5(1)(h) of the Construction Regulations, 2014 (hereinafter referred to as the Regulations), in terms of Section 43 of the Occupational Health and Safety Act, 1993 (Act No 85 of 1993) the Employer shall not appoint a contractor to perform construction work unless the Contractor can satisfy the Employer that his/her firm has the necessary competencies and resources to carry out the work safely and has allowed adequately in his/her tender for the due fulfilment of all the applicable requirements of the Act and the Regulations.

1. I confirm that I am fully conversant with the Regulations and that my company has (or will acquire/procure) the necessary competencies and resources to timeously, safely and successfully comply with all of the requirements of the Regulations.

YES	
NO	

2. Proposed approach to achieve compliance with the Regulations (Tick)

Own resources, competent in terms of the Regulations (refer to 3 below)	
Own resources, still to be hired and/or trained (until competency is achieved)	
Specialist subcontract resources (competent) – specify: _____ _____	

CONTRACT NO: DARD/RFT 04/2023

3. Provide details of proposed key persons, competent in terms of the Regulations, who will form part of the team as specified in the Regulations (CVs to be attached):

4. Provide details of proposed training (if any) that will be undergone:

5. Potential key risks identified and measures for addressing risks:

6. I have fully included in my tendered rates and prices (in the appropriate payment items provided in the Bill of Quantities) for all resources, actions, training and any other costs required for the due fulfilment of the Regulations for the duration of the construction and defects repair period.

YES	
NO	

TENDERER'S REPRESENTATIVE

(Signature)..... Date.....

**FORM A6: TENDERER’S CREDIT LETTER FROM A REGISTERED SERVICE PROVIDER
AND/OR A CREDIT AGREEMENT OR EQUIVALENT**

CREDIT LETTER

Credit letter and/or credit agreement or equivalent signed and stamped by the institution from a registered service provider indicating the availability of funds or credit to facilitate the project and must be attached to this schedule.

CREDIT LETTER AFTER THIS PAGE.

SIGNED BY/ON BEHALF OF BIDDER:

NAME		SIGNATURE	DATE

FORM A7: PRELIMINARY PROGRAMME INCLUDING UNDERSTANDING AND APPROACH

Notes to tenderer:

- 1. The tenderer shall attach a preliminary programme reflecting the proposed sequences and tempo of execution of the various activities.*
- 2. Limit this to two pages.*

EMPLOYER'S REPRESENTATIVE

(Signature)..... Date.....

PART A INVITATION TO BID

YOU ARE HEREBY INVITED TO BID FOR REQUIREMENTS OF THE (NAME OF DEPARTMENT/ PUBLIC ENTITY)					
BID NUMBER:	DARD/RFT 04/2023	CLOSING DATE:	24 November 2023	CLOSING TIME:	11:00
DESCRIPTION	UPGRADE OF THE OLD NURSERY/HATCHERY BUILDING FOR MULTI-SPECIES BREEDING INCLUSIVE OF TILAPIA AND FRIES				
BID RESPONSE DOCUMENTS MAY BE DEPOSITED IN THE BID BOX SITUATED AT (STREET ADDRESS)					
Location of tender box: Room no. 149, Cashier's Office, Ground floor			Physical address: Administration Building, Gielie Joubert Street, Glen (Manguang Metro)		
BIDDING PROCEDURE ENQUIRIES MAY BE DIRECTED TO			TECHNICAL ENQUIRIES MAY BE DIRECTED TO:		
CONTACT PERSON	Me Fikile Khumalo		CONTACT PERSON	Mr H Grobler	
TELEPHONE NUMBER	078 451 6529		TELEPHONE NUMBER	082 762 1847	
FACSIMILE NUMBER	N/A		FACSIMILE NUMBER	N/A	
E-MAIL ADDRESS	khumalof@dard.gov.za		E-MAIL ADDRESS	groblerh@dard.gov.za	
SUPPLIER INFORMATION					
NAME OF BIDDER					
POSTAL ADDRESS					
STREET ADDRESS					
TELEPHONE NUMBER	CODE		NUMBER		
CELLPHONE NUMBER					
FACSIMILE NUMBER	CODE		NUMBER		
E-MAIL ADDRESS					
VAT REGISTRATION NUMBER					
SUPPLIER COMPLIANCE STATUS	TAX COMPLIANCE SYSTEM PIN:		OR	CENTRAL SUPPLIER DATABASE No:	MAAA
ARE YOU THE ACCREDITED REPRESENTATIVE IN SOUTH AFRICA FOR THE GOODS /SERVICES OFFERED?	<input type="checkbox"/> Yes <input type="checkbox"/> No [IF YES ENCLOSE PROOF]		ARE YOU A FOREIGN BASED SUPPLIER FOR THE GOODS /SERVICES OFFERED?		<input type="checkbox"/> Yes <input type="checkbox"/> No [IF YES, ANSWER THE QUESTIONNAIRE BELOW]
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, THE GENERAL CONDITIONS OF CONTRACT (GCC) AND, IF APPLICABLE, ANY OTHER SPECIAL CONDITIONS OF CONTRACT.
1.4. THE SUCCESSFUL BIDDER WILL BE REQUIRED TO FILL IN AND SIGN A WRITTEN CONTRACT FORM (SBD7).
2. TAX COMPLIANCE REQUIREMENTS
2.1 BIDDERS MUST ENSURE COMPLIANCE WITH THEIR TAX OBLIGATIONS.
2.2 BIDDERS ARE REQUIRED TO SUBMIT THEIR UNIQUE PERSONAL IDENTIFICATION NUMBER (PIN) ISSUED BY SARS TO ENABLE THE ORGAN OF STATE TO VERIFY THE TAXPAYER'S PROFILE AND TAX STATUS.
2.3 APPLICATION FOR TAX COMPLIANCE STATUS (TCS) PIN MAY BE MADE VIA E-FILING THROUGH THE SARS WEBSITE WWW.SARS.GOV.ZA .
2.4 BIDDERS MAY ALSO SUBMIT A PRINTED TCS CERTIFICATE TOGETHER WITH THE BID.
2.5 IN BIDS WHERE CONSORTIA / JOINT VENTURES / SUB-CONTRACTORS ARE INVOLVED; EACH PARTY MUST SUBMIT A SEPARATE TCS CERTIFICATE / PIN / CSD NUMBER.
2.6 WHERE NO TCS PIN IS AVAILABLE BUT THE BIDDER IS REGISTERED ON THE CENTRAL SUPPLIER DATABASE (CSD), A CSD NUMBER MUST BE PROVIDED.
2.7 NO BIDS WILL BE CONSIDERED FROM PERSONS IN THE SERVICE OF THE STATE, COMPANIES WITH DIRECTORS WHO ARE PERSONS IN THE SERVICE OF THE STATE, OR CLOSE CORPORATIONS WITH MEMBERS PERSONS IN THE SERVICE OF THE STATE."

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

SIGNATURE OF BIDDER:

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

DATE:

BIDDER'S DISCLOSURE

1. PURPOSE OF THE FORM

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

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

2. Bidder's declaration

2.1 Is the bidder, or any of its directors / trustees / shareholders / members / partners or any person having a controlling interest¹ in the enterprise,

employed by the state?

YES/NO

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

Full Name	Identity Number	Name of State institution

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

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2.2 Do you, or any person connected with the bidder, have a relationship with any person who is employed by the procuring institution? **YES/NO**

2.2.1 If so, furnish particulars:

.....

.....

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

2.3.1 If so, furnish particulars:

.....

.....

3 DECLARATION

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

3.1 I have read and I understand the contents of this disclosure;

3.2 I understand that the accompanying bid will be disqualified if this disclosure is found not to be true and complete in every respect;

3.3 The bidder has arrived at the accompanying bid independently from, and without consultation, communication, agreement or arrangement with any competitor. However, communication between partners in a joint venture or consortium² will not be construed as collusive bidding.

3.4 In addition, there have been no consultations, communications, agreements or arrangements with any competitor regarding the quality, quantity, specifications, prices, including methods, factors or formulas used to calculate prices, market allocation, the intention or decision to submit or not to submit the bid, bidding with the intention not to win the bid and conditions or delivery particulars of the products or services to which this bid invitation relates.

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

- 3.5 The terms of the accompanying bid have not been, and will not be, disclosed by the bidder, directly or indirectly, to any competitor, prior to the date and time of the official bid opening or of the awarding of the contract.
- 3.6 There have been no consultations, communications, agreements or arrangements made by the bidder with any official of the procuring institution in relation to this procurement process prior to and during the bidding process except to provide clarification on the bid submitted where so required by the institution; and the bidder was not involved in the drafting of the specifications or terms of reference for this bid.
- 3.7 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.

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

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

.....

Signature

.....

Date

.....

Position

.....

Name of bidder

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

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

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

1. GENERAL CONDITIONS

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

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

1.2 **To be completed by the organ of state**

(delete whichever is not applicable for this tender).

- a) ~~The applicable preference point system for this tender is the 90/10 preference point system.~~
- b) The applicable preference point system for this tender is the 80/20 preference point system.
- c) Either the 90/10 or 80/20 preference point system will be applicable in this tender. The lowest/ highest acceptable tender will be used to determine the accurate system once tenders are received.

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

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

1.4 **To be completed by the organ of state:**

The maximum points for this tender are allocated as follows:

	POINTS
PRICE	80
SPECIFIC GOALS	20
Total points for Price and SPECIFIC GOALS	100

- 1.5 Failure on the part of a tenderer to submit proof or documentation required in terms of this tender to claim points for specific goals with the tender, will be interpreted to mean that preference points for specific goals are not claimed.
- 1.6 The organ of state reserves the right to require of a tenderer, either before a tender is adjudicated or at any time subsequently, to substantiate any claim in regard to preferences, in any manner required by the organ of state.

2. DEFINITIONS

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

3. FORMULAE FOR PROCUREMENT OF GOODS AND SERVICES

3.1. POINTS AWARDED FOR PRICE

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

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

80/20

or

90/10

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

Where

Ps = Points scored for price of tender under consideration

Pt = Price of tender under consideration

Pmin = Price of lowest acceptable tender

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

3.2.1. POINTS AWARDED FOR PRICE

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

80/20

or

90/10

$$Ps = 80 \left(1 + \frac{Pt - P_{max}}{P_{max}} \right) \text{ or } Ps = 90 \left(1 + \frac{Pt - P_{max}}{P_{max}} \right)$$

Where

Ps = Points scored for price of tender under consideration

Pt = Price of tender under consideration

Pmax = Price of highest acceptable tender

4. POINTS AWARDED FOR SPECIFIC GOALS

4.1. In terms of Regulation 4(2); 5(2); 6(2) and 7(2) of the Preferential Procurement Regulations, preference points must be awarded for specific goals stated in the tender. For the purposes of this tender the tenderer will be allocated points based on the goals stated in table 1 below as may be supported by proof/ documentation stated in the conditions of this tender:

4.2. In cases where organs of state intend to use Regulation 3(2) of the Regulations, which states that, if it is unclear whether the 80/20 or 90/10 preference point system applies, an organ of state must, in the tender documents, stipulate in the case of—

(a) an invitation for tender for income-generating contracts, that either the 80/20 or 90/10 preference point system will apply and that the highest acceptable tender will be used to determine the applicable preference point system; or

(b) any other invitation for tender, that either the 80/20 or 90/10 preference point system will apply and that the lowest acceptable tender will be used to determine the applicable preference point system,

then the organ of state must indicate the points allocated for specific goals for both the 90/10 and 80/20 preference point system.

Table 1: Specific goals for the tender and points claimed are indicated per the table below.

Note to tenderers: The tenderer must indicate how they claim points for each preference point system.)

The specific goals allocated points in terms of this tender	Number of points allocated (80/20 system) (To be completed by the organ of state)	Proof of documents to be attached.	Number of points claimed (80/20 system) (To be completed by the tenderer)
Enterprise with ownership of 51% or more by person/s who are woman.	5	BBBEE certificate (certified) or sworn affidavit.	
Enterprise with ownership of 51% or more by person/s who are youth.	5	BBBEE certificate (certified) or sworn affidavit	
Promotion of enterprises located in the Free State.	5	Municipal rates and / or valid lease agreement with landlord's municipal rates not older than 3 months.	
Promotion of enterprises located in the District tendering for.	5	Municipal rates and / or valid lease agreement with landlord's municipal rates not older than 3 months.	
TOTAL	20		

DECLARATION WITH REGARD TO COMPANY/FIRM

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

4.4. Company registration number:

4.5. TYPE OF COMPANY/ FIRM

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

[TICK APPLICABLE BOX]

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

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

.....	
SIGNATURE(S) OF TENDERER(S)	
SURNAME AND NAME:
DATE:
ADDRESS:

CONTRACT NO: DARD/RFT 04/2023

FORM B1: B-BBEE CERTIFICATE OR SWORN AFFIDAVIT

In terms of Regulation 4(1)(a) of the Preferential Procurement Regulations (2022), preference criteria based on BBBEE status level is applicable to this tender.

A trust, consortium or joint venture (including unincorporated consortia and joint ventures) must submit a consolidated B-BBEE status level verification certificate.

In order to claim B-BBEE points, tenderers must submit valid (original or certified copy) B-BBEE verification certificate issued by a verification agency accredited by the South African Accreditation System (SANAS) (Entities other than EME's and QSE's) or a valid sworn affidavit (original or certified copy) completed in the format supplied by Department of Trade, Industry and Competition (DTIC), signed by the EME/QSE representative and attested by a commissioner of oath (EME's and QSE's).

ATTACH B-BBEE CERTIFICATE OR SWORN AFFIDAVIT IMMEDIATELY AFTER THIS PAGE.

SIGNED BY/ON BEHALF OF BIDDER:

NAME		SIGNATURE	DATE

FORM B2: VALID CERTIFICATE OF CIDB REGISTRATION OF CONTRACTOR

A certificate of bidder’s registration with the Construction Industry Development Board (CIDB) must be included in the bid submission as per requirements indicated in the Tender data.

The tenderer must be registered with the CIDB with a contractor grading of ME (Mechanical Engineering) three (3) or higher or a contractor grading designation equal to or higher than a contractor grading designation determined in accordance with the sum tendered.

Where a bidder satisfies CIDB Contractor grading designation requirements through a joint venture or consortium formation, such bidder must submit the joint CIDB grading of the bidding entity, and the certificates of contractor registration for each partner.

ATTACH CIDB REGISTRATION CERTIFICATE IMMEDIATELY AFTER THIS PAGE.

SIGNED BY/ON BEHALF OF BIDDER:

NAME		SIGNATURE	DATE

CONTRACT NO: DARD/RFT 04/2023

FORM B3: REGISTRATION ON NATIONAL TREASURY CENTRAL SUPPLIER DATABASE

The tenderer shall provide a pdf. Copy of the supplier registration form from the National Treasury Central Supplier Database (www.treasury.gov.za). Tenderers who are not registered on the Central Supplier Database at tender closure will be declared non-responsive (refer to Tender Data, Clause C.2.1.1). In the case of a Joint Venture or a Targeted Enterprise, a pdf. Supplier registration form must be provided for each member of the Joint Venture or Targeted Enterprise.

Name of Service Provider:

Central Supplier Database Supplier Number:

Supplier Commodity:

Delivery Location:

NAME		SIGNATURE	DATE

FORM B4: TAX COMPLIANCE

The Tenderer shall complete the declaration below.

I, (name)
the undersigned in my capacity as (position) on
behalf of (name of company)

herewith grant consent that SARS may disclose to the South African National Roads Agency SOC Limited (SANRAL) our tax compliance status.

For this purpose our unique security personal identification number (PIN) is

In the event of a joint venture or a Targeted Enterprise each member shall comply with the above requirements.

ATTACH VALID TAX STATUS PIN IMMEDIATELY AFTER THIS PAGE.

NAME		SIGNATURE	DATE

FORM B5: SPECIFIC GOALS

The Tenderer shall submit certificates/documents to this page in order to claim relevant points:

The specific goals allocated points in terms of this tender	Number of points allocated (80/20 system) (To be completed by the organ of state)	Documentary proof to be attached.
Enterprise with ownership of 51% or more by person/s who are woman.	5	BBBEE certificate (certified) or sworn affidavit.
Enterprise with ownership of 51% or more by person/s who are youth.	5	BBBEE certificate (certified) or sworn affidavit
Promotion of enterprises located in the Free State.	5	Municipal rates and / or valid lease agreement with landlord's municipal rates not older than 3 months.
Promotion of enterprises located in the District tendering for.	5	Municipal rates and / or valid lease agreement with landlord's municipal rates not older than 3 months.

In order to claim the relevant points, attach hereto relevant documents as referenced in column 3 of the table directly above.

.....
SIGNATURE

.....
DATE

FORM F1: PROJECT REFERENCES

BIDDER'S PAST EXPERIENCE IN DELIVERING SIMILAR CONSTRUCTION CONTRACTS OF SIMILAR SCALE

The information supplied will be used to evaluate functionality. Non submission will influence the functionality score negatively.

Lists of Completed Projects over the last three (3) years to be submitted in Table below.

Bidders must familiarise themselves with the evaluation criteria and submit a list of completed contracts to support the allocation of points.

The list of completed contracts must be supported with contractual agreements or appointment letters or reference letters which must be attached directly after this page. A listed contract which is not substantiated with evidence will not be considered in the evaluation of functionality.

List of Previous and Completed Projects

NAME OF COMPANY: _____

PROJECT/EMPLOYER (Name, Tel. No)	NATURE OF CONTRACT	VALUE OF CONTRACT	YEAR OF COMPLETION

FORM F2: PROJECT REFERENCES

Note to tenderer:

- The tenderer must submit this form for each relevant project given under project reference.
- Letter to be on Client's letterhead stating the following:

Department of Agriculture and Rural Development
Glen Agricultural College
Chemistry Building 1st Floor
Gielie Joubert Street
Bloemfontein
9301

ATTENTION: Procurement Department

REFERENCE LETTER FOR PAST PERFORMANCE RELATED TO *(insert project number)* **FOR THE** *(insert project description)*

This letter serves to confirm that *(insert name of tenderer)* completed the subject project to the value of R..... *(insert value of project)* on *(insert date)*.

Rate the performance of the tenderer for the reference project on the table below:

Rating	Poor	Adequate	Good	Excellent
Client score	1	3	4	5
Mark the relevant box with "x"				

Were the quality /specifications complied with?

YES / NO*

* If no, please furnish details:

.....

Will you recommend this supplier to anyone without reservations?

YES / NO

Any enquiries relating to this project can be addressed to *(insert the name, contact number and e-mail address of reference)*.

Signed by:

.....

(Print Name of signatory)

.....

Date

Designation of signatory:

FORM F3: JOINT VENTURE AGREEMENT

Note: In the event of a Joint Venture, attach to this form a signed and properly completed Joint Venture Agreement.

IN CASE OF A CONSORTIUM/ JOINT VENTURE/ SUB-CONTRACTOR CONCERN:

I/we certify that this is a bona fide bid.

I/we also certify that I/we have not done and I/we undertake that I/we shall not do any of the following acts at any time before the hour and date specified for the closure of submission of Bid for this Contract.

1. Fixed or adjusted the amount of this bid by, or under, or in accordance with any agreement or arrangement with any other person outside this consortium/joint venture/sub-contracting;
2. Communicate to a person outside this consortium/joint venture/sub-contracting other than the person calling for these bids, the amount or approximate amount of the proposed bid, except where the disclosure, in confidence, of the approximate amount of the bid was necessary to obtain insurance premium quotations required for the preparation of the bid;
3. Caused or induced any other person outside this consortium/joint venture/sub-contracting to communicate to me/us the amount or approximate amount of any rival bid for this contract;
4. Entered into any agreement or arrangement with any other person outside this consortium/joint venture/sub-contracting to induce him/her to refrain from bidding for the contract, or as to the amount of any bid to be submitted or the conditions on which a bid is made, nor caused or induced any other person to enter to any sub agreement or arrangement; and
5. Officer or paid or given or agreed to pay or given any sum of money or valuable consideration directly or indirectly to any person for doing or having done or causing or having caused to be done in relation to any bid or proposed bid for this contract, any act or thing of the sort described above.
6. Certified that a joint bank account will be open in the name of the Consortium/Joint/Venture/Sub-Contractor's Names.

In this certificate, the term "person" includes any persons, body of persons or association, whether corporate or not; and the term "agreement or arrangement" includes any agreement or arrangement, whether formal or informal and whether legally binding or not and the term "person outside this consortium/joint venture/sub-contracting means, when the consortium/joint venture/sub-contracting is a partnership, a person other than a partner or an employee of such partnership, or when the consortium/joint venture/sub-contracting is a company, a person other than a person or company holding shares in the consortium/joint venture/sub-contracting, or any employee of such a person, consortium/joint venture/sub-contracting.

consortium/joint venture/sub-contracting.

NAME		SIGNATURE	DATE

FORM F4: KEY TECHNICAL STAFF

- Site Agent
- Contracts Manager

Provide:

- short CVs with
- copy of ID,
- qualifications (minimum B degree in the build environment and appointment or intention to appoint letter.)
- General experience (total duration of work activity),
- level of education and training and positions held.
- Certified copies of certificates subject to verification

Requirements for CVs

The experience of the personnel who will be responsible for the execution of the project will be evaluated in relation to the scope of work from three different points of view:

- 1) General experience (total duration of work activity), level of education and training and positions held.
- 2) The education, training, skills and experience and knowledge of issues which are pertinent to the scope of work.
- 3) The staff members' / experts' knowledge of issues which the tenderer considers pertinent to the project e.g. local conditions, affected communities, legislation, techniques.

A CV of the person of approximately 3 pages should be attached to this schedule.

Each CV should be structured under the following headings:

- 1 Personal particulars
 - name
 - date and place of birth
 - place(s) of tertiary education and dates associated therewith
 - professional awards
- 2 Qualifications (degrees, diplomas, grades of membership of professional societies and professional registrations) (Attach copies of each)
- 3 Name of current employer and position in enterprise
- 4 Overview of work experience (year, organization and position)
- 5 Outline of recent assignments / experience that has a bearing on the scope of work

NAME		SIGNATURE	DATE

APPROVAL OF TENDER DOCUMENT

It is hereby recommended that approval is granted for Tender: **“DARD/RFT 04/2023: UPGRADE OF THE OLD NURSERY/HATCHERY BUILDING FOR MULTI-SPECIES BREEDING INCLUSIVE OF TILAPIA AND FRIES”**, to be advertised.

Submitted by: _____ Dr. M Ramorena Chairperson: Bid Specification Committee DATE: _____	Supported / Not Supported _____ Mr. T Matshaba Director: Supply Chain Management DATE: _____
Recommended / Not Recommended _____ Mr. P Khiba CFO DATE: _____	Approved / Not Approved _____ Dr. TJ Masiteng HOD DATE: _____

PART C: CONTRACT

(Documents Relating to Form of Agreement)

C1. Agreements and Contract Data

The General Conditions of Contract for Construction Works, Third Edition (2015) published by the South African Institution of Civil Engineering, Private Bag X200, Halfway House, 1685, is applicable to this Contract and is obtainable from www.saice.org.za.

C1.1 Form of Offer and Acceptance

Free State Department of Agriculture and Rural Development

SBD 7.1 (version 1 2023)

CONTRACT FORM - PURCHASE OF GOODS/WORKS

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

PART 1 (TO BE FILLED IN BY THE BIDDER)

1. I hereby undertake to supply all or any of the goods and/or works described in the attached bidding documents to (name of institution)..... in accordance with the requirements and specifications stipulated in bid number..... at the price/s quoted. My offer/s remain binding upon me and open for acceptance by the purchaser during the validity period indicated and calculated from the closing time of bid.
2. The following documents shall be deemed to form and be read and construed as part of this agreement:
 - (i) Bidding documents, v/z
 - Invitation to bid;
 - Proof of tax compliance status;
 - Pricing schedule(s);
 - Technical Specification(s);
 - Preference claim form for Preferential Procurement in terms of the Preferential Procurement Regulations;
 - Bidder's Disclosure form;
 - Special Conditions of Contract;
 - (ii) General Conditions of Contract; and
 - (iii) Other (specify)
3. I confirm that I have satisfied myself as to the correctness and validity of my bid; that the price(s) and rate(s) quoted cover all the goods and/or works specified in the bidding documents; that the price(s) and rate(s) cover all my obligations and I accept that any mistakes regarding price(s) and rate(s) and calculations will be at my own risk.
4. I accept full responsibility for the proper execution and fulfilment of all obligations and conditions devolving on me under this agreement as the principal liable for the due fulfillment of this contract.
5. I declare that I have no participation in any collusive practices with any bidder or any other person regarding this or any other bid.

CONTRACT NO: DARD/RFT 04/2023

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

NAME (PRINT)
CAPACITY
SIGNATURE
NAME OF FIRM
DATE

WITNESSES	
1
2.
DATE:

CONTRACT FORM - PURCHASE OF GOODS/WORKS

PART 2 (TO BE FILLED IN BY THE PURCHASER)

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

ITEM NO.	PRICE (ALL APPLICABLE TAXES INCLUDED)	BRAND	DELIVERY PERIOD	TOTAL PREFERENCE POINTS CLAIMED	POINTS CLAIMED FOR EACH SPECIFIC GOAL

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

SIGNED ATON.....

NAME (PRINT)

SIGNATURE

OFFICIAL STAMP

WITNESSES

1.

2.

DATE

C1.2 SCHEDULE OF DEVIATIONS.

Notes:

- 1. The extent of deviations from the tender documents issued by the Employer before the tender closing date is limited to those permitted in terms of the conditions of tender.*
- 2. A tenderer's covering letter shall not be included in the final contract document. Should any such letter, which constitutes a deviation as aforesaid, become the subject of agreements reached during the process of offer and acceptance, the outcome of such agreement shall be recorded here.*
- 3. Any other matter arising from the process of offer and acceptance either as a confirmation, clarification or change to the tender documents and which it is agreed by the parties becomes an obligation of the contract shall also be recorded here.*
- 4. Any change or addition to the tender documents arising from the above agreements and recorded here, shall also be incorporate into the final draft of the Contract.*

The deviations listed below constitute agreed variations/amendments to the tender document negotiated between the tenderer and the employer based on information provided in Form A4: Schedule of Variations or deviations by tenderer or imposed conditions of award. Addenda issued during the tender period are deemed not to be variations to the tender.

1. Subject:
Details:
2. Subject:
Details:
3. Subject:
Details:
4. Subject:
Details:

By the duly authorised representatives signing this agreement, the Employer and the tenderer agree to and accept the foregoing schedule of deviations as the only deviations from and amendments to the documents listed in the tender data and addenda thereto as listed in the returnable schedules, as well as any confirmation, clarification or changes to the terms of the offer agreed by the tenderer and the Employer during this process of offer and acceptance.

It is expressly agreed that no other matter whether in writing, oral communication or implied during the period between the issue of the tender documents and the receipt by the tenderer of a completed signed copy of this agreement shall have any meaning or effect in the contract between the parties arising from this agreement.

(Note to compiler: In the event that an alternative offer has been accepted by the Employer, the various elements of the alternative offer must be listed in this appendix)

C1.3 Contract Data

General Conditions of Contract for Construction Works, Third Edition (2015)

CONTRACT DATA

CONTRACT DATA FOR:

CONTRACT NO: DARD/RFT 04/2023

UPGRADE OF THE OLD NURSERY/HATCHERY BUILDING FOR MULTI-SPECIES BREEDING INCLUSIVE OF TILAPIA AND FRIES

PART 1: DATA PROVIDED BY THE EMPLOYER

CONDITIONS OF CONTRACT

The General Conditions of Contract for Construction Works, Third Edition (2015) published by the South African Institution of Civil Engineering, Private Bag X200, Halfway House, 1685, is applicable to this Contract and is obtainable from www.saice.org.za.

CONTRACT SPECIFIC DATA

The following contract specific data, referring to the General Conditions of Contract for Construction Works, Third Edition (2015) are applicable to this Contract:

Compulsory Data

Clause	Description
Clause 1.1.1.13:	The Defects Liability Period is 12 months. <i>A time measured from the date of the Certificate of Completion.</i>
Clause 1.1.1.14:	<i>(Omit if the Contractor is to state the time for achieving Practical Completion.)</i> The time for achieving Practical Completion is 3 months from the Commencement Date.
Clause 1.1.1.15:	The name of the Employer is: Free State Department of Agriculture and Rural Development. (DARD)
Clause 1.2.1.2:	The address of the Employer is: Free State: Department of Agriculture and Rural Development (FS DARD) Glen Agricultural College Chemistry Building 1st Floor Gielie Joubert Street Bloemfontein 9301 Email: hodmanager@dard.gov.za Cell nr: 072 712 7186
Clause 1.1.1.16:	The name of the Employer's Agent is FS DARD
Clause 1.2.1.2:	The address of the Employer's Agent is Free State: Department of Agriculture and Rural Development

	<p>Glen Agricultural College Chemistry Building 1st Floor Gielie Joubert Street Bloemfontein 9301</p> <p>Email: hodmanager@dard.gov.za Cell nr: 072 712 7186</p>
Clause 1.1.1.26:	The Pricing Strategy is a <u>Re-measurement Contract</u> .
Clauses 5.1.1 and 5.8.1:	<p>The non-working days are Sundays.</p> <p>The special non-working days are:</p> <ol style="list-style-type: none"> <i>1. The public holidays.</i> <i>2. The year-end break commencing on 15 December 2023 and ending on 2 January 2024.</i>
Clause 5.3.1:	<p>The documentation required before commencing with the Works are:</p> <ol style="list-style-type: none"> 1. Health and Safety Plan (Refer to Clause 4.3) 2. Initial programme (Refer to Clause 5.6) 3. Security (Refer to Clause 6.2) 4. Insurance (Refer to Clause 8.6)
Clause 5.3.2:	The time to submit the documentation required before commencement of the Works is 14 days.
Clause 5.13.1:	The penalty for failing to complete the Works is R1000 <i>per day</i> .
Clause 5.14.1:	<p>The requirements for achieving Practical Completion are</p> <ul style="list-style-type: none"> • All construction work should be done • Site cleaned up • Works to reach a state of readiness, fit for the intended purpose and occupation without danger or undue inconvenience to the Employer.
Clause 5.16.3:	The latent defects period is 5 years for works.
Clause 6.10.1.5:	The percentage advance on materials not yet built into the Permanent Works is 80%.
Clause 6.10.3:	<p>The limit of retention money is:</p> <ul style="list-style-type: none"> • 10% , without performance guarantee and • 5% with a performance guarantee.
Clause 8.6.1.1.2:	"Not Required"
Clause 8.6.1.1.3:	The amount to cover professional fees for repairing damage and loss to be included in the insurance sum is R100 000.
Clause 8.6.1.3:	The limit of indemnity for liability insurance is R 4 000 0000.
Clause 10.5.3	Ad hoc arbitration.

CONTRACT NO: DARD/RFT 04/2023

Optional data *Only the statements applicable to the options chosen should be completed.*

Clause	Description
Clause 5.4.2:	<i>Access and possession of the Site is not exclusive to the contractor, as it is a fully operational fish hatchery and demonstration centre, therefor construction must be planned in co-operation with the other activities on site.</i>
Clause 6.8.2:	<i>No Contract Price Adjustment apply due to the short duration of the contract.</i>
Clause 6.8.3:	<i>No price adjustments for variations in the costs of special materials are allowed.</i>

PART 2: DATA PROVIDED BY THE CONTRACTOR

Clause	Description								
Clause 1.1.1.9:	<p>The name of the Contractor is:</p> <p>.....</p> <p><i>(The legal name of the Contractor.)</i></p>								
Clause 1.2.1.2:	<p>The address of the Contractor is</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p><i>(The physical address, postal address, e-mail address and/or fax number where the Contractor will receive notices.)</i></p>								
Clause 6.2.1:	<p>The security to be provided by the Contractor shall be one of the following:</p> <table border="1"> <thead> <tr> <th>Type of security</th><th>Contractor's choice</th></tr> <tr> <th><i>(Indicate if Value Added Tax is excluded from the Contract Sum and the value of the Works for calculating the percentages)</i></th><th><i>(Indicate "Yes" or "No")</i></th></tr> </thead> <tbody> <tr> <td><i>Retention of 10% of the value of the Works.</i></td><td></td></tr> <tr> <td><i>Fixed Performance guarantee of 10% of the Contract Sum plus retention of 5% of the value of the Works.</i></td><td></td></tr> </tbody> </table>	Type of security	Contractor's choice	<i>(Indicate if Value Added Tax is excluded from the Contract Sum and the value of the Works for calculating the percentages)</i>	<i>(Indicate "Yes" or "No")</i>	<i>Retention of 10% of the value of the Works.</i>		<i>Fixed Performance guarantee of 10% of the Contract Sum plus retention of 5% of the value of the Works.</i>	
Type of security	Contractor's choice								
<i>(Indicate if Value Added Tax is excluded from the Contract Sum and the value of the Works for calculating the percentages)</i>	<i>(Indicate "Yes" or "No")</i>								
<i>Retention of 10% of the value of the Works.</i>									
<i>Fixed Performance guarantee of 10% of the Contract Sum plus retention of 5% of the value of the Works.</i>									

C1.4 Form of Guarantee/Securities

General Conditions of Contract for Construction Works, Third Edition (2015)

PRO FORMA

PERFORMANCE GUARANTEE

For use with the General Conditions of Contract for Construction Works, Third Edition (2015).

GUARANTOR DETAILS AND DEFINITIONS

“Guarantor” means:

Physical address:

“Employer” means:

“Contractor” means:

“Employer's Agent” means:

.....

“Works” means:

“Site” means:

“Contract” means: The Agreement made in terms of the Form of Offer and Acceptance and such amendments or additions to the Contract as may be agreed in writing between the parties.

“Contract Sum” means: The accepted amount inclusive of tax of R

Amount in words:

“Guaranteed Sum” means: The maximum aggregate amount of R.....

Amount in words:

Type of Performance Guarantee: (*Insert Variable or Fixed*)

“Expiry Date” means: (*Give date*) or any other later date set by the Contractor and/or Employer provided such instruction is received prior to the Expiry Date as indicated here.

CONTRACT DETAILS

Employer's Agent issues: Interim Payment Certificates, Final Payment Certificate and the Certificate of Completion of the Works as defined in the Contract.

1. VARIABLE PERFORMANCE GUARANTEE

- 1.1 Where a Variable Performance Guarantee has been selected, the Guarantor's liability shall be limited during the following periods to diminishing amounts of the Guaranteed Sum as follows:
- 1.1.1 From and including the date of signing the Performance Guarantee up to and including the date of the interim payment certificate certifying, for the first time, more than 50% of the Contract Sum:
- R.....
- (Amount in words)
- 1.1.2 From the day following the date of the said interim payment certificate up to and including the Expiry Date, or the date of issue by the Employer's Agent of the Certificate of Completion of the Works, whichever occurs first:
- R.....
- (Amount in words)
- 1.2 The Employer's Agent and/or the Employer shall advise the Guarantor in writing of the date on which the interim payment certificate certifying, for the first time, more than 50% of the Contract Sum, has been issued and the date on which the Certificate of Completion of the Works has been issued.

2. FIXED PERFORMANCE GUARANTEE

- 2.1 Where a Fixed Performance Guarantee has been selected, the Guarantor's liability shall be limited to the amount of the Guaranteed Sum.
- 2.2 The Guarantor's period of liability shall be from and including the date on which the Performance Guarantee is signed, up to and including the Expiry Date, or the date of issue by the Employer's Agent of the Certificate of Completion of the Works, or the date of payment in full of the Guaranteed Sum, whichever occurs first.
- 2.3 The Employer's Agent and/or the Employer shall advise the Guarantor in writing of the date on which the Certificate of Completion of the Works has been issued.

3. CONDITIONS APPLICABLE TO VARIABLE AND FIXED PERFORMANCE GUARANTEES

- 3.1 The Guarantor hereby acknowledges that:
- 3.1.1 Any reference in this Performance Guarantee to the Contract is made for the purpose of convenience and shall not be construed as any intention whatsoever to create an accessory obligation or any intention whatsoever to create a suretyship.
- 3.1.2 Its obligation under this Performance Guarantee is restricted to the payment of money.
- 3.2 Subject to the Guarantor's maximum liability referred to in 1.1 or 2.1, the Guarantor hereby undertakes to pay the Employer the sum certified upon receipt of the documents identified in 3.2.1 to 3.2.3:
- 3.2.1 A copy of a first written demand issued by the Employer to the Contractor stating that payment of a sum certified by the Employer's Agent in an Interim or Final Payment Certificate has not been made in terms of the Contract and failing such payment within seven (7) calendar days, the Employer intends to call upon the Guarantor to make payment in terms of 3.2.2;
- 3.2.2 A first written demand issued by the Employer to the Guarantor at the Guarantor's physical address with a copy to the Contractor stating that a period of seven (7) days has elapsed since the first written demand in terms of 3.2.1 and the sum certified has still not been paid;
- 3.2.3 A copy of the aforesaid payment certificate which entitles the Employer to receive payment in terms of the Contract of the sum certified in 3.2.

- 3.3 Subject to the Guarantor's maximum liability referred to in 1.1 or 2.1, the Guarantor undertakes to pay to the Employer the Guaranteed Sum or the full outstanding balance upon receipt of a first written demand from the Employer to the Guarantor at the Guarantor's physical address calling up this Performance Guarantee, such demand stating that:
- 3.3.1 the Contract has been terminated due to the Contractor's default and that this Performance Guarantee is called up in terms of 3.3; or
 - 3.3.2 a provisional or final sequestration or liquidation court order has been granted against the Contractor and that the Performance Guarantee is called up in terms of 3.3; and
 - 3.3.3 the aforesaid written demand accompanied by a copy of the notice of termination and/or the provisional/final sequestration and/or the provisional liquidation court order.
- 3.4 It is recorded that the aggregate amount of payments required to be made by the Guarantor in terms of 3.2 and 3.3 shall not exceed the Guarantor's maximum liability in terms of 1.1 or 2.1.
- 3.5 Where the Guarantor has made payment in terms of 3.3, the Employer shall upon the date of issue of the Final Payment Certificate submit an expense account to the Guarantor showing how all monies received in terms of this Performance Guarantee have been expended and shall refund to the Guarantor any resulting surplus. All monies refunded to the Guarantor in terms of this Performance Guarantee shall bear interest at the prime overdraft rate of the Employer's bank compounded monthly and calculated from the date payment was made by the Guarantor to the Employer until the date of refund.
- 3.6 Payment by the Guarantor in terms of 3.2 or 3.3 shall be made within seven (7) calendar days upon receipt of the first written demand to the Guarantor.
- 3.7 Payment by the Guarantor in terms of 3.3 will only be made against the return of the original Performance Guarantee by the Employer.
- 3.8 The Employer shall have the absolute right to arrange his affairs with the Contractor in any manner which the Employer may consider fit and the Guarantor shall not have the right to claim his release from this Performance Guarantee on account of any conduct alleged to be prejudicial to the Guarantor.
- 3.9 The Guarantor chooses the physical address as stated above for the service of all notices for all purposes in connection herewith.
- 3.10 This Performance Guarantee is neither negotiable nor transferable and shall expire in terms of 1.1.2 or 2.2, where after no claims will be considered by the Guarantor. The original of this Guarantee shall be returned to the Guarantor after it has expired.
- 3.11 This Performance Guarantee, with the required demand notices in terms of 3.2 or 3.3, shall be regarded as a liquid document for the purposes of obtaining a court order.

3.12 Where this Performance Guarantee is issued in the Republic of South Africa the Guarantor hereby consents in terms of Section 45 of the Magistrates' Courts Act No 32 of 1944, as amended, to the jurisdiction of the Magistrate's Court of any district having jurisdiction in terms of Section 28 of the said Act, notwithstanding that the amount of the claim may exceed the jurisdiction of the Magistrate's Court.

Signed at

Date

Guarantor's signatory (1)

Capacity.....

Guarantor's signatory (2)

Capacity

Witness signatory (1)

Witness signatory (2)

C2. Pricing Data

C2.1 Pricing Instructions

(Yellow forms) Provides criteria and assumptions which the Tenderer has used in developing his Financial Offer

C2.1.1 For the purposes of this Pricing Schedule, the following words shall have the meanings hereby assigned to them.

Unit:	The unit of measurement for each item of work as defined in the Scope of Works.
Quantity:	The number of units of work for each item as provided by the Employer or as tendered by the Service Provider.
Rate:	The payment per unit of work for which a rate has been provided by the Employer or for which the Service Provider tenders to do the work.
Amount:	The product of the quantity and the rate tendered for an item.
Sum:	An amount tendered for an item, the extent of which is described in the Pricing Schedule, the Scope of Work or elsewhere, but of which the quantity of work is not measured in units.
Provisional Sum:	An amount allowed for in the Pricing Schedule, for which the quantity of work is not known.
Prime Cost:	Is a specific type of Provisional Sum where payment is made on the production of invoices showing the cost price of the implementation or installation of the service required. Services rendered in this manner carry a cost for which a rate or a lump sum is offered at tender stage to cover all the tenderer's handling, supervision and liability costs in providing the item or services.

C2.1.2 The quantities provided by the Employer in the Pricing Schedule are only approximate quantities. The quantities of work finally accepted and certified for payment, and not the quantities given in the Pricing Schedule, will be used to determine payments to the Service Provider.

The validity of the Contract shall in no way be affected by differences between the quantities in the Pricing Schedule and the quantities finally certified for payment. Work is valued at the rates or lump sums tendered.

C2.1.3 Rates and lump sums shall include full compensation for overheads, profits, incidentals, tax (other than VAT), etc., and for the completed items of work as specified in the Scope of Works and Contract Data and for all the risks, obligations and responsibilities specified in the General Conditions of Contract, Particular or Special Conditions of Contract, except in so far as the quantities given in the Pricing Schedule are only approximate.

C2.1.4 The tenderer shall fill in a quantity or a rate or a lump sum for each item where provision is made. Items against which no rate or lump sum has been entered in the tender will not be paid for when the work is executed, as payment for such work will be regarded as being covered by other rates or lump sums in the pricing schedule.

The tenderer shall fill in a rate against all items where the words "rate only" appears in the amount column. Although no work is foreseen under such item and no quantities are consequently given in the quantity column, the tendered rate shall apply should work under this item actually be required. Tenders should note the provisions of clause C2.1.10 of this preamble.

The tendered lump sums and rates shall be valid irrespective of any change in the quantities during the execution of the contract.

C2.1.5 The short descriptions of the payment items in the Pricing Schedule are only given to identify the items and to provide specific details. Reference shall, *inter alia*, be made to the Contract Data, General Conditions of Contract and Particular/Special Conditions of Contract and Scope of Works for more detailed information regarding the extent of work entailed under each item.

C2.1.7 Interim payments for lump sum payment items may be permitted. Such interim payments shall however be limited to proven progress achieved for that particular service deliverable. The sum of any progress payments made under a particular lump sum payment item shall be deducted prior to calculating any adjustments for escalation as described in clause C2.1.6 above.

C2.1.8 Provisional and Prime Cost Sums: Each Sum shall only be used, in whole or in part, in accordance with the Employer's instructions and the Contract Price shall be adjusted accordingly. The total sum paid to the Service Provider shall include only such amounts, for the work, supplies or services to which the Sum relates, as the Employer shall have instructed.

For each Sum, the Employer may instruct plant, materials or services to be procured by the Service Provider in accordance with the Employer's policies, and for which there shall be included in the Contract Price:

- The actual amounts paid (or due to be paid) by the Service Provider under the Sum, and
- An item for compilation and printing of procurement documentation, quotation/tender process and evaluation, and all overhead charges and profit, tendered in the Pricing Schedule. Provided that for Prime Cost Sums only, where a percentage mark-up or lump sum mark-up is tendered, which shall exclude profit.

The Service Provider shall produce all quotations, invoices, vouchers and accounts or receipts in substantiation of any claim under a Sum.

Any percentage adjustment or lump sum mark-up against the Sum for handling fee, profits, etc. shall not be negative.

C2.1.9. Subject to the conditions stated in Clause C2.1.10 below, the rates and lump sums filled in by the tenderer in the pricing schedule shall be final and binding with regard to submitting the tender and may not be adjusted should there be any mistakes in the extensions thereof and in the total sums appearing in the tender. Should there be any discrepancies between the tender sum and the correctly extended and totalled pricing schedule, the rates and the lump sums will be regarded as being correct, and the Employer shall have the right to make adjustments to the tender sum to reconcile the tender sum with the total of the pricing schedule. In such an event the tenderer will be consulted but, failing agreement between the parties, the decision of the Employer shall be final and binding. Adjustment of the tender sum will take place prior to the signing of the contract. In their own interest tenderers must make doubly sure of the correctness of their tendered rates and lump sums, the extensions and the tender sum.

C2.1.10 A tender shall be deemed non-responsive if the unit rates or lump sums for some of the items in the Pricing Schedule are, in the opinion of the Employer, unreasonable or out of proportion, and if the tenderer fails, within a period of seven (7) days of having been notified in writing by the Employer to adjust the unit rates or lump sums for such items, to make such adjustments.

C2.1.11 All rates and sums of money quoted in the Pricing Schedule shall be in South African Rand and whole cents

C2.1.12 The item numbers appearing in the Pricing Schedule refer to the corresponding item numbers in the Scope of Work.

C2.2 Activity/Work Schedule

(Yellow forms) Records the Financial Offers to provide the services as described elsewhere – in the Scope section.

Note to tenderer:

The tenderer will be declared non-responsive if:

- A signed Form of Offer is submitted with an incomplete Pricing Schedule.
- A signed Form of Offer is submitted without a Pricing Schedule, but only the Summary of Pricing Schedule submitted.

Free State Department of Agriculture and Rural Development

**UPGRADE OF THE OLD NURSERY/HATCHERY BUILDING FOR MULTI-SPECIES BREEDING
INCLUSIVE OF TILAPIA AND FRIES****SUMMARY OF BILL OF QUANTITIES**

SECTION	DESCRIPTION	AMOUNT
i)	GENERAL ITEMS	R -
1	SECTION A: Room 1 and 1.1	R -
2	SECTION B: Room 2	R -
3	SECTION C: Room 3	R -
4	SECTION D: Room 4	R -
5	SECTION E: Room 5	R -
6	SECTION F: Room 6	R -
7	SECTION G: Room 7	R -
TOTAL OF PRICED ITEMS		R -
PLUS : 10% CONTINGENCIES (calculated on TOTAL OF PRICED ITEMS) *1		R -
SUB TOTAL		R -
PLUS : 15% VAT (calculated on SUB TOTAL)		R -
TOTAL (CARRIED OVER TO FORM OF OFFER & FRONT PAGE)		R -

Note *1 : This contract can be awarded excluding Contingencies whereby this amount may only be utilized on written instruction by the Project Manager with approval by the client.

.....

TENDERER'S SIGNATURE

.....

DATE

.....

ON BEHALF OF COMPANY

Note: Failure to price any of the items will invalidate the bid. The Departmental representatives from the Department of Agriculture and Rural Development will negotiate with the successful bidder to ensure a balanced Bill of Quantities and approve the Bill of Quantities if necessary.

C2.2.1 BILL OF QUANTITIES

UPGRADE OF THE OLD NURSERY/HATCHERY BUILDING FOR TILAPIA BREEDING AND FRIES PRODUCTION AT AQUACULTURE TECHNOLOGY
DEMONSTRATION CENTER (ATDC), GARIEP DAM

TABLE: Costing and function of old hatchery upgrade into multispecies hatchery (see Figure 1 - 10 for detail references)

i) GENERAL ITEMS:

<u>Nr</u>	<u>Description</u>	<u>Unit</u>	<u>Quantity</u>	<u>Rate</u>	<u>Amount</u>
OHS	<u>OCCUPATIONAL HEALTH AND SAFETY</u>				
	Adherence to the OHS Act and Construction Regulations and the Client Specific: Client Health And Safety Specifications as per Construction Regulation 5(1)(B), 2014 Occupational Health and Safety Act, No. 85 of 1993, as also in Annexure C.	L/Sum	1	R	R
ENV	<u>ENVIRONMENTAL</u>				
	Adherence to the NEMA Act and all Environment Regulations, also to the EMP and other Environmental documentation as attached in Annexure B.	L/Sum	1	R	R
	Summary of General items carried to Summary of Schedules				R

ITEM NO	Allocation	Component	Rate	Quantity (incl spares)	Amount	Comments
Room 1 and 1.1 (Fig 1 and 2)						
1	Primary hatchery Hapas	Hapas (1.0 mm polyester mesh) and 50cm (L) x 30cm (w) 20cm (d)		24		Hapas also equipped with corner bottom bags with marbles as weight to configure bag shape when sinking. Hapa also stitch seam attached to a ss roundbar (6mm) frame suspending the Hapa in trough.
2	Primary hatchery and third bench multispecies primary hatchery flow through preheating option	STC 1000 Temp controller with wiring and housing box + 2 kW inline heater unit (set)		2		This option for juveniles of species sensitive to RAS build-up of phosphates
		Temp adjustable aquarium heaters SS (200 W)		12		In winter, the heatpump is non-efficient. The heater elements to be used in supporting the 2 kW heater indicated in previous item.
3	Primary hatchery + third bench multispecies primary hatchery systems main heating (flow through capacity heating)	Heatpump/chiller (1 kW input and 5.4 kW output)		2		Heatpump required to heat all troughs with valve controlled recirculation through filter components below bench (Fig 2b). Heating support in winter with mentioned SS heaters.
4	Filtration of primary hatchery + third bench primary hatchery multispecies systems	BLACK BIO SPONGE 60 cm (L) x 45 cm (w) x 4 cm (thick)		16		Mechanical filtration function

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ITEM NO	Allocation	Component	Rate	Quantity (incl spares)	Amount	Comments
		Zeolite chips in 20kg bags		10		Ammonia remover during early hatchery stage, transforming into biofilter in late hatchery stage
		15mm float valve		2		Top up water influent
		15mm flush valve + socket lock connection		2		System fill or flush
		Oyster net bottom grid stand (rust proof)(150mm high)- snug fit in current sump below bench		2		Water permeable surface serving as free board for system pump and aquarium heaters below to function
		55W UV Sterilizer (50mm unions fitted) with wall mount brackets		2		Sterilization of recirculated water (antibacterial and antiviral)
		50mm PVC T pieces (x16), elbows (x35), 50mm PVC pipe (18m), 15mm PVC pipe (18m), PVC weld (500ml),		1		Plumbing and valve control points
5	Third bench primary hatchery components (multi-species)	Aztec square conical glass upwelling egg tumblers (x 3) with 25mm overflow PVC socket and union connection to 25mm PVC pipes flowing into primary nursery tank. Each incubator Lock into platform fully galvanised (FG) of water resistant stand frame		3		Incubator type can be different but with similar function and spatial placement dimension than indicated

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ITEM NO	Allocation	Component	Rate	Quantity (incl spares)	Amount	Comments
		Incubator wedge locking stand platform (FG) with water resistant frame and legs (FG coated 12mm roundbar frame)		3		The incubator is vertically stabilized by wedging into platform square shape frame within platform.
		Primary nursery tank (1,2m (L) x 0,6m (W) x 45cm (D) (FG)		1		Primary nursery tank with smooth inner surface (gelcoat) and equipped with open end lip line to re-enforce the firmness of the tank against water pressure. Tank wall re-enforced with horizontal fibreglass embedded steel ribs (steel rods fibreglassed into exterior tank wall and floor)
		Primary nursery stand with water resistant frame and legs (FG coated)		1		Stand removable and made of fibreglass coated steel skeleton. Platform rests on steel skeleton. Platform made of 10mm plywood coated with fibreglass layer.
		Piping and fittings as per Figure 2B the 50mm supply pipe from system pump is fitting reduced to 20mm delivery lines to the three incubators. The flow control gate valves are PVC type as well as unions - that disconnects pipeline to incubator during cleaning. The outflow of incubators in 50mm piping and unions. The pipe		1		Flow from system pump control by PVC gate valves for fine tuning. Water overflow form Aztec incubators to primary hatchery tanks gravitational via removable pipes (union connected). The 50mm bottom insert pipe equipped with banjo screen and overflow screen pipe (50mm T piece connected to slotted pipe and removable endcap)

ITEM NO	Allocation	Component	Rate	Quantity (incl spares)	Amount	Comments
		removable water exit plumbing in incubator tank in 50 mm. Banjo filter (+2 spares) made of 160mm pipe. Screening mesh of banjo filter is 0.8mm Nylal and overflow screen pipe mesh is 1mm soft mosquito net.				
6	Third bench packing facility for fish sold to clients.	12kg technical Oxygen bottle with male adapter connection having 10mm nozzle for 10mm aperture silicon-rubber pipe connection. Silicon rubber pipe = 2m. Mounting strap for bottle against wall in horizontal position (as per Fig 2B) or vertical (next to bench).		1		Portapak oxygen bottles an option since no monthly rental required. In this case spare Portapak bottles must be available due to low volume of oxygen available per bottle.
		Stand with platform. Plastic bags in closed pockets: 70cm x 90cm x 75 micron plastic bags (10 x 100) and No 64 elastic bands (6kg). 60cm x 40cm x 80micron bags (x1000). 50cm x 100cm x 80micron bags (x 500)		1		Surplus pockets of bags can be stored in the storage space in filter room of Room 1 (Room 1.1 -Fig 2)

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ITEM NO	Allocation	Component	Rate	Quantity (incl spares)	Amount	Comments
7	Recovery/Functional broodstock system (4 tanks)	Repair tiling and outlet of tanks. Bottom drain points connected to filter room swirl separator (Room 1.1 Fig 2 and Figure 10). Current pressure supply piping lines used for external connection to supply pump from Room 1.1. Current biofilter in Room 1 to be removed.		1		
		Wall mount anchor plates for hooking swimming pool net cover over tanks - preventing the jump escape of breeder fish. Net covers must have hooks for plate connection. Hook plates and hooks stainless steel.		4		Mesh of swimming pool net not more than 50mm. Anchor plates spaced 30cm apart on the upper vertical part of tank outside walls (linear - in one line).
		Flat walkway pallet like planking on floor between broodstock tanks - require repair and partial replacement		1		Non- water proof walkway pallets must be treated with water proofing varnish

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ITEM NO	Allocation	Component	Rate	Quantity (incl spares)	Amount	Comments
	Aeration lines for all three systems	50mm overhead closed loop (along all four walls of room above tank and trough levels. LP 100 airpump x 2 mounted in loop line and on wall bracket with platform, connection between LP100 and loop and system components (all Hapas, broodstock tanks, sumps and open troughs. Leaky pipe (20mm) diffusers for each system application, all microjet tubing and nipples required (Fig 9).		1		
	Overhead LED lighting with timer	Overhead lighting (LED T8 Tubes) at 3 per each of the trough banks of primary nursery and multispecies hatchery, as well as each tank bank of broodstock tanks (30 lights). Each bank on its own timer. All timers in wall mount box next to door entrance. Lights double barrel in moisture proof casing suspended by ceiling mount brackets. Lights accessible by operator using a three step ladder		1		

ITEM NO	Allocation	Component	Rate	Quantity (incl spares)	Amount	Comments
8	Room 1.1 filter system outlay for recovery/functional broodstock system recirculation water filtration and treatment (Fig 2)	Current water return lines redirected to swirl separator in Room 1.1. Swirl separator (0,8m diameter and about 1,2m high or level with brood tank in Room 1) that is made of fibreglass and equipped with overflow gutter or decantation chamber (Figure 10) and 63mm sludge removal double union ball valve in bottom cone exit.		1		All sludge or waste water lines (including the one from primary hatchery systems) directed to current drain box externally to Room 1, which will form part of Room 1,1 after construction.
9	Mechanical Filter tank	FG filter tank (1,2m (h) x 0,9m (w) x 1m (L) with rib re- inforcement or steel frame (water resistant). Tank equipped with oyster net grid floor spaced 150mm from tank floor with cut and fixed 110mm pipes. Oyster net grid packed with BLACK BIO SPONGE 60 cm (l) X45 cm (w) X 4 cm thick (x16) bedded in two layers. Three pipes perforate the filter and the oyster net platform. One pipe (110mm) is slotted in area below oyster net and transfers water to the area below grid when sponge filter gets blocked with organic waste. The two		1		

ITEM NO	Allocation	Component	Rate	Quantity (incl spares)	Amount	Comments
		remaining pipes (75mm) transfer filtered water via upper tank wall to the sump fluidized biofilter bed (Fig 2)				
10	Sump	FG sump tank (1,2m (h) x 0,9m (w) x 1m (L) with rib re- enforcement or steel frame (water resistant). It is adjacent to filter tank and receives water via 2 x 75mm pipes flowing into the fluidized biofilter tank with grid floor.		1		Sump is water delivery and extraction point, and accommodates secondary mechanical filter, fluidized biofilter and trickle tower degasser + system and filter pumps.
	Sump biofilter	The inner sump FG biofilter tank (0.9m x 0,6m) is in a shape of a tank but it has an elevated floor made of oyster net fixed to the tank walls at about 150 mm above sump tank floor level. About 100 litres of the fluidized Kaldnes biomedia is in this compartment. The media is fluidized by the incoming water but also by a 20mm leaky pipe aeration loop fixed to the borderline attachment of the oyster net grid. The leaky pipe receives two opposite T - piece connections that is connected		1		The biofilter receives water from the sponge filter tank and water exits into the sump via the elevated oyster net grid floor of the biofilter tank.

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ITEM NO	Allocation	Component	Rate	Quantity (incl spares)	Amount	Comments
		to the overhead airpump (LP100) mounted on an angle plate platform attached to the side wall of the sump.				
11	Sump accessories:	Trickle degasser tower: The fibreglass sheet made rectangular shaped tower is standing on the sump floor and with elevated oyster net grid about 90cm from floor of tank. Four bioblocks (TERBO 1200X = 900mm x 300mm) are packed vertically in the box and suspended by the oyster net grid platform. The blocks are separated from the water level in sump (approximately 700m depth) and receives overhead sprayed water from the system pump (valve controlled). The tower is closed with a lid so that sprayed water must pass		1		

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ITEM NO	Allocation	Component	Rate	Quantity (incl spares)	Amount	Comments
		through the bioblock tower column to the sump.				
		ACP 20 pumps x 2. Pumps are in manifold connected to the common water supply pipe that serve the degasser tower (valve controlled) and the final treatment units (UV sterilizer and Heatpump) before supplying water to the 4 broodstock keeping tanks. Flow switch in main system pump line installed. Flow switch activate the second pump when required (switchgear)		2		Main system pump failure activate the second system pump by flow switch control. A GSM sms warning must be signalled by cellphone to the system manager.
		Thermo adjustable stainless steel aquarium heaters (200W)		6		The heaters required in winter when heat pump function is impaired by cold weather.

ITEM NO	Allocation	Component	Rate	Quantity (incl spares)	Amount	Comments
		20mm HP cistern valve (municipal water). Line to cistern valve equipped with an inline activated carbon filter cartridge which is replace-able. The cistern valve also supported by forked municipal line input (20mm valve control). This input required when system flushing or fast top-up required.		1		Municipal line connections must be considered in the final costing analysis.
		Sump overflow exits (63mm) at 900 or 700mm from floor. The lower exit equipped with a valve. Exit water is directed to the effluent sump and out of the way (Fig 2)		1		
	UV treatment	55W UV Sterilizer (50mm unions fitted) with wall mount brackets (+ 4 spare UV lamps)		2		See Figure 3 for UV bank and inverter heatpump construction outlay (mounting brackets and site specific geometrics will add to extra materials required, catered for under contingencies)
	Heat treatment	12 kW output inverter heat pump (~2kW input)		1		
	UV + Heat treatment plumbing	UV bank and Heatpump station plumbing - 50mm Ball valves (x10), 50mm fittings (7 elbows (90 degrees); 6 T-pieces, pipe x		1		

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ITEM NO	Allocation	Component	Rate	Quantity (incl spares)	Amount	Comments
		3m). Geometric required extra fittings to be included in contingency cost.				
	Filtermat cleaning station (Fig 2 & 4)	Pressure cleaner (Same or higher specification as Karcher K2.360)		1		
	Mat cleaning basin	Stainless steel basin with wash area angle of about 45 degrees (Fig 4) with support legs and wall mount anchor points		1		
		Valves, fittings and outlet piping to effluent sump		1		
12	Switchgear (Room 1+1,1)	Switchgear for all overhead lighting, pumps, airpumps, UV sterilizers, heatpumps, heating elements grouped and marked as per system in DB next to the wall that separates the building from the external pump room. Airpumps on UPS system (ELLIES/MECER 1600W) with two deep cycle batteries harnessed for theft control. Airpumps will run uninterrupted during loadshedding or power failures. GSM warning system (SMS) for		1		

ITEM NO	Allocation	Component	Rate	Quantity (incl spares)	Amount	Comments
		each system main pump function failure.				
13	Room 1.1 & 7 construction cost	Double bricks & mortar cost per square meter. There is already a foundation, roof and floors, thus needing only break & build plus additional wall construction, joints opening for doors and windows.		50,05		
14	Insulation paint on walls and ceiling plus ceiling repair (Room 1 +1,1)	Eco Insulate at 1 Litre per m ²		100		
15	Slide door	Slide door of synthetic type (plastic or FG) and railings stainless steel		1		
16	25000 BTU Airconditioner	Airconditioner installed below window level and opposite as per Fig 1		2		
A	SUBTOTAL carried to summary					

ITEM NO	Allocation	Component	Cost per ea	Quantity (incl spares)	Collective total	Comments
Room 2 (Fig 5)						
1	Room 2 & 3 construction cost	Double bricks & mortar cost per square meter. There is already a foundation, roof and floors, thus needing only break & build plus additional wall construction, joints opening for doors and windows.		25,025		
2	Racks from rooms 3 or 4 to cover one side of room)	Labour and materials		1		
3	Treatment of rack skeleton with rust proof coating (epoxy/FG)	Epoxy/FG coating of square tubing skeleton and sheeting		1		
4	Three tier rack system (17 square meters storage space)	25mm square tubing skeleton frame (approximately 56 meters)		48		
5	Extractor fan	Extractor fan installed with control box		1		
6	Refrigerator, scale and spares	<ul style="list-style-type: none"> • Refrigerator (324L) • Mettler scale or similar (5kg with 0.1g resolution) • Spare pumps 2 x ACP12 Submersible pumps • Spare Hapa bags <ul style="list-style-type: none"> ○ 10 x as per Room 1 		1		

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ITEM NO	Allocation	Component	Cost per ea	Quantity (incl spares)	Collective total	Comments
		<ul style="list-style-type: none"> ○ 3 x as per Room 3 ○ 3 x as per Room 5 ○ 6 x as per Room 6 				
7	Lighting and wall plugs	T8 LED tubes double barrel in moisture proof casing and mounted on ceiling in row of three units. Switch on wall next to slide door entrance. Light switch serves timer which controls photoperiod. Wall plugs mounted against wall above benchtop. Wall plugs weatherproof type. 4 wall plugs or 1 for every meter of bench top surface. Electricity supply controlled from breaker in main DB (Room 3)		1		
8	Slide door	Slide door of synthetic type (plastic or FG) and railings stainless steel		1		
B	SUBTOTAL carried to summary					

ITEM NO	Allocation	Component	Cost per ea	Quantity (incl spares)	Collective total	Comments
Room 3 (Figs 1 and 6)						
1	Room 3 New wall	Double bricks & mortar cost per square meter. There is already a foundation, roof and floors, thus needing only break & build plus additional wall		0		Construction cost of new wall in Room 3 included in the cost of new wall Room 2 (See above)
2	6kl Suspended fibreglass trough with 6 Hapas for Tilapia broodstock (1male + 4 females per Hapa)+filter system (Figure 6)	4m (L) x 0,6m (w) x 0,7m (d) suspended fibreglass trough with tapering floor towards filter system. Water level at 0.5m depth and drain exit flows into swirl separator sump. Hapa made of polyester/nylon mosquito net (60cm (L), 60cm(w) x 60cm deep)		1		
3	Filter system of tilapia reserve broodstock tank	FG filter tank (0.9m (h) x 0,6m (w) x 0.9m (L) with rib re-enforcement or steel frame (water resistant). Tank equipped with oyster net grid floor spaced 150mm from tank floor with cut and fixed 110mm pipes. Oyster net grid packed with BLACK BIO SPONGE 60 cm (l) X 45 cm (w) X 4 cm thick (x16) bedded in two layers. Three pipes perforate the filter		1		

ITEM NO	Allocation	Component	Cost per ea	Quantity (incl spares)	Collective total	Comments
		and the oyster net platform. One pipe (110mm) is slotted in area below oyster net and transfers water to the area below grid when sponge filter is blocked with organic waste. The two remaining pipes (75mm) transfer filtered water via upper tank wall to the sump fluidized biofilter bed (similar to quarantine tank filter system in Fig 2)				
4	Sump	FG sump tank (1,0m (h) x 0,9m (w) x 1,2m (L) with rib re- enforcement or steel frame (water resistant). It is adjacent to filter tank and receives water via 2 x 75mm pipes flowing into the fluidized biofilter tank with grid floor (similar configuration but smaller than Room 7 sump with accessories).		1		Sump is water delivery and extraction point, and accommodates secondary mechanical filter, fluidized biofilter and trickle tower degasser + system and filter pumps.
		The inner sump FG biofilter tank (0.4m x 0,6m) is in a shape of a tank but it has an elevated floor made of oyster net fixed to the tank walls at about 150 mm above sump tank floor		1		The biofilter receives water from the sponge filter tank and water exits into the sump via the elevated oyster net grid floor of the biofilter tank.

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ITEM NO	Allocation	Component	Cost per ea	Quantity (incl spares)	Collective total	Comments
		level. About 60 litres of the fluidized Kaldnes biomedica is in this compartment. The media is fluidized by the incoming water but also by a 20mm leaky pipe aeration looping on the zeolite chip packed veggie bags (one layer) below it. The leaky pipe receives two opposite T - piece connections that is connected to the overhead airpump (LP100) mounted on an angle plate platform attached to the side wall of the sump.				
5	Sump accessories:	Trickle degasser tower: The fibreglass sheet made rectangular shaped tower is standing on the sump floor and with elevated oyster net grid about 90cm from floor of tank. Four bioblocks (TERBO 1200X = 600mm x 300mm) are packed vertically in the box and suspended by the oyster net grid platform. The blocks are separated from the water level in sump (approximately 700m depth) and receives overhead sprayed water from the system		1		

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ITEM NO	Allocation	Component	Cost per ea	Quantity (incl spares)	Collective total	Comments
		pump (valve controlled). The tower is closed with a lid so that sprayed water must pass through the bioblock tower column to the sump.				
		ACP 12 pumps x 2. Pumps are in manifold connected to the common water supply pipe that serve the degasser tower (valve controlled) and the final treatment units (UV sterilizer and Heatpump) before supplying water to the 3 Quarantine tanks. Flow switch in main system pump line installed. Flow switch activated the second pump when required (switchgear)		2		Main system pump failure activate the second system pump by flow switch control. A GSM sms warning must be signalled by cellphone to the system manager.
		Thermo adjustable stainless steel aquarium heaters (200W)		6		The heaters required in winter when heat pump function is impaired by cold weather.
		20mm HP cistern valve (municipal water). Line to cistern valve equipped with an inline activated carbon filter cartridge which is replace-able. The cistern valve also supported		1		Municipal line connections must be considered in the final costing analysis.

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ITEM NO	Allocation	Component	Cost per ea	Quantity (incl spares)	Collective total	Comments
		by forked municipal line input (20mm valve control). This input required when system flushing, or fast top-up required.				
		Sump overflow exits (63mm) at 900 or 700mm from floor. The lower exit equipped with a valve. Exit water is directed to the external of room and finally connected to common sump (Fig 1)		1		
		55W UV Sterilizer (50mm unions fitted) with wall mount brackets (+ 4 spare UV lamps)		2		See Figure 3 for UV bank and inverter heatpump construction outlay (mounting brackets and site specific geometrics will add to extra materials required, catered for under contingencies)
		6 kW output inverter heat pump (~1kW input)		1		
		UV bank and Heatpump station plumbing - 50mm Ball valves (x10), 50mm fittings (7 elbows (90 degrees); 6 T-pieces, pipe x 3m). Geometric required extra fittings to be included in contingency cost.		1		

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ITEM NO	Allocation	Component	Cost per ea	Quantity (incl spares)	Collective total	Comments
6	Filtermat cleaning station (similar cost and layout than for Room 1.1 but positioned in Room 8 (Fig 1)	Room 8		1		
7	Room 8 will have common filter mat cleaning stations for filters of Rooms 3,4,5 and 6	Stainless steel basin with wash area angle of about 45 degrees (Fig 4) with support legs and wall mount anchor points		1		
		Valves, fittings and outlet piping to effluent sump		1		
8	Switchgear (Room 3) and main DB	Switchgear for all overhead lighting, pumps, airpumps, UV sterilizers, heatpumps, heating elements grouped and marked as per system (Rooms 3, 4,5 and 6) in main DB (Fig 1). Airpumps on UPS system (ELLIES/MECER 1600W) with two deep cycle batteries harnessed for theft control. Airpumps will run uninterrupted during loadshedding or power failures. GSM warning system (SMS) for each system main pump function failure. Main DB provides electricity to all sub		1		

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ITEM NO	Allocation	Component	Cost per ea	Quantity (incl spares)	Collective total	Comments
		DB's and lighting switches for all rooms - as per respective circuit breakers, earth leakage trip breakers, and wiring with core diameter sufficient for electricity demand per room. The main DB also provides switch controlled electricity to LED flood lights where required outside building (doors, filter rooms and quarantine room). An alarm is mounted on DB to signal specific breaker fail. Breakers marked for different sub DB's. Main breaker switch from ESKOM = 100A per phase. DB must have 3 phase supply. Phases must be balance in power distribution between different sub DB's.				
9	Stand alone work benches x 2	Waterproof work benches with waterproof tops and ss legs (or ss or plastic coated mild steel) required. Bench for rinsing female mouths to obtain eggs/larvae with following dimensions (2m (l) x 1m (w) x 0.8m (h)). Second smaller bench for jugs and bowls when		1		

ITEM NO	Allocation	Component	Cost per ea	Quantity (incl spares)	Collective total	Comments
		required and measures 1m (w) x 1.5m (L) x 0.8m (h). Municipal water (prefiltered) supplied by tap installed above both benches (40cm above bench top)				
10	Lighting and wall plugs	T8 LED tubes double barrel in moisture proof casing and mounted on ceiling in center (longitudinal axis of ceiling) row of 6 evenly spaced units. Switch on wall next to both slide door entrances. Wall plugs mounted against wall above each benchtop. Wall plugs weatherproof type. 4 wall plugs or 1 for every meter of bench top surface. Electricity supply controlled from breaker in main DB (of Room 3)		1		
11	Slide door	Slide door (double door size) of synthetic type (plastic or FG) and railings stainless steel. Slide door in closed position allows little air to come through from external environment.		2		

ITEM NO	Allocation	Component	Cost per ea	Quantity (incl spares)	Collective total	Comments
12	25000 BTU Airconditioner	Airconditioner installed below ceiling level and positioned as per Fig 1.		2		
13	LP 100 blower supply (Rooms 3-6)	LP100 x 2 is mounted in overhead aeration loop (50mm) that supplies air to systems in Room 3 -6. The airline runs as a closed loop through all the mentioned rooms above water works and branches of microjet tubing (4mm) with leaky pipe aerators to all units with fish (Figure 9). Each leaky pipe equipped with a microjet choke valve to control airflow. The two LP 100 blowers similarly connected and wired as for those in room 1 (UPS inverter and deep cycle batteries)- so that aeration is still running in times of loadshedding or power failures.		1		
14	Insulation paint on walls and ceiling plus ceiling repair	Eco Insulate at 1 Liter per m ²		100		
C	SUBTOTAL carried to summary					

ITEM NO	Allocation	Component	Cost per ea	Quantity (incl spares)	Collective total	Comments
Room 4 (Fig 1)						
1	Brick, brickforce and plaster tank as support structure for fibreglass lining (2 layers chopmat) and top coat for 7kl fish breeder tank	Bricks, brickforce and plaster screed required for 7kl endemic fish broodstock tank (3,9m (L) x 1,6m (w) x 1,3m (d)). Fibreglass resin, chopmat, catalyst, acetone, latex gloves, rollers brushes and 10L top coat (bright blue pigment)		1		
2	Filtration, sump and heating system	Filtration and heating system similar to Room 3.		1		
3	Primary hatchery system (similar to multispecies primary hatchery in Room1)	1.5m x 1.2m re-enforced bench (0.8m high) with space below for sump and filtration system (chemical = zeolite and biofiltration = media filter, 15UV filter and 1kW element. 55w Royal pump (x2 = 1 spare) in sump - supplying water to egg tumblers x 3 (see room 1 details of similar system. Wall mount egg tumblers deliver water respectively to each of three glass aquaria (80cm (l) x 30cm (w) x 40cm (d). The		1		

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ITEM NO	Allocation	Component	Cost per ea	Quantity (incl spares)	Collective total	Comments
		aquaria filter serviced overflows reach filtermat filter one top compartment of sump. Also bench top over filter system to create space to work with breeders. Municipal tap installed above 7kl tank, hatchery and benchtop for fish handling.				
4	15000 BTU Airconditioner	Airconditioner installed below window level and positioned as per Fig 1.		1		
5	Swingdoor treated with fibreglass resin after prepared with sanding.	Sanding and fibreglass coating of swingdoor		1		
6	Lighting and wall plugs	T8 LED tubes double barrel in moisture proof casing and mounted on ceiling in center (longitudinal axis of ceiling) row of 2 parallel spaced units above broodstock tank, and one each above hatchery and working station (second bench top) Light switch on wall next to swing door entrances. Light switch serves timer which controls photoperiod. Wall plugs mounted against wall above		1		

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ITEM NO	Allocation	Component	Cost per ea	Quantity (incl spares)	Collective total	Comments
		each benchtop. Wall plugs weatherproof type. Two weatherproof wall plugs against wall in proximity to filtration and pump system. Electricity supply controlled from breaker in main DB (of Room 3)				
7	Insulation paint on walls and ceiling plus ceiling repair	Eco Insulate at 1 Litre per m ²		57		
D	SUBTOTAL carried to summary					

ITEM NO	Allocation	Component	Cost per ea	Quantity (incl spares)	Collective total	Comments
Room 5 (Fig. 1)						
1	Ornamental fish broodstock conditioning/spawning induction tank + filter system	Fibreglass (or re-enforced brickwall tank) (2,7m (l) x 1,5m (w) x 1m deep). Tank capacity = 3000 litres at 0.8m water depth). Floor taper diagonally to exit pipe that enters the filter system swirl separator sump. Filter components and heating similar to room three system but reductively adapted to biometrics for ornamental fish density allowed. The exit opening (75mm) equipped with an inserted cylindrical constructed oysternet screen. Tank directly used for big fish such as Koi broodstock. Otherwise 5 Hapas (0.5m (w) x 1,5m (l) x 70cm deep) can be used to house goldfish of different strains (x5) separately. Filtermats will be cleaned in Room 8.		1		

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ITEM NO	Allocation	Component	Cost per ea	Quantity (incl spares)	Collective total	Comments
2	Ornamental fish hatchery tank + filter system	Tank dimensions and filter similar to the ornamental fish broodstock conditioning/spawning tank. This tank also can function as a secondary broodstock conditioning/spawning induction tank. However, it is easily converted into a hatchery tank by translocating the breeders (ex Room 1 breeder tanks), and the incubators activated by the system recirculating pump.(plumbing adapted). The hatchery is equipped with netbags (floating perlon nets with cluster weights (x16) each net = 30cm (w) x 70cm (l) x20cm deep) which will receive eggs that have been stripped, fertilized and then cast evenly over these nets. The nets are attached to 25mm conduit frames. Hatched larvae are transferred to externally prepared plankton rich ponds.		1		

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ITEM NO	Allocation	Component	Cost per ea	Quantity (incl spares)	Collective total	Comments
3	15000 BTU Airconditioner	Airconditioner installed below window level and positioned as per Fig 1.		1		
4	Sliding door treated with fibreglass resin after prepared with sanding.	Sanding and fibreglass coating of slide door or using synthetic slide door		1		
5	Lighting and wall plugs	T8 LED tubes double barrel in moisture proof casing and mounted on ceiling in center (longitudinal axis of ceiling) row of each tank (broodstock or hatchery). Light switch on wall next to slide door entrances. Light switch serves timer which controls photoperiod. Wall plugs mounted against wall above each tank and wall mount in proximity of each of respective filtration systems. Wall plugs weatherproof type. Electricity supply controlled from breaker in main DB (of Room 3)		1		
6	Insulation paint on walls and ceiling plus ceiling repair	Eco Insulate at 1 Litre per m ²		57		

ITEM NO	Allocation	Component	Cost per ea	Quantity (incl spares)	Collective total	Comments
E	SUBTOTAL carried to summary					

ITEM NO	Allocation	Component	Cost per ea	Quantity (incl spares)	Collective total	Comments
Room 6 (Figs 1 and 6)						
1	4kl Suspended fibreglass trough with 5 Hapas for Tilapia broodstock (1male + 4 females per Hapa)+filter system (similar to Room 3 system) (Figure 6)	4m x 1m meter x 0,7m suspended fibreglass trough with tapering floor towards filter system. Water level in Hapa at 0.5m depth and drain exit flows into filter system and sump similar in design as for the reserve broodstock systems in Room 3. Hapas equipped with weights and suspension structures as per Fig 7		1		
2	2 x 1.8kl Suspended fibreglass troughs with 7 Hapas each for tilapia upswimming fry rearing to 0.5g (30days) +filtration system	3.5m x 1m meter x 0,6m suspended fibreglass trough with tapering floor towards filter system. Water level at 0.6m depth and drain exit flows into filter system and sump similar in design as for the reserve broodstock systems in Room 3. Hapas equipped with weights and suspension structures as per Fig 7		1		
3	Down welling egg tumblers with fibreglass platforms and water reticulation	Aztec downwelling egg tumblers x 14. Each supply flow controlled water to each of the 14 Hapa bags in hatchery.		1		

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ITEM NO	Allocation	Component	Cost per ea	Quantity (incl spares)	Collective total	Comments
	supply to hatchery Hapas. (See Figure 8)	Overhead water supply (20mm) creates down welling with height adjustable pipe (40mm). Water supply manifold mounted against the wall above hatchery and with reachable gate valves (screw type) for finer flow adjustments = compared to ball valves). Overhead water supply removable (unions) if egg incubation tumblers must be removed for cleaning.				
4	25000 BTU Airconditioner	Airconditioner installed below ceiling level and positioned as per Fig 1.		2		
5	Work bench (waterproof and synthetic) at hip height (3m x 0.5m)	Work bench (3m (l) x 50cm (w)) positioned between broodstock and hatchery systems (Fig 1). Bench for breeder mouth washing and other management activities.		1		
6	Lighting and wall plugs	T8 LED tubes double barrel in moisture proof casing and mounted on ceiling above the work bench. 5 units evenly spaced in straight line. Light		1		

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ITEM NO	Allocation	Component	Cost per ea	Quantity (incl spares)	Collective total	Comments
		switch on wall next to slide door entrances. Light switch serves timer which controls photoperiod. Wall plugs mounted against wall above each tank and wall mount in proximity of each of respective filtration systems. Wall plugs weatherproof type. Electricity supply controlled from breaker in main DB (of Room 3)				
7	Insulation paint on walls and ceiling plus ceiling repair	Eco Insulate at 1 Litre per m ²		69		
8	Sliding door treated with fibreglass resin after prepared with sanding.	Sanding and fibreglass coating of slide door or using synthetic slide door. Two slide doors to be used due to space available (Fig 1)		1		
F	SUBTOTAL carried to summary					

ITEM NO	Allocation	Component	Cost per ea	Quantity (incl spares)	Collective total	Comments
Room 7 (Fig. 1)						
1	Room 7 New wall	Double bricks & mortar cost per square meter. There is already a foundation, roof and floors, thus needing only break & build plus additional wall		0		Construction cost of new wall in Room 7 included in the cost of new wall Room 1.1 (See above)
2	Quarantine tanks	Square conical FG tanks similar to Seapoint hatchery tanks (1,3m x 1,3m x 1,2m (d)) + 63mm outlet port.		3		
		Plumbing for quarantine tanks: 63mm T-piece slotted screen pipe with removable end caps for floor mount, 63mm valve, pipe manifold to next tank		3		
3	Filter system	FG filter tank (0.9m (h) x 0,6m (w) x 0.9m (l) with rib re-enforcement or steel frame (water resistant). Tank equipped with oyster net grid floor spaced 150mm from tank floor with cut and fixed 110mm pipes. Oyster net grid packed with BLACK BIO SPONGE 60 cm (l) X 45 cm (w) X 4 cm thick (x16) bedded in two layers.		1		

ITEM NO	Allocation	Component	Cost per ea	Quantity (incl spares)	Collective total	Comments
		Three pipes perforate the filter and the oyster net platform. One pipe (110mm) is slotted in area below oyster net and transfers water to the area below grid when sponge filter gets blocked with organic waste. The two remaining pipes (75mm) transfer filtered water via upper tank wall to the sump fluidized biofilter bed (Fig 2)				
4	Sump	FG sump tank (1,0m (h) x 0,9m (w) x 2m (l) with rib re-enforcement or steel frame (water resistant). It is adjacent to filter tank and receives water via 2 x 75mm pipes flowing into the fluidized biofilter tank with grid floor.		1		Sump is water delivery and extraction point, and accommodates secondary mechanical filter, fluidized biofilter and trickle tower degasser + system and filter pumps.
5		The inner sump FG biofilter tank (0.4m x 0,6m) is in a shape of a tank but it has an elevated floor made of oyster net fixed to the tank walls at about 150 mm above sump tank floor level. About 60 litres of the fluidized Kaldnes biomedica is in		1		The biofilter receives water from the sponge filter tank and water exits into the sump via the elevated oyster net grid floor of the biofilter tank.

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ITEM NO	Allocation	Component	Cost per ea	Quantity (incl spares)	Collective total	Comments
		this compartment. The media is fluidized by the incoming water but also by a 20mm leaky pipe aeration looping on the zeolite chip packed veggie bags (one layer) below it. The leaky pipe receives two opposite T - piece connections that is connected to the overhead airpump (LP100) mounted on an angle plate platform attached to the side wall of the sump.				
6	Sump accessories:	Trickle degasser tower: The fibreglass sheet made rectangular shaped tower is standing on the sump floor and with elevated oyster net grid about 90cm from floor of tank. Four bioblocks (TERBO 1200X = 900mm x 300mm) are packed vertically in the box and suspended by the oyster net grid platform. The blocks are separated from the water level in sump (approximately 700mm depth) and receives overhead sprayed water from the system pump (valve controlled). The tower is closed with a lid so that		1		

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ITEM NO	Allocation	Component	Cost per ea	Quantity (incl spares)	Collective total	Comments
		sprayed water must pass through the bioblock tower column to the sump.				
7		ACP 12 pumps x 2. Pumps are in manifold connected to the common water supply pipe that serve the degasser tower (valve controlled) and the final treatment units (UV sterilizer and Heatpump) before supplying water to the 3 Quarantine tanks. Flow switch in main system pump line installed. Flow switch activated the second pump when required (switchgear)		2		Main system pump failure activates the second system pump by flow switch control. A GSM sms warning must be signalled by cellphone to the system manager.
8		Thermo adjustable stainless steel aquarium heaters (200W)		6		The heaters required in winter when heat pump function is impaired by cold weather.
9		20mm HP cistern valve (municipal water). Line to cistern valve equipped with an inline activated carbon filter cartridge which is replace-able. The cistern valve also supported by forked municipal line input (20mm valve control). This		1		Municipal line connections must be considered in the final costing analysis.

ITEM NO	Allocation	Component	Cost per ea	Quantity (incl spares)	Collective total	Comments
		input required when system flushing or fast top-up required.				
		Sump overflow exits (63mm) at 900 or 700mm from floor. The lower exit equipped with a valve. Exit water is directed to the effluent sump and out of the way (Fig 2)		1		
		55W UV Sterilizer (50mm unions fitted) with wall mount brackets (+ 4 spare UV lamps)		2		See Figure 3 for UV bank and inverter heatpump construction outlay (mounting brackets and site specific geometrics will add to extra materials required, catered for under contingencies)
		12 kW output inverter heat pump (~2kW input)		1		
		UV bank and Heatpump station plumbing - 50mm Ball valves (x10), 50mm fittings (7 elbows (90 degrees); 6 T-pieces, pipe x 3m). Geometric required extra fittings to be included in contingency cost.		1		
	Filtermat cleaning station (Fig 2)	Pressure cleaner (Same or higher specification as Karcher K2.360)		1		

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ITEM NO	Allocation	Component	Cost per ea	Quantity (incl spares)	Collective total	Comments
		Stainless steel basin with wash area angle of about 45 degrees (Fig 4) with support legs and wall mount anchor points		1		
		Valves, fittings and outlet piping to effluent sump		1		
	Switchgear (Room 1+1,1)	Switchgear for all overhead lighting, pumps, airpumps, UV sterilizers, heatpumps, heating elements grouped and marked as per system in DB next to the wall that separates the building from the external pump room. Airpumps on UPS system (ELLIES/MECER 1600W) with two deep cycle batteries harnessed for theft control. Airpumps will run uninterrupted during loadshedding or power failures. GSM warning system (SMS) for each system main pump function failure.		1		
	Insulation paint on walls and ceiling plus ceiling repair	Eco Insulate at 1 Liter per m ²		40		

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ITEM NO	Allocation	Component	Cost per ea	Quantity (incl spares)	Collective total	Comments
	Slide door	Slide door of synthetic type (plastic or FG) and railings stainless steel		1		
G	SUBTOTAL carried to summary					

C3. Scope of Services and Scope of Work

1. BACKGROUND

The following provides a background on Gariep Aquaculture Technology Demonstration Centre (ATDC) with special reference to Tilapia mini hatchery unit.



LOCATION DISCRIPTION

The project is located in Free State province, Xhariep District, kopanong local municipality, Gariep dam along the Orange River System which supplies water to the Centre. Area of 47 ha.



Figure1: Maps depicting the area in RSA, Free State Province showing where Gariep ATDC is situated and exact spot Gariep ATDC at Gariep dam.

The Gariep ATDC is situated along the Upper Orange River Water Basin in the Xhariep District bordering the Northern Cape Province. The total farm is amounting 47 ha in size, though the portion area parcel where the Centre is situated is less than 20 Ha.

The key functions of the Gariep Aquaculture Technology Demonstration Centre (ATDC) is for research and development, technology demonstration, fish breeding techniques, training and promotions to support aquacultural development in the South African Development Community regional countries, with special reference to South Africa as the country of first priority.

The Gariep ATDC systems was initially planned and developed as Flow Through Aquaculture System (FTAS) for both breeding and grower production systems, which was and is still inefficient. This FTAS is not user friendly since it is not energy efficient (meaning it wastes lot of electricity because the water from the Orange River is only heated once and then flow back directly into the river without reuse, thus continuous heating), FTAS is further risky because there is higher chances for both fries and fingerlings fish to have higher chances of escaping into the Orange River due to poor metal screen, thus it can result in dire repercussions.

The whole Hatchery FTAS is in the process of been reconstructed into Recirculating Aquaculture System (RAS), of which both the hatchery for brooder stock and nursery grower for growing both fries and fingerlings units are anticipated to operate more energy efficient and cost effectively;

After the handover of the Gariep ATDC by the Chinese Government to RSA Government, with special reference to the National Department of Agriculture, a new premise was set wherein, the systems were re-planned to suit the South African conditions. This therefore, let to the redesigning and refocusing to ensure efficient upgrade in order to support sustainable development from Flow-Through Aquaculture Systems (FTAS) to Recirculating Aquaculture Systems (RAS).



Picture 1: Front longitudinal side



Picture 2: Side view backside

It is against this background therefore that, a Tilapia Mini Hatchery RAS Unit is in the process of been developed through reconstruction (see picture 1 & 2) from the existing old hatchery and store building into a Tilapia Mini Hatchery RAS facility. The current old hatchery and store building needs to be reconstructed into a more plausible user friendly system to ensure effective and efficient Research & Development, hatchery for breeding, Training and promotion, and Technology demonstrations infrastructure through upgrade. The attached sketch depicts a full component design plans for the envisaged new Tilapia Mini Hatchery;

Currently the FTAS is been converted into RAS, of which for further development of Tilapia species within the fish industry, a Tilapia Mini Hatchery is a necessity;

Since the whole old hatchery is been upgraded to RAS. The store-room joined with old hatchery building is hereby to be reconstructed and upgraded to a more economical plausible RAS unit for Tilapia breeding purposes;

The ultimate intent and processes of the Gariep ATDC includes amongst others, center's revitalization, upgrade,

further development and growth to serve and fulfill the requirements of a developmental state for successful R&D, Breeding techniques, Training promotions and technology demonstration.

Table 1: Table indicating various physical structural buildings function and magnitudes.

Main Facilities	Size	Functions
Administrative Building	1073 m ²	Space for training, meetings, offices and labs
Expert Apartment	299.9 m ²	Accommodation for fishery visiting experts
Hatchery	1007.6 m ²	Cat-fish breeding and overwintering growing system (84 Fish tanks been upgraded to RAS)
Tilapia Mini-Hatchery	127,96 m ²	Tilapia breeding stock and fries to fingerlings rearing facility
Boiler Room	99 m ²	Heating supplying systems
Storage Room	102 m ²	Fish feed and farming tools
Ponds	36	Demonstration of the pond farming technology (outgrow & adaptabilities & floating cage culture ponds systems)

2. SCOPE OF WORK

The works include the following:

- 2.1 Supply, deliver, install and commissioning of Recirculation Aquaculture System (RAS) with its electrical and plumbing installation and associated building works. The system includes heating (heat pumps), ancillary equipment, filtration, Water Treatment and Aeration system.
- 2.2 Supply, deliver, install and commissioning Hatching Systems and Packaging (fingerlings) with its electrical and plumbing installation and associated building works.
- 2.3 Supply, deliver, install and commissioning of Broodstock and Quarantine facilities with its electrical and plumbing installation and associated building works.

- 2.4 Supply, deliver, install and commissioning of Air Conditioning Systems with its electrical and plumbing installation and associated building works.
- 2.5 Supply, deliver, install and commissioning of Water quality Testing Equipment.

3. APPLICABLE STANDARDIZED AND PARTICULAR SPECIFICATIONS

3.1 The following Acts and Codes of practice are applicable to the Specifications included in this Bid Document:

- Standardized Specifications for Civil Engineering Construction – SANS 1200.
- National Building Regulations S.A.N.S. 0400.
- Building Regulations of Act 1977 (Act 103 of 1977).
- Wiring Code – SANS 0142
- Occupational Health and Safety Act (83 of 1993)
- SANS 0142 1987 Electrical installations
- SANS 1200 AA General (Small works)
- SANS 1200 C Site clearance
- SANS 1200 DA Earthworks (Small)
- SANS 1200 DB Earthworks (Pipe trenches)
- SANS 1200 GA Concrete (Small works)
- SANS 1083 Aggregates from natural source
- Act for Health and Occupational Safety
- Specific regulations and requirements of the local authority must be adhered to.
- National Environmental Management Act (NEMA)

The Standardized and Particular Specifications are deemed to form part of the Bid document. The Bidder must make his own arrangements for obtaining the Specifications and keep copies of all listed Specifications on site during the construction period. Health and Safety records and registers must be kept on the site during construction.

3.2 General Specifications

- All materials used must be new.
- All rubble / building materials must be removed from the building site after completion of the building.
- All construction work to be carried out in compliance with the S.A.N.S. codes of practice and strictly to plans and specifications.
- The Bidder must inform the Representative of the Department at least 48Hrs beforehand, in writing, about construction inspections to be done.

3.3 Detail Specifications

- Detail specifications of the works to be conducted are included in the Bill of Quantities read with the structural change layout drawing as well as Figure 1: Old Hatchery Layout change.
- Bidders must confirm dimensions during clarification meeting and obtain additional measurements required.
- During implementation, the Contractor will be requested to submit proposals for some of the items specified, which will have to be approved by the department before procurement.

C4 Site Information

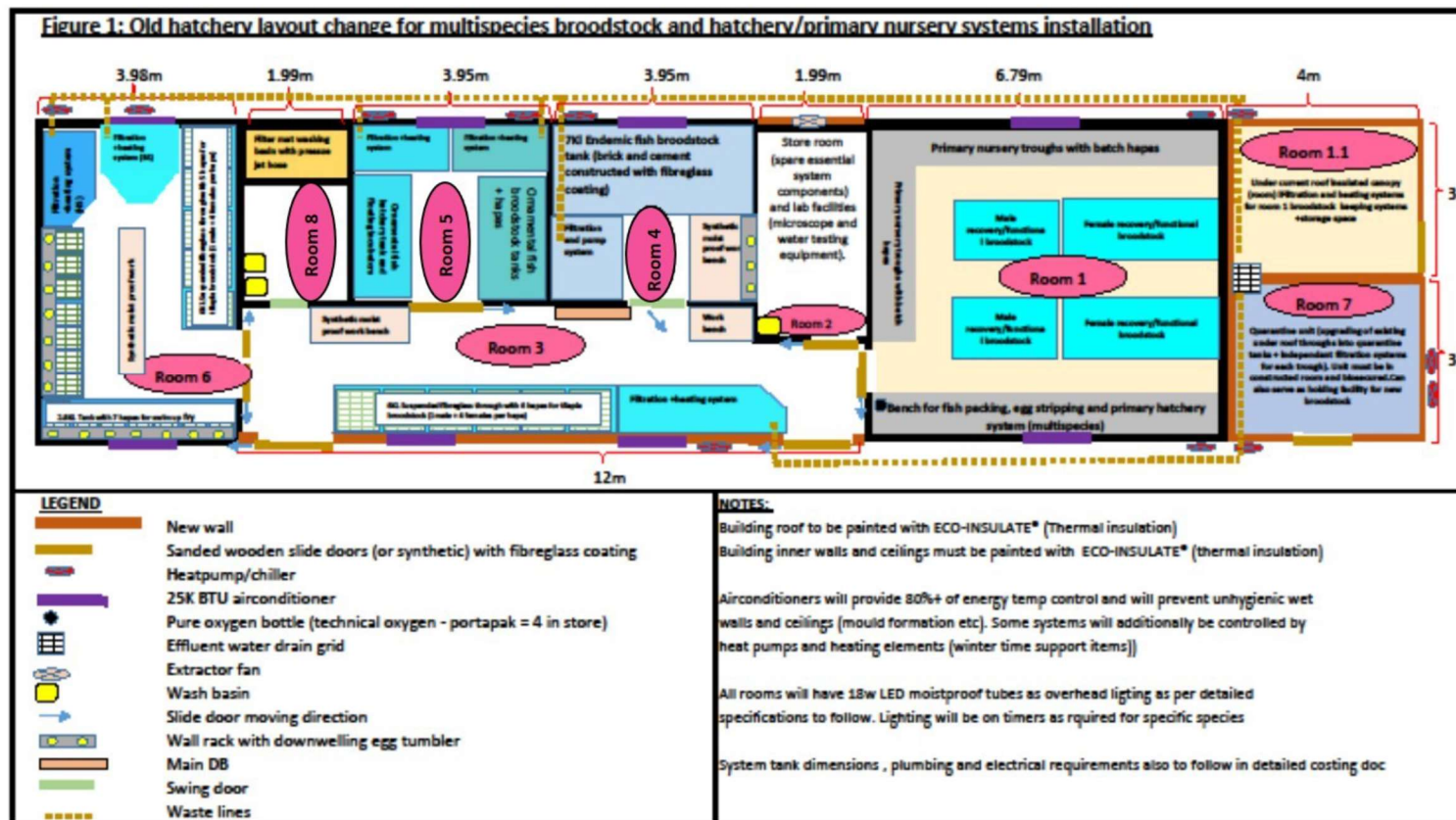
The old nursery/hatchery building at Gariep Fish Hatchery (ATDC) near Gariep Dam must be upgraded to improve efficiency and allow for Tilapia breeding and Fries production. Coordinates: S 30.62628°; E 25.47266°

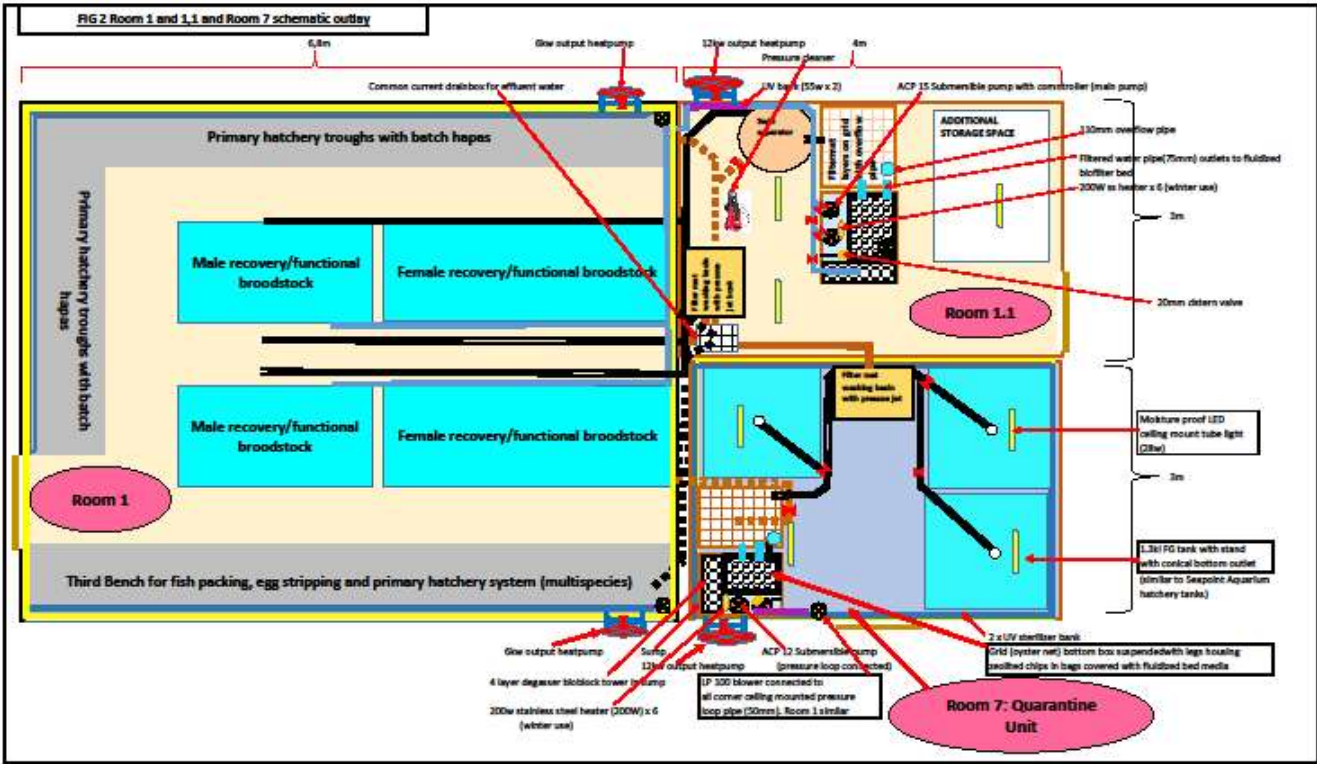
LIST OF DRAWINGS

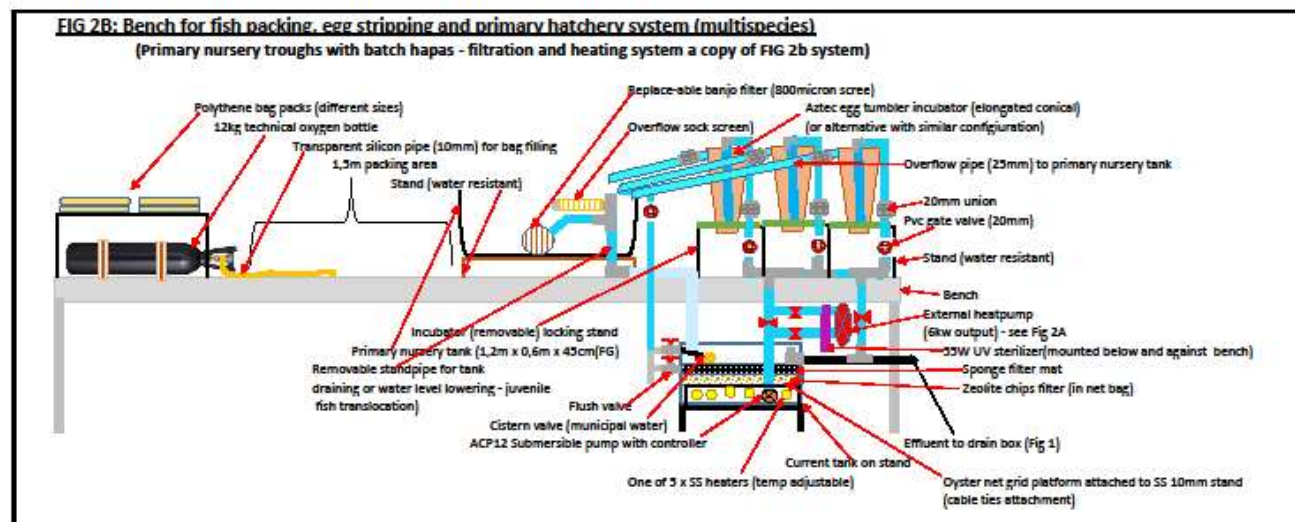
Drawing No.	Description	Annexure
Figure 1	Old Hatchery layout change	Annexure 1
Figure 2	Room 1, 1.1 and 7 schematic outlay	Annexure 2
Figure 2B	Bench for fish packing, egg stripping and primary hatchery system	Annexure 3
Figure 3	UV Bank outlay	Annexure 4
Figure 4	Filtermat cleaner station	Annexure 5
Figure 5	Store room	Annexure 6
Figure 6	Broodstock conditioning system	Annexure 7
Figure 7	Hapa net bag with frame configuration	Annexure 8
Figure 8	Tilapia hatchery tank and platform outlay	Annexure 9
Figure 9	Leaky pipe diffuser construction	Annexure 10
Figure 10	Swirl separator outlay	Annexure 11

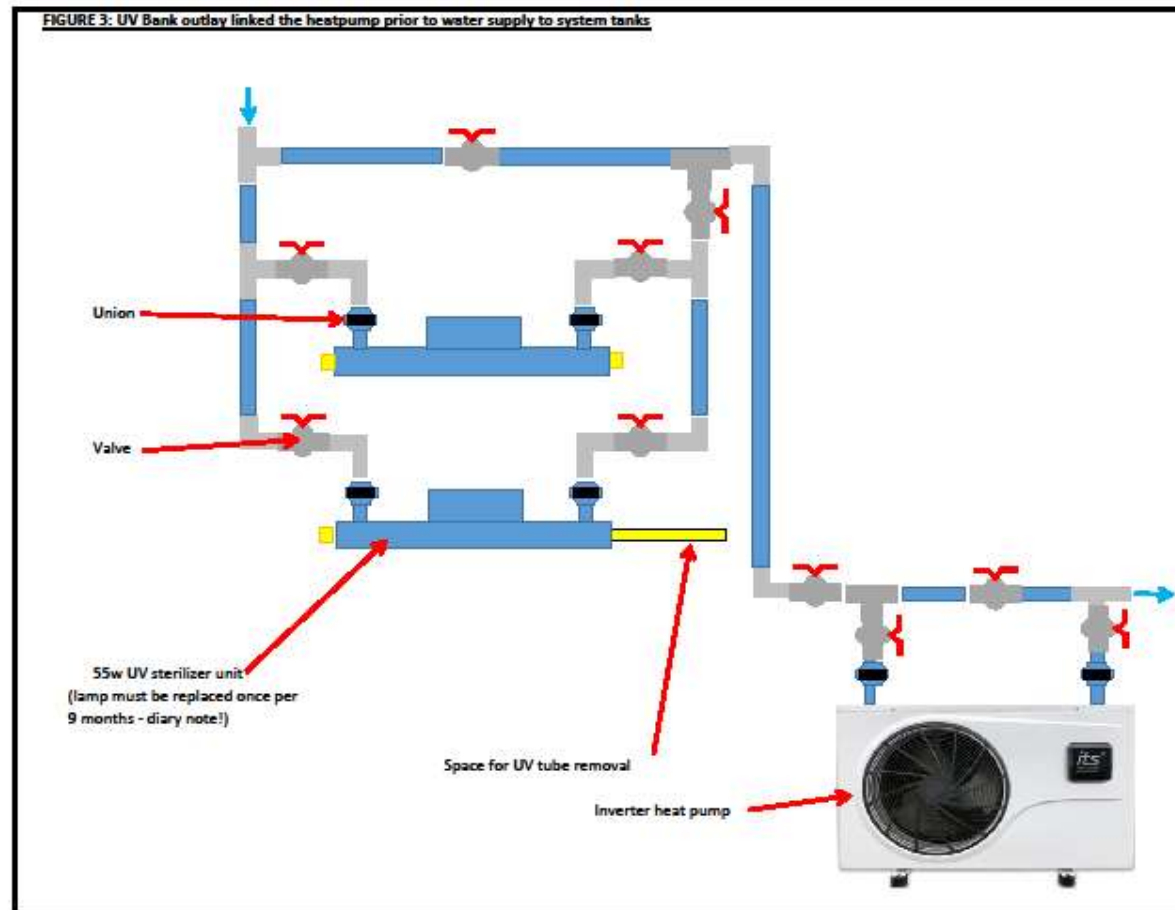
ANNEXURE B: ENVIRONMENTAL

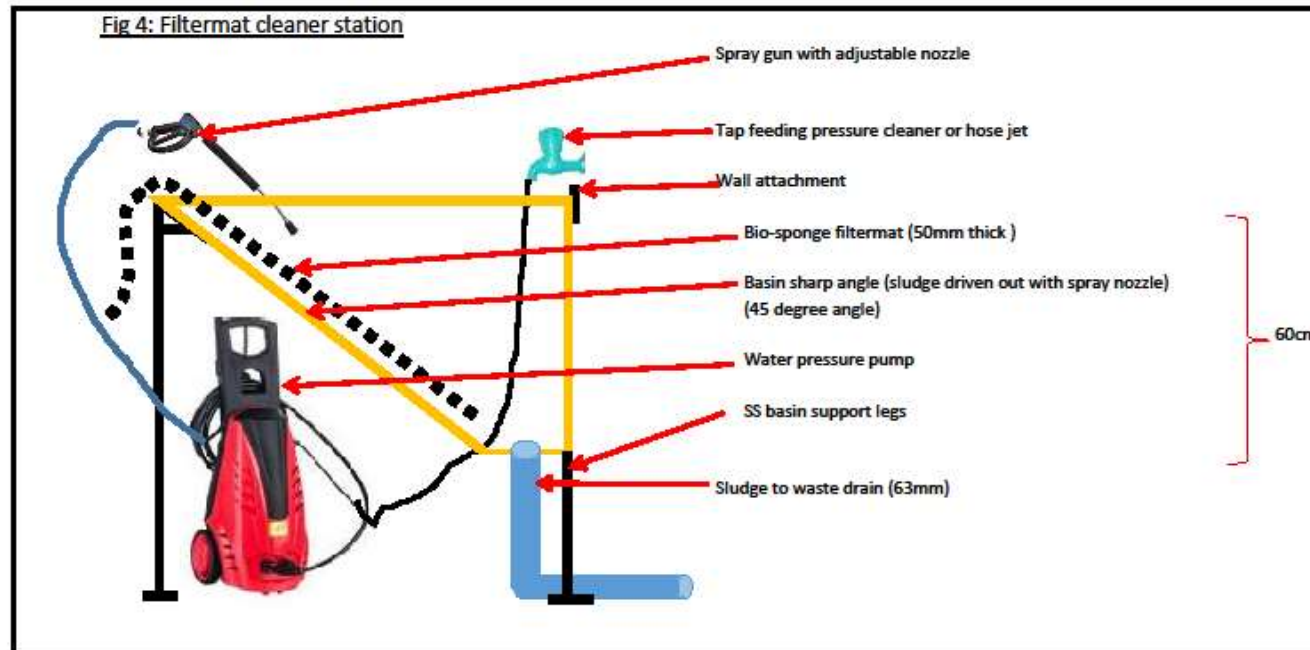
ANNEXURE C: HEALTH AND SAFETY SPECIFICATION

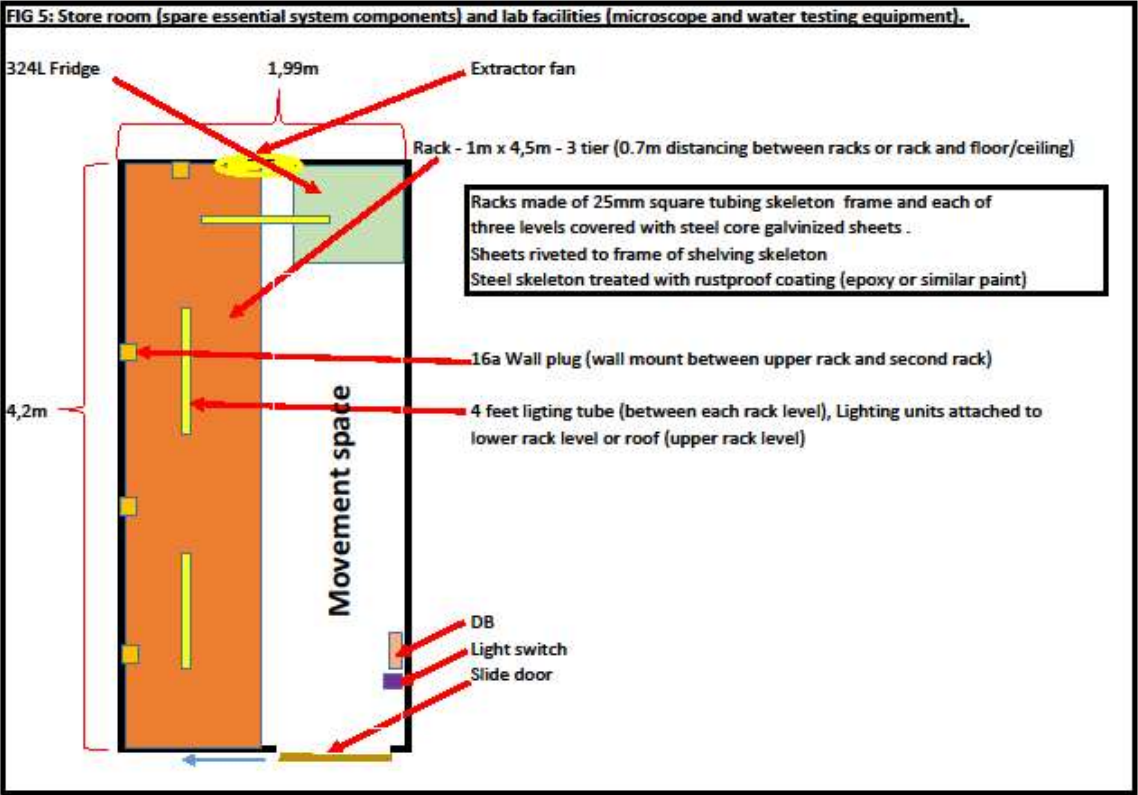


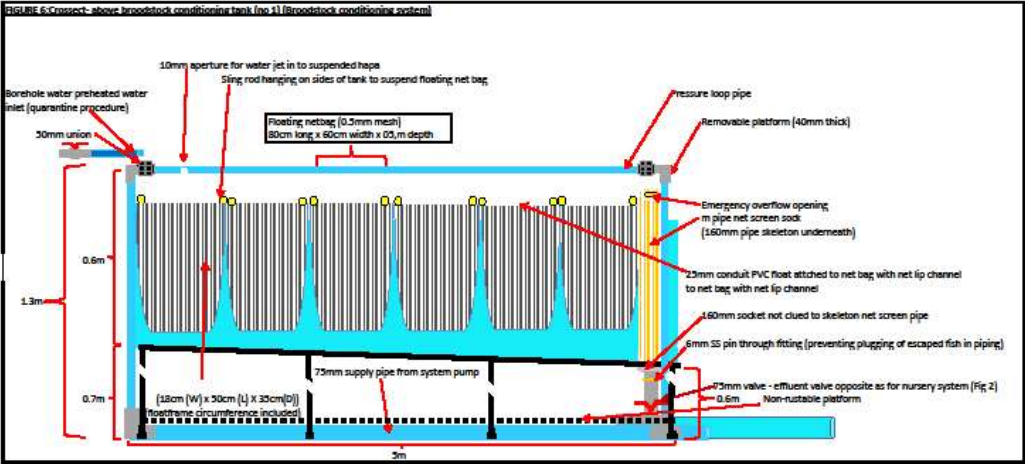


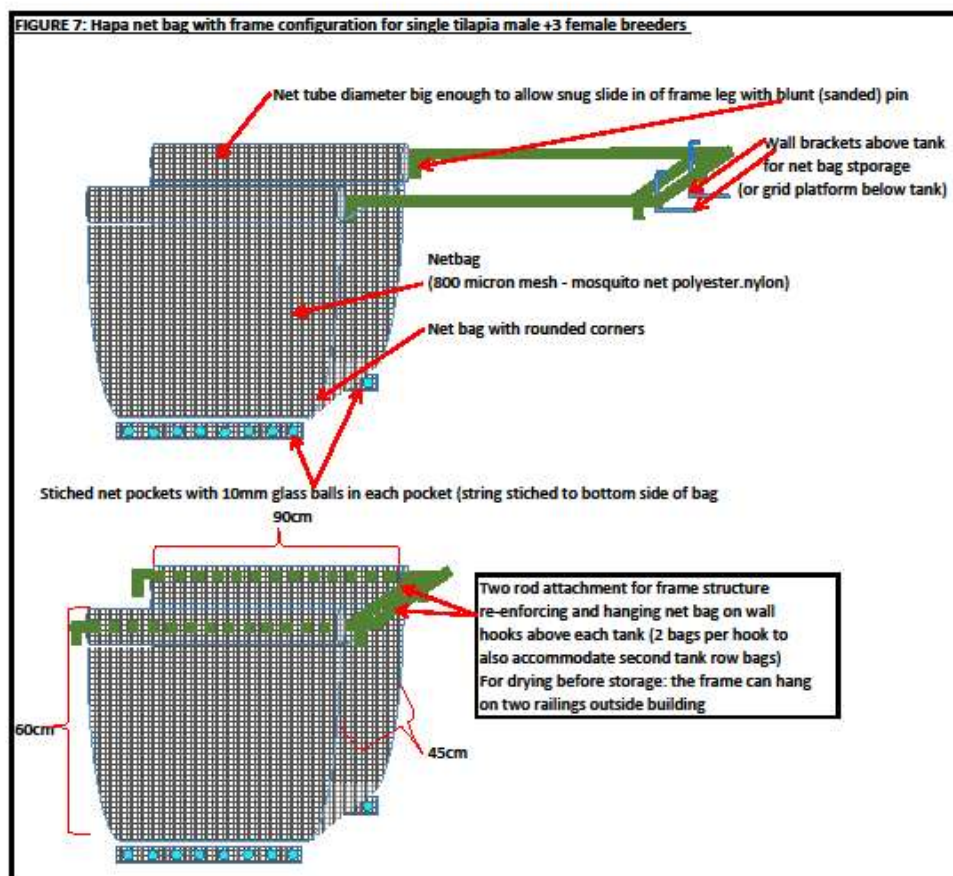












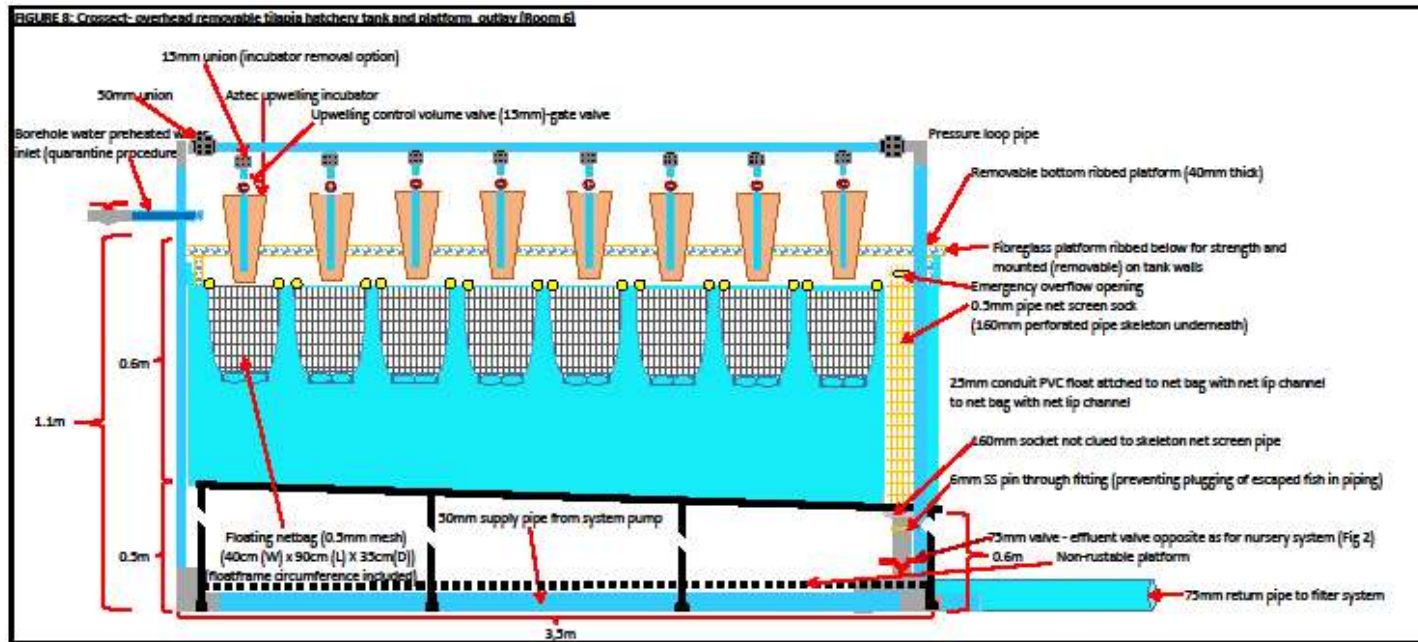
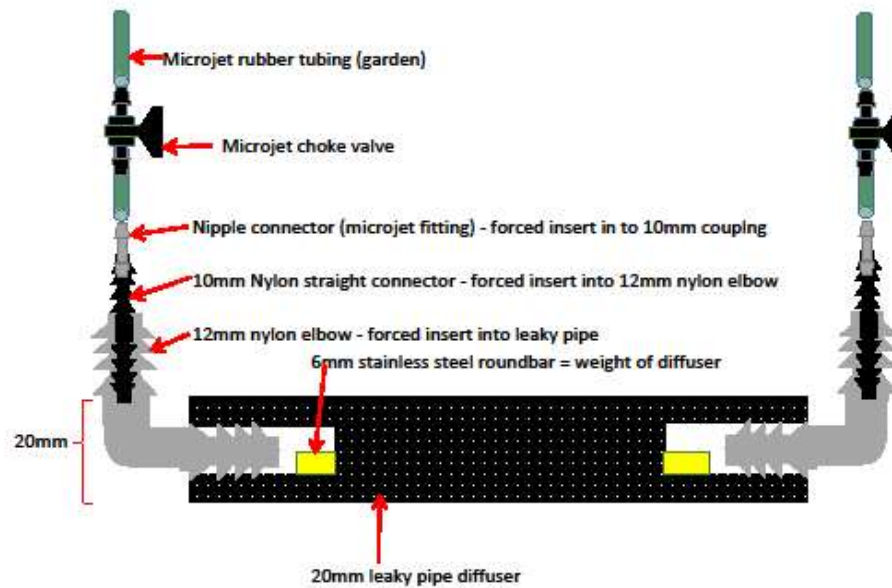
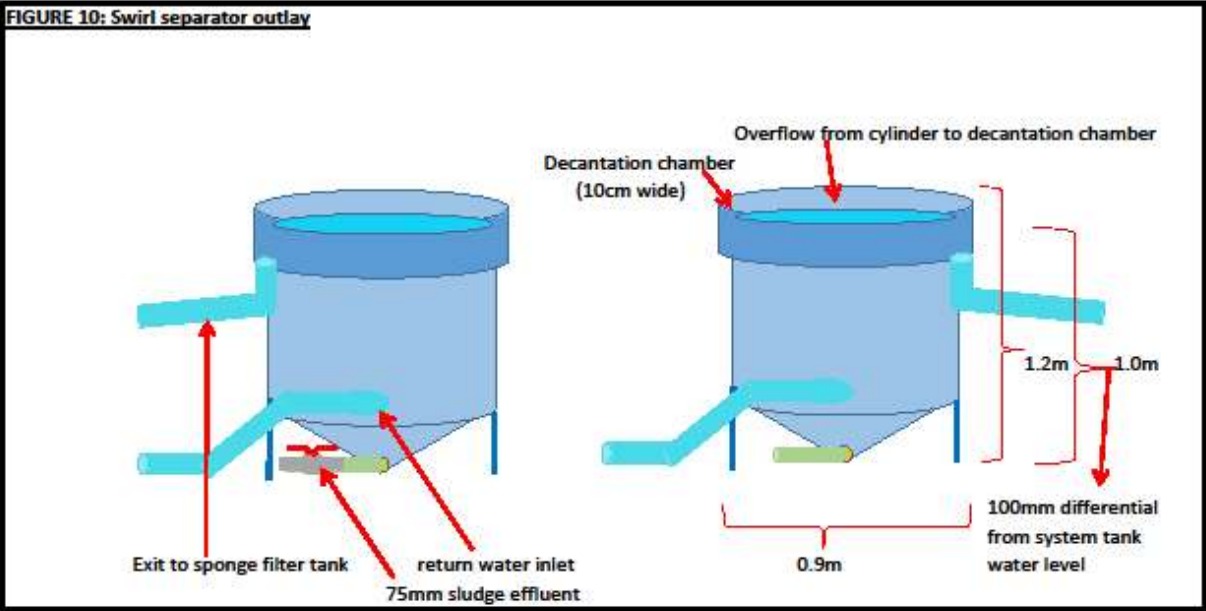


FIGURE 9: Leaky pipe diffuser construction





EMP and RODs here.

ANNEXURE C: HEALTH AND SAFETY SPECIFICATION

HEALTH AND SAFETY SPECIFICATION