



# CALL FOR BIDS

**BID NO: ECDC ECDC/INFRA/40/122024**

**BID SUBJECT: COMPLETION OF CIVIL, MECHANICAL AND ELECTRICAL INFRASTRUCTURE AT THE DIMBAZA WASTEWATER TREATMENT WORKS – PHASE 1**

**Consisting Of:**

**The Tender (Returnable) - This Document**

**The Bills of Quantities**

**Annexures**

**BIDDER NAME:** .....

**CSD No:** .....

**CRS No.:** .....

<b>CLOSING DATE:</b>	<b>31 January 2025</b>
<b>CLOSING TIME:</b>	<b>12h00</b>

.....

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<b>SECTION A: ABBREVIATIONS AND ACRONYMS</b>	
CIDB	Construction Industry Development Board
DTI	Department of Trade and Industry
ECDC	Eastern Cape Development Corporation
EME	Exempt Micro Enterprise
IRBA	Independent Regulatory Board of Auditors
PCCA	Prevention and Combating of Corrupt Activities Act 12 of 2004
PFMA	Public Finance Management Act (Act 1 of 1999)
PPPFA	Preferential Procurement Policy Framework Act (Act 5 of 2000)
QSE	Qualifying Small Enterprise
SABS	South African Bureau of Standards
SANAS	South African National Accreditation System
SARS	South African Revenue Service
SASAE	South African Standard on Assurance Engagements
SCM	Supply Chain Management
SMME	Small, Medium and Micro Enterprises
ToR	Terms of Reference
CSD	National Treasury Central Supplier Database for South African Government
<b>B: DEFINITIONS</b>	
Acceptable tender	Means any tender which, in all respects, complies with the specifications and conditions of tender as set out in the tender document.
Accreditation Body	Means the South African National Accreditation System or any other entity appointed by the Minister from time to time whose function it is to: Accrediting verification agencies Developing, maintaining, and enforcing of Verification Standards.
Affordable	Means (in terms of a PPP-Agreement) that the financial commitments to be incurred can be met by funds: Designated within ECDC's existing budget for the function to which the agreement relates; and Destined for ECDC in accordance with the relevant Treasury's future budgetary projections.
All applicable taxes	Includes value-added tax, pay as you earn, income tax, unemployment insurance fund contributions and skills development levies.
Bid	Means a written offer or proposal to supply goods and/or provide services, submitted in response to the ECDC's invitation to quote or submit proposals which includes advertised competitive bids, written price quotations or proposals.
Bid Specification	A specification that lays down the characteristics of goods to be procured or their related processes and production methods, or the characteristics of services to be procured or their related operating methods, including the applicable administrative provisions, and a detailed requirement relating to conformity assessment procedures that an entity prescribes and shall include TOR for specialised services.

Black People	Means 'African', 'Indian' and 'Coloured' people who are citizens of the Republic of South Africa by birth; or are citizens of the Republic of South Africa by naturalisation before the commencement date of the Constitution of South Africa Act (1993); or became citizens of the Republic of South Africa after the commencement of the of the Constitution of South Africa Act(1993), but who for the Apartheid policy that has been in place to that date, would have been entitled to acquire citizenship by naturalisation prior to that date.
Specific goal	<p>2.1. 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 in SBD  6.1 as may be supported by proof/ documentation stated in the conditions of this tender:</p> <p>2.2. 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—</p> <p>(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</p> <p>(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.</p>
Close Family Member	Shall mean: - member of the same household, parent (including adoptive parent), parent-in-law, son (including adoptive son), son-in-law, daughter (including adoptive daughter), daughter-in-law, step-parent, step-son, step-daughter, brother, sister, grandparent, grandchild, uncle, aunt, nephew, niece, the spouse or unmarried partner with relation to any of the person's above.
Code of Ethics	Refer to the ECDC Code of Ethics for Management and Staff as may be amended from time to time.
Comparative Price	Means the price after the factors of a non-firm price and all the unconditional discounts that can be utilised have been taken into consideration.
Consortium or Joint Venture	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.
Contract	Means the agreement that results from the acceptance of a bid by ECDC.
Designated Sector	Means a sector, sub-sector or industry that has been designated by the DTI in line with national development and industrial policies for local production, where on local produced goods or locally manufactured goods meet the stipulated minimum threshold for local production and content.
Duly Sign	Means a document that has been signed by the Chief Financial Officer or other legally responsible person nominated in writing by the Chief Executive, or senior member / person with management responsibility

	(close corporation, partnership or individual).
Exempt Micro Enterprise (EME)	Means an enterprise with a specified total annual revenue as per Department of Trade and Industry Codes of Good Practice on Broad Based Black Economic Empowerment.
Family Member	Means a husband or wife, any partner in a customary union according to indigenous law or any partner in a relationship where the parties live together in a manner resembling a marital partnership or a customary union; and any person related to either one or both persons referred above within the second degree through a marriage, a customary union, or a relationship or the third degree of consanguinity.
Firm Price	Means the price that is only subject to adjustments in accordance with the actual increase or decrease resulting from the change, imposition, or abolition of customs or excise duty and any other duty, levy, or tax, which, in terms of the law or regulation, is binding on the contractor and demonstrably has an influence on the price of any supplies, or the rendering costs of any service, for the execution of the contract.
Fronting	Means a deliberate circumvention or attempted circumvention of the B-BBEE Act and the Codes. Fronting commonly involves reliance on data or claims of compliance based on misrepresentation of facts, whether made by the party claiming compliance or by any other person.
Functionality	Means the measurement according to predetermined norms, as set out in the tender documents, of a service or commodity that is designed to be practical or useful, working or operating, taking into account, among other factors, the quality, reliability, viability and durability of a service and the technical capacity and ability of the tenderer.
Imported Content	Means that portion of the tender price represented by the cost of components, parts or materials which have been or are still to be imported (whether by the bidder or its subcontractors) and which costs are inclusive of the costs abroad (this includes labour or intellectual property costs), plus freight and other direct importation costs, such as landing costs, dock dues, import duty, sales duty or other similar tax or duty at the South African port of entry.
In the service of the state	Means: an employee of any municipality who has a performance contract with the municipality and is employed on a permanent, temporary, or short-term basis. an employee or public servant of any national or provincial government as defined in terms of Public Services Act. a member who – is a councillor of any municipal council as defined in the Local Government Municipal Structures Act (Act No 117 of 1998); is a politician serving in any provincial legislature; or is a politician serving in the National Assembly or the National Council of Provinces, a member of the board of directors of any municipal entity, an employee and a member of a government owned entity as defined in the Public Finance Management Act (Act No 1 of 1999); and / or such other meaning ascribed to it by National Legislation

	from time to time.
Local content	Means a portion of the tender price, which is not included in the imported content, provided that local manufacture does take place.
Non-firm prices	Means all prices other than "firm" prices.
Person	Includes a juristic person.
Price Quotation	An estimate describing the product, stating its price, time of shipment, and specifies the terms of the sale and terms of the payment.
Property	Includes all movable and immovable property and intellectual property belonging to ECDC.
Public Private partnership	Means a commercial transaction between ECDC and a private party in terms of which: the private party either performs a function o.b.o. ECDC for a specified or indefinite period or acquires the use of state property for its own commercial purposes for a specified or indefinite period. the private party receives a benefit for performing the function or by utilizing state property, either by way of: compensation from a revenue fund charges or fees collected by the private party from users or customers of a service provider to them; or a combination of such compensation and such charges or fees.
Qualifying Small Entity	Means an enterprise with a specified total annual revenue as per Department of Trade and Industry Codes of Good Practice on Broad Based Black Economic Empowerment.
Rand value	Means the total estimated value of a contract in South African currency, calculated at the time of bid invitations, and includes all applicable taxes and excise duties.
Related enterprise	Means an entity controlled by a measured entity whether directly or indirectly controlled by the natural persons who have direct or indirect control over that measured entity or the immediate family of those natural persons.
Service Level Agreement	Shall have the same meaning assigned as "Contract".
Shareholder	Means a person who owns shares in the company and is actively involved in the management of the enterprise or business and exercises control over the enterprise.
State	Means: any national or provincial department, national or provincial public entity or constitutional institution within the meaning of the PFMA any municipality or municipal entity national Assembly or the national Council of Provinces; or parliament.
Stipulated minimum threshold	Means that portion of local production and content as determined by the DTI.
Sub-Contract	Means the primary contractor's assigning, leasing, making out work to, or employing, another person to support such primary contractor in the execution of part of a project in terms of the contract.
Tender	The same meaning is assigned as "Bid" above.

Threshold	Shall mean the financial limits on the value of goods or services to be procured as set and prescribed in this policy which shall determine the manner in which these goods and services will be procured.
Total revenue	Means the total income of an entity from its operations as determined under South African Generally Accepted Accounting Practice.
Trust	Means the arrangement through which the property of one person is made over or bequeathed to a trustee to administer such property for the benefit of another person.
Trustee	Means any person, including the founder of a trust, to whom property is bequeathed in order for such property to be administered for the benefit of another person.
Value for Money	Means that the item (public-private partnership agreement) results in a net benefit to ECDC defined in terms of cost, price, quality, quantity, or risk transfer, or a combination thereof.

## **Part T1: Tendering Procedures**

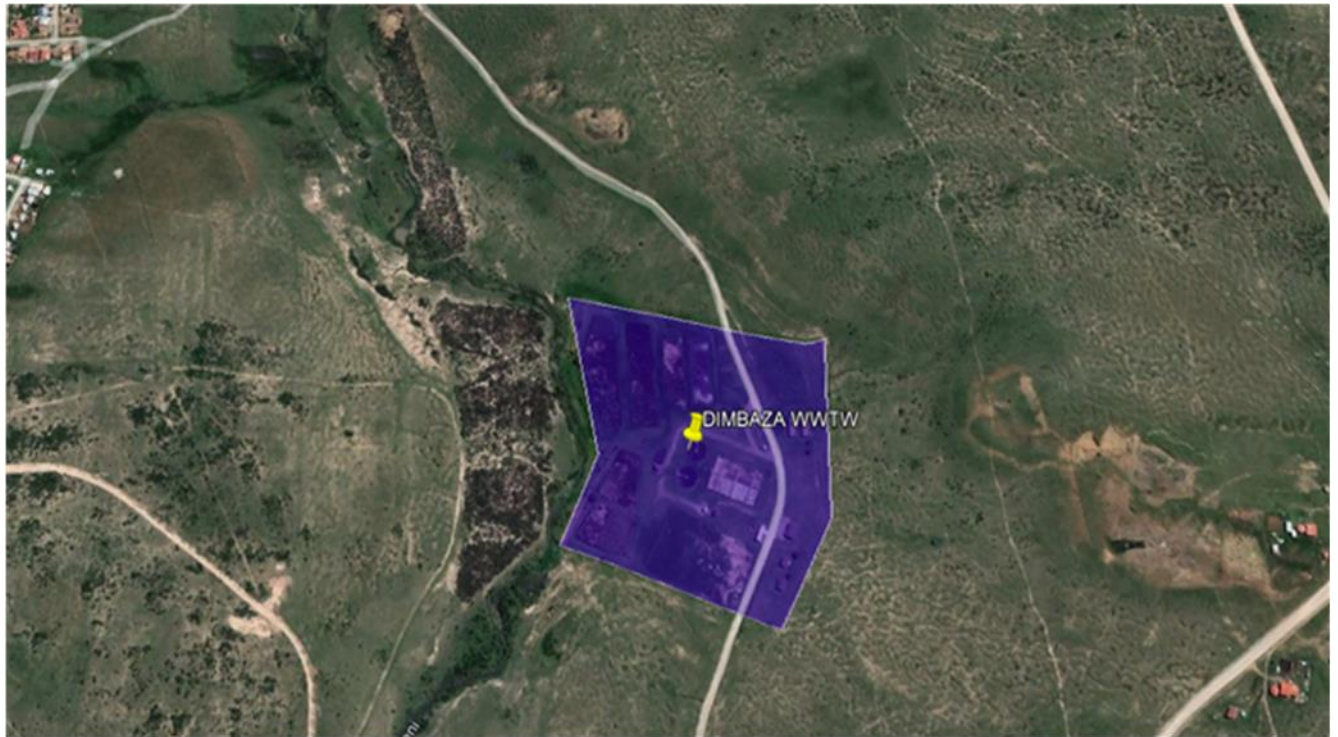


**T.1.1**  
**TENDER NOTICE AND INVITATION TO BID**

**1. Invitation to Bid**

Eastern Cape Development Corporation (ECDC) wishes to engage with a suitable contractor with a CIDB Grading of **7ME** or Higher for the Completion of Civil, Mechanical and Electrical Infrastructure at The Dimbaza Wastewater Treatment Works – Phase 1.

The site is in Dimbaza, Eastern Cape, South Africa.



Dimbaza Wastewater Treatment Works - GPS co-ordinates of the site are 32°51'18.7"S 27°14'08.8"E

A Detailed scope of services is described in Scope of Work Section below.

**2. Eligibility to Bid**

- a) Bidders should meet the Mandatory Requirements in order to be evaluated T2.1
- b) **It is estimated that bidders should have a CIDB grading of 7ME or Higher.**

Only those tenderers who are registered with the CIDB prior to submissions of bid with a contractor grading equal in accordance with the sum tendered, or a value determined in accordance with Regulation **25 (1B)** or **25 (7A)** of the **Construction Industry Development Regulations, for the above-mentioned grading classes of construction work, are eligible to have their tenders evaluated.**

**3. Payment of Bid Document**

No payment is due to obtain tender documents.

**4. Collection /Availability of Documents**

Documents will be available for downloading from the ECDC website at [www.ecdc.co.za](http://www.ecdc.co.za).

## 5. Queries on Bid Document

Queries relating to the issue of these documents may be addressed to Ms P Casa,  
E- Mail at [tenders@ecdc.co.za](mailto:tenders@ecdc.co.za) and [cc\\_pcasa@ecdc.co.za](mailto:cc_pcasa@ecdc.co.za)

## 6. Estimated Timeline

Activity	Date	Time
1.	<b>Placing of Advert</b> Daily Dispatch, E-tender, CIDB, Load on ECDC Website <b>13 December 2024</b>	n/a
2.	<b>Compulsory Briefing Meeting</b> A compulsory briefing will be held at the Dimbaza Wastewater Treatment Works on the <b>14 January 2025 starting at 11h00.</b>	
3.	<b>Last day of questions</b>	<b>5 days before closing date</b> <b>16H00</b>
4.	<b>Final date of submission of bids</b>	<b>31 January 2025</b> <b>12h00</b>
5.	<b>Bid Validity</b>	<b>90 days</b>

### 6.1. Briefing Session and Site Location

A compulsory briefing meeting to be held at the Dimbaza Wastewater Treatment Works on 14 January 2025 starting at 11h00.

Coordinates are **32°51'18.7"S 27°14'08.8"E**

For any enquiries relating to this Bid please email the procurement department at [tenders@ecdc.co.za](mailto:tenders@ecdc.co.za) and [cc\\_pcasa@ecdc.co.za](mailto:cc_pcasa@ecdc.co.za), attention Ms P Casa.

Communication with the Bidders and any clarity on Queries Bid will be posted on the website at [www.ecdc.co.za](http://www.ecdc.co.za) and will also be communicated to the bidders via email where the Bidder has indicated to ECDC that they are interested in submitting a bid.

**Bidders must visit the site to ensure that their proper assessment of the site is done and that the Bill of Quantities is priced correctly.**

**Bidders must acquaint themselves of the current site conditions, works complexity and associated safety risks.**

**ECDC will only consider bidders that have attended the briefing meeting.**

**Telephonic, emailed, telexed, facsimile, and late tenders will not be accepted.**

Tenders may only be submitted on the tender documentation that is issued.

Requirements for sealing, addressing, delivery, opening and assessment of tenders are stated in the **Tender Data**.

## T1.2 Tender Data

The conditions of tender are the Standard Conditions of Tender as contained in Annex C of the CIDB Standard for Uniformity in Construction Procurement (January 2019) as published in Government Gazette No 42622, Board Notice 423 of 2019 on the 8<sup>th</sup> of August 2019 (See [www.cidb.org.za](http://www.cidb.org.za)).

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 it and the Standard Conditions of Tender.

Each item of data given below is cross-referenced to the clause in the Standard Conditions of Tender to which it mainly applies.

Clause number	Tender Data
A.1.1	The employer is <b>Eastern Cape Development Cooperation (ECDC)</b>
A.1.2	<p>The Tender Documents issued by the Employer comprise the following documents:</p> <p><b>THE TENDER</b></p> <p><b>Part T1: Tendering procedures</b></p> <p>T1.1 - Tender notice and invitation to tender T1.2 - Tender data</p> <p><b>Part T2: Returnable documents</b></p> <p>T2.1 - List of returnable documents T2.2 - Returnable schedules</p> <p><b>THE CONTRACT</b></p> <p><b>Part C1: Agreements and Contract data</b></p> <p>C1.1 - Form of offer and acceptance C1.2 - Contract data C1.3 – Performance Guarantee C1.4 – Adjudicator's Contract</p> <p><b>Part C2: Pricing data</b></p> <p>C2.1 - Pricing Instructions C2.2 - Bill of Quantities</p> <p><b>Part C3: Scope of work</b></p> <p>C3.1 - Scope of work C3.2 – Conditions of Scope of Work</p> <p><b>Part C4 : Site Information/Drawings</b></p> <p>C4.1 - Health and Safety Specification C4.2 - Mechanical and Electrical Specification C4.3 - Drawings</p>

A.1.4	<p><b>During Tender stage all communication shall be through the Procurement Department for attention:</b>  <b>Name: Ms. P Casa</b>  Address: ECDC Head Office at  Ocean Terrace Park  Moore Street  Quigney,  East London</p> <p>Tel: 043 704 5644  E-mail: <a href="mailto:tenderes@ecdc.co.za">tenderes@ecdc.co.za</a> cc <a href="mailto:pcasa@ecdc.co.za">pcasa@ecdc.co.za</a></p>
A.2.1	<p>Only those tenderers who are registered with the CIDB or are capable of being so prior to the evaluation of submissions, in a contractor grading designation equal to or higher than a contractor grading designation determined in accordance with the sum tendered, or a value determined in accordance with CIDB Regulations are eligible to have their tenders evaluated.</p> <p><b>Joint ventures are eligible to submit tenders provided that:</b></p> <ol style="list-style-type: none"> <li>1. every member of the joint venture is registered with the CIDB,</li> <li>2. the lead partner has a contractor grading designation in the <b>ME (Mechanical Engineering)</b> class of construction work; not lower than one level below the required grading designation in the class of works of construction under consideration and possess the required recognition status.</li> <li>3. the combined contractor grading designation calculated in accordance with the Construction Industry Development Regulations is equal to or higher than a contractor grading designation determined in accordance with the sum tendered for a <b>7ME or Higher</b> class of construction work or a value determined in accordance with Regulation 25 (1B) or 25(7A) of the Construction Industry Development Regulations.</li> </ol>
A.2.1	<p><b>Not Applicable for this Bid</b></p> <p>The following tenderers who are registered with the CIDB, or are capable of being so registered prior to the evaluation of submissions, are eligible to have their tenders evaluated:</p> <ol style="list-style-type: none"> <li>a) contractors who have a contractor grading designation equal to or higher than a contractor grading designation determined in accordance with the sum tendered, or a value determined in accordance with Regulation 25 (1B) or 25(7A) of the Construction Industry Development Regulations, for an 7ME class of construction work; and</li> <li>b) contractors registered as potentially emerging enterprises with the CIDB who are registered in one contractor grading designation lower than that required in terms of a) above and who satisfy the following criteria **</li> </ol>

A.2.7	<p>The arrangements for a compulsory clarification meeting are as stated in the Tender Notice and Invitation to Tender.</p> <p>Tenderers must sign the attendance list in the name of the tendering entity. Addenda will be issued to, and tenders will be received only from those tendering entities appearing on the attendance list.</p>
A.2.12	<p><b>Not Applicable for this Bid</b></p> <p>Main tender offers are not required to be submitted together with alternative tenders.</p>
A.2.12	<p>No alternative tender offers will be considered.</p>
A.2.12	<p><b>Not Applicable for this Bid</b></p> <p>If a tenderer wishes to submit an alternative tender offer, the only criteria permitted for such alternative tender offer is that it demonstrably satisfies the Employer's standards and requirements, the details of which may be obtained from the Employer's Agent.</p> <p>Calculations, drawings and all other pertinent technical information and characteristics as well as modified or proposed Pricing Data must be submitted with the alternative tender offer to enable the Employer to evaluate the efficacy of the alternative and its principal elements, to take a view on the degree to which the alternative complies with the Employer's standards and requirements and to evaluate the acceptability of the pricing proposals. Calculations must be set out in a clear and logical sequence and must clearly reflect all design assumptions. Pricing Data must reflect all assumptions in the development of the pricing proposal.</p> <p>Acceptance of an alternative tender offer will mean acceptance in principle of the offer. It will be an obligation of the contract for the tenderer, in the event that the alternative is accepted, to accept full responsibility and liability that the alternative offer complies in all respects with the Employer's standards and requirements.</p> <p>The modified Pricing Data must include an amount equal to 5% of the amount tendered for the alternative offer to cover the Employer's costs in confirming the acceptability of the detailed design.</p>
A.2.13. 3	<p><b>One original duly signed (by authorised representative) and completed bid document (hardcopy) MUST be submitted inclusive of the terms and conditions of this bid document with any attachments/annexures /returnable required for this Bid.</b></p> <p>A PDF soft copy of the duly signed and completed original bid (e.g., PDF format in Flash drive/disc) should be submitted with the Original duly signed and completed hardcopy bid document however non-submission of a soft copy will not result in the Bid being disqualified.</p> <p>ECDC will not be responsible if your bid is not submitted on time. All bid documents are to be <b>completed in permanent black ink.</b></p> <p><b>No alterations of the Bid Document will be allowed.</b></p> <p><b>No correction fluid will be allowed. Corrections should be initialled.</b></p>

<p>A.2.13.5</p> <p>A.2.15.1</p>	<p>Valid originally firmly bound signed complete tender document (by authorized representative) must be placed in the Bid Box on or before the final date and time of submission.</p> <p>The employer's details and address for delivery of tender offers and identification details that are to be shown on each tender offer package are:</p> <p>a) <b>Location of tender box:</b></p> <p>Bid Reference Number: <b>ECDC/INFRA/40/122024</b></p> <p>Project Name: <b>COMPLETION OF CIVIL, MECHANICAL AND ELECTRICAL INFRASTRUCTURE AT THE DIMBAZA WASTEWATER TREATMENT WORKS – PHASE 1</b></p> <p>Delivered at Physical Address: <b>ECDC Head Office at ECDC House, Ocean Terrace Park, Moore Street, Quigney, East London.</b></p> <p>Bids/Tender offers must be submitted on or before the final date and time of submission of bids as indicated in the Tender Notice and invitation to Tender.</p> <p><b>It is the Bidders responsibility to ensure that all the documents are received on time. The bid box is open on weekdays between 08h00 and 16h30</b></p>
<p>A.2.13.6</p> <p>A.3.5</p>	<p><b>Not Applicable for this Bid</b> A two-envelope procedure is required.</p>
<p>A.2.13.9</p>	<p>Telephonic, email, telegraphic, telex, email, or facsimile tender offers <b>will not</b> be accepted.</p>
<p>A.2.15</p>	<p>The closing time for submission of tender offers is as stated in the Tender Notice and Invitation to Tender.</p>
<p>A.2.16</p>	<p>The tender offer validity period is 90 days.</p>
<p>A.2.18</p>	<p><b>Not applicable to this bid</b></p> <p>The tenderer shall, when requested by the Employer to do so, submit the names of all management and supervisory staff that will be employed to supervise the Labour-Intensive portion of the works together with satisfactory evidence that such staff members satisfy the eligibility requirements. Tenders to submit the associated names being part of the returnable documents failure to submit can result in the tender being eliminated.</p>
<p>A.2.19</p>	<p>Access shall be provided for the following inspections, tests, and analysis:</p> <p>The site is available for viewing the location of the works.</p>
<p>A.2.20</p>	<p>The tenderer is required to submit with his tender a letter of intent from an approved insurer undertaking to provide the Performance Bond to the format included in Contract Data/Contract of this procurement document.</p>

A.2.22	<b>Not Applicable for this Bid</b> Return all retained tender documents within 28 days after the expiry of the validity period.
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A.2.23	<p>The tenderer is required to submit with his tender:</p> <p><b>1) Tax Compliance</b></p> <p>Bidders must ensure compliance with their tax obligations.</p> <p>In Bids where Consortia/Joint venture/Sub-Contractors are involved; each party must submit a separate proof of Tax Compliance Status.</p> <p>The bidders' Tax status will be verified on the CSD prior to the bid award and where the preferred bidders is not compliant, <b>7 working days</b> will be granted for remedy, failing which the bidder will be disqualified.</p>
A.3.1.1	<p>The Employer will respond to requests for clarification received up to 5 working days before the tender closing time.</p>
A.3.4	<p><b>Opening of the Bids</b></p> <p>There will be <b>NO PUBLIC OPENING</b> of the Bids received; however, the list of bids received may be published on the ECDC website and will be sent to the Bidders that have submitted bids via email.</p> <p>There will be no discussions with any Bidder/Interested Party that Submitted Proposals/ Bids until evaluations have been complete. Any subsequent discussions shall be at the discretion of ECDC.</p>
A.3.11.1	<p>The financial offer will be reduced to a comparative basis.</p>
A.3.11.2	<p><b>Not Applicable for this Bid</b></p> <p>The procedure for the evaluation of responsive tenders is Method 1.</p>



### A.3.11.3 Evaluation Criteria

This bid is subject to the Preferential Procurement Policy Framework Act and the Preferential Procurement Regulations 2022 as applicable to provincial government business enterprises as listed under schedule 3(D) of the Public Finance Management Act and the ECDC Procurement Policy as amended from time to time.

The procedure for evaluation of tenders is as follows:

<p><b>Stage 1</b></p>	<p>Service Providers are to meet all the Mandatory Requirements to be evaluated further. Failure to submit the Mandatory Requirements as required will result in the bid being disqualified.</p> <p>Involves a valuation of local production and content (goods) only. At this stage Bidders must meet the minimum threshold for local production and content as determined by the DTI for local content before they will be evaluated in terms of preferential procurement points.</p> <p>Bidders to complete the Declaration for Local Production and Content for Designated Sectors and Local Content Declaration: <b>Summary Schedule (Annexure C)</b></p>
<p><b>Stage 2</b></p>	<p><b>Functionality:</b> Involves an evaluation of Functionality only – At this stage Bidders must score a minimum score of <b>70% (49/70 points)</b> for functionality (services) to be evaluated for Stage 3 (Preferential procurement points).</p>
<p><b>Stage 3</b></p>	<p><b>Preferential Procurement points:</b> <b>Price:</b> Points will be calculated for price on the relevant prices in accordance with the preference point system, 80/20.</p>

Functionality Criteria	Maximum number of points
Completed Similar Projects	25
Experience and Qualifications of the Key Personnel	30
Implementation Plan/Methodology	10
Programme	5
<b>Maximum possible score for functionality (M<sub>s</sub>)</b>	<b>70</b>

A.3.11.3	<p>The evaluation criteria and maximum score in respect of each of the criteria are as follows: (Details on Functionality Evaluation are on T2.1)</p> <p>Functionality shall be scored by not less than three evaluators in accordance with the Functionality Criteria Evaluation below.</p> <p>The minimum percentage to be achieved for functionality is <b>70% (or 49/70 points)</b>.</p>
A.3.13	<p>Tender offers will only be accepted if:</p> <ul style="list-style-type: none"> <li>a) the tenderer is Tax Compliant <ul style="list-style-type: none"> <li>✓ tenderers must ensure compliance with their tax obligations.</li> <li>✓ in Bids where Consortia/Joint venture/Sub-Contractors are involved; each party must submit a separate proof of Tax Compliance Status.</li> <li>✓ the tenderer Tax status will be verified on the CSD prior to the bid award and where the preferred bidder is not compliant, <b>7 working days</b> will be granted for remedy, failing which the bidder will be disqualified.</li> </ul> </li> <li>b) the tenderer is registered with the Construction Industry Development Board in an appropriate contractor grading designation.</li> <li>c) is not under restrictions, or has principals who are under restrictions, preventing participating in the employer's procurement.</li> <li>d) the tenderer has not: <ul style="list-style-type: none"> <li>i) abused the Employer's Supply Chain Management System; or</li> <li>ii) failed to perform on any previous contract and has been given a written notice to this effect.</li> </ul> </li> <li>e) the tenderer is able, in the opinion of the employer, to perform the contract free of conflicts.</li> <li>f) the employer is reasonably satisfied that the tenderer has in terms of the Construction Regulations, 2003, issued in terms of the Occupational Health and Safety Act, 1993, the necessary competencies and resources to carry out the work safely.</li> <li>g) the tenderer can, as necessary and in relation to the proposed contract, demonstrate that he or she possesses the professional and technical qualifications, professional and technical competence, financial resources, equipment and other physical facilities, managerial capability, reliability, experience and reputation, expertise, and the personnel, to perform the contract.</li> <li>h) the tenderer has the legal capacity to enter the contract.</li> <li>i) the tenderer is not; insolvent, in receivership, under Business Rescue as provided for in chapter 6 of the Companies Act No. 2008, bankrupt or being wound up, has his/her affairs administered by a court or a judicial officer, has suspended his/her business activities or is subject to legal proceedings in respect of any of the foregoing;</li> <li>j) the tenderer complies with the legal requirements, if any, stated in the tender data; and</li> </ul>
A.3.17	<p>The number of paper copies of the signed contract to be provided by the employer is one (1).</p>

## **Part T2: Returnable documents**

T2.1 - List of returnable  
documents

T2.2 - Returnable  
schedules

## 1. Evaluation Criteria

This bid is subject to the CIDB and Preferential Procurement Policy Framework Act and the Preferential Procurement Regulations 2022 as applicable to provincial government business enterprises as listed under schedule 3(d) of the Public Finance Management Act and the ECDC Procurement Policy as amended from time to time.

The procedure for evaluation of tenders is as follows:

<b>Stage 1</b>	<p>Service Providers are to meet all the Mandatory Requirements in order to be evaluated further. Failure to submit the Mandatory Requirements as required will result in the bid being disqualified.</p> <p>Stage 1 involves a valuation of local production and content (goods) only. At this stage Bidders must meet the minimum threshold for local production and content as determined by the DTI for local content before they will be evaluated in terms of preferential procurement points.</p> <p>Bidders to complete the Declaration for Local Production and Content for Designated Sectors and Local Content Declaration: <b>Summary Schedule (Annexure C)</b></p>
<b>Stage 2</b>	<p><b>Functionality:</b> Involves an evaluation of Functionality only – At this stage Bidders must score a minimum score of <b>70% (49/70)</b> for functionality (services) in order to be evaluated for Stage 3 (Preferential procurement points).</p>
<b>Stage 3</b>	<p><b>Preferential Procurement points:</b> <b>Price:</b> Points will be calculated for price on the relevant prices in accordance with the preference point system, <b>80/20</b>.</p>

## T2.1 MANDATORY LIST OF TENDER RETURNABLES

Service Providers are to meet all the Mandatory Tender Requirements in order to be evaluated further for Stage 1. Failure to submit the Mandatory Requirements as required will result in this bid being disqualified.

Description	Disqualification if not submitted with Bid Document or Bidder is found to be Non-Compliant at the Time of Bid Close	Mandatory Requirement for Award
<p>1. <b>Bidders must be registered on the National Treasury Central Supplier Database (CSD).</b> The following information will be verified on the National Treasury Central Supplier Database:</p> <ul style="list-style-type: none"> <li>• Business Registration including details of directorship and membership, - The bidders' Business Registration Status will be verified on the CSD prior to the bid award and where the preferred bidder's status is under deregistration, <b>7 working days</b> will be granted for remedy, failing which the bidder will be disqualified.</li> <li>• ID Number,</li> <li>• Government Employee</li> <li>• Tender Defaulting and Restriction Status. Should the Tender be a restricted supplier or a defaulting supplier they will be disqualified.</li> </ul> <p><b><u>Onus on the Service Provider</u></b></p> <p>Onus is on the Service Provider to make sure that all these are active and compliant on the CSD at the time of bid closing and tender award. ECDC will verify if the Service Provider has been registered on CSD. Service Provider to submit CSD Number as required in the Cover Page. <b>It is the responsibility of the Service Provider to ensure that the correct CSD Number is provided.</b></p> <p>If Service Provider is not registered on CSD by the time of closing of the bid, they will not be</p>	<p style="text-align: center;">Yes</p>	<p style="text-align: center;">Yes</p>

	<p>considered for evaluation.</p> <p><b><u>Directors in the Service of State</u></b></p> <p>Where a person within the Bidding Entity is an Employee of the State, Bidder should</p> <ol style="list-style-type: none"> <li>a. submit a signed letter on a letter head from their Accounting Officer/Accounting Authority (AO/AA of the Government Institution where they are employed) stating that they are not prohibited from conducting business with the State in terms of Section 8 of the Public Administration Management Act, 2012 (Act No.11 of 2014- "The PFMA")</li> <li>b. submit a signed letter on a letter head from their AO/AA granting permission to perform other remunerative work outside of their employment where the PAMA does not apply to such an employee.</li> </ol> <p><b>ECDC reserves the right to verify such information from their AO/AA.</b></p> <p><b><u>JV's and Consortium</u></b></p> <p>Where the Bidder is a JV/Consortium, each firm must be registered on the CSD.</p>		
2.	<p><b>Tax Compliance Requirements:</b></p> <ul style="list-style-type: none"> <li>• Bidders must ensure compliance with their tax obligations.</li> <li>• The bidders' Tax status will be verified on the CSD prior to the bid award and where the preferred bidders is not compliant, <b>7 working days</b> will be granted for remedy, failing which the bidder will be disqualified.</li> <li>• In Bids where Consortia/Joint venture/sub-contractors are involved, each party must submit a separate proof of Tax Compliance Status Certificate/SARS Pin Number/CSD Number.</li> </ul>	No	Yes

3.	<p><b>CIDB Requirements:</b></p> <p>Only those tenderers who are registered with the CIDB, or are capable of being so prior to the evaluation of submissions, in a contractor grading designation equal to or higher than a contractor grading designation determined in accordance with the sum tendered, or a value determined in accordance with <b>Regulation 25 (1B) or 25(7A) of the Construction Industry Development Regulations, for a 7ME (Mechanical Engineering) or higher</b> class of construction work, are eligible to have their tenders evaluated.</p> <p><b>Joint ventures are eligible to submit tenders provided that:</b></p> <ol style="list-style-type: none"> <li>1. every member of the joint venture is registered with the CIDB.</li> <li>2. the lead partner has a contractor grading designation in the <b>ME (Mechanical Engineering)</b> class of construction work; not lower than one level below the required grading designation in the class of works construction works under considerations and possess the required recognition status.</li> <li>3. the combined contractor grading designation calculated in accordance with the Construction Industry Development Regulations is equal to or higher than a contractor grading designation determined in accordance with the sum tendered for a GB class of construction work or a value determined in accordance with Regulation 25 (1B) or 25(7A) of the Construction Industry Development Regulations.</li> </ol> <p><b>ECDC will verify whether the Bidders have an active and valid CIDB registration as required above</b></p>	Yes	Yes <b>7ME or Higher</b>
4.	<p><b>Annexure C – Supplier Information (Completed and Signed by the Delegated Authority) Attach Delegation of Authority</b></p>	Yes	Yes
5.	<p><b>Annexure L – C.1.1 Form of Offer and Acceptance Offer (Completed and Signed by the Delegated Authority) Attach Delegation of Authority.</b></p>	Yes	Yes
6.	<p><b>Annexure G - (SBD 4): Bidders disclosure. (Completed and Signed by the Delegated Authority) Attach Delegation of Authority.</b></p> <p><b>Important Note:</b></p> <ul style="list-style-type: none"> <li>✓ <b>Bidders should declare all the entities (companies) they have interest (directorship/shareholder/member etc) in</b></li> </ul>	Yes	Yes

	<p><b>whether or not those companies are bidding for this contract</b></p> <p>✓ <b>Bidders can check their CSD and CIPC for the companies they have interest in.</b></p>		
7.	<p><b>Annexure H: Statement of consent to data processing (Completed and Signed by the Delegated Authority) Attach Delegation of Authority.</b></p>	No	Yes
8.	<p><b>Declaration with regards to Company /Firm Location</b></p> <p><b>Attach</b> a proof of address to claim points for the Eastern Cape base locality as the specific goal as advised in the tender / quotation qualifies the company/firm for the PPR of 2022 preference points claim.</p> <p><b>Failure to submit the declaration and proof of address for eachJV /Consortium member may result in awarding of 0 (zero) points preference points under Eastern Cape Locality.</b></p> <p>This information will be verified from the FICA documents (PhysicalAddress, Utility Bill, Telephone, Tax Clearance, lease agreement submitted by the bidder).</p> <p><b>Failure to submit the declaration and proof of address may result in awarding of 0 (zero) points preference points under Eastern Cape locality.</b></p>	No	Yes
9.	<p><b>Annexure I – (SBD 6.1.): Preferential Points Claim (Signed andCompleted).</b></p> <p><b>CSD report will be used to confirm other specific goals listed inTable 1 of the SBD 6.1 document.</b></p> <p><b>Failure to submit the preference points claim and proof of address may result in awarding of 0 (zero) points preference points under Eastern Cape locality.</b></p>	No	No
10.	<p><b>Duly signed Letter of Authority MUST be submitted authorising the individual to sign on behalf of the bidder if:</b></p> <p><b>a) If there are more than one Owner/ Director / Shareholder / Member / Trustee etc. OR</b></p> <p><b>b) If there is only one Director / Shareholder / Member / Trustee / Owner etc. and they are not the one completing the bid document.</b></p> <p><b>Note:</b> The Letter of Authority MUST be signed by all directors of the Bidder (or a signed Board Resolution authorising the signatory will be accepted).</p>	Yes	Yes



11.	<b>ANNEXURE J (which includes local content annexure C):</b> Declaration of Local Content (SBD 6.2) <b>(Completed and Signed by the Delegated Authority) Attach Delegation of Authority</b>	Yes	Yes
12.	<b>Priced Bills of Quantities completed in black ink.</b>	Yes	Yes

<b>The following will be applicable to Joint Ventures/Consortium</b>			
Consortium/Joint Venture Agreement to enter in a Consortium / Joint Venture signed by all Consortium Members who are Duly Authorized.		Yes	Yes
Resolution of the Board of Directors to enter into a Consortium or Joint Venture from each member firm of the Consortium/Joint Venture for this Bid.		Yes	Yes
Letter of Authority of Signatory (individual) authorizing the Signatory to sign on behalf of the Consortium/JV.  The Letter of Authority should be from each member firm and must be signed by all directors of each member firm (or Board Resolution will be accepted).		Yes	Yes
<p><b>Declaration with regards to Company /Firm Location</b></p> <p><b>Attach</b> a proof of address to claim points for the Eastern Cape base locality as the specific goal as advised in the tender / quotation qualifies the company/firm for the PPR of 2022 preference points claim. <b>Failure to submit the declaration and proof of address for each JV / Consortium member may result in awarding of 0 (zero) points preference points under Eastern Cape Locality.</b></p> <p>This information will be verified from the FICA documents (Physical Address, Utility Bill, Telephone, Tax Clearance, lease agreement submitted by the bidder).</p> <p><b>Failure to submit the declaration and proof of address may result in awarding of 0 (zero) points preference points under Eastern Cape locality.</b></p>		No	Yes
<p><b>Annexure I – (SBD 6.1.): Preferential Points Claim (Signed and Completed).</b></p> <p><b>CSD report will be used to confirm other specific goals listed in Table 1 of the SBD 6.1 document.</b></p> <p><b>Failure to submit the preference points claim and proof of address may result in awarding of 0 (zero) points preference points under Eastern Cape locality.</b></p>		No	No

**KINDLY NOTE THAT, FAILURE TO SUBMIT THE REQUIRED MANDATORY DOCUMENTATION WITH THE BID WILL RESULT IN YOUR BID BEING DISQUALIFIED WITHOUT FURTHER CONSIDERATION.**

**Bidders shall take note of the following conditions:**

1. The successful bidder will be required to submit a Letter of Good Standing from the Compensation Commission within 14 days after award and before the contract can be signed.
2. Performance Guarantee to be submitted within 14 days after award.
3. The Bid Validity period is 90 days.
4. An approved and project specific Health and Safety file within 14 days upon appointment.
5. A Proposed Project Execution Plan & Program to proceed with works with occupied buildings within 14 days upon appointment.
6. Submission of a Construction Works Insurance for all works upon appointment.
7. No correction fluid to be used and all errors to be initialled.
8. Tenderers to complete and sign annexure C.

**Queries relating to the issue of these documents may be addressed in writing to:**

Ms P Casa

[tenders@ecdc.co.za](mailto:tenders@ecdc.co.za) or [pcasa@ecdc.co.za](mailto:pcasa@ecdc.co.za)

## **1.1. STAGE 1: EVALUATION OF LOCAL PRODUCTION AND CONTENT FOR DESIGNATED SECTORS AND LOCAL CONTENT DECLARATION**

This Standard Bidding Document (SBD) must form part of all bids invited. It contains general information and serves as a declaration form for local content (local production and local content are used interchangeably).

Before completing this declaration, bidders must study the General Conditions, Definitions, Directives applicable in respect of Local Content as prescribed in the ECDC Supply Chain Management Policy, the South African Bureau of Standards (SABS) approved technical specification number SATS 1286:2011 (Edition 1) and the Guidance on the Calculation of Local Content together with the Local Content Declaration Templates [Annex C (Local Content Declaration: Summary Schedule), D (Imported Content Declaration: Supporting Schedule to Annex C) and E (Local Content Declaration: Supporting Schedule to Annex C)].

### 1. General Conditions

- 1.1 ECDC Supply Chain Management policy makes provision for the promotion of local production and content.
- 1.2 ECDC Supply Management Policy prescribes that in the case of designated sectors, tenders must be advertised with the specific bidding condition that only locally produced or manufactured goods, with a stipulated minimum threshold for local production and content will be considered.
- 1.3 Where necessary, for tenders referred to in paragraph 1.2 above, a three-stage bidding process may be followed, where the first stage involves a minimum threshold for local production and content and the second stage functionality with a minimum threshold of 70% and third stage of price and specific goals.
- 1.4 A person awarded a contract in relation to a designated sector, may not sub-contract in such a manner that the local production and content of the overall value of the contract is reduced to below the stipulated minimum threshold.
- 1.5 The local content (LC) expressed as a percentage of the bid price must be calculated in accordance with the SABS approved technical specification number SATS 1286: 2011 as follows:

$$LC = [1 - x / y] * 100$$

Where:

x is the imported content in Rand 27

- 1.6 A bid may be disqualified if this Declaration Certificate and the Annex C (Local Content Declaration: Summary Schedule) are not submitted as part of the bid documentation.

y is the bid price in Rand excluding value added tax (VAT) Prices referred to in the determination of x must be converted to Rand (ZAR) by using the exchange rate published by South African Reserve Bank (SARB) at 12:00 on the date of advertisement of the bid as indicated in paragraph 4.1 below.

The SABS approved technical specification number SATS 1286:2011 is accessible on [http://www.thedti.gov.za/industrial\\_development/ip.jsp](http://www.thedti.gov.za/industrial_development/ip.jsp) at no cost.

2. The stipulated minimum threshold(s) for local production and content (refer to Annex A of SATS 1286:2011) for this bid: Prices referred to in the determination of x must be converted to Rand (ZAR) by using the exchange rate published by South African Reserve Bank (SARB) at 12:00 on the date of advertisement of the bid as indicated in table 1 below.

Bidder that fails to meet the minimum stipulated threshold for local production and content will be unacceptable and will not proceed to stage 2.

.....

SIGNATURE(S) OF BIDDERS(S)

DATE: .....

ADDRESS: .....

.....

.....

WITNESSES:

1. ....

2. ....

**STAGE 2 - FUNCTIONALITY**

Involves an evaluation of Functionality only – At this stage Bidders must score a minimum score of **70%** for functionality (services) to be evaluated for stage 3 (Preferential procurement points).

**Bidder to note the following for Functionality Evaluation:**

- 3.1.1. Adequate proof supporting the points claimed must be provided. (e.g., documents, agreements, qualifications, previous experience, certifications, etc.)
- 3.1.2. Failure to submit relevant information with supporting document and adequate proof may result in ECDC not being able to allocate points for the Evaluation Criteria outlined below.

**Table 1: Functionality Evaluation Criteria – Stage 2**

<b><u>COMPANY EXPERIENCE (Read with Schedule T.2.2.2(a) requirements)</u></b>	Allocated Points
<p><b>Reference letters for completed Mechanical and Electrical related projects (A minimum of 1 project per category below needs to be related to a waste water treatment plant project, failure which, the bidder will score zero points)</b></p> <p>5 or more acceptable reference letters 25                      4 or less than 5 acceptable reference letters 20                      3 or less than 4 acceptable reference letters 15                      2 or less than 3 acceptable reference letters 10                      Less than 2 acceptable reference letters 0</p> <p><b><u>Document to be submitted for points allocation</u></b></p> <p><b>The Bidder must demonstrate that they have the relevant experience in Mechanical and Electrical works by submitting completed T.2.2.2 (a) reference forms or reference letters of completed Mechanical and Electrical projects (Read with Schedule T.2.2.2(a) requirements)</b></p> <p><b>Note: The bidder must submit a reference letter. Submission of only a completion certificate will not be accepted.</b></p> <p>Reference letter should indicate the following:</p> <ul style="list-style-type: none"> <li>• Signature of the client</li> <li>• Client's Letter head or Client Stamp</li> <li>• Company name, contact person, contact details (telephone number and email address)</li> <li>• Value of the project</li> <li>• Description Works carried out</li> <li>• Works have been completed on time /within the stipulated contract period</li> <li>• Good or better quality of workmanship</li> <li>• Assessment of the quality of work performed</li> </ul>	
<p><b><u>EXPERTISE (CV's &amp; Certified Copies of Qualifications of Key Personnel to be included in Returnable)</u></b></p> <p><b>Bidder must submit certificate of qualification (Built Environment) and CV's indicating experience gained</b></p> <p><b>Construction Manager</b></p> <p>- BSc / BEng / BTech with 10 years or more post graduate experience in Mechanical and Electrical projects 10</p> <p>- BSc / BEng / BTech with 5 years but less than 10 years' post graduate experience in Mechanical and Electrical projects 8</p>	

BSc / BEng / BTech with 3 years but less than 5 years post graduate experience in Mechanical and Electrical projects	5
BSc / BEng / BTech with less than 3 years' post graduate experience in Mechanical and Electrical projects	0
<b>Construction Supervisor</b>	
NDip / TVET N6 with 10 years or more post graduate experience in Mechanical and Electrical projects	10
NDip / TVET N6 with 5 years but less than 10 years' post graduate experience in Mechanical and Electrical projects	8
NDip / TVET N6 with 3 years but less than 5 years post graduate experience in Mechanical and Electrical projects	5
NDip / TVET N6 with less than 3 years' post graduate experience in Mechanical and Electrical projects	0
<b>Health and Safety Officer</b>	
10 years or more post registration experience as a Health and Safety Officer in construction.	10
5 years but less than 10 years post registration experience as a Health and Safety Officer in construction.	8
3 years but less than 5 years post registration experience as a Health and Safety Officer in construction.	5
Less than 3 years post registration experience as a Health and Safety Officer in construction.	0
<b>(To qualify for the points above, bidder must submit a certificate of registration with the SACPCMP as a registered Construction Health and Safety Officer and CV indicating experience gained)</b>	
<b><u>PROJECT IMPLEMENTATION PLAN/METHODOLOGY</u></b>	
Project implementation plan that clearly details the execution plan on a waste water treatment project.	10
Project implementation plan with no detailed execution plan on a waste water treatment project.	0
<b><u>CONSTRUCTION PROGRAM</u></b>	
<b>Bidder needs to submit a construction program to claim full points (5 max).</b>	
Project specific detailed program covering all construction aspects relating to a waste water treatment project, clearly defining the critical path and dependencies.	5
Not a project specific detailed program	0
<b>TOTAL MAXIMUM ACHIEVABLE POINTS</b>	<b>70</b>
<b>MINIMUM POINTS REQUIRED</b>	<b>49</b>

- Only bids that have achieved the minimum qualifying score for functionality will be evaluated further in terms of preferential procurement points (Stage 3).
- All bids that fail to achieve the minimum score will be disqualified.
- The minimum qualifying score (in a percentage) for functionality shall be calculated as follows:

$$P_s = \frac{S_o}{M_s} \times 100 \quad \text{Where:}$$

$P_s$  = percentage scored for functionality by bid under

consideration

So = Total score for bid under consideration

Ms = Maximum possible score

The percentages of each panel member shall be added and divided by the number of panel members to establish the average percentage obtained by each bidder for functionality.

**Stage 3 – Preference Procurement Point - Evaluation Criteria**

Preference points for this bid shall be awarded for price and the specific goal. The maximum points for this bid are allocated as follows:

CRITERIA	POINTS
Price	80
Specific Goal	20
<b>TOTAL POINTS</b>	100

- 3.1 Points awarded for price will be based on the 80/20 Preference point systems
- 3.2 The points scored by the tenderer/bidder for Price will be added to the points scored for ECDC specific goal to obtain the bidder’s total points scored out of 100 points.
- 3.3 In the event that two or more bids have scored equal total points, the successful bid will be the one scoring the highest number of preference points for ECDC specific goal.
- 3.4 However, when functionality is part of the evaluation process and two or more bids have scored equal points including equal preference points for specific goal, the successful bid must be the one scoring the highest score for functionality.
- 3.5 Should two or more bidders/tenderers be equal in all respects; the award shall be decided by the drawing of lots.
- 3.6 The bidder obtaining the highest number of total points will be awarded the contract.
- 3.7 Points scored will be rounded off to the nearest 2 decimal places.
- 3.8 **Price**
  - 3.8.1 The lowest acceptable bid will score 80 points for price.
  - 3.8.2 The following formula will be used to calculate the points out of 80 for price in respect of the bid/tender.
  - 3.8.3 Preference points for price shall be calculated after prices have been brought to a comparative basis taking into account all factors of non-firm prices and all unconditional discounts.

DETAILS	80/20 PREFERENCE POINT SYSTEM
Rand value (competitive bids or quotations) all applicable taxes included.	<ul style="list-style-type: none"> <li>• Equal and above R30 000 to R50 million, inclusive of all applicable taxes.</li> <li>Below R30 000 if and when considered to be appropriate</li> </ul>
Formulae	$P_s = 80 \left( 1 - \frac{P_t - P_{\min}}{P_{\min}} \right)$ <p>Ps = Points scored for comparative price of bid / offer under consideration            Pt = Comparative price of bid / offer under consideration            Pmin = Comparative price of lowest acceptable bid / offer</p>



## Annex A

### Standard Conditions of Tender

The conditions of tender are the Standard Conditions of Tender as contained in Annex C of the CIDB Standard for Uniformity in Construction Procurement (January 2019) as published in Government Gazette No 42622, Board Notice 423 of 2019 on the 8<sup>th</sup> of August 2019 (See [www.cidb.org.za](http://www.cidb.org.za)).

#### A.1 General

##### A.1.1 Actions

**A.1.1.1** The employer and each tenderer submitting a tender offer shall comply with these conditions of tender. In their dealings with each other, they shall discharge their duties and obligations as set out in A.2 and A.3, timeously and with integrity, and behave equitably, honestly, and transparently, comply with all legal obligations and not engage in anticompetitive practices.

**A.1.1.2** The employer and the tenderer and all their agents and employees involved in the tender process shall avoid conflicts of interest and where a conflict of interest is perceived or known, declare any such conflict of interest, indicating the nature of such conflict. Tenderers shall declare any potential conflict of interest in their tender submissions. Employees, agents and advisors of the employer shall declare any conflict of interest to whoever is responsible for overseeing the procurement process at the start of any deliberations relating to the procurement process or as soon as they become aware of such conflict and abstain from any decisions where such conflict exists or recuse themselves from the procurement process, as appropriate.

*Note: 1) A conflict of interest may arise due to a conflict of roles which might provide an incentive for improper acts in some circumstances. A conflict of interest can create an appearance of impropriety that can undermine confidence in the ability of that person to act properly in his or her position even if no improper acts result.*

*2) Conflicts of interest in respect of those engaged in the procurement process include direct, indirect or family interests in the tender or outcome of the procurement process and any personal bias, inclination, obligation, allegiance, or loyalty which would in any way affect any decisions taken.*

**A.1.1.3** The employer shall not seek, and a tenderer shall not submit a tender without having a firm intention and the capacity to proceed with the contract.

## **A.1.2 Tender Documents**

The documents issued by the employer for the purpose of a tender offer are listed in the tender data.

## **A.1.3 Interpretation**

**A.1.3.1** The tender data and additional requirements contained in the tender schedules that are included in the returnable documents are deemed to be part of these conditions of tender.

**A.1.3.2** These conditions of tender, the tender data and tender schedules which are required for tender evaluation purposes, shall form part of any contract arising from the invitation to tender.

**A.1.3.3** For the purposes of these conditions of tender, the following definitions apply:

- a) **conflict of interest** means any situation in which:
  - i) someone in a position of trust has competing professional or personal interests which make it difficult to fulfil his or her duties impartially.
  - ii) an individual or tenderer is in a position to exploit a professional or official capacity in some way for their personal or corporate benefit; or
  - iii) in compatibility or contradictory interests exist between an employee and the tenderer who employs that employee.
- b) **comparative offer** means the price after the factors of a non-firm price and all unconditional discounts it can be utilised to have been taken into consideration.
- c) **corrupt practice** means the offering, giving, receiving, or soliciting of anything of value to influence the action of the employer or his staff or agents in the tender process.
- d) **fraudulent practice** means the misrepresentation of the facts to influence the tender process or the award of a contract arising from a tender offer to the detriment of the employer, including collusive practices intended to establish prices at artificial levels.

## **A.1.4 Communication and employer's agent**

Each communication between the employer and a tenderer shall be to or from the employer's agent only, and in a form that can be readily read, copied, and recorded. Communications shall be in the English language. The employer shall not take any responsibility for non-receipt of communications from or by a tenderer. The name and contact details of the employer's agent are stated in the tender data.

## **A.1.5 Cancellation and Re-Invitation of Tenders**

**A.1.5.1** An employer may, prior to the award of the tender, cancel a tender if-

- a) due to changed circumstances, there is no longer a need for the engineering and construction works specified in the invitation.
- b) funds are no longer available to cover the total envisaged expenditure; or

- c) no acceptable tenders are received.
- d) there is a material irregularity in the tender process.

**A.1.5.2** The decision to cancel a tender invitation must be published in the same manner in which the original tender invitation was advertised

**A.1.5.3** An employer may only with the prior approval of the relevant treasury cancel a tender invitation for thesecond time.

## **A.1.6 Procurement procedures**

### **A.1.6.1 General**

Unless otherwise stated in the tender data, a contract will, subject to A.3.13, be concluded with the tenderer who in terms of A.3.11 is the highest ranked or the tenderer scoring the highest number of tender evaluation points, asrelevant, based on the tender submissions that are received at the closing time for tenders.

### **A.1.6.2 Competitive negotiation procedure**

**A.1.6.2.1** Where the tender data require that the competitive negotiation procedure is to be followed, tenderers shall submit tender offers in response to the proposed contract in the first round of submissions. Notwithstanding the requirements of A.3.4, the employer shall announce only the names of the tenderers who make a submission. The requirements of A.8 relating to the material deviations or qualifications which affect the competitive position of tenderers shall not apply.

**A.1.6.2.2** All responsive tenderers or at least a minimum of not less than three responsive tenderers that are highest ranked in terms of the evaluation criteria stated in the tender data shall be invited to enter into competitive negotiations based on the principle of equal treatment, keeping confidential the proposed solutions and associated information.

Notwithstanding the provisions of A.2.17, the employer may request that tenders be clarified, specified and fine- tuned in order to improve a tenderer's competitive position provided that such clarification, specification, fine-tuning or additional information does not alter any fundamental aspects of the offers or impose substantial new requirements which restrict or distort competition or have a discriminatory effect.

**A.1.6.2.3** At the conclusion of each round of negotiations, tenderers shall be invited by the employer to revise their tender offer based on the same evaluation criteria, with or without adjusted weightings. Tenderers shall be advised when they are to submit their best and final offer.

**A.1.6.2.4** The contract shall be awarded in accordance with the provisions of A.3.11 and A.3.13 after tenderers have been requested to submit their best and final offer.

## **A.2 Tenderer's obligations**

### **A.2.1 Eligibility**

A.2.1.1 Submit a tender offer only if the tenderer satisfies the criteria stated in the tender data and the tenderer, or any of his principals, is not under any restriction to do business with employer.

A.2.1.2 Notify the employer of any proposed material change in the capabilities or formation of the tendering entity (or both) or any other criteria which formed part of the qualifying requirements used by the employer as the basis in a prior process to invite the tenderer to submit a tender offer and obtain the employer's written approval to do so prior to the closing time for tenders.

### **A.2.2 Cost of tendering**

A.2.2.1 Accept that, unless otherwise stated in the tender data, the employer will not compensate the tenderer for any costs incurred in the preparation and submission of a tender offer, including the costs of any testing necessary to demonstrate that aspects of the offer comply with requirements.

A.2.2.2 The cost of the tender documents charged by the employer shall be limited to the actual cost incurred by the employer for printing the documents. Employers must attempt to make available the tender documents on its website so as not to incur any costs pertaining to the printing of the tender documents.

### **A.2.3 Check documents**

Check the tender documents on receipt for completeness and notify the employer of any discrepancy or omission.

### **A.2.4 Confidentiality and copyright of documents**

Treat as confidential all matters arising in connection with the tender. Use and copy the documents issued by the employer only for the purpose of preparing and submitting a tender offer in response to the invitation.

### **A.2.5 Reference documents**

Obtain, as necessary for submitting a tender offer, copies of the latest versions of standards, specifications, conditions of contract and other publications, which are not attached but which are incorporated into the tender documents by reference.

### **A.2.6 Acknowledge addenda**

Acknowledge receipt of addenda to the tender documents, which the employer may issue, and if necessary apply for an extension to the closing time stated in the tender data, in order to take the addenda into account.

### **A.2.7 Clarification meeting**

Attend, where required, a clarification meeting at which tenderers may familiarize themselves with aspects of the proposed work, services or supply and raise questions. Details of the meeting(s) are stated in the tender data.

### **A.2.8 Seek clarification**

Request clarification of the tender documents, if necessary, by notifying the employer at least five (5) working days before the closing time stated in the tender data.

### **A.2.9 Insurance**

Be aware that the extent of insurance to be provided by the employer (if any) might not be for the full cover required in terms of the conditions of contract identified in the contract data. The tenderer is advised to seek qualified advice regarding insurance.

### **A.2.10 Pricing the tender offer**

A.2.10.1 Include in the rates, prices, and the tendered total of the prices (if any) all duties, taxes except Value Added Tax (VAT), and other levies payable by the successful tenderer, such duties, taxes and levies being those applicable fourteen (14) days before the closing time stated in the tender data.

A.2.10.2 Show VAT payable by the employer separately as an addition to the tendered total of the prices.

A.2.10.3 Provide rates and prices that are fixed for the duration of the contract and not subject to adjustment except as provided for in the conditions of contract identified in the contract data.

A.2.10.4 State the rates and prices in Rand unless instructed otherwise in the tender data. The conditions of contract identified in the contract data may provide for part payment in other currencies.

### **A.2.11 Alterations to documents**

Do not make any alterations or additions to the tender documents, except to comply with instructions issued by the employer, or necessary to correct errors made by the tenderer. All signatories to the tender offer shall initial all such alterations.

### **A.2.12 Alternative tender offers**

A.2.12.1 Unless otherwise stated in the tender data, submit alternative tender offers only if a main tender offer, strictly in accordance with all the requirements of the tender documents, is also submitted as well as a schedule that compares the requirements of the tender documents with the alternative requirements that are proposed.

A.2.12.2 Accept that an alternative tender offer must be based only on the criteria stated in the tender data or criteria otherwise acceptable to the employer.

A.2.12.3 An alternative tender offer must only be considered if the main tender offer is the winning tender.

### **A.2.13 Submitting a tender offer**

Submit one tender offer only, either as a single tendering entity or as a member in a joint venture to provide the whole of the works identified in the contract data and described in the scope of works, unless stated otherwise in the tender data.

A.2.13.1 Return all returnable documents to the employer after completing them in their entirety, either electronically (if they were issued in electronic format) or by writing legibly in non-erasable ink.

A.2.13.2 Submit the parts of the tender offer communicated on paper as an original plus the number of copies stated in the tender data, with an English translation of any documentation in a language other than English, and the parts communicated electronically in the same format as they were issued by the employer.

A.2.13.3 Sign (Signature by authorized personnel) the original and all copies of the tender offer where required in terms of the tender data. The employer will hold all authorized signatories liable on behalf of the tenderer. Signatories for tenderers proposing to contract as joint ventures shall state which of the signatories is the lead partner whom the employer shall hold liable for the purpose of the tender offer.

A.2.13.4 Seal the original and each copy of the tender offer as separate packages marking the packages as "ORIGINAL" and "COPY". Each package shall state on the outside the employer's address and identification details stated in the tender data, as well as the tenderer's name and contact address.

A.2.13.5 Where a two-envelope system is required in terms of the tender data, place and seal the returnable documents listed in the tender data in an envelope marked "financial proposal" and place the remaining returnable documents in an envelope marked "technical proposal". Each envelope shall state on the outside the employer's address and identification details stated in the tender data, as well as the tenderer's name and contact address.

A.2.13.6 Seal the original tender offer and copy packages together in an outer package that states on the outside only the employer's address and identification details as stated in the tender data.

A.2.13.7 Accept that the employer will not assume any responsibility for the misplacement or premature opening of the tender offer if the outer package is not sealed and marked as stated.

A.2.13.8 Accept that tender offers submitted by facsimile or e-mail will be rejected by the employer, unless stated otherwise in the tender data.

### **A.2.14 Information and data to be completed in all respects**

Accept that tender offers, which do not provide all the data or information requested

completely and, in the form, required, may be regarded by the employer as non-responsive.

#### **A.2.15 Closing time**

A.2.15.1 Ensure that the employer receives the tender offer at the address specified in the tender data not later than the closing time stated in the tender data. Accept that proof of posting shall not be accepted as proof of delivery.

A.2.15.2 Accept that, if the employer extends the closing time stated in the tender data for any reason, the requirements of these conditions of tender apply equally to the extended deadline.

#### **A.2.16 Tender offer validity**

A.2.16.1 Hold the tender offer(s) valid for acceptance by the employer at any time during the validity period stated in the tender data after the closing time stated in the tender data.

A.2.16.2 If requested by the employer, consider extending the validity period stated in the tender data for an agreed additional period with or without any conditions attached to such extension.

A.2.16.3 Accept that a tender submission that has been submitted to the employer may only be withdrawn or substituted by giving the employer's agent written notice before the closing time for tenders that a tender is to be withdrawn or substituted. If the validity period stated in C.2.16 lapses before the employer evaluating tender, the contractor reserves the right to review the price based on Consumer Price Index (CPI).

A.2.16.4 Where a tender submission is to be substituted, a tenderer must submit a substitute tender in accordance with the requirements of C.2.13 with the packages clearly marked as "SUBSTITUTE".

#### **A.2.17 Clarification of tender offer after submission**

Provide clarification of a tender offer in response to a request to do so from the employer during the evaluation of tender offers. This may include providing a breakdown of rates or prices and correction of arithmetical errors by the adjustment of certain rates or item prices (or both). No change in the competitive position of tenderers or substance of the tender offer is sought, offered, or permitted.

**Note:** *Sub-clause C.2.17 does not preclude the negotiation of the final terms of the contract with a preferred tenderer following a competitive selection process, should the Employer elect to do so.*

#### **A.2.18 Provide other material**

A.2.18.1 Provide, on request by the employer, any other material that has a bearing on the tender offer, the tenderer's commercial position (including notarized joint venture agreements), preferencing arrangements, or samples of materials, considered necessary by the employer for the purpose of a full and fair risk assessment.

Should the tenderer not provide the material, or a satisfactory reason as to why it cannot be provided, by the time for submission stated in the employer's request, the employer may regard the tender offer as non-responsive.

A.2.18.2 Dispose of samples of materials provided for evaluation by the employer, where required.

#### **A.2.19 Inspections, tests and analysis**

Provide access during working hours to premises for inspections, tests and analysis as provided for in the tender data.

#### **A.2.20 Submit securities, bonds and policies**

If requested, submit for the employer's acceptance before formation of the contract, all securities, bonds, guarantees, policies and certificates of insurance required in terms of the conditions of contract identified in the contract data.

#### **A.2.21 Check final draft**

Check the final draft of the contract provided by the employer within the time available for the employer to issue the contract.

#### **A.2.22 Return of other tender documents**

If so, instructed by the employer, return all retained tender documents within twenty-eight (28) days after the expiry of the validity period stated in the tender data.

#### **A.2.23 Certificates**

Include in the tender submission or provide the employer with any certificates as stated in the tender data.

### **A.3 The employer's undertakings**

#### **A.3.1 Respond to requests from the tenderer**

A.3.1.1 Unless otherwise stated in the tender Data, respond to a request for clarification received up to five (5) working days before the tender closing time stated in the Tender Data and notify all tenderers who collected tender documents.

A.3.1.2 Consider any request to make a material change in the capabilities or formation of the tendering entity (or both) or any other criteria which formed part of the qualifying requirements used to prequalify a tenderer to submit a tender offer in terms of a previous procurement process and deny any such request if as a consequence:

- a) an individual firm, or a joint venture as a whole, or any individual member of the joint venture fails to meet any of the collective or individual qualifying requirements.
- b) the new partners to a joint venture were not prequalified in the first instance, either as individual firms or as another joint venture; or
- c) in the opinion of the Employer, acceptance of the material change would



compromise the outcome of the prequalification process.

### **A.3.2 Issue Addenda**

If necessary, issue addenda that may amend or amplify the tender documents to each tenderer during the period from the date that tender documents are available until three (3) working days before the tender closing time stated in the Tender Data. If, as a result a tenderer applies for an extension to the closing time stated in the Tender Data, the Employer may grant such extension and, shall then notify all tenderers who collected tender documents.

### **A.3.3 Return late tender offers**

Return tender offers received after the closing time stated in the Tender Data, unopened, (unless it is necessary to open a tender submission to obtain a forwarding address), to the tenderer concerned.

### **A.3.4 Opening of tender submissions N/A**

A.3.4.1 Unless the two-envelope system is to be followed, open valid tender submissions in the presence of tenderers' agents who choose to attend at the time and place stated in the tender data. Tender submissions for which acceptable reasons for withdrawal have been submitted will not be opened.

A.3.4.2 Announce at the meeting held immediately after the opening of tender submissions, at a venue indicated in the tender data, the name of each tenderer whose tender offer is opened and, where applicable, the total of his prices, number of points ECDC specific goal and time for completion for the main tender offer only.

A.3.4.3 Make available the record outlined in A.3.4.2 to all interested persons upon request.

### **A.3.5 Two-envelope system**

A.3.5.1 Where stated in the tender data that a two-envelope system is to be followed, open only the technical proposal of valid tenders in the presence of tenderers' agents who choose to attend at the time and place stated in the tender data and announce the name of each tenderer whose technical proposal is opened.

A.3.5.2 Evaluate functionality of the technical proposals offered by tenderers, then advise tenderers who remain in contention for the award of the contract of the time and place when the financial proposals will be opened. Open only the financial proposals of tenderers, who score in the functionality evaluation more than the minimum number of points for functionality stated in the tender data, and announce the score obtained for the technical proposals and the total price and any points claimed on BBBEE status level. Return unopened financial proposals to tenderers whose technical proposals failed to achieve the minimum number of points for functionality.

### **A.3.6 Non-disclosure**

Not disclose to tenderers, or to any other person not officially concerned with such processes, information relating to the evaluation and comparison of tender offers, the final evaluation

price and recommendations for the award of a contract, until after the award of the contract to the successful tenderer.

### **A.3.7 Grounds for rejection and disqualification**

Determine whether there has been any effort by a tenderer to influence the processing of tender offers and instantly disqualify a tenderer (and his tender offer) if it is established that he engaged in corrupt or fraudulent practices.

### **A.3.8 Test for responsiveness**

A.3.8.1 Determine, after opening and before detailed evaluation, whether each tender offer properly received:

- a) complies with the requirements of these Conditions of Tender,
- b) has been properly and fully completed and signed, and
- c) is responsive to the other requirements of the tender documents.

A.3.8.2 A responsive tender is one that conforms to all the terms, conditions, and specifications of the tender documents without material deviation or qualification. A material deviation or qualification is one which, in the Employer's opinion, would:

- a) detrimentally affect the scope, quality, or performance of the works, services or supply identified in the Scope of Work,
- b) significantly change the Employer's or the tenderer's risks and responsibilities under the contract, or
- c) affect the competitive position of other tenderers presenting responsive tenders, if it were to be rectified.

Reject a non-responsive tender offer, and not allow it to be subsequently made responsive by correction or withdrawal of the non-conforming deviation or reservation.

### **A.3.9 Arithmetical errors, omissions and discrepancies**

A.3.9.1 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 in words shall govern.

A.3.9.2 Check the highest ranked tender or tenderer with the highest number of tender evaluation points after the evaluation of tender offers in accordance with A.3.11 for:

- 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:
  - (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.

A.3.9.3 Notify the tenderer of all errors or omissions that are identified in the tender offer and either confirm the tender offer as tendered or accept the corrected total of prices.

A.3.9.4 Where the tenderer elects to confirm the tender offer as tendered, correct the errors as follows:

- 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 line-item total shall govern, and the rate shall be corrected. Where there is an obviously gross misplacement of the decimal point in the unit rate, the line-item total as quoted shall govern, 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 govern and the tenderer will be asked to revise selected item prices (and their rates if bills of quantities apply) to achieve the tendered total of the prices.

#### **A.3.10 Clarification of a tender offer**

Obtain clarification from a tenderer on any matter that could give rise to ambiguity in a contract arising from the tender offer.

#### **A.3.11 Evaluation of tender offers**

The Standard Conditions of Tender standardize the procurement processes, methods and procedures from the time that tenders are invited to the time that a contract is awarded. They are generic in nature and are made project specific through choices that are made in developing the Tender Data associated with a specific project.

Conditions of tender are by definition the document that establishes a tenderer's obligations in submitting a tender and the employer's undertakings in soliciting and evaluating tender offers. Such conditions establish the rules from the time a tender is advertised to the time that a contract is awarded and require employers to conduct the process of offer and acceptance in terms of a set of standard procedures.

<b>The CIDB Standard Conditions of Tender are based on a procurement system that satisfies the following system requirements:</b>	
<b>Requirement</b>	<b>Qualitative interpretation of goal</b>
Fair	The process of offer and acceptance is conducted impartially without bias, providing simultaneous and timely access to participating parties to the same information.
Transparent	The only grounds for not awarding a contract to a tenderer who satisfies all requirements are restrictions from doing business with the employer, lack of capability or capacity, legal impediments and conflicts of interest.
Competitive	The system provides for appropriate levels of competition to ensure cost effective and best value outcomes.
Cost effective	The processes, procedures and methods are standardized with sufficient flexibility to attain best value outcomes in respect of quality, timing and price, and least resources to effectively manage and control procurement processes.

**The activities associated with evaluating tender offers are as follows:**

- a) Open and record tender offers received.
- b) Determine whether or not tender offers are complete.
- c) Determine whether or not tender offers are responsive.
- d) Evaluate tender offers
- e) Determine if there are any grounds for disqualification.
- f) Determine acceptability of preferred tenderer
- g) Prepare a tender evaluation report.
- h) Confirm the recommendation contained in the tender evaluation report.

**A.3.11.1 General**

The employer must appoint an evaluation panel of not less than three persons conversant with the proposed scope of works to evaluate each responsive tender offer using the tender evaluation methods and associated evaluation criteria and weightings that are specified in the tender data.

**A.3.12 Insurance provided by the employer**

If requested by the proposed successful tenderer, submit for the tenderer's information the policies and / or certificates of insurance which the conditions of contract identified in the contract data, require the employer to provide.

**A.3.13 Acceptance of tender offer**

Accept the tender offer; if in the opinion of the employer, it does not present any risk and only if the tenderer:

- a) is not under restrictions, or has principals who are under restrictions, preventing participating in the employer's procurement;
- b) can, as necessary and in relation to the proposed contract, demonstrate that he or she possesses the professional and technical qualifications, professional and technical competence, financial resources, equipment and other physical facilities, managerial capability, reliability, experience and reputation, expertise and the personnel, to perform the contract.
- c) has the legal capacity to enter into the contract.
- d) is not; insolvent, in receivership, under Business Rescue as provided for in chapter 6 of the Companies Act No. 2008, bankrupt or being wound up, has his/her affairs administered by a court or a judicial officer, has suspended his/her business activities or is subject to legal proceedings in respect of any of the foregoing;
- e) complies with the legal requirements, if any, stated in the tender data; and
- f) is able, in the opinion of the employer, to perform the contract free of conflicts of interest.

#### **A.3.14 Prepare contract documents**

A.3.14.1 If necessary, revise documents that shall form part of the contract and that were issued by the employer as part of the tender documents to take account of:

- a) addenda issued during the tender period,
- b) inclusion of some of the returnable documents and other revisions agreed between the employer and the successful tenderer.

A.3.14.2 Complete the schedule of deviations attached to the form of offer and acceptance, if any.

#### **A.3.15 Complete adjudicator's contract**

Unless alternative arrangements have been agreed or otherwise provided for in the contract, arrange for both parties to complete formalities for appointing the selected adjudicator at the same time as the main contract is signed.

#### **A.3.16 Registration of the award**

An employer must, within twenty-one (21) working days from the date on which a contractor's offer to perform a construction works contract is accepted in writing by the employer, register and publish the award on the CIDB Register of Projects.

#### **A.3.17 Provide copies of the contracts**

Provide to the successful tenderer the number of copies stated in the Tender Data of the signed copy of the contract as soon as possible after completion and signing of the form of offer and acceptance.

### **A.3.18 Provide written reasons for actions taken**

Provide upon request written reasons to tenderers for any action that is taken in applying these conditions of tender but withhold information which is not in the public interest to be divulged, which is considered to prejudice the legitimate commercial interests of tenderers or might prejudice fair competition between tenderers.

## ANNEXURE B

### ADDITIONAL CONDITIONS OF TENDER OF ECDC

Where the CIDB standard condition of tender does not address the following, clauses on the ECDC standard conditions of tender, the ECDC Standard condition of tender will be additional.

#### 1.1 Alteration or withdrawal of Proposals

Bidders may withdraw their proposal by written notification on or before the date Specified for the evaluation of Bids.

#### 1.2 Alternative Bid

Alternative Bids will not be accepted.

#### 1.3 Costs for preparation of Proposals/presentations

The costs incurred by Bidders in respect of the attendance of any briefing or presentation meetings if necessary or costs incurred in preparing any proposal will be borne by the Bidder and the ECDC shall in no way be liable to reimburse such costs incurred.

#### 1.4 Ownership of Proposals and presentations

The ECDC shall on receipt of any proposal relating to this request and submitted in accordance with the procedure set out herein, shall become the owner thereof and the ECDC shall not be obliged to return any proposal.

#### 1.5 Tax Clearance Certificate requirement

It is a condition of all bids inclusive of foreign bidders / individuals) that the South African taxes of the successful bidder must be in order.

The bidders' Tax status will be verified on the CSD prior to the bid award and where the preferred bidder is not compliant, **7 working days** will be granted for remedy, failing which the bidder will be disqualified.

In Bids where Consortia/Joint venture/Sub-Contractors are involved, each party will be verified separately for proof of Tax Compliance Status.

In bids where Consortia / Joint Ventures / Sub-contractors are involved, each party must submit a separate Tax Clearance Certificate. Applications for the Tax Clearance Certificates may also be made via eFiling. In order to use this provision, taxpayers will need to register with SARS as eFilers through the website [www.sars.gov.za](http://www.sars.gov.za)

#### 1.6 Confidentiality

The entire process of calling for Bids was initiated by the ECDC in terms of its procurement policy and is confidential. All deliberations in respect of the acceptability or otherwise of the

proposals shall be conducted in closed sessions and members of the Evaluation and Procurement Committee and prospective service providers are bound to treat all discussions as highly confidential.

The service provider shall not divulge directly or indirectly to any other person than a person employed by ECDC, make copies or extracts of any of the information obtained during this assignment, while they may have access to ECDC's trade secrets, confidential information which may include, specifications, plans, drawings, pattern, samples, written instructions, notes, memoranda, technical information, know-how or process or method or any other records of whatsoever nature without the written consent of ECDC and shall surrender all these items to ECDC on termination of the assignment or on demand of ECDC.

The service provider shall not be entitled to make use of the information whether for its own benefit or that of others, to make available or derive any profit from any of the information or knowledge specifically related to the business or affairs of ECDC.

Any document shall remain the property of ECDC and shall be returned (all copies) to ECDC on completion of the contract if so required by ECDC.

#### **1.7 Inventions Patent and Copy-Rights**

The service provider cedes, assigns and transfers to ECDC all rights, title and interest in and to any and all copyright in all works and inventions which relates to the business of ECDC (which includes, but is not limited to, methodologies and products) which arises within the course and scope of this services will be assigned to ECDC.

The Service Provider shall Provide ECDC the sole and exclusive right to alter and adapt the work.

The service provider shall indemnify ECDC against all third-party claims of infringement of patent, trademark, or industrial design rights arising from use of the goods or any part thereof by ECDC.

#### **1.8 Ethics**

Any attempt by an interested Bidder to obtain confidential information, or enter into unlawful agreements with competitors or influence the various ECDC Procurement Committee's or the ECDC during the process of examining, evaluating and comparing Bids/Proposals or Proposals will lead to the rejection of its bid/quotation/proposal in its entirety.

The Bidder must declare any business or other interests it has with the ECDC or any employee of the ECDC, as per the declaration of interest form annexed hereto marked in Section D; failing which the Bidder shall be automatically disqualified from further participation in the Bid or call for proposals. The disqualification will be applicable at any stage of the bidding and / or engagement process.



## **1.9 Competition**

Bidders and their respective officers, employees and agents are prohibited from engaging in any collusive action with respect to the bidding process which serves to limit competition amongst bidders.

In general, the attention of bidders is drawn to Section 4(1) (b) (iii) of the Competition Act 1998 (Act No. 89 of 1998) (the Competition Act) that prohibits collusive bidding.

An agreement between, or concerted practice by, firms, or a decision by an association of firms, is prohibited if it is between parties in a horizontal relationship and if a bidder/s is / are or a contractor(s) was / were involved in collusive bidding.

If bidders have reason to believe that competition issues may arise from any submission of a response to this bid invitation they may make, they are encouraged to discuss their position with the competition authorities before submitting response.

Any correspondence or process of any kind between bidders and the competition authorities must be documented in the responses to this invitation to bid.

In this regard bidders are required to complete the Certificate of Independence Bid Determination, failing which the Bidder shall be automatically disqualified from further participation in the Bid or call for proposals. The disqualification will be applicable at any stage of the bidding and / or engagement process.

If a bidder (s) or contractor (s), based on reasonable grounds or evidence obtained by ECDC, has /have engaged in the restrictive practice referred to above, ECDC may refer the matter to the Competition Commission for investigation and possible imposition of an administrative penalty as contemplated in Section 59 of the Competition Act 89 of 1998.

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

## **1.10 Cancellation of Bid Process**

The ECDC shall be entitled, within its sole and entire discretion, to cancel this Bid/Call for Proposals and/or Quotations at any time and shall notify the interested service providers accordingly. The ECDC shall in no way be liable for any damages whatsoever, including, without limitation, damages for loss of profit, in any way connected with the cancellation of this bid. The publication of the bid does not commit the ECDC to appoint any of the qualifying Bidders.

## **1.11 Interviews**

In terms of the bid evaluation process short listed bidders may be interviewed. This will entail

the bidder being invited to a venue as determined by the bid committee. All transport and accommodation costs incurred by the bidder will be for the bidders account and will not be reimbursed in any way. Failure to attend a scheduled interview will lead to immediate disqualification from the bid process. The ECDC reserves the right to appoint a bidder without conducting interviews.

#### **1.12 Contract award**

The successful bidder will be notified of the bid award in writing by the Procurement Department.

The acceptance of any proposal shall only be confirmed with the conclusion of a final written signed service level agreement or any other appropriate agreement between the ECDC and the successful Bidder, in terms of which the rights and duties of the parties are recorded, which agreement shall regulate the relationship between the ECDC and the Successful Bidder.

As a guideline regarding the content of the service level agreement, the bidder is referred to the **General Conditions of Contract for Construction Works, Third Edition (2015) (hereinafter referred to as the "GCC")**

Until such time that an appropriate agreement has been concluded in writing between the ECDC and the successful Bidder, no rights shall be conferred nor shall any legitimate expectations be conferred to the successful Bidder to carry out the works or services provided for in this Bid.

The ECDC, the Accounting Officer and the Bid Committee (as the case may be) does not bind itself to accept either the lowest (price), highest (points) or any other bid and reserves the right to accept the bid which it deems to be in the best interest of the Institution even if it implies a waiver by the ECDC, the Accounting Officer, or the Bid Committee, (as the case may be) of certain requirements which the ECDC, the Accounting Officer, the Bid Committee, (as the case may be) considers to be of minor importance and not complied with by the bidder.

The ECDC will not entertain any request of feedback before the final awarding of the contract.

#### **1.13 Supplier Due Diligence**

ECDC reserves the right to conduct supplier due diligence prior to final award or at any time during the contract period. This may include site visits and requests for additional information.

#### **1.14 Disclaimer**

This Bid document has been prepared for the purpose of providing information to interested Bidders. The provision of any additional information about the organization to Bidders, are

disclosed and will be made available to enable the prospective Bidders to submit comprehensive proposals.

Interested Bidders are accordingly required to conduct their own due diligence in respect of the ECDC and its business operations and the nature and scope of the services required.



**HOTLINE DETAIL** Ethics & Fraud Hotline

<b>HOTLINE DETAILS</b>	
Hotline Name:	ECDC Ethics & Fraud Hotline
Contact Number:	0800 116 665
WhatsApp Number:	0860 004 004
Dedicated Email Address:	<a href="mailto:ecdc@behonest.co.za">ecdc@behonest.co.za</a> <a href="mailto:aidc@behost.co.za">aidc@behost.co.za</a>
SMS Number:	48691
Free Post	BNT165, Advance Call Pty (Ltd), Brooklyn Square, 0075
Website Link	<a href="http://www.behonest.co.za">www.behonest.co.za</a>
Chat	<a href="http://www.behonest.co.za">www.behonest.co.za</a>

Whilst all due care has been taken in connection with the preparation of this bid, ECDC makes no representations or warranties that the content of the bid or any information communicated to or provided to Bidder(s) during the bidding process is, or will be, accurate, current or complete. ECDC, and its employees and advisors will not be liable with respect to any information communicated which may not be accurate, current or complete.

If Bidder(s) finds or reasonably believes it has found any discrepancy, ambiguity, error or inconsistency in this bid or any other information provided by ECDC (other than minor clerical matters), the Bidder(s) must promptly notify ECDC in writing of such discrepancy, ambiguity, error or inconsistency in order to give ECDC an opportunity to consider what corrective action is necessary (if any).

Any actual discrepancy, ambiguity, error or inconsistency in the bid or any other information provided by ECDC will, if possible, be corrected and provided to all Bidder(s) without attribution to the Bidder(s) who provided the written notice.

All persons (including Bidder(s)) obtaining or receiving the bid and any other information in connection with the Bid or the Tendering process must keep the contents of the Bid and other such information confidential, and not disclose or use the information except as required for the purpose of developing a proposal in response to this Bid. All persons (including Bidder(s)) obtaining or receiving the bid and any other information in connection with the Bid or the Tendering process must keep the contents of the Bid and other such information confidential, and not disclose or use the information except as required for the purpose of developing a proposal in response to this Bid.

## **T2.2. - Returnable schedules**

T2.2.1 – Declarations

T2.2.2 – Functionality Evaluation Schedules

**ANNEXURE C: SUPPLIER INFORMATION/COMPANY ENTERPRISE QUESTIONNAIRE**

**Note: Mandatory Requirement. Failure to complete and sign this document will result in the bid being nonresponsive.**

**Important Note: The following particulars must be furnished. In the case of a joint venture, separate enterprise questionnaires in respect of each partner must be completed and submitted.**

<b>Legal Name of Bidder:</b> (Same as CSD)	
<b>Trading Name of Bidder:</b> (Same as CSD)	
<b>Registration Number</b> (Same as CSD)	
<b>Physical Address</b>	
<b>Postal Address</b>	
<b>Contact Person (of the JV if the Bidder is a JV)</b>	
<b>Title/Position in the Firm</b>	
<b>Mobile Number (of the JV if the Bidder is a JV)</b>	
<b>Bidder Telephone Number (of the JV if the Bidder is a JV)</b>	
<b>Facsimile Number</b>	
<b>Email Address of Contact Person (of the JV if the Bidder is a JV)</b>	
<b>Email Address of Bidder (of the JV if the Bidder is a JV)</b>	
<b>VAT Registration Number</b> (Same as CSD)	

<b>Central Supplier Database Number</b>		<b>MAAA</b>	
<b>CIDB Registration Number (CRS Number)</b>			
<b>Are the Accredited Representative in South Africa for the Goods/Services/Works Offered?</b>	<input type="checkbox"/> Yes <input type="checkbox"/> No  (If Yes enclose Proof)	<b>Are you a foreign based supplier for the Goods/Services/Works Offered?</b>	<input type="checkbox"/> Yes <input type="checkbox"/> No  (If Yes, answer the questionnaire Below)
<b>QUESTIONNAIRE TO BIDDING FOREIGN SUPPLIERS</b>			
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
<b>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 (SARS) and if not register</b>			
<b><u>VERY IMPORTANT</u></b>			
Where a person within the Bidding Entity is an Employee of the State, Bidder should			
a. submit a signed letter on a letter head from their Accounting Officer/Accounting Authority (AO/AA of the Government Institution where they are employed) stating that they are not prohibited from conducting business with the State in terms of Section 8 of the Public Administration Management Act, 2012 (Act No.11 of 2014- "The PFMA")			
b. submit a signed letter on a letter from their AO/AA granting permission to perform other remunerative work outside of their employment where the PAMA does not apply to such an employee			
<b>ECDC reserves the right to verify such information from their AO/AA</b>			

**SERVICE PROVIDER ACKNOWLEDGEMENT OF REQUEST AND TERMS AND CONDITIONS:**

I.....(NAME) HEREBY ACCEPT THE TERMS OF THIS REQUEST FOR BID AND ACKNOWLEDGE THAT I AM APPROPRIATELY DELEGATED TO RESPOND ON BEHALF OF (ATTACH DELEGATION OF AUTHORITY)

.....

**(NAME OF BIDDER).**

Print Name

\_\_\_\_\_

Designation

\_\_\_\_\_

Date

\_\_\_\_\_

Signature

\_\_\_\_\_

**Annexure D: Location**

1	Where is the Bidder's main office?	
	Other offices:	



**Annexure G: BIDDER'S DISCLOSURE (SBD4)**

**Note:** Mandatory Requirement. Failure to complete and sign this document will result in the bid being nonresponsive.

**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 interest<sup>1</sup> in the enterprise, employed by the state? **YES/NO**

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

Full Name	Identity Number	Name of State institution

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

**2.4 YES/NO**

2.4.1 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 consortium<sup>2</sup> will not be construed as collusive bidding.
- 3.4 In addition, there have been no consultations, communications, agreements or arrangements with any competitor regarding the quality, quantity, specifications, prices, including methods, factors or formulas used to calculate prices, market allocation, the intention or decision to submit or not to submit the bid, bidding with the intention not to win the bid and conditions or delivery particulars of the products or services to which this bid invitation relates.
- 3.4 The terms of the accompanying bid have not been, and will not be, disclosed by the bidder, directly or indirectly, to any competitor, prior to the date and time of the official bid opening or of the awarding of the contract.
- 3.5 There have been no consultations, communications, agreements or arrangements made by the bidder with any official of the procuring institution in relation to this procurement process prior to and during the bidding process except to provide clarification on the bid submitted where so required by the institution; and the bidder was not involved in the drafting of the specifications or terms of reference for this bid.
- 3.6 I am aware that, in addition and without prejudice to any other remedy provided to combat any restrictive practices related to bids and contracts, bids that are suspicious will be reported to the Competition Commission for investigation and possible imposition of administrative penalties in terms of section 59 of the 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

<b>SIGNATURE OF BIDDER OF DELEGATED AUTHORITY</b>		<b>DATE</b>	
---	--	-------------	--

**ANNEXURE H: STATEMENT OF CONSENT TO DATA PROCESSING**

**In terms of the provisions of the Protection of Personal Information Act, 2013 (Act No. 4 of 2013)**

1. I, \_\_\_\_\_ (full names of the **client/applicant**),

Identity number \_\_\_\_\_ (**"the applicant"**)

do hereby grant my consent to the Eastern Cape Development Corporation ("the ECDC") and its appointed processor to process my personal data for the purpose of any or all of the undermentioned actions, being the legitimate reasons for processing and/or using my personal data.

2. I accept that my personal information will only be utilized for the purposes it was collected, that the information will only be retained for as long as is necessary and required by law, and that I have the right to view such information at any time, as well as requested correction or deletion of my personal information held by the ECDC.
3. I am aware that I may withdraw my consent at any time by using the relevant Data Subject Consent Withdrawal Form.
4. I herewith consent to the ECDC official / staff member / employee or agent collecting and having access to my personal information.
5. I expressly consent to the ECDC official / staff member / employee or agent to collect and process this information for the purpose of **considering my application for funding / leasing / employment alternatively for considering our bid document.**
6. I expressly consent to the ECDC or its official / staff member / employee or agent having access to my personal information contained in my application for lease, employment, funding, my bid document or any other administrative document required by the ECDC for processing.
7. I expressly consent to the ECDC or its official / staff member / employee or agent using my personal information to communicate with me in person / via telephone / email / video call / fax / WhatsApp / any form of social media.
8. I expressly consent that the ECDC or its official / staff member / employee or agent may discuss any of my personal information with any of its officials / staff members / employees or agents that may at any stage of my application be involved in considering same and forward any such information to any ECDC relevant committee or forum.
9. I expressly consent to the ECDC or its official / staff member / employee or agent **handing over any outstanding accounts to debt collection third parties (applicable to properties/development finance and business support unit).**
10. I expressly consent to the ECDC or its official / staff member / employee or agent handing over my personal information for purposes of verification of my credit profile or record, references or any purpose required in terms of the law.

<b>SIGNATURE of the DELEGATED AUTHORITY</b>		<b>DATE</b>	
---	--	-------------	--

**SBD 6.1**

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

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

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

**1. GENERAL CONDITIONS**

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

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

1.2 **Principle applicable for this tender /quotation is:**

- a) The value of this bid is estimated to not exceed R50 000 000 (all applicable taxes included) and therefore the applicable preference point system for this tender is the **80/20** preference point system.

1.3 Points for this tender shall be awarded for:

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

1.4 The maximum points for this tender are allocated as follows:

	<b>POINTS</b>
<b>PRICE</b>	80
<b>SPECIFIC GOALS</b>	
51% and above black owned enterprise	10
Eastern Cape Based Supplier	05
51 % and above woman owned enterprises.	03
51 % and above youth owned enterprises	02
<b>Total points for Price and SPECIFIC GOALS</b>	<b>100</b>

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

“**tender**” means a written offer in the form determined by an organ of state in response to an invitation to

- (a) 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).

### 2.1 FORMULAE FOR PROCUREMENT OF GOODS AND SERVICES

#### 2.2 POINTS AWARDED FOR PRICE

#### 2.3 THE 80/20 OR 90/10 PREFERENCE POINT SYSTEMS

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

<b>80/20</b>	<b>or</b>	<b>90/10</b>	
$P_s = 80 \left( 1 - \frac{Pt - P_{min}}{P_{min}} \right)$	or	$P_s = 90 \left( 1 - \frac{Pt - P_{min}}{P_{min}} \right)$	
Where			
P <sub>s</sub>	=	Points scored for price of tender under consideration	
P <sub>t</sub>	=	Price of tender under consideration	

### 2.4 FORMULAE FOR DISPOSAL OR LEASING OF STATE ASSETS AND INCOME GENERATING PROCUREMENT

#### 2.4.1. POINTS AWARDED FOR PRICE

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

<b>80/20</b>	<b>or</b>	<b>90/10</b>	
$P_s = 80 \left( 1 + \frac{Pt - P_{max}}{P_{max}} \right)$	or	$P_s = 90 \left( 1 + \frac{Pt - P_{max}}{P_{max}} \right)$	

Where:

$P_s$  = Points scored for price of tender under consideration

$P_t$  = Price of tender under consideration

$P_{max}$  = Price of highest acceptable tender

**3. POINTS AWARDED FOR SPECIFIC GOALS**

3.1. 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:

3.2. 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—

(c) 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

(d) 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 organs of state: Where either the 90/10 or 80/20 preference point system is applicable, corresponding points must also be indicated as such.**

**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 (90/10 system) (To be completed by the organ of state)	Number of points allocated (80/20 system) (To be completed by the organ of state)	Number of points claimed (90/10 system) (To be completed by the tenderer)	Number of points claimed (80/20 system) (To be completed by the tenderer)
<b>SPECIFIC GOALS</b>				
51% and above black owned enterprises		10		
Eastern Cape Based Supplier		05		
51 % and above woman owned enterprises		03		
51 % and above youth owned enterprises		02		

## DECLARATION WITH REGARD TO COMPANY/FIRM

3.3. Name of company/firm

.....

3.4. Company registration number:

.....

3.5. 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]

3.6. 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:** .....

.....

.....

.....

**ANNEXURE J: SBD 6.2 – Declaration Certificate for Local Production and Content for Designated Sector**  
**Note: Mandatory Requirement. Failure to complete and sign this document will result in the bid being non responsive**

This Standard Bidding Document (SBD) must form part of all bids invited. It contains general information and serves as a declaration form for local content (local production and local content are used interchangeably).

Before completing this declaration, bidders must study the General Conditions, Definitions, Directives applicable in respect of Local Content as prescribed in the ECDC Supply Chain Management Policy, the South African Bureau of Standards (SABS) approved technical specification number SATS 1286:2011 (Edition 1) and the Guidance on the Calculation of Local Content together with the Local Content Declaration Templates [Annex C (Local Content Declaration: Summary Schedule), D (Imported Content Declaration: Supporting Schedule to Annex C) and E (Local Content Declaration: Supporting Schedule to Annex C)].

1. General Conditions

- 1.1 ECDC Supply Chain Management policy makes provision for the promotion of local production and content.
- 1.2 ECDC Supply Management Policy prescribes that in the case of designated sectors, tenders must be advertised with the specific bidding condition that only locally produced or manufactured goods, with a stipulated minimum threshold for local production and content will be considered.
- 1.3 Where necessary, for tenders referred to in paragraph 1.2 above, a three-stage bidding process may be followed, where the first stage involves a minimum threshold for local production and content and the second stage functionality with a minimum threshold of 70% and third stage of price and specific goals.
- 1.4 A person awarded a contract in relation to a designated sector, may not sub-contract in such a manner that the local production and content of the overall value of the contract is reduced to below the stipulated minimum threshold.
- 1.5 The local content (LC) as a percentage of the bid price must be calculated in accordance with the SABS approved technical specification number SATS 1286: 2011 as follows:

$$LC = 1 - [x / y] \times 100$$

Where:

- x imported content  
y bid price excluding value added tax (VAT)

Prices referred to in the determination of x must be converted to Rand (ZAR) by using the exchange rate published by South African Reserve Bank (SARB) at 12:00 on the date, one week (7 calendar days) prior to the closing date of the bid as indicated in paragraph 4.1 below.

**The SABS approved technical specification number SATS 1268:2011 is accessible on <http://www.thedfti/industrialdevelopment/ip.jsp> at no cost.**

- 1.6 A bid will be disqualified if this Declaration Certificate and the Annex C (Local Content Declaration: Summary Schedule) are not submitted as part of the bid documentation.

## 2. Definitions

- 2.1 “bid”** includes advertised competitive bids, written price quotations or proposals
- 2.2 “bid price”** price offered by the bidder, excluding value added tax (VAT);
- 2.3 “contract”** means the agreement that results from the acceptance of a bid by an organ of state;
- 2.4 “designated sector”** means a sector, sub-sector or industry that has been designated by the Department of Trade and Industry in line with national development and industrial policies for local production,
- 2.5** where only locally produced services, works or goods or locally manufactured goods meet the stipulated minimum threshold for local production and content;
- 2.6 “duly sign”** means a Declaration Certificate for Local Content that has been signed by the Chief Financial Officer or other legally responsible person nominated in writing by the Chief Executive, or senior member / person with management responsibility (close corporation, partnership or individual).
- 2.7 “imported content”** means that portion of the bid price represented by the cost of components, parts or materials which have been or are still to be imported (whether by the supplier or its subcontractors) and
- 2.8** which costs are inclusive of the costs abroad, plus freight and other direct importation costs, such as landing costs, dock duties, import duty, sales duty or other similar tax or duty at the South African port of entry;
- 2.9 “Local content”** means that portion of the bid price which is not included in the imported content, provided that local manufacture does take place;
- 2.10 “Stipulated minimum threshold”** means that portion of local production and content as determined by the Department of Trade and Industry; and
- 2.11 “sub-contract”** means the primary contractor’s assigning, leasing, making out work to, or employing another person to support such primary contractor in the execution of part of a project in terms of the contract in the execution part of a project in terms of the contract.

**The stipulated minimum threshold(s) for local production and content (refer to Annex A of SATS 1286:2011 for this bid is/are as follows**

**Table 1 (Refer to Annexure C for more details)**

<b>Designated Sector / Sub-sector / Industries</b>	<b>Minimum threshold for local content</b>
<b>Steel Products</b>	<b>100%</b>
<b>Cement (All classes)</b>	<b>100%</b>
<b>Electrical wiring</b>	<b>90%</b>
<b>Valves Products &amp; Actuators</b>	<b>70%</b>
<b>Pumps, MV, Motor &amp; Associated Accessories</b>	<b>70%</b>
<b>Plastic pipes</b>	<b>100%</b>

**3. Does any portion of the services, works or goods offered have any imported content? (Tick Applicable Box)**

YES	NO
-----	----

**3.1** If yes, the rate(s) of exchange to be used in this bid to calculate the local content as prescribed in paragraph 1.5 of the general conditions must be the rate(s) published by SARB for the specific currency at 12:00 on the date, one week (7 calendar days) prior to the closing date of the bid.

The relevant rates of exchange information is accessible on [www.reservebank.co.za](http://www.reservebank.co.za). Indicate the rate(s) of exchange against the appropriate currency in the table below:

Currency	Rates of exchange
US Dollar	
Pound Sterling	
Euro	
Yen	
Other	

**NB: Bidders must submit proof of the SARB rate (s) of exchange used.**

**4. Where , after the award of a Bid, challenges are experienced in the meeting the stipulated Minimum threshold for local content, the DTI must be informed accordingly in order for the DTI to verify and consultation with the AO/AA provide directive in this regard.**

**LOCAL CONTENT DECLARATION BY THE CHIEF FINANCIAL OFFICER OR OTHER LEGALLY RESPONSIBLE PERSON NOMINATED IN WRITING BY THE CHIEF EXECUTIVE OR SENIOR MEMBER/PERSON WITH MANAGEMENT RESPONSIBILITY (CLOSE CORPORATION, PARTNERSHIP OR INDIVIDUAL)**

.....

**IN RESPECT OF BID No.** \_\_\_\_\_

**ISSUED BY:** (Procurement Authority / Name of Institution):

.....

**NB**

The obligation to complete, duly sign and submit this declaration cannot be transferred to an external authorized representative, auditor or any other third party acting on behalf of the bidder.

Guidance on the Calculation of Local Content together with Local Content Declaration Templates (Annex C, D and E) is accessible on [http://www.thdti.gov.za/industrial\\_development/ip.jsp](http://www.thdti.gov.za/industrial_development/ip.jsp)

Bidders should first complete Declaration D After completing Declaration D, bidders should complete Declaration E and then consolidate the information on Declaration C.

**Declaration C should be submitted with the bid documentation at the closing date and time of the bid in order to substantiate the declaration made in paragraph C below.**

Declaration D and E should be kept by the Bidder for verification purposes for a period of at least 5 years. The successful bidder is required to continuously update Declarations C, D and E with the actual values for the duration of the contract.

I, the undersigned, ..... (full names), do hereby declare, in my capacity as ..... of ..... (name of bidder entity), the following:

The facts contained herein are within my own personal knowledge.

I have satisfied myself that

- the goods/services/works to be delivered in terms of the above-specified bid comply with the minimum local content requirements as specified in the bid, and as measured in terms of SATS 1286:2011 and

The local content percentage (%) indicated below has been calculated using the formula given in clause 3 of SATS 1286:2011, the rates of exchange indicated in paragraph 4.1 and information contained in Declaration D and E which has been consolidated in Declaration C above:

Bid price, excluding VAT (y)	R
Imported content (x)	R
Stipulated minimum threshold for Local content (paragraph 3 above)	
Local content %, as calculated in terms of SATS 1286:2011	

**If the bid is for more than one product, the local content percentages for each product contained in Declaration C shall be used instead of the table above.**

**The local content percentages for each product has been calculated using the formula given in clause 3 of SATS 1286:2011, the rates of exchange indicated in paragraph 4.1 above and the information contained in Declaration D and E**

- (d) I accept that the Procurement Authority / Institution has the right to request that the local content be verified in terms of the requirements of SATS 1286:2011
- (e) I understand that the awarding of the bid is dependent on the accuracy of the information furnished in this application. I also understand that the submission of incorrect data, or data that are not verifiable as described in SATS 1286:2011, may result in the Procurement Authority / Institution imposing any or all of the remedies as provided for in Regulation 14 of the Preferential Procurement Regulations, 2017 promulgated under the Policy Framework Act (PPFA), 2000 (Act No. 5 of 2000).

**NAME:** \_\_\_\_\_

**SIGNATURE:** \_\_\_\_\_ **DATE:** \_\_\_\_\_

**WITNESS No. 1** \_\_\_\_\_ **DATE:** \_\_\_\_\_

**WITNESS No. 2** \_\_\_\_\_ **DATE:** \_\_\_\_\_

The below listed declarations are attached in the next three pages that follow;

- **Declaration C SATS 1286.2011**

- Local Content Declaration – Summary Schedule

- **Declaration D SATS 1286.2011**

- Imported Content Declaration – Supporting Schedule to declaration C

- **Declaration E SATS 1286.2011**

- Local Content Declaration \_- Supporting Schedule to declaration C

- Bidders should first complete annexure D, after completing annexure D, bidders should complete annexure E and then consolidate the information on annexure C.
- **Annexure C should be submitted with the with the bid documentation on the closing date in order to substantiate the declaration made on annexure J.**
- The successful bidder is required to continuously update annexures C, D and E with the actual for the duration of the contract.
- Bidders should obtain copies of certificates of trading the subject materials from manufactures/suppliers and attach them in the bid document in order to substantiate annexure J above.

**NB: Tenderers to complete and sign annexure C even if they claim 100% of local content.**

**Templates of Declarations C, D and E follow:**

## Annex C

(C1) Tender No.	ECDC/INFRA/33/042024		
(C2) Tender description:	Completion of Dimbaza Waste Water Treatment Works Plant		
(C3) Designated product(s)	Street Light Steel Poles, Valves products and actuators, Pumps, Medium Voltage (MV) Motor and Associated		
(C4) Tender Authority:	Eastern Cape Development Corporation		
(C5) Tendering Entity name:			
(C6) Tender Exchange Rate:	US\$	EU	GBP
(C7) Specified local content %			

Note: VAT to be excluded from all calculations

Tender item No's (BoQ reference)	List of items	Tender price - each (excl VAT)	Exempted imported value	Tender value net of exempted imported content	Imported value	Local value	Local content % (per item)	Tender Qty	Total tender value	Total exempted imported content	Total Imported content
(C8)	(C9)	(C10)	(C11)	(C12)	(C13)	(C14)	(C15)	(C16)	(C17)	(C18)	(C19)
	<b>Street Light Steel Poles</b>										
5.5.2	Supply and install Galvanised Pole for Area Lighting, 9m Mounting Height, including Floodlight Spigot for 2 x Floodlights.						100%	8			
	<b>Electrical and telecom cables</b>										
5.1.4	Main Cable: 16mm2 x 4core Cu/PVC/ECC/PVC cable						90%	190			
5.1.11	1.5mm2 PVC single core conductor (house wire)						90%	2155			
5.1.12	2.5mm2 PVC single core conductor (house wire)						90%	1804			
5.1.13	4mm2 PVC single core conductor						90%	485			
5.2.13	11kV MV Cable, 35mm x 3core XLPE						90%	30			
5.3.1	Main Cable: 25mm2 x 4core Cu/PVC/ECC/PVC cable						90%	660			
5.4.5	Main Cable: 16mm2 x 4core Cu/PVC/ECC/PVC cable						90%	100			
5.5.4	Main Cable: 4mm2 x 4core Cu/PVC/ECC/PVC cable						90%	300			
5.5.7	Cable for Area Lights: 4mm2 x 3core						90%	400			
5.6.2	Main Cable: 16mm2 x 4core Cu/PVC/ECC/PVC cable						90%	190			
5.7.5	Main Cable: 16mm2 x 2core Cu/PVC/ECC/PVC cable						90%	60			
	<b>Valves products and actuators</b>										
4.1.10	Manual hand bar screen, Galvanised mild steel. Channel Size: 2500mm x 1200mm. Bar Spacing: 20mm						70%	1			
4.1.11	Weir plates 3000x180x2mm, 304 Stainless Steel.						70%	28			
4.1.12	Telescopic valve 250Nb, Galvanised mild steel						70%	2			
4.1.13	Channel inlet sluice gates 880w x 1040d Stainless steel						70%	2			
4.1.14	Channel Lagoon sluice gates 440w x 440 Stainless steel						70%	1			
	<b>Pumps, Medium Voltage (MV) Motor and Associated Accessories</b>										
4.1.1	Supply and install effluent booster pumps. BOOSTER 5 FMH 8B-53 Horizontal Multistage pump 3ph						70%	2			
4.5.1	Supply and Install RAS Pumps and motors. Gorman Rupp (GR Pumps), Model T8A3-B (T- Series), Motor Size: 11kW						70%	2			
	<b>Plastic Pipes</b>										
5.1.9	20mm PVC conduit (chased into wall or on surface)						100%	492			
3.1.15	Refurbish all plumbing										
	<b>Steel Products and Components for Construction</b>										
3.1.8	New galvanised handrails at splitter box to match existing						100%	20			

**Annex C**

3.1.9, 3.3.6, 3.5.7, 3.7.7, 3.9.7	<i>New timber roof - Comprises the complete roof refurbishment including wall plates, ties, trusses, windbracing, etc. The Contractor will be responsible for all shop drawings.</i>						100%	490			
3.1.12, 3.5.12	<i>Construct new canopy complete with IBR sheet roof covering - comprises roof coverings, treatment, ridge coverings, etc.</i>						100%	23			
3.1.13	<i>Supply new 100mm diameter (3m long) galvanized support columns to canopy.</i>						100%	4			
3.1.10, 3.5.10, 3.7.10, 3.9.10	<i>Replace all rainwater goods (gutters and downpipes) with 125 x 87mm eaves pvc gutters including gutter brackets spaced at 0,5m centres and 88mm diameter rainwater downpipe fixed with heavy duty aluminium holderbats at 1500mm centres</i>						100%	190			
3.3.12, 3.5.12	<i>Replace entrance door with a single pressed steel Amdoor Transformer Room door and frame, Type CV, size of 1200mm x 2134mm high. Door to be painted with two coats heritage green anti rust paint</i>						100%	6			

CONTINUES ON NEXT PAGE

Signature of Tenderer from Annex B

Date: \_\_\_\_\_

(C20) Total tender value R

(C21) Total Exempt imported content R

(C22) Total Tender value net of exempt imported content R

(C23) Total Imported content R

(C24) Total local content R

(C25) Average local content % of tender



Annex D

Imported Content Declaration - Supporting Schedule to Annex C

(D1) Tender No.	ECDC/INFRA/33/042024	0	0	0	Note: VAT to be excluded from all calculations
(D2) Tender description:	Completion of Dimbaza Waste Water Treatment Works Plant	0	0	0	
(D3) Designated Products:	As before (Annex C)				
(D4) Tender Authority:	ECDC				
(D5) Tendering Entity name:					
(D6) Tender Exchange Rate:	Pula	EU		GBP	

A. Exempted imported content

Tender item no's	Description of imported content	Local supplier	Overseas Supplier	Calculation of imported content						Summary	
				Foreign currency value as per Commercial Invoice	Tender Exchange Rate	Local value of imports	Freight costs to port of entry	All locally incurred landing costs & duties	Total landed cost excl VAT	Tender Qty	Exempted imported value
(D7)	(D8)	(D9)	(D10)	(D11)	(D12)	(D13)	(D14)	(D15)	(D16)	(D17)	(D18)
(D19) Total exempt imported value										This total must correspond with Annex C - C 21	

B. Imported directly by the Tenderer

Tender item no's	Description of imported content	Unit of measure	Overseas Supplier	Calculation of imported content						Summary	
				Foreign currency value as per Commercial Invoice	Tender Rate of Exchange	Local value of imports	Freight costs to port of entry	All locally incurred landing costs & duties	Total landed cost excl VAT	Tender Qty	Total imported value
(D20)	(D21)	(D22)	(D23)	(D24)	(D25)	(D26)	(D27)	(D28)	(D29)	(D30)	(D31)
(D32) Total imported value by tenderer										This total must correspond with Annex C - C 21	

C. Imported by a 3rd party and supplied to the Tenderer

Description of imported content	Unit of measure	Local supplier	Overseas Supplier	Calculation of imported content						Summary	
				Foreign currency value as per Commercial Invoice	Tender Rate of Exchange	Local value of imports	Freight costs to port of entry	All locally incurred landing costs & duties	Total landed cost excl VAT	Quantity imported	Total imported value
(D33)	(D34)	(D35)	(D36)	(D37)	(D38)	(D39)	(D40)	(D41)	(D42)	(D43)	(D44)
(D45) Total imported value by 3rd party										This total must correspond with Annex C - C 21	

D. Other foreign currency payments

Type of payment	Local supplier making the payment	Overseas beneficiary	Calculation of foreign currency payments		Summary of payments	
			Foreign currency value paid	Tender Rate of Exchange	Local value of payments	
(D46)	(D47)	(D48)	(D49)	(D50)	(D51)	
(D52) Total of foreign currency payments declared by Tenderer and/or 3rd party						This total must correspond with Annex C - C 23

Signature of Tenderer from Annex B

Date: \_\_\_\_\_

(D53) Total of imported content & foreign currency payments - (D32), (D45) & (D52) above

This total must correspond with Annex C - C 23



## **T2.2.2 - Functionality Evaluation Schedules**

**T2.2.2a: SIMILAR PROJECTS COMPLETED SUCCESSFULLY WITH REFERENCE LETTERS**

**Note:** Mandatory Returnable Schedule. Failure to submit as required will result in the bid being nonresponsive.

<b>Project title:</b>	<b>COMPLETION OF CIVIL, MECHANICAL AND ELECTRICAL INFRASTRUCTURE AT THE DIMBAZA WASTEWATER TREATMENT WORKS – PHASE 1</b>
<b>Bid No:</b>	<b>ECDC/INFRA/40/122024</b>

**Bidders are required to provide a schedule of similar work in complexity that was successfully completed with contactable references as per the attached forms below.**

**OR**

**Submit a reference letter that indicates the following:**

*Signature of the Client*

*On Clients Letter Head or Client Stamp*

*Company Name, contact person, contact details (telephone number and email etc)*

*Value of the Project*

*Scope of works carried out*

*Works have been completed on time/within stipulated contract period*



<b>Project title:</b>	<b>COMPLETION OF CIVIL, MECHANICAL AND ELECTRICAL INFRASTRUCTURE AT THE DIMBAZA WASTEWATER TREATMENT WORKS – PHASE 1</b>
<b>Bid No:</b>	<b>ECDC/INFRA/40/122024</b>

Sir/Madam,

We are in the process of evaluating \_\_\_\_\_ for the above project.

**Tenderers Company Name**

They have listed you as a reference. Please evaluate the contractor's performance on the criteria listed below by ticking the appropriate boxes. This form to be submitted with the bid. If you have any questions, please do not hesitate to contact us.

NAME OF EMPLOYER	NAME OF PROJECT	CONTRACT PERIOD	VALUE OF WORK

**1. KNOWLEDGEABLE IN THE FIELD IN WHICH THIS BID RELATES TO**

<b>EXCELLENT</b>	<b>VERY GOOD</b>	<b>GOOD</b>	<b>FAIR</b>	<b>POOR</b>
<b>5</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>

**2. TIME PERFORMANCE**

<b>EXCELLENT</b>	<b>VERY GOOD</b>	<b>GOOD</b>	<b>FAIR</b>	<b>POOR</b>
<b>5</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>

**3. FINANCIAL PERFORMANCE**

<b>EXCELLENT</b>	<b>VERY GOOD</b>	<b>GOOD</b>	<b>FAIR</b>	<b>POOR</b>
<b>5</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>

**4. WAS THE WORKS COMPLETED SATISFACTORY?**

YES / NO (please circle)

If no, please provide details below:

\_\_\_\_\_

\_\_\_\_\_

Project Manager/Principal Agent: \_\_\_\_\_ **Place company stamp below:**

Tel: \_\_\_\_\_

E-mail Address \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_



<b>Project title:</b>	<b>COMPLETION OF CIVIL, MECHANICAL AND ELECTRICAL INFRASTRUCTURE AT THE DIMBAZA WASTEWATER TREATMENT WORKS – PHASE 1</b>
<b>Bid No:</b>	<b>ECDC/INFRA/40/122024</b>

Sir/Madam,

We are in the process of evaluating \_\_\_\_\_ for the above project.

**Tenderers Company Name**

They have listed you as a reference. Please evaluate the contractor's performance on the criteria listed below by ticking the appropriate boxes. This form to be submitted with the bid. If you have any questions, please do not hesitate to contact us.

NAME OF EMPLOYER	NAME OF PROJECT	CONTRACT PERIOD	VALUE OF WORK

**1. KNOWLEDGEABLE IN THE FIELD IN WHICH THIS BID RELATES TO**

<b>EXCELLENT</b>	<b>VERY GOOD</b>	<b>GOOD</b>	<b>FAIR</b>	<b>POOR</b>
5	4	3	2	1

**2. TIME PERFORMANCE**

<b>EXCELLENT</b>	<b>VERY GOOD</b>	<b>GOOD</b>	<b>FAIR</b>	<b>POOR</b>
5	4	3	2	1

**3. FINANCIAL PERFORMANCE**

<b>EXCELLENT</b>	<b>VERY GOOD</b>	<b>GOOD</b>	<b>FAIR</b>	<b>POOR</b>
5	4	3	2	1

**4. WAS THE WORKS COMPLETED SATISFACTORY?**

YES / NO (please circle)

If no, please provide details below:

\_\_\_\_\_

\_\_\_\_\_

Project Manager/Principal Agent: \_\_\_\_\_ **Place company stamp below:**

Tel: \_\_\_\_\_

E-mail Address \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_



<b>Project title:</b>	<b>COMPLETION OF CIVIL, MECHANICAL AND ELECTRICAL INFRASTRUCTURE AT THE DIMBAZA WASTEWATER TREATMENT WORKS – PHASE 1</b>
<b>Bid No:</b>	<b>ECDC/INFRA/40/122024</b>

Sir/Madam,

We are in the process of evaluating \_\_\_\_\_ for the above project.

**Tenderers Company Name**

They have listed you as a reference. Please evaluate the contractor's performance on the criteria listed below by ticking the appropriate boxes. This form to be submitted with the bid. If you have any questions, please do not hesitate to contact us.

NAME OF EMPLOYER	NAME OF PROJECT	CONTRACT PERIOD	VALUE OF WORK

**1. KNOWLEDGEABLE IN THE FIELD IN WHICH THIS BID RELATES TO**

EXCELLENT	VERY GOOD	GOOD	FAIR	POOR
5	4	3	2	1

**2. TIME PERFORMANCE**

EXCELLENT	VERY GOOD	GOOD	FAIR	POOR
5	4	3	2	1

**3. FINANCIAL PERFORMANCE**

EXCELLENT	VERY GOOD	GOOD	FAIR	POOR
5	4	3	2	1

**4. WAS THE WORKS COMPLETED SATISFACTORY?**

YES / NO (please circle)

If no, please provide details below:

\_\_\_\_\_

\_\_\_\_\_

Project Manager/Principal Agent: \_\_\_\_\_ Place company stamp below:

Tel: \_\_\_\_\_

E-mail Address \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_



<b>Project title:</b>	<b>COMPLETION OF CIVIL, MECHANICAL AND ELECTRICAL INFRASTRUCTURE AT THE DIMBAZA WASTEWATER TREATMENT WORKS – PHASE 1</b>
<b>Bid No:</b>	<b>ECDC/INFRA/40/122024</b>

Sir/Madam,

We are in the process of evaluating \_\_\_\_\_ for the above project.

**Tenderers Company Name**

They have listed you as a reference. Please evaluate the contractor's performance on the criteria listed below by ticking the appropriate boxes. This form to be submitted with the bid. If you have any questions, please do not hesitate to contact us.

NAME OF EMPLOYER	NAME OF PROJECT	CONTRACT PERIOD	VALUE OF WORK

**1. KNOWLEDGEABLE IN THE FIELD IN WHICH THIS BID RELATES TO**

EXCELLENT	VERY GOOD	GOOD	FAIR	POOR
5	4	3	2	1

**2. TIME PERFORMANCE**

EXCELLENT	VERY GOOD	GOOD	FAIR	POOR
5	4	3	2	1

**3. FINANCIAL PERFORMANCE**

EXCELLENT	VERY GOOD	GOOD	FAIR	POOR
5	4	3	2	1

**4. WAS THE WORKS COMPLETED SATISFACTORY?**

YES / NO (please circle)

If no, please provide details below:

\_\_\_\_\_

\_\_\_\_\_

Project Manager/Principal Agent: \_\_\_\_\_ Place company stamp below:

Tel: \_\_\_\_\_

E-mail Address \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_





**Reference No 5**

<b>Project title:</b>	<b>COMPLETION OF CIVIL, MECHANICAL AND ELECTRICAL INFRASTRUCTURE AT THE DIMBAZA WASTEWATER TREATMENT WORKS – PHASE 1</b>
<b>Bid No:</b>	<b>ECDC/INFRA/40/122024</b>

Sir/Madam,

We are in the process of evaluating \_\_\_\_\_ for the above project.

**Tenderers Company Name**

They have listed you as a reference. Please evaluate the contractor's performance on the criteria listed below by ticking the appropriate boxes. This form to be submitted with the bid. If you have any questions, please do not hesitate to contact us.

NAME OF EMPLOYER	NAME OF PROJECT	CONTRACT PERIOD	VALUE OF WORK

**1. KNOWLEDGEABLE IN THE FIELD IN WHICH THIS BID RELATES TO**

EXCELLENT	VERY GOOD	GOOD	FAIR	POOR
5	4	3	2	1

**2. TIME PERFORMANCE**

EXCELLENT	VERY GOOD	GOOD	FAIR	POOR
5	4	3	2	1

**3. FINANCIAL PERFORMANCE**

EXCELLENT	VERY GOOD	GOOD	FAIR	POOR
5	4	3	2	1

**4. WAS THE WORKS COMPLETED SATISFACTORY?**

YES / NO (please circle)

If no, please provide details below:

\_\_\_\_\_

\_\_\_\_\_

Project Manager/Principal Agent: \_\_\_\_\_ Place company stamp below:

Tel: \_\_\_\_\_

E-mail Address \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**T2.2.2 b – Construction Detailed Implementation Plan/Methodology**

<b>Project title:</b>	<b>COMPLETION OF CIVIL, MECHANICAL AND ELECTRICAL INFRASTRUCTURE AT THE DIMBAZA WASTEWATER TREATMENT WORKS – PHASE 1</b>
<b>Bid No:</b>	<b>ECDC/INFRA/40/122024</b>

**Construction Detailed Implementation Plan/Methodology**

Detailed implementation plan/methodology to be attached here.

**T2.2.2 c – Key Personnel Qualifications**

**(Construction Manager)**

<b>Project title:</b>	<b>COMPLETION OF CIVIL, MECHANICAL AND ELECTRICAL INFRASTRUCTURE AT THE DIMBAZA WASTEWATER TREATMENT WORKS – PHASE 1</b>
<b>Bid No:</b>	<b>ECDC/INFRA/40/122024</b>

Attach CV's & Certified Copies of Qualifications here

T2.2.2 e – Contactable References

(Construction Supervisor)

<b>Project title:</b>	<b>COMPLETION OF CIVIL, MECHANICAL AND ELECTRICAL INFRASTRUCTURE AT THE DIMBAZA WASTEWATER TREATMENT WORKS – PHASE 1</b>
<b>Bid No:</b>	<b>ECDC/INFRA/40/122024</b>

Attach CV's & Certified Copies of Qualifications here

**T2.2.2 e – Contactable References**

**(Construction Health and Safety Officer)**

<b>Project title:</b>	<b>COMPLETION OF CIVIL, MECHANICAL AND ELECTRICAL INFRASTRUCTURE AT THE DIMBAZA WASTEWATER TREATMENT WORKS – PHASE 1</b>
<b>Bid No:</b>	<b>ECDC/INFRA/40/122024</b>

Attach CV's, Certified Copies of Qualifications & Professional Registration here

## **THE CONTRACT**

### **Part C1: Agreements and Contract data**

C1.1 - Form of Offer and  
Acceptance

C1.2 - Contract Data

C1.3 - Form of Guarantee

## **C1.1 - Form of offer and acceptance**

**Annexure L:**

**C.1.1 FORM OF OFFER AND ACCEPTANCE OFFER**

**Note:**

**Mandatory Requirement. Failure to complete and sign this document will result in the bid being nonresponsive.**

**OFFER**

The Employer, identified in the Acceptance signature block, has solicited offers to enter into a contract in respect of the following works:

**PROJECT: COMPLETION OF CIVIL, MECHANICAL AND ELECTRICAL INFRASTRUCTURE AT THE DIMBAZA WASTEWATER TREATMENT WORKS – PHASE 1**

**Bid No: ECDC/INFRA/40/122024**

The Tenderer, identified in the Offer signature block below, has examined the documents listed in the Tender Data and addenda thereto as listed in the Tender Schedules, and by submitting this Offer has accepted the Conditions of Tender.

By the representative of the Tenderer, deemed to be duly authorized, signing this part of this Form of Offer and Acceptance, the Tenderer offers to perform all of the obligations and liabilities of the Contractor under the Contract including compliance with all its terms and conditions according to their true intent and meaning for an amount to be determined in accordance with the Conditions of Contract identified in the Contract Data.

**THE OFFERED TOTAL OF THE PRICES INCLUSIVE OF VALUE ADDED TAX IS:**

**R..... (in figures)**

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

**Rand (in words)**

This offer may be accepted by the Employer by signing the acceptance part of this form of offer and acceptance and returning one copy of this document to the tenderer before the end of the period of validity stated in the Tenderdata, whereupon the tenderer becomes the party named as the Service Provider in the conditions of Contract identified in the Contract Data.

**THIS OFFER IS MADE BY THE FOLLOWING LEGAL ENTITY:** (cross out block which is not applicable)

Company or close corporation:

.....  
..... And:  
whose registration number is:

.....  
.....  
And: whose income tax reference number  
is:.....



Trading under the name and style of:  
 .....  
 .....

<p><b>AND WHO IS:</b></p> <p>Represented herein, and who is duly authorized to do so, by:</p> <p>Mr/Mrs/Ms:</p> <p>.....</p> <p>.....</p> <p>In his/her capacity as:</p> <p>.....</p> <p>.....</p>	<p><b>Note:</b></p> <p>A resolution/power of attorney, signed by all the directors/ members/ partners of the legal entity must accompany this offer, authorizing the representative to make this offer.</p>
--	---

SIGNED FOR THE TENDERER:		
Name of Representative	Signature	Date

SIGNED BY WITNESS:		
Name of Representative	Signature	Date

The tenderer elects as its *domicillium citandi et executandi* in the Republic of South Africa, where any and all legal notices may be served, as (physical address)

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

Other contact details of the tenderer are:

Telephone no:

.....

Cellular phone no:

.....

Fax no:

.....

Postal address

.....

Banker:

.....

Branch:

.....

**ACCEPTANCE**

By signing this part of this form of offer and acceptance, ECDC accepts the bidder's offer. Acceptance of the bidder's offer shall form an agreement between the ECDC and the bidder upon the terms and conditions contained in this agreement and in the contract that is the subject of this agreement.

The terms of the contract are contained in the contract to be concluded.

- Agreements and Contract Data, (which includes this Agreement)
- Pricing data
- Scope of work.
- Site information and drawings and documents or parts thereof, which may be incorporated by reference into the volumes above.

Deviations from and amendments to the documents listed in the bid data and any addenda thereto as listed in the bid schedules as well as any changes to the terms of the offer agreed by the bidder and ECDC during this process of offer and acceptance, are contained in the schedule of deviations attached to and forming part of this agreement. No amendments to or deviations from said documents are valid unless agreed by both parties.

The bidder shall within two weeks after receiving a completed copy of this agreement, including the schedule of deviations (if any), contact the ECDC's Legal Department to arrange documentation to be provided in terms of the conditions of contract identified in the contract. Failure to fulfil any of these obligations in accordance with those terms shall constitute a repudiation of this agreement.

Notwithstanding anything contained herein, this agreement comes into effect on the date when the bidder receives one fully completed original copy of this document, including the schedule of deviations (if any). Unless the bidder within five working days of the date of such receipt notifies the employer in writing of any reason why he cannot accept the contents of this agreement, this agreement shall constitute a binding contract between the parties.

**Signed for the ECDC:**

<b>Name of representative</b>	<b>Capacity</b>	<b>Date</b>
..... ..... ..... .....		
<b>Address</b>	<b>Signature</b>	

**Witnessed by:**

<b>Name of witness</b>	<b>Signature</b>	<b>Date</b>

**Schedule of deviations**

Notes:

1. The extent of deviations from the tender documents issued by the Employer prior to 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 matter in such letter, which constitutes a deviation as aforesaid becomes 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 document 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 document arising from the above agreements and recorded here, shall also be incorporated into the final draft of the Contract.

<b>1</b>	<b>Subject</b>	
	<b>Details</b>	
<b>2</b>	<b>Subject</b>	
	<b>Details</b>	
<b>3</b>	<b>Subject</b>	
	<b>Details</b>	

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

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

**Signed for the ECDC**

Name of Representative	Capacity	Signature

**Signed by Bidder:**

Name of Representative	Capacity	Signature

## **C1.2 - Contract data**

## C1.2 CONTRACT DATA

### PART 1: DATA PROVIDED BY THE EMPLOYER

#### CONDITIONS OF CONTRACT

The General Conditions of Contract for Construction Works 3<sup>rd</sup> Edition (2015), published by the South African Institution of Civil Engineering, is applicable to this Contract and is incorporated herein by reference.

Copies of these Conditions of Contract may be obtained from the South African Institution of Civil Engineering, Tel. No. +27 11 805-5947 or [www.saice.org.za](http://www.saice.org.za).

The General Conditions of Contract for Construction Works make several references to the Contract Data for specific data, which together with these conditions collectively describe the risks, liabilities and obligations of the contracting parties and the procedures for the administration of the Contract. The Contract Data shall have precedence in the interpretation of any ambiguity or inconsistency between it and the general conditions of contract.

The Contract Data and General Conditions of Contract shall have precedence over the Drawings, Scope of Work and Standardised Specifications in the interpretation of any ambiguity or inconsistency.

The following contract specific data are applicable to this Contract:

CONTRACT SPECIFIC DATA	
Clause	Data
1.1.1.13	The Defects Liability Period is: <b>Twelve (12) calendar months</b> measured from the date of the Certificate of Completion separately applicable to each phase.
1.1.1.14	The time for achieving Practical Completion for this project is: <b>(11) calendar months</b> from the Commencement Date.
1.1.1.15	The name of the Employer is: <b>Eastern Cape Development Corporation (ECDC)</b>
1.1.1.16	The name of the Employer's Agent is: <b>BM Infrastructure Development</b> The Employer's Agent means any Director, Associate or Professional Engineer appointed generally or specifically by the Management of BM Infrastructure to fulfil the functions of the Employer's Agent in terms of the Conditions of Contract. Wherever the name " <b>Engineer</b> " appears in the document, it shall be read to mean the " <b>Employer's Agent</b> ".
1.1.1.26	The Pricing Strategy is: <b>Re-measurement Contract</b>

1.1.1.35	<p>The following additional definition applies:-</p> <p><b>“Drawings”</b>: Means all drawings, calculations and technical information forming part of the Contract Documents and any modifications thereof or additions thereto from time to time approved in writing by the Employer’s Agent or delivered to the Contractor by the Employer’s Agent.</p>
1.1.1.36	<p>The following additional definition applies:-</p> <p><b>Letter of Notification</b>”: Means the letters of formal notification, signed by the Employer, of the decision of the Supply Chain Management Bid Adjudication Committee sent to all tenderers.</p>
1.2.1.2	<p>Delivery of Notices</p> <p>The following two additional sub-clauses, covering alternative methods of communication, apply: -</p>
1.2.1.2.1	<p>Sent by facsimile or any like communication irrespective of it being during office hours or otherwise.</p>
1.2.1.2.2	<p>Posted to the addressee for certified delivery by the postal Authorities</p>
1.2.1.2	<p>The address of the Employer for receipt of communications is:</p> <p>Attention: Ms. P Casa</p> <p><u>Physical address:</u>  Eastern Cape Development Corporation  Ocean Terrace Park  Moore Street  Quigney, East London  5201</p> <p>Tel : +27 43 704 5644</p>

2.1.4	<p>The following additional clause applies:-</p> <p>"Without limiting the generality of the afore going, the Schedule of Rates and Prices shall include:</p> <p>The provision and use of all labour, plant, tools instruments, templates, materials, transport and all other appliances that may be required for satisfactorily protecting and efficiently carrying out the works without interruption or delay.</p> <p>The provision and housing of adequate staff and labour force and the provision of false work of every kind and description necessary for the due and proper performance of the Contract.</p> <p>The execution of the Works in orderly and progressive manner until it has been completed. Time being of the essence of the Contract the progressive development of the Works shall be arranged so that the time from the start to the finish of the construction of the said Works shall not exceed the time laid down in the Tender.</p> <p>The inclusion in the tendered rates for all and any of the general liabilities such as Establishment Charges, legal contingencies, regulations, risks or damage, Royalties and all other overhead charges.</p> <p>The submission of a tender shall be considered prima facie evidence that the Contractor has complied with the requirements of this clause and has satisfied himself as to all circumstances and local conditions which may influence or affect his Tender."</p>
2.4.3	<p>The following additional clause applies:-</p> <p>In the event of any discrepancy or conflict between any parts of the Contract Documents, the order of precedence shall be as follows :</p> <ol style="list-style-type: none"> <li>1. Project Specifications</li> <li>2. Special Conditions of Contract</li> <li>3. General Conditions of Contract</li> <li>4. Conditions of Tender</li> <li>5. Standardised/Particular Specifications</li> <li>6. Contract Drawings</li> <li>7. Schedule of Quantities</li> </ol>



2.5.2	<p>The following additional clause applies: -</p> <p>The Employer may make direct payments to suppliers on behalf of the Contractor subject to the receipt of a specific request from the Contractor and subject to the following conditions:</p> <p>An original of the invoice together with a signed Cession Form is submitted together with a certificate approved by the Employer's Agent.</p> <p>The Contractor cedes, transfers and assigns all the rights, title and interest in and to the materials and goods to the total value of the invoice.</p> <p>The cession shall become effective as soon as payment is made by the Employer or on behalf of the Employer.</p> <p>The Contractor indemnifies the Employer against any loss or damage whatsoever to the said material and goods whilst they are in the Contractor's possession and in transit to the site and until such time as they are safely and properly stored on the site, and the Contractor undertakes to effect adequate insurance against these risks. Such insurance shall be for the full value of the materials and goods and goods certified for payment and the insurance policy ceded in full to the Employer.</p>
3.2.3	<p>The Employer's Agent shall obtain the specific approval of the Employer before executing any of his functions or duties according to the following Clauses of the General Conditions of Contract:</p> <p>Clause 3.3.1      Nomination of Employer's Agent's Representative  Clause 3.3.4      Employer's Agent's authority to delegate  Clause 5.8.1      Non-working times  Clause 5.11.1     Suspension of the Works  Clause 5.12.4     Acceleration instead of extension of time</p>
3.2.5	<p>The following additional clause applies:-</p> <p>The onus rests with the Contractor to raise any item about which the Contractor may be uncertain, with the Employer's Agent's Representative. Any advice given to the Contractor by the Employer's Agent's Representative in response to matters so raised shall not be construed as instructions and shall be held to have been given without prejudice.</p>
3.3.6	<p>The following additional clause applies:-</p> <p>The Employer or the Employer's Agent under delegated authority, reserves the right to obtain the services of consultants on any matter pertaining to this contract; the employment of such consultants forms no part of this contract; a consultant's advice and/or documentation is to be followed only if the Employer's Agent or the Employer's Agent's Representative so instructs.</p>

4.1	All references to "design" are deemed to be deleted and the Contractor shall bear no liability in respect of the Projects design, other than the temporary works and items clearly indicated to design on drawings.
4.3.3	<p>The following additional clause applies:-</p> <p>The Employer and the Contractor shall enter into an agreement to complete the work required for the construction of the works in terms of the provisions of Section 37(2) of the Occupational Health and Safety Act (Act 85 of 1993) and the Construction Regulations promulgated thereunder.</p> <p>An agreement is included in the Contract Document (C1.1 of Contract Data) and shall be completed and submitted to the Employer together with a letter of good standing from the Compensation Commissioner (if not insured with a Licenced Compensation Insurer) within fourteen (14) days after the Commencement Date. The Contractor shall ensure that any letter of good standing shall be timeously renewed in order that it remains in full force for the duration of the Contract.</p>
4.4.1	The total value of work executed by subcontractors shall be agreed on by the Client and awarded Bidder upon acceptance of appointment.
5.3.1	<p>The documentation required before commencing with the Works execution are:</p> <ul style="list-style-type: none"> <li>• Health and Safety Plan (Refer to Clause 4.3)</li> <li>• Initial programme (Refer to Clause 5.6)</li> <li>• Security (Refer to Clause 6.2)</li> <li>• Insurance (Refer to Clause 8.6.1.3)</li> <li>• Letter of Good Standing from the Compensation Commissioner (if not insured with a Licensed Compensation Insurer)</li> </ul>
5.3.2	<p>The time to submit the documentation required before commencement of the Works is:</p> <p><b>14 calendar days</b></p>
5.4.2	Access and possession of site shall not be exclusive to the Contractor but will be shared by the Employers management / maintenance and operational staff on site.
5.4.3	The Contractor shall bear all costs and charges for special and temporary rights of way required by him in connection with access to the Site.
5.1.1 & 5.8.1	<p>The non-working days are: <b>Saturdays and Sundays.</b></p> <p>The special non-working days are:</p> <p><b>(1) All gazetted public holidays falling outside the year end break.</b>  <b>(2) The year end break commencing on 13 December 2024 and ending on 06</b></p>

	<b>January 2025 both days included.</b>
5.8.3	<p>The following additional clause shall apply:</p> <p>Should the Employer's Agent permit work outside of normal Employer working hours (viz Mondays to Fridays inclusive sunrise to sunset) and on Saturdays, Sundays or on any of the non-working days stated in the Appendix and if he deems the presence of the Employer's Agent's Representative or other duly authorised representative to be necessary, the Contractor will be liable for the cost of such supervision (calculated at a daily rate of 1/130 of the annual salary of such representative). Where the Employer's Agent has ordered such work, the salary of the representative will be to the account of the Employer.</p> <p>A minimum of 24 hours notification of intent to work outside normal working hours shall be regarded as sufficient notice as set out in 5.8.1"</p>
5.13.1	The penalty for failing to complete the Works is: 3 cents per R100 of the project cost <b>(excl. VAT)</b> per calendar day
5.14.1	The requirements for achieving Practical Completion shall mean: <b>the commissioning and full operation as listed in the scope of works.</b>
5.14.7	Different dates to achieve Practical Completion <b>will not be permitted.</b>
5.16.3	The latent defect period is: <b>Twelve (12) months.</b>
6.5.1.2.3:	<p>The percentage allowances to cover overhead charges for day work are as follows:</p> <ul style="list-style-type: none"> <li>• 15% of the gross remuneration of workmen and foremen actually engaged in the day work;</li> <li>• 15% on the net cost of materials actually used</li> </ul> <p>No allowance will be made for work done, or for materials and equipment for which day work rates have been quoted at tender stage.</p>
6.6.1	The provisional sums stated in the Schedule of Quantities are net amounts covering the actual expenditure which the Employer may incur.
6.7.6	The following additional clause shall apply: The Works are measured in accordance with the current SANS 1200 and the standard system of measurement of Civil Engineering quantities for South Africa, published by the South African Institution of Civil Engineers. No claims arising from the method of measurement will be entertained.
6.8.2	<p>Contract Price Adjustment: <b>Is not applicable</b></p> <p>The value of certificates issued shall be adjusted in accordance with the Contract</p>

	<p>Price Adjustment Schedule with the following values:</p> <p>The value of x = 0.15</p> <p>The value of coefficients are: a = 0.30</p> <p>b = 0.30</p> <p>c = 0.35</p> <p>d = 0.05</p> <p>The province wherein the larger part of the Site is located is the <b>Eastern Cape</b>.</p> <p>The applicable industry for the Producer Price Index for materials is <b>Mechanical Engineering</b>.</p> <p>The area for the Producer Price Index for fuel is <b>Coastal</b>.</p> <p>The base month is the month prior to tender closing.</p>
6.8.3	Price adjustment for variations in the cost of special materials are: <b>Not allowed</b>
6.10.1.5:	The % advance on materials not yet built into the Permanent Works is 80%. The percentage advance on Plant not yet supplied to site is not required.
6.10.3:	The limit of retention money on amounts due to the contractor is <b>10% and the limit on retention is 10% of the contract sum</b>
8.6.1.1.2:	The value of Plant and materials supplied by the Employer to be included in the insurance sum is: <b>Nil</b> .
8.6.1.1.3:	The amount to cover professional fees for repairing damage and loss to be included in the insurance sum is 20% of the Contract Sum.
8.6.1.3:	Public Liability: <b>R20 Million per incident</b>
10.5.3	The number of Adjudication Board Members to be appointed is: <b>One</b> .
10.7.1:	<p><b>Additional</b></p> <p>Disputes are to be settled in terms of paragraph 106 of the SCM Policy, which reads as follows:</p> <p>(1) The accounting officer must appoint an independent and impartial person, not directly involved in the supply chain management processes:</p> <p>(a) to assist in the resolution of disputes between the Municipality and other persons regarding:</p> <p>(i) any decisions or actions taken in the implementation of the supply chain management system; or</p> <p>(ii) any matter arising from a contract awarded in the course of the</p>

	<p style="text-align: center;">supply chain management system; or</p> <p>(b) To deal with objections, complaints or queries regarding any such decisions or actions or any matters arising from such contract.</p> <p>(2) The accounting officer, or another official designated by the accounting officer, is responsible for assisting the appointed person to perform his or her functions effectively.</p> <p>(3) The person appointed must:</p> <p>(a) strive to resolve promptly all disputes, objections, complaints or queries received; and</p> <p>(b) Submit monthly reports to the accounting officer on all disputes, objections, complaints or queries received, attended to or resolved.</p> <p>(4) A dispute, objection, complaint or query may be referred to the provincial treasury if:</p> <p>(a) the dispute, objection, complaint or query is not resolved within 60 days; or</p> <p>(b) No response is forthcoming within 60 days.</p> <p>(5) If the provincial treasury does not or cannot resolve the matter, the dispute, objection, complaint or query may be referred to the National Treasury for resolution.</p> <p>(6) This section must not be read as affecting a person's rights to approach a court at any time.</p>
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<b>The additional Conditions of Contract are:</b>	
<b>Clause</b>	<b>Data</b>
4.13	<p>Add new sub clause 4.13:</p> <p><b>Applicable labour laws</b></p> <p>The Ministerial Determination, Special Public Works Programmes, issued in terms of the Basic Conditions of Employment Act of 1997 by the Minister of Labour in Government Notice No R63 of 25 January 2002, as reproduced below, shall apply to works described in the scope of work as being labour-intensive and which are undertaken by unskilled or semi-skilled workers.</p> <p><b>1 Introduction</b></p> <p>1.1 This document contains the standard terms and conditions for workers employed in elementary occupations on a Special Public Works Programme (SPWP). These terms and conditions do NOT apply to persons employed in the supervision and management of a SPWP.</p> <p>.2 In this document –</p> <p>(a) “department” means any department of the State, implementing agent or contractor;</p> <p>(b) “employer” means any department, implementing agency or contractor that hires workers to work in elementary occupations on a SPWP;</p> <p>(c) “worker” means any person working in an elementary occupation on a SPWP;</p> <p>(d) “elementary occupation” means any occupation involving unskilled or semi-skilled work;</p> <p>(e) “management” means any person employed by a department or implementing agency to administer or execute an SPWP;</p> <p>(f) “task” means a fixed quantity of work;</p> <p>(g) “task-based work” means work in which a worker is paid a fixed rate for performing a task;</p> <p>(h) “task-rated worker” means a worker paid on the basis of the number of tasks completed;</p> <p>(i) “time-rated worker” means a worker paid on the basis of the length of time worked.</p> <p><b>2 Terms of work</b></p> <p>2.1 Workers on a Special Public Works Programme (SPWP) are employed on a temporary basis.</p> <p>2.2 A worker may NOT be employed for longer than 24 months in any five-year cycle on a SPWP.</p> <p>2.3 Employment on a SPWP does not qualify as employment as a contributor for the purposes of the Unemployment Insurance Act 30 of 1966.</p> <p><b>3 Normal hours of work</b></p> <p>3.1 An employer may not set tasks or hours of work that require a worker to work–</p> <p>(a) more than forty hours in any week;</p> <p>(b) on more than five days in any week; and</p>

**The additional Conditions of Contract are:**

- (c) For more than eight hours on any day.
- 3.2 An employer and worker may agree that a worker will work four days per week. The worker may then work up to ten hours per day.
- 3.3 A task-rated worker may not work more than a total of 55 hours in any week to complete the tasks allocated (based on a 40-hour week) to that worker.

**4 Meal breaks**

- 4.1 A worker may not work for more than five hours without taking a meal break of at least thirty minutes duration.
- 4.2 An employer and worker may agree on longer meal breaks.
- 4.3 A worker may not work during a meal break. However, an employer may require a worker to perform duties during a meal break if those duties cannot be left unattended and cannot be performed by another worker. An employer must take reasonable steps to ensure that a worker is relieved of his or her duties during the meal break.
- 4.4 A worker is not entitled to payment for the period of a meal break. However, a worker who is paid on the basis of time worked must be paid if the worker is required to work or to be available for work during the meal break.

**5 Special conditions for security guards**

- 5.1 A security guard may work up to 55 hours per week and up to eleven hours per day.
- 5.2 A security guard who works more than ten hours per day must have a meal break of at least one hour or two breaks of at least 30 minutes each.

**6 Daily rest period**

Every worker is entitled to a daily rest period of at least eight consecutive hours. The daily rest period is measured from the time the worker ends work on one day until the time the worker starts work on the next day.

**7 Weekly rest period**

Every worker must have two days off every week. A worker may only work on their day off to perform work which must be done without delay and cannot be performed by workers during their ordinary hours of work ("emergency work").

**8 Work on Sundays and public holidays**

- 8.1 A worker may only work on a Sunday or public holiday to perform emergency or security work.
- 8.2 Work on Sundays is paid at the ordinary rate of pay.
- 8.3 A task-rated worker who works on a public holiday must be paid –
  - (a) the worker's daily task rate, if the worker works for less than four hours;
  - (b) Double the worker's daily task rate, if the worker works for more than four hours.
- 8.4 A time-rated worker who works on a public holiday must be paid –
  - (a) the worker's daily rate of pay, if the worker works for less than four hours on the public holiday;
  - (b) Double the worker's daily rate of pay, if the worker works for more than four hours on the public holiday.

**9 Sick leave**

- 9.1 Only workers who work four or more days per week have the right to claim sick-pay in

**The additional Conditions of Contract are:**

terms of this clause.

- 9.2 A worker who is unable to work on account of illness or injury is entitled to claim one day's paid sick leave for every full month that the worker has worked in terms of a contract.
- 9.3 A worker may accumulate a maximum of twelve days sick leave in a year.
- 9.4 Accumulated sick leave may not be transferred from one contract to another contract.
- 9.5 An employer must pay a task-rated worker the worker's daily task rate for a day's sick leave.
- 9.6 An employer must pay a time-rated worker the worker's daily rate of pay for a day's sick leave.
- 9.7 An employer must pay a worker sick pay on the worker's usual pay day.

- 9.8 Before paying sick pay, an employer may require a worker to produce a certificate stating that the worker was unable to work on account of sickness or injury if the worker is –
  - (a) absent from work for more than two consecutive days; or
  - (b) absent from work on more than two occasions in any eight-week period.**8**
- 9.9 A medical certificate must be issued and signed by a medical practitioner, a qualified nurse or a clinic staff member authorised to issue medical certificates indicating the duration and reason for incapacity.
- 9.10 A worker is not entitled to be paid sick leave for a work-related injury or occupational disease for which the worker can claim compensation under the Compensation for Occupational Injuries and Diseases Act.

**10 Maternity leave**

- 10.1 A worker may take up to four consecutive month's unpaid maternity leave.
- 10.2 A worker is not entitled to any payment or employment-related benefits during maternity leave.
- 10.3 A worker must give her employer reasonable notice of when she will start maternity leave and when she will return to work.
- 10.4 A worker is not required to take the full period of maternity leave. However, a worker may not work for four weeks before the expected date of birth of her child or for six weeks after the birth of her child, unless a medical practitioner, midwife or qualified nurse certifies that she is fit to do so.



**The additional Conditions of Contract are:**

- 10.5 A worker may begin maternity leave –
- (a) four weeks before the expected date of birth; or
  - (b) on an earlier date –
    - (i) if a medical practitioner, midwife or certified nurse certifies that it is necessary for the health of the worker or that of her unborn child; or
    - (ii) if agreed to between employer and worker; or
  - (c) On a later date, if a medical practitioner, midwife or certified nurse has certified that the worker is able to continue to work without endangering her health.
- 10.6 A worker who has a miscarriage during the third trimester of pregnancy or bears a stillborn child may take maternity leave for up to six weeks after the miscarriage or stillbirth.
- 10.7 A worker who returns to work after maternity leave, has the right to start a new cycle of twenty-four months employment, unless the SPWP on which she was employed has ended.

**11 Family responsibility leave**

- 11.1 Workers who work for at least four days per week, are entitled to three days paid family responsibility leave each year in the following circumstances:
- (a) when the employee's child is born;
  - (b) when the employee's child is sick;
  - (c) in the event of a death of
    - (i) the employee's spouse or life partner;
    - (ii) The employee's parent, adoptive parent, grandparent, child, adopted child, grandchild or sibling.

**12 Statement of conditions**

- 12.1 An employer must give a worker a statement containing the following details at the start of employment:
- (a) the employer's name and address and the name of the SPWP;
  - (b) the tasks or job that the worker is to perform; and
  - (c) the period for which the worker is hired or, if this is not certain, the expected duration of the contract;
  - (d) the worker's rate of pay and how this is to be calculated;
  - (e) The training that the worker will receive during the SPWP.
- 12.2 An employer must supply each worker with a copy of these conditions of employment.

**The additional Conditions of Contract are:**

**13 Keeping records**

13.1 Every employer must keep a written record of at least the following:

- (a) the worker's name and position;
- (b) in the case of a task-rated worker, the number of tasks completed by the worker;
- (c) in the case of a time-rated worker, the time worked by the worker;
- (d) Payments made to each worker.

13.2 The employer must keep this record for a period of at least three years after the completion of the SPWP.

**14 Payment**

14.1 An employer must pay all wages at least monthly in cash or by cheque or into a bank account.

14.2 A task-rated worker will only be paid for tasks that have been completed.

14.3 An employer must pay a task-rated worker within five weeks of the work being completed and the work having been approved by the manager or the contractor having submitted an invoice to the employer.

14.4 A time-rated worker will be paid at the end of each month.

14.5 Payment must be made in cash, by cheque or by direct deposit into a bank account designated by the worker.

14.6 Payment in cash or by cheque must take place –

- (a) at the workplace or at a place agreed to by the worker;
- (b) during the worker's working hours or within fifteen minutes of the start or finish of work;
- (c) In a sealed envelope which becomes the property of the worker.

14.7 An employer must give a worker the following information in writing:

- (a) the period for which payment is made;
- (b) the numbers of tasks completed or hours worked;
- (c) the worker's earnings;
- (d) any money deducted from the payment;
- (e) The actual amount paid to the worker.

14.8 If the worker is paid in cash or by cheque, this information must be recorded on the envelope and the worker must acknowledge receipt of payment by signing for it.

14.9 If a worker's employment is terminated, the employer must pay all monies owing to that worker within one month of the termination of employment.

**15 Deductions**

15.1 An employer may not deduct money from a worker's payment unless the deduction is required in terms of a law.

15.2 An employer must deduct and pay to the SA Revenue Services any income tax that the worker is required to pay.

15.3 An employer who deducts money from a worker's pay for payment to another person must pay the money to that person within the time period and other requirements specified in the agreement law, court order or arbitration award concerned.

15.4 An employer may not require or allow a worker to –

<b>The additional Conditions of Contract are:</b>	
	<p>(a) repay any payment except an overpayment previously made by the employer by mistake;</p> <p>(b) state that the worker received a greater amount of money than the employer actually paid to the worker; or</p> <p>(c) Pay the employer or any other person for having been employed.</p>
	<p><b>16 Health and safety</b></p> <p>16.1 Employers must take all reasonable steps to ensure that the working environment is healthy and safe.</p> <p>(e) Report any accident, near-miss incident or dangerous behaviour by another person to their employer or manager.</p>
	<p>16.2 A worker must –</p> <p>(a) work in a way that does not endanger his/her health and safety or that of any other person;</p> <p>(b) obey any health and safety instruction;</p> <p>(c) obey all health and safety rules of the SPWP;</p> <p>(d) use any personal protective equipment or clothing issued by the employer;</p> <p><b>17 Compensation for injuries and diseases</b></p> <p>17.1 It is the responsibility of the employers (other than a contractor) to arrange for all persons employed on a SPWP to be covered in terms of the Compensation for Occupational Injuries and Diseases Act, 130 of 1993.</p> <p>17.2 A worker must report any work-related injury or occupational disease to their employer or manager.</p> <p>17.3 The employer must report the accident or disease to the Compensation Commissioner.</p> <p>17.4 An employer must pay a worker who is unable to work because of an injury caused by an accident at work 75% of their earnings for up to three months. The employer will be refunded this amount by the Compensation Commissioner. This does NOT apply to injuries caused by accidents outside the workplace such as road accidents or accidents at home.</p> <p><b>18 Termination</b></p> <p>18.1 The employer may terminate the employment of a worker for good cause after following a fair procedure.</p> <p>18.2 A worker will not receive severance pay on termination.</p> <p>18.3 A worker is not required to give notice to terminate employment. However, a worker who wishes to resign should advise the employer in advance to allow the employer to find a replacement.</p> <p>18.4 A worker who is absent for more than three consecutive days without informing the employer of an intention to return to work will have terminated the contract. However, the worker may be re-engaged if a position becomes available for the balance of the 24-month period.</p> <p>18.5 A worker who does not attend required training events, without good reason, will have terminated the contract. However, the worker may be re-engaged if a position becomes</p>

<b>The additional Conditions of Contract are:</b>	
	available for the balance of the 24-month period.
	<p><b>19 Certificate of service</b></p> <p>19.1 On termination of employment, a worker is entitled to a certificate stating –</p> <ul style="list-style-type: none"> <li>(a) the worker’s full name;</li> <li>(b) the name and address of the employer;</li> <li>(c) the SPWP on which the worker worked;</li> <li>(d) the work performed by the worker;</li> <li>(e) any training received by the worker as part of the SPWP;</li> <li>(f) the period for which the worker worked on the SPWP;</li> <li>(g) Any other information agreed on by the employer and worker."</li> </ul>

**PART 2: DATA PROVIDED BY THE CONTRACTOR**

The Contractor is advised to read 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, in order to understand the implications of this data which is required to be completed.

Copies of these conditions of contract may be obtained from [www.saice.org.za](http://www.saice.org.za).

Each item of data given below is cross-referenced to the clause in the Conditions of Contract to which it mainly applies.

Clause	Data														
1.1.1.9	The name of the Contractor is: .....														
1.2.1.2	The address of the Contractor for receiving notices is: <u>Physical Address:</u> ..... <u>Postal Address:</u> ..... ..... ..... ..... Telephone: ..... Facsimile: ..... E-mail: .....														
6.2.1	<table border="1"> <thead> <tr> <th>Type of Security</th> <th>Contractor's Choice Indicate "Yes" or "No"</th> </tr> </thead> <tbody> <tr> <td>The security to be provided by the Contractor shall be one of the following:</td> <td></td> </tr> <tr> <td>Cash deposit of 10% of the Contract Sum, incl. VAT</td> <td></td> </tr> <tr> <td>Performance guarantee of 10% of the Contract Sum, incl. VAT</td> <td></td> </tr> <tr> <td>Retention of 10% of the value of the works.</td> <td></td> </tr> <tr> <td>Cash deposit of 5% of the Contract Sum plus retention of 5% of the value of the works.</td> <td></td> </tr> <tr> <td>Performance Guarantee of 5% of the Contract Sum plus a retention of 5% of the value of the works.</td> <td></td> </tr> </tbody> </table>	Type of Security	Contractor's Choice Indicate "Yes" or "No"	The security to be provided by the Contractor shall be one of the following:		Cash deposit of 10% of the Contract Sum, incl. VAT		Performance guarantee of 10% of the Contract Sum, incl. VAT		Retention of 10% of the value of the works.		Cash deposit of 5% of the Contract Sum plus retention of 5% of the value of the works.		Performance Guarantee of 5% of the Contract Sum plus a retention of 5% of the value of the works.	
Type of Security	Contractor's Choice Indicate "Yes" or "No"														
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Cash deposit of 5% of the Contract Sum plus retention of 5% of the value of the works.															
Performance Guarantee of 5% of the Contract Sum plus a retention of 5% of the value of the works.															
6.5.1.2.3	The percentage allowance to cover overhead charges is ..... %														

### **C1.3 – Form of Guarantee**

**PERFORMANCE GUARANTEE**

**PRO FORMA**

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

**Contract No: ECDC/INFRA/40/122024**

**Project Name: COMPLETION OF CIVIL, MECHANICAL AND ELECTRICAL INFRASTRUCTURE AT THE DIMBAZA WASTEWATER TREATMENT WORKS – PHASE 1**

WHEREAS: **Eastern Cape Development Corporation**

(hereinafter referred to as the Employer")

GUARANTOR DETAILS AND DEFINITIONS

"Guarantor" means .....

Physical address: .....

"Employer" means: .....

"Contractor" means: .....

"Guarantor" ..... means:

"Employers 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. PERFORMANCE GUARANTEE**

- 1.1 Where a Fixed Performance Guarantee has been selected, the Guarantor's liability shall be limited to the amount of the Guaranteed Sum.
- 1.2 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 the 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.
- 1.3 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.

### **2. CONDITIONS APPLICABLE TO VARIABLE AND FIXED PERFORMANCE GUARANTEES**

- 2.1 The Guarantor hereby acknowledges that:
  - 2.1.1 Any reference in this Performance Guarantee to the Contract is made for the purpose of convenience and shall not be constructed as any intention whatsoever to create an accessory obligation or any intention whatsoever to create a suretyship.
  - 2.1.2 Its obligation under this Performance Guarantee is restricted to the payment of money.
- 2.2 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 the receipt of the documents identified in 3.2.1 to 3.2.3:
  - 2.2.1 A copy of the first written demand issued by the Employer to the Contractor stating that the 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 with seven (7) calendar days, the Employer intends to call upon the Guarantor to make payment in terms of 3.2.2;
  - 2.2.2 A first writing 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;
  - 2.2.3 A copy of the aforesaid payment certified which entitles the Employer to receive payment in terms of the Contract of the sum certified in 3.2.



- 2.3 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:
- 2.3.1 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
- 2.3.2 A provisional or final sequestration or liquidation court order has been granted against the Contractor and that a Performance Guarantee is called up in terms of 3.3; and
- 2.3.3 The aforesaid written demand is accompanied by a copy of the notice of termination and/or the provisional/final sequestration and/or the provisional liquidation court order.
- 2.4 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.
- 2.5 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 and 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 and 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 made by the Guarantor to the Employer until the date of refund.
- 2.6 Payment by the Guarantor in terms of 3.2 and 3.3 shall be made within seven (7) calendar days upon receipt of the first written demand to the Guarantor.
- 2.7 Payment by the Guarantor in terms of 3.3 will only be made against the return of the original Performance Guarantee by the Employer.
- 2.8 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.
- 2.9 The Guarantor chooses the physical address as stated above for the service of all notices for all purposes in connection herewith.

2.10 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.

2.11 The 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.

2.12 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 and 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):** .....

**PART.4 AGREEMENT IN TERMS OF SECTION 37(2) OF THE OCCUPATIONAL HEALTH AND SAFETY ACT (ACT No. 85 OF 1993)**

THIS AGREEMENT made between:

.....  
(hereinafter referred to as "the Employer") of the one part, herein represented by:

.....  
In his capacity as .....

AND: .....  
(hereinafter referred to as "the Mandatory") of the other part, herein represented by:

.....  
In his capacity as .....

And being duly authorised to act as Mandatory on behalf of the Contractor;  
WHEREAS the Employer is desirous that certain works be constructed, viz (Contract No.)

(Title).....  
and has accepted a bid by the Mandatory for the construction, completion and defects correction of such works and whereas the Employer and the Mandatory have agreed to certain arrangements and procedures to be followed in order to ensure compliance by the Mandatory with the provisions of the Occupational Health and Safety Act No 85 of 1993.

**NOW THEREFORE THIS DOCUMENT WITNESSETH AS FOLLOWS:**

1. The Mandatory shall execute the work in accordance with the Contract Documents pertaining to this Contract.
2. This Agreement shall hold good from its Commencement Date, which shall be the date of a written notice from the Employer or Employers Agent requiring him to commence the execution of the Works, to either:
  - a) The date of the Final Approval Certificate issued in terms of Clause 5.16.1 of the General Conditions of Contract for Construction Works, Third Edition (2015) (hereinafter referred to as the "GCC").

- b) The date of termination of the Contract in terms of Clauses 9.2 or clause 9.3 of the GCC.
3. The Mandatory declares himself to be conversant with the following:
- a) All the requirements, regulations and standards of the Occupational Health and Safety Act (Act 85 of 1995), hereinafter referred to as "The Act", together with its amendments and with special reference to the following Sections of The Act:
    - i) Section 8: General duties of employers to their employees;
    - ii) Section 9: General duties of employers and self-employed persons to persons other than employees;
    - iii) Section 37: Acts or omissions by employees or mandatories, and
    - iv) Subsection 37(2) relating to the purpose and meaning of this Agreement.
  - b) The procedures and safety rules of the Employer as pertaining to the Mandatory and to all his subcontractors.
4. In addition to the requirements of Clause 6.3 of the GCC and all relevant requirements of the above-mentioned Volume 3, the Mandatory agrees to execute all the Works forming part of this Contract and to operate and utilise all machinery, plant and equipment in accordance with the Act.
5. The Mandatory is responsible for the compliance with the Act by all his subcontractors, whether or not selected and/or approved by the Employer.
6. The Mandatory warrants that all his and his subcontractors' workmen are covered in terms of the Compensation for Occupational Injuries and Diseases Act, 1995 which cover shall remain in force whilst any such workmen are present on site. A letter of good standing from the Compensation Commissioner to this effect must be produced to the Employer upon signature of the agreement.
7. The Mandatory undertakes to ensure that he and/or subcontractors and/or their respective employers will at all times comply with the following conditions:
- a) The Mandatory shall assume the responsibility in terms of Section 16.1 of the Occupational Health and Safety Act. The Mandatory shall not delegate any duty in terms of Section 16.2 of this Act without the prior written approval of the Employer. If the Mandatory obtains such approval and delegates any duty in terms of section 16.2 a copy of such written delegation shall immediately be forwarded to the Employer.

- b) All incidents referred to in the Occupational Health and Safety Act shall be reported by the Mandatory to the Department of Labour as well as to the Employer. The Employer will further be provided with copies of all written documentation relating to any incident.
- c) The Employer hereby obtains an interest in the issue of any formal inquiry conducted in terms of section 32 of the Occupational Health and Safety Act into any incident involving the Mandatory and/or his employees and/or his subcontractors

In witness thereof, the parties hereto have set their signatures hereon in the presence of the subscribing witnesses:

At .....for and behalf of the Employer  
 on this the ..... day of ..... 20.....

**SIGNATURE:**.....

**CAPACITY:**.....

**WITNESSES:**

**SIGNATURES:** (1) .....

(2) .....

**NAMES:** (1) .....

(2).....

At ..... for and behalf of the MANDATORY  
 on this the ..... day of ..... 20.....

**SIGNATURE:** .....

**CAPACITY:** .....

**WITNESSES:**

**SIGNATURES:** (1).....

(2).....

**NAMES:** (1) .....

(2).....

## **Part C2: Pricing data**

### **C2.1 - Pricing instructions**

## **C2.1 - Pricing instructions**

C2.1.1 **PREAMBLE TO THE SCHEDULE OF PRICES**

- C2.1.1.1 **All** prices shall be quoted in the currency of the Republic of South Africa and will be held to be firm unless otherwise stated, in which case sufficient information must be afforded at the time of tendering to indicate the basis on which payment shall be adjusted.
- C2.1.1.2 The Tenderer shall enter a price against each item in the schedule of prices. If the Tenderer fails to enter a price against any item in the schedule of prices the relevant cost for such item shall be regarded as being covered by other prices in the schedule of prices. **Should an item specifically be excluded from the offersubmitted, such tender will be regarded as non-responsive and not be considered.**
- C2.1.1.3 The prices quoted against each item of these schedules shall cover the full inclusive cost of everything required for the execution of the work under the item plus an apportionment of any cost involved in meeting the obligations and liabilities imposed by the conditions of contract and in complying with the specifications.
- C2.1.1.4 The prices quoted for the supply of plant and equipment shall include for all handling, loading, transporting and of-loading required for the delivery of the plant and equipment to the site, including in the case of of-site storage for double handling at the store.
- C2.1.1.5 The prices quoted for erection and installation shall include for all handling, loading, transporting and of- loading, to take plant and equipment to place on site where required, erection, installation, painting, commissioning, operating, testing, adjusting, handing over in proper working order and upholding for a period of 12 months, all as specified.
- C2.1.1.6 Any additional charges in connection with of-site storage which there may be over and above the prices quoted in the various sections of these schedules of prices shall be set out in detail by the Tenderer.
- C2.1.1.7 The tendered rates and amounts must exclude Value Added Tax (VAT) but must include all levies, other taxes and duties on items to which they apply. Separate provision has been made in the Tender Summary for the purpose of VAT.
- C2.1.1.8 Amounts allowed for contingencies will be spent in part or as a whole at the sole discretion of the Principal Agent.
- C2.1.1.9 Schedule of Prices shall be completed and signed in **black ink**. Corrections must be done by deleting, rewriting and initialling next to the amendment.
- C2.1.1.10 **The Bills of Quantities are not to be used for the purpose of ordering materials**



**C2.2 - Bill of  
Quantities  
(See Attached)**

**EASTERN CAPE DEVELOPMENT CORPORATION**

REFURBISHMENT OF THE DIMBAZA WASTEWATER TREATMENT WORKS PHASE 1

CONTRACT NO: ECDC/INFRA/40/122024

SECTION 1: PRELIMINARY AND GENERAL

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
1	<b>SANS 1200 A</b>	<b>PRELIMINARY AND GENERAL</b>				
1.1	8.3	<b><u>Scheduled Fixed-Charge and Value-Related Items</u></b>				
1.1.1	8.3.1	Contractual Requirements  <u>Provision for the site facilities:</u>	Sum	1		
1.1.2	8.3.2.2	b) Facilities for the Contractor. Items A to J	Sum	1		
1.1.3	8.3.3	General responsibilities and other fixed charge obligations	Sum	1		
1.1.4	8.3.4	Removal of site establishment on completion of the project	Sum	1		
1.1.5		Compliance with the OHS Act regulations (Rate to include for risk assessments and other adjustments to ensure compliance for the assignment including maintenance of a register for workers contacts.)	Sum	1		
1.1.6		Preparation of a OHS Plan  <u>Costs of medical certificate and Medical Surveillance including Screenings for Employees with COVID-19Symptoms</u>	Sum	1		
1.1.7		a) Initial (baseline) medical examinations	No.	20		
1.1.8		b) Exit examinations	No.	20		
1.1.9		Contract Nameboard	Sum	1		
1.2	<b>8.4</b>	<b>SCHEDULED TIME-RELATED ITEMS</b>				
1.2.1	8.4.1	Contractual requirements	Sum	1		
1.2.2	8.4.2	Occupation and maintenance of the site facilities				
1.2.3	8.4.2.2	b) Facilities for the Contractor . Items A to J	Sum	1		
1.2.4		General responsibilities and other time related obligations	Sum	1		
1.2.5		Compliance with the OHS Act regulations (Rate to include for risk assessments and other adjustments to ensure compliance for the assignment including maintenance of a register for workers contacts.)	Sum	1		
<b>Carried Forward</b>						
<b>Brought Forward</b>						

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
1.2.6	8.4.3	Fulltime OHS supervision for the duration of the contract	Sum	11		
1.2.7		Contractors supervision for the duration of the contract	Sum	11		
<b>Total Carried Forward To Summary</b>						

**EASTERN CAPE DEVELOPMENT CORPORATION**

REFURBISHMENT OF THE DIMBAZA WASTEWATER TREATMENT WORKS

CONTRACT NO: ECDC/INFRA/40/122024

SECTION 2: DAYWORKS

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
<b>2</b>		<b>DAYWORKS (PROVISIONAL)</b>				
2.1		<b><u>Personnel during normal working hours</u></b>				
		Unskilled labour	hr	40		
		Semi-skilled labour	hr	40		
		Skilled labour	hr	40		
		Ganger	hr	40		
		Flagman	hr	40		
		Artisan	hr	40		
2.2		<b><u>Plant</u></b>				
		Flat bed truck (specify size)	hr	40		
		Tipper Trucks - 3 to 5 ton capacity	hr	40		
		Tipper Trucks - more than 5 ton	hr	40		
		Loader (0,5m <sup>3</sup> ) bucket	hr	40		
		Backhoe TLB (digger loader)	hr	40		
		Excavator (20-30 ton)	hr	40		
		Compactor (Bomag 90 or similar)	hr	40		
		Compressor (air) including hose and tools (specify)	hr	40		
		Dewatering pump including generators and accessories (specify size)	hr	40		
		Mobile electric welding sets and accesorries (specify size)	hr	40		
		Cutting torch with mobile electric & oxy acetylene installation	hr	40		
		Mobile concrete mixers (specify size)	hr	40		
		Light delivery vehicle (LDV)	hr	40		
<b>Total Carried Forward To Summary</b>						

**EASTERN CAPE DEVELOPMENT CORPORATION**

REFURBISHMENT OF THE DIMBAZA WASTEWATER TREATMENT WORKS

CONTRACT NO: ECDC/INFRA/40/122024

SECTION 3: BUILDING AND CIVIL WORKS

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
<b>3</b>		<b>BUILDING AND CIVIL WORKS</b>				
3.1		<b><u>Head of Works (Inlet Works)</u></b>				
3.1.1		Remove all rubble / debris in the immediate vicinity of the building and dispose at an approved landfill site	m3	6		
3.1.2		Removal of all damaged finishes from walls, floor, ceilings, etc. all inclusive	Sum	1		
3.1.3 SMME		Building up openings in 230mm brick wall inclusive of cement plaster	m2	10		Rate Only
3.1.4 SMME		228 x 15mm Everite medium density plain ungrooved Nutec fascia boards (Code: 41-237), fixed to 38 x 38mm support battens between rafters twice screwed with 12 x 40mm countersunk brass screws at 900mm centres to support battens	m	20		Rate Only
3.1.5 SMME		6mm thick Everite NUTEC plain nail up ceiling board, with r-value of 0.19 in accordance with SANS 10400 - XA: 2011 edition 3 (clause 4.4.5.4 table 9) (class 1 fire index rating) fixed to 38 x 38mm timber bradering (to be included in rate) at max 400mm centres. All joints to be H - profile white pvc joining strips: Nailed up ceilings	m2	64		Rate Only
3.1.6 SMME		NUTEC 'NU-DORIC' 75' cornice secured with nucornice acrylic filler and adhesive: Cornices	m	40		Rate Only
3.1.7 SMME		Paintwork on internal plastered walls two (2) coats of Plascon Professional Superior Low Sheen or similar approved	m2	60		Rate Only
3.1.8		New galvanised handrails at splitter box to match existing	m	20		
3.1.9		New timber roof - Comprises the complete roof refurbishment including wall plates, ties, trusses, windbracing, etc. The Contractor will be responsible for all shop drawings.	m2	64		
3.1.10 SMME		Supply and install slate roof tiles Monier Double Roman or similar approved	m2	64		Rate Only
3.1.11 SMME		Paint roof tiles complete. Green all weather roof paint Plascon or similar approved	m2	64		Rate Only
3.1.12		Construct new canopy complete with IBR sheet roof covering - comprises roof coverings, treatment, ridge coverings, etc.	m2	15		
<b>Carried Forward</b>						
<b>Brought Forward</b>						

**EASTERN CAPE DEVELOPMENT CORPORATION**

REFURBISHMENT OF THE DIMBAZA WASTEWATER TREATMENT WORKS

CONTRACT NO: ECDC/INFRA/40/122024

SECTION 3: BUILDING AND CIVIL WORKS

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
3.1.13		Supply new 100mm diameter (3m long) galvanized support columns to canopy.	No	4		
3.1.14		Construct new 25MPa concrete foundations to canopy columns	m3	3		
3.1.15 SMME		Refurbish all plumbing	P. Sum	1	R35 000.00	R35 000.00
3.1.16		Miscellaneous items	P.Sum	1	R75 000.00	R75 000.00
3.2		<b><u>Sludge Lagoons</u></b>				
3.2.1		Remove and dispose sludge at approved landfill site	m3	3000		
3.2.2		Overhaul on materials under item 3.2.1 hauled in excess of 1,0km (ordinary overhaul)	m3.km	45000		
3.2.3		Remove and replace existing lining membrane complete with the necessary earthworks. HDPE (GRI GM13) membrane with a formulated sheet density of 0.940 g/ml, or higher, and a 2mm minimum thickness	P. Sum	1	R900 000.00	R900 000.00
3.3		<b><u>Main Electrical Supply and Main LV Room</u></b>				
3.3.1		Remove all rubble / debris in the immediate vicinity of the building and dispose at an approved landfill site	m3	6		
3.3.2		Removal of all damaged finishes from walls, floor, ceilings, etc. all inclusive	Sum	1		
3.3.3 SMME		228 x 15mm Everite medium density plain ungrooved Nutec fascia boards (Code: 41-237), fixed to 38 x 38mm support battens between rafters twice screwed with 12 x 40mm countersunk brass screws at 900mm centres to support battens	m	30		Rate Only
3.3.4 SMME		6mm thick Everite NUTEC plain nail up ceiling board, with r-value of 0.19 in accordance with sabs 10400 - XA: 2011 edition 3 (clause 4.4.5.4 table 9) (class 1 fire index rating) fixed to 38 x 38mm timber bradering (to be included in rate) at mac 400mm centres. All joints to be H - profile white pvc joining strips: Nailed up ceilings	m2	85		Rate Only
3.3.5 SMME		NUTEC 'NU-DORIC' 75' cornice secured with nucornice acrillic filler and adhesive: Cornices	m	60		Rate Only
<b>Carried Forward</b>						
<b>Brought Forward</b>						

**EASTERN CAPE DEVELOPMENT CORPORATION**

REFURBISHMENT OF THE DIMBAZA WASTEWATER TREATMENT WORKS

CONTRACT NO: ECDC/INFRA/40/122024

SECTION 3: BUILDING AND CIVIL WORKS

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
3.3.6		Fix existing timber roof - Comprises the complete roof refurbishment including wall plates, ties, trusses, windbracing, ceilings, etc. The Contractor will be responsible for all shop drawings.	m2	85		
3.3.7 SMME		Paintwork on internal plastered walls two (2) coats of Plascon Professional Superior Low Sheen or similar approved	m2	150		Rate Only
3.3.8 SMME		Supply and install slate roof tiles Monier Double Roman or similar approved	m2	85		Rate Only
3.3.9 SMME		Paint roof tiles complete. Green all weather roof paint Plascon or similar approved	m2	85		Rate Only
3.3.10 SMME		Replace all rainwater goods (gutters and downpipes) with 125 x 87mm eaves pvc gutters including gutter brackets spaced at 0,5m centres and 88mm diameter rainwater downpipe fixed with heavy duty aluminium holderbats at 1500mm centres	m	50		Rate Only
3.3.11		Miscellaneous items	P.Sum	1	R15 000.00	R15 000.00
3.3.12 SMME		Replace entrance door with a single pressed steel Amdoor Transformer Room door and frame, Type CV, size of 1200mm x 2134mm high. Door to be painted with two coats heritage green anti rust paint	No	5		Rate Only
3.3.13		Install new NC2 window and frame inclusive of sealant. Frames to be covered with two coats of white anti rust paint	No	1		
3.3.14		Install new NC4 window and frame inclusive of sealant. Frames to be covered with two coats of white anti rust paint	No	2		
3.3.15		Install new NC7 window and frame inclusive of sealant. Frames to be covered with two coats of white anti rust paint	No	2		
3.4		<u>Aeration Tanks</u>				
3.4.1		New galvanised handrails to match existing	m	35		
3.5		<b><u>Return Activated Sludge (RAS) Pump Building</u></b>				
3.5.1		Remove all rubble / debris in the immediate vicinity of the building and dispose at an approved landfill site	m3	6		
3.5.2		Removal of all damaged finishes from walls, floor, ceilings, etc. all inclusive	Sum	1		
<b>Carried Forward</b>						

**EASTERN CAPE DEVELOPMENT CORPORATION**

REFURBISHMENT OF THE DIMBAZA WASTEWATER TREATMENT WORKS

CONTRACT NO: ECDC/INFRA/40/122024

SECTION 3: BUILDING AND CIVIL WORKS

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
<b>Brought Forward</b>						
3.5.3 SMME		228 x 15mm Everite medium density plain ungrooved Nutec fascia boards (Code: 41-237), fixed to 38 x 38mm support battens between rafters twice screwed with 12 x 40mm countersunk brass screws at 900mm centres to support battens	m	30		Rate Only
3.5.4 SMME		6mm thick Everite NUTEC plain nail up ceiling board, with r-value of 0.19 in accordance with SANS 10400 - XA: 2011 edition 3 (clause 4.4.5.4 table 9) (class 1 fire index rating) fixed to 38 x 38mm timber bradering (to be included in rate) at max 400mm centres. All joints to be H - profile white pvc joining strips:	m2	65		Rate Only
3.5.5 SMME		NUTEC 'NU-DORIC' 75' cornice secured with nucornice acrylic filler and adhesive: Cornices	m	60		Rate Only
3.5.6 SMME		Paintwork on internal plastered walls two (2) coats of Plascon Professional Superior Low Sheen or similar approved	m2	110		Rate Only
3.5.7		New timber roof - Comprises the complete roof refurbishment including wall plates, ties, trusses, windbracing, etc. The Contractor will be responsible for all shop drawings.	m2	65		
3.5.8 SMME		Supply and install slate roof tiles Monier Double Roman or similar approved	m2	65		Rate Only
3.5.9 SMME		Paint roof tiles complete. Green all weather roof paint Plascon or similar approved	m2	65		Rate Only
3.5.10 SMME		Replace all rainwater goods (gutters and downpipes) with 125 x 87mm eaves pvc gutters including gutter brackets spaced at 0,5m centres and 88mm diameter rainwater downpipe fixed with heavy duty aluminium holderbats at 1500mm centres	m	18		Rate Only
3.5.11 SMME		Replace entrance door with a single pressed steel Amdoor Transformer Room door and frame, Type CV, size of 1200mm x 2134mm high. Door to be painted with two coats heritage green anti rust paint	No	1		Rate Only
3.5.12		Construct new canopy complete with IBR sheet roof covering - comprises roof coverings, treatment, ridge coverings, etc.	m2	8		
3.5.13		Supply new 100mm diameter (3m long) galvanized support columns to canopy.	No	4		
3.5.14		Construct new 25MPa concrete foundations to canopy columns	m3	3		



**EASTERN CAPE DEVELOPMENT CORPORATION**

REFURBISHMENT OF THE DIMBAZA WASTEWATER TREATMENT WORKS

CONTRACT NO: ECDC/INFRA/40/122024

SECTION 3: BUILDING AND CIVIL WORKS

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
<b>Carried Forward</b>						
<b>Brought Forward</b>						
3.5.15		Miscellaneous items	P.Sum	1	R15 000.00	R15 000.00
3.5.16		Install new NC2 window and frame inclusive of sealant. Frames to be covered with two coats of white anti rust paint	No	1		
3.5.17		Install new NC4 window and frame inclusive of sealant. Frames to be covered with two coats of white anti rust paint	No	2		
3.5.18		Install new NC7 window and frame inclusive of sealant. Frames to be covered with two coats of white anti rust paint	No	2		
3.6		<b><u>Clarifiers</u></b>				
3.6.1		Repair concrete at splitter box. Apply concrete repair mortar Sika Mono Top or similar approved. Minimum strength 25MPa	m3	1		
3.6.2		Refurbish all plumbing complete	P. Sum	1	R35 000.00	R35 000.00
3.6.3		Replace Manhole and associated pipework	P. Sum	1	R50 000.00	R50 000.00
3.7		<b><u>Chlorination Tank and Building</u></b>				
3.7.1		Remove all rubble / debris in the immediate vicinity of the building and dispose at an approved landfill site	m3	6		
3.7.2		Removal of all damaged finishes from walls, floor, ceilings, etc. all inclusive	Sum	1		
3.7.3 SMME		228 x 15mm Everite medium density plain ungrooved Nutec fascia boards (Code: 41-237), fixed to 38 x 38mm support battens between rafters twice screwed with 12 x 40mm countersunk brass screws at 900mm centres to support battens	m	40		Rate Only
3.7.4 SMME		6mm thick Everite NUTEC plain nail up ceiling board, with r-value of 0.19 in accordance with SANS 10400 - XA: 2011 edition 3 (clause 4.4.5.4 table 9) (class 1 fire index rating) fixed to 38 x 38mm timber bradering (to be included in rate) at max 400mm centres. All joints to be H - profile white pvc joining strips: Nailed up ceilings	m2	96		Rate Only
3.7.5 SMME		NUTEC 'NU-DORIC' 75' cornice secured with nucornice acrylic filler and adhesive: Cornices	m	80		Rate Only

**EASTERN CAPE DEVELOPMENT CORPORATION**

REFURBISHMENT OF THE DIMBAZA WASTEWATER TREATMENT WORKS

CONTRACT NO: ECDC/INFRA/40/122024

SECTION 3: BUILDING AND CIVIL WORKS

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
3.7.6 SMME		Paintwork on internal plastered walls and ceilings with two (2) coats of Plascon Professional Superior Low Sheen or similar approved	m2	180		Rate Only
<b>Carried Forward</b>						
<b>Brought Forward</b>						
3.7.7		New timber roof - Comprises the complete roof refurbishment including wall plates, ties, trusses, windbracing, etc. The Contractor will be responsible for all shop drawings.	m2	96		
3.7.8 SMME		Supply and install slate roof tiles Monier Double Roman or similar approved	m2	96		Rate Only
3.7.9 SMME		Paint roof tiles complete. Green all weather roof paint Plascon or similar approved	m2	96		Rate Only
3.7.10 SMME		Replace all rainwater goods (gutters and downpipes) with 125 x 87mm eaves pvc gutters including gutter brackets spaced at 0,5m centres and 88mm diameter rainwater downpipe fixed with heavy duty aluminium holderbats at 1500mm centres	m	42		Rate Only
3.7.11		Miscellaneous items	P.Sum	1	R15 000.00	R15 000.00
3.7.12		Install new NC2 window and frame inclusive of sealant. Frames to be covered with two coats of white anti rust paint	No	1		
3.7.13		Install new NC4 window and frame inclusive of sealant. Frames to be covered with two coats of white anti rust paint	No	2		
3.7.14		Install new NC7 window and frame inclusive of sealant. Frames to be covered with two coats of white anti rust paint	No	2		
3.8		<b><u>Discharge Channel</u></b>				
3.8.1		Repair concrete at discharge channel. Rate is inclusive of all falsework and dealing with water	m3	1		
3.9		<b><u>Office Building</u></b>				
3.9.1		Remove all rubble / debris in the immediate vicinity of the building and dispose at an approved landfill site	m3	10		
3.9.2		Removal of all damaged finishes from walls, floor, ceilings, etc. all inclusive	Sum	1		
<b>Carried Forward</b>						
<b>Brought Forward</b>						

**EASTERN CAPE DEVELOPMENT CORPORATION**

## REFURBISHMENT OF THE DIMBAZA WASTEWATER TREATMENT WORKS

CONTRACT NO: ECDC/INFRA/40/122024

SECTION 3: BUILDING AND CIVIL WORKS

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
3.9.3 SMME		228 x 15mm Everite medium density plain ungrooved Nutec fascia boards (Code: 41-237), fixed to 38 x 38mm support battens between rafters twice screwed with 12 x 40mm countersunk brass screws at 900mm centres to support battens	m	80		Rate Only
3.9.4 SMME		6mm thick Everite NUTEC plain nail up ceiling board, with r-value of 0.19 in accordance with SANS 10400 - XA: 2011 edition 3 (clause 4.4.5.4 table 9) (class 1 fire index rating) fixed to 38 x 38mm timber bradering (to be included in rate) at max 400mm centres. All joints to be H - profile white pvc joining strips: Nailed up ceilings	m <sup>2</sup>	180		Rate Only
3.9.5 SMME		NUTEC 'NU-DORIC' 75' cornice secured with nucornice acrylic filler and adhesive: Cornices	m	160		Rate Only
3.9.6 SMME		Paintwork on internal plastered walls and ceilings with two (2) coats of Plascon Professional Superior Low Sheen or similar approved	m <sup>2</sup>	320		Rate Only
3.9.7		New timber roof - Comprises the complete roof refurbishment including wall plates, ties, trusses, windbracing, etc. The Contractor will be responsible for all shop drawings.	m <sup>2</sup>	180		
3.9.8 SMME		Supply and install slate roof tiles Monier Double Roman or similar approved	m <sup>2</sup>	180		Rate Only
3.9.9 SMME		Paint roof tiles complete. Green all weather roof paint Plascon or similar approved	m <sup>2</sup>	180		Rate Only
3.9.10 SMME		Replace all rainwater goods (gutters and downpipes) with 125 x 87mm eaves pvc gutters including gutter brackets spaced at 0,5m centres and 88mm diameter rainwater downpipe fixed with heavy duty aluminium holderbats at 1500mm centres	m	70		Rate Only
3.9.11		Install new NC2 window and frame inclusive of sealant. Frames to be covered with two coats of white anti rust paint	No	1		
3.9.12		Install new NC4 window and frame inclusive of sealant. Frames to be covered with two coats of white anti rust paint	No	3		
<b>Carried Forward</b>						
<b>Brought Forward</b>						
3.9.13		Install new NC7 window and frame inclusive of sealant. Frames to be covered with two coats of white anti rust paint	No	3		

**EASTERN CAPE DEVELOPMENT CORPORATION**

REFURBISHMENT OF THE DIMBAZA WASTEWATER TREATMENT WORKS

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SECTION 3: BUILDING AND CIVIL WORKS

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
3.9.14		Install new NC12 window and frame inclusive of sealant. Frames to be covered with two coats of white anti rust paint	No	4		
3.9.15 SMME		Varnished Timber doors ("Swartland") hung to steel frames: 813 x 2032mm high CAYO interior veneer door (CODE: VNCOML12) complete. New steel frame to be included in the rate	No	8		Rate Only
3.9.16		VINYL FLOOR COVERINGS Polysafe Standard PUR 2mm thick wide anti-slip vinyl sheeting, manufactured in accordance with EN 649/ISO 10581 and laid in Polyflor approved acrylic adhesive:	m2	180		
3.9.17 SMME		69 x 16mm coved back meranti skirtings plugged & screwed to brick walls or screwed to drywalls. Screw heads to be countersunk & filled.	m	160		Rate Only
3.9.18 SMME		Refurbish all plumbing complete	P. Sum	1	R75 000.00	R75 000.00
3.9.19		Miscellaneous items	P.Sum	1	R15 000.00	R15 000.00
3.10.22		Provide new 6m long x 2.4m high access sliding gate complete. Sliding gate to match boundary fencing	P.Sum	1	R51 000.00	R51 000.00
3.10.23		Remove old concrete fence poles, close excavations and dispose off at an approved landfill site.	Psum	1	R75 000.00	R75 000.00
3.10.24		Supply and install 5000ltr storage tanks	No	2		
3.10.25		Supply and install 2500ltr storage tanks	No	2		
3.10.26		Supply and install 3m high hot dipped galvanized stands for the 5000ltr storage tanks. The price will be inclusive a excavations and concrete (30/19) concrete	No	2		
<b>Total Carried Forward To Summary</b>						

**EASTERN CAPE DEVELOPMENT CORPORATION**

REFURBISHMENT OF THE DIMBAZA WASTEWATER TREATMENT WORKS

CONTRACT NO: ECDC/INFRA/40/122024

SECTION 4: MECHANICAL WORKS

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
<b>4</b>		<b>MECHANICAL WORKS</b>  # Where applicable, rate shall include stripping out, supply & install, and disposal of old materials.  # It is the responsibility of the contractor to verify information on-site before place orders on equipment.  The successful bidder will be required to submit an affidavit together with the name and CIDB grading for a 7ME or higher sub-contractor that will execute the electrical and mechanical works. If the successful bidder has multiple grading designations including that of a 7ME or higher grading, they will need to submit proof thereof				
4.1		<b>Head of Works (Inlet Works)</b>				
4.1.1		Supply and install effluent booster pumps. BOOSTER 5 FMH 8B-53 Horizontal Multistage pump 3ph	No	2		
4.1.2		Replace existing Rotary Drum Fine Screen (Make: Huber Technology, Model: Rotamat Ro2)	No	1		
4.1.3		Supply and install Conveyer system to transport of coarse, fine and compacted screenings, sludge, grit, and solids from the Mechanical Screen.	No	1		
		<b>Portable Fire Extinguishers Installation</b> Supply, Install, test, commission and provide 12 month guarantee for portable fire extinguisher cubicle, red in colour, fibreglass weatherproof wall mounted and etc.				
4.1.4 SMME		Fire extinguisher cubicle to mount fire extinguishers	No.	2		Rate Only
4.1.5 SMME		9 kg Dry Chemical Powder (DCP) hand held fire extinguisher.	No.	2		Rate Only
		<b>Fire Signage Installation</b> Supply, Install, test, commission and provide 12 month guarantee for fire signage symbol, arrow and portable fire extinguisher.				
4.1.6 SMME		Fire Extinguisher (Down Arrow) - 190 x 190	No.	2		Rate Only
4.1.7 SMME		Emergency Exit Arrow - 190 x 190	No.	1		Rate Only
4.1.8 SMME		Assembly points sign boards - 290 x 290	No.	1		Rate Only

**EASTERN CAPE DEVELOPMENT CORPORATION**

REFURBISHMENT OF THE DIMBAZA WASTEWATER TREATMENT WORKS

CONTRACT NO: ECDC/INFRA/40/122024

SECTION 4: MECHANICAL WORKS

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
<b>Carried Forward</b>						
<b>Brought Forward</b>						
4.1.9 SMME		First Aid Kit	No.	1		Rate Only
4.1.10		Front rake screen IBS 900/1200/2900/10	No	1		
4.1.11		Manual hand screen mild steel Galv	No	1		
4.1.12		Weir plates 3000x180x2mm 304s/s	No	28		
4.1.13		Telescopic valve 250 Nb Mild steel Galv	No	2		
4.1.14		Channel inlet sluice gates 880w x 1040d Stainless steel	No	2		
4.1.15		Channel Lagoon sluice gates 440w x 440 Stainless steel	No	1		
4.2		<b><u>Main Electrical Supply and Main LV Room</u></b>				
4.2.1 SMME		Supply and install ventilation fans. Industrial Axial Fan 230V 0.1Kw 1800M3/H	No.	1		Rate Only
		<b>Portable Fire Extinguishers Installation</b>				
		Supply, Install, test, commission and provide 12 month guarantee for portable fire extinguisher cubicle, red in colour, fibreglass weatherproof wall mounted and etc.				
4.2.2 SMME		Fire extinguisher cubicle to mount fire extinguishers	No.	2		Rate Only
4.2.3 SMME		9 kg Dry Chemical Powder (DCP) hand held fire extinguisher.	No.	2		Rate Only
		<b>Fire Signage Installation</b>				
		Supply, Install, test, commission and provide 12 month guarantee for fire signage symbol, arrow and portable fire extinguisher.				
4.2.4 SMME		Fire Extinguisher (Down Arrow) - 190 x 190	No.	2		Rate Only
4.2.5 SMME		Emergency Exit Arrow - 190 x 190	No.	1		Rate Only
4.2.6 SMME		Assembly points sign boards - 290 x 290	No.	1		Rate Only
4.2.7 SMME		First Aid Kit	No.	1		Rate Only

**EASTERN CAPE DEVELOPMENT CORPORATION**

REFURBISHMENT OF THE DIMBAZA WASTEWATER TREATMENT WORKS

CONTRACT NO: ECDC/INFRA/40/122024

SECTION 4: MECHANICAL WORKS

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
<b>Carried Forward</b>						
<b>Brought Forward</b>						
4.3		<b><u>Aeration Tanks</u></b>				
4.3.1		Supply and install Vertical Aerator complete with 45kW Motor, Drive unit. Mounting plate: Carbon steel Shaft: stainless steel Fan: stainless steel grade.	No.	6		
4.5		<b><u>Return Activated Sludge (RAS) Pump Building</u></b>				
4.5.1		Replace existing RAS Pumps and motors. The existing pumps are Gorman Rupp (GR Pumps), Model T8A3-B (T- Series), Motor Size: 11kW	No	2		
		<b><u>Portable Fire Extinguishers Installation</u></b>				
		Supply, Install, test, commission and provide 12 month guarantee for portable fire extinguisher cubicle, red in colour, fibreglass weatherproof wall mounted and etc.				
4.5.2 SMME		Fire extinguisher cubicle to mount fire extinguishers	No.	2		Rate Only
4.5.3 SMME		9 kg Dry Chemical Powder (DCP) hand held fire extinguisher.	No.	2		Rate Only
		<b><u>Fire Signage Installation</u></b>				
		Supply, Install, test, commission and provide 12 month guarantee for fire signage symbol, arrow and portable fire extinguisher.				
4.5.5 SMME		Fire Extinguisher (Down Arrow) - 190 x 190	No.	2		Rate Only
4.5.6 SMME		Emergency Exit Arrow - 190 x 190	No.	1		Rate Only
4.5.7 SMME		Assembly points sign boards - 290 x 290	No.	1		Rate Only
4.5.8 SMME		First Aid Kit	No.	1		Rate Only
4.6		<b><u>Clarifiers</u></b>				
4.6.1		Supply and Install Suction Lift Clarifier complete (Mild Steel galvanised / Painted)	P. Sum	2	R1 625 000.00	R3 250 000.00
4.6.2		Profit and Attendance for item 4.6.1	%		R3 250 000.00	
4.7		<b><u>Chlorination Tank and Building</u></b>				

**EASTERN CAPE DEVELOPMENT CORPORATION**

REFURBISHMENT OF THE DIMBAZA WASTEWATER TREATMENT WORKS

CONTRACT NO: ECDC/INFRA/40/122024

SECTION 4: MECHANICAL WORKS

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
4,7,1		Supply and install mounting brackets and safety chains full and empty cylinders	No.	1		
<b>Carried Forward</b>						
<b>Brought Forward</b>						
4.7.2		Replace existing chlorination system with Supply and Install new Wallace+Tieran 0-2kg Gas Chlorination System	P.Sum	1	R400 000.00	R400 000.00
4.7.2.1		Profit and Attendance for item 4.7.2	%		R400 000.00	
		<b>Portable Fire Extinguishers Installation</b> Supply, Install, test, commission and provide 12 month guarantee for portable fire extinguisher cubicle, red in colour, fibreglass weatherproof wall mounted and etc.				
4.7.2 SMME		Fire extinguisher cubicle to mount fire extinguishers	No.	2		Rate Only
4.7.3 SMME		9 kg Dry Chemical Powder (DCP) hand held fire extinguisher.	No.	2		Rate Only
		<b>Fire Signage Installation</b> Supply, Install, test, commission and provide 12 month guarantee for fire signage symbol, arrow and portable fire extinguisher.				
4.7.4 SMME		Fire Extinguisher (Down Arrow) - 190 x 190	No.	2		Rate Only
4.7.5 SMME		Emergency Exit Arrow - 190 x 190	No.	1		Rate Only
4.7.6 SMME		Assembly points sign boards - 290 x 290	No.	1		Rate Only
4.7.7 SMME		First Aid Kit	No.	1		Rate Only
4.8		<b>Office Building and Living Quarters</b>				
		<b>Portable Fire Extinguishers Installation</b> Supply, Install, test, commission and provide 12 month guarantee for portable fire extinguisher cubicle, red in colour, fibreglass weatherproof wall mounted and etc.				
4.8.1 SMME		Fire extinguisher cubicle to mount fire extinguishers	No.	2		Rate Only
4.8.2 SMME		9 kg Dry Chemical Powder (DCP) hand held fire extinguisher.	No.	2		Rate Only
		<b>Fire Signage Installation</b>				



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REFURBISHMENT OF THE DIMBAZA WASTEWATER TREATMENT WORKS

CONTRACT NO: ECDC/INFRA/40/122024

SECTION 4: MECHANICAL WORKS

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		Supply, Install, test, commission and provide 12 month guarantee for fire signage symbol, arrow and portable fire extinguisher.				
<b>Carried Forward</b>						
<b>Brought Forward</b>						
4.8.3 SMME		Fire Extinguisher (Down Arrow) - 190 x 190	No.	2		Rate Only
4.8.4 SMME		Emergency Exit Arrow - 190 x 190	No.	1		Rate Only
4.8.5 SMME		Assembly points sign boards - 290 x 290	No.	1		Rate Only
4.8.6 SMME		First Aid Kit	No.	1		Rate Only
<b>Total Carried Forward To Summary</b>						

**EASTERN CAPE DEVELOPMENT CORPORATION**

REFURBISHMENT OF THE DIMBAZA WASTEWATER TREATMENT WORKS

CONTRACT NO: ECDC/INFRA/40/122024

SECTION 5: ELECTRICAL WORKS

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
<b>5</b>		<b>ELECTRICAL WORKS</b>				
		# Where applicable, rate shall include stripping out, supply & install, and disposal of old materials.				
		# It is the responsibility of the contractor to verify information on-site before place orders on equipment.				
		The successful bidder will be required to submit an affidavit together with the name and CIDB grading for a 7ME or higher sub-contractor that will execute the electrical and mechanical works. If the successful bidder has multiple grading designations including that of a 5ME or higher grading, they will need to submit proof thereof				
5.1		<b><u>Head of Works (Inlet Works)</u></b>				
5.1.1 SMME		Replace existing 1500mm Long Open channel light fittings with LED Type open channel complete with 2*20W Osram LED lamps.	No	2		Rate Only
5.1.2 SMME		Supply and install LEDFLOOD MIDI 48 LED 104W OPTIC 5120 LED FLOODLIGHT	No	1		Rate Only
5.1.3 SMME		Supply and install Electrical Sub-Distribution Board as per schematic diagram	No	1		Rate Only
5.1.4 SMME		Main Cable: 16mm <sup>2</sup> x 4core Cu/PVC/ECC/PVC cable	m	190		Rate Only
5.1.5 SMME		Cable Termination: 16mm <sup>2</sup> x 4core Cu/PVC/ECC/PVC cable	No	2		Rate Only
5.1.6 SMME		600mm deep trench	m	170		Rate Only
5.1.7		Control Panel for Mechanical Fine Screen	Prov. Sum	1	R65 000.00	R65 000.00
5.1.8		Control Panel for Effluent Booster Pumps	Prov. Sum	1	R65 000.00	R65 000.00
5.1.9 SMME		20mm PVC conduit (chased into wall or on surface)	m	96		Rate Only
5.1.10 SMME		20mm galvanised conduit (on surface)	m	10		Rate Only
5.1.11 SMME		1.5mm <sup>2</sup> PVC single core conductor (house wire)	m	486		Rate Only
5.1.12 SMME		2.5mm <sup>2</sup> PVC single core conductor (house wire)	m	648		Rate Only
5.1.13 SMME		4mm <sup>2</sup> PVC single core conductor	m	200		Rate Only

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REFURBISHMENT OF THE DIMBAZA WASTEWATER TREATMENT WORKS

CONTRACT NO: ECDC/INFRA/40/122024

SECTION 5: ELECTRICAL WORKS

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
5.1.14 SMME		Supply and install 16A + 2-pin SSO	No	6		Rate Only
<b>Carried Forward</b>						
<b>Brought Forward</b>						
5.1.15 SMME		16A, 1Lever, 1Way Light Switch	No	40		Rate Only
5.1.16 SMME		Photocell	No	6		Rate Only
5.1.17 SMME		100x50 Galvnised Steel drawbox	No	100		Rate Only
5.1.18 SMME		100x100 Galvnised Steel drawbox	No	100		Rate Only
5.2		<b><u>Main Electrical Supply and Main LV Room</u></b>				
5.2.1 SMME		Replace existing 1500mm Long Open channel light fittings with LED Type open channel complete with 2*20W Osram LED lamps.	No	4		Rate Only
5.2.2 SMME		Replace existing exterior wall mounted floodlights with LEDFLOOD MIDI 48 LED 104W OPTIC 5120 LED FLOODLIGHT	No	2		Rate Only
5.2.3 SMME		Supply and install Electrical Sub-Distribution Board as per schematic diagram	No	1		Rate Only
5.2.4		Supply and install 500kVA, 11 000/420V, Minisub to BCMM specification	No	1		
5.2.5		Supply and install 11kV Ring Main Unit with 2 x Transformer feeders, to BCMM Specification	No	1		
5.2.6		Supply and Install 350kVA Silent Weatherproof Diesel Back-up generator.	No	1		
5.2.7		Replace existing Main LV Panel and make provision for Telemetry Integration. Refer to drawings.	P.Sum	1	R1 200 000.00	R1 200 000.00
5.2.8 SMME		20mm PVC conduit (chased into wall or on surface)	m	60		Rate Only
5.2.9 SMME		20mm galvanised conduit (on surface)	m	20		Rate Only
5.2.10 SMME		1.5mm <sup>2</sup> PVC single core conductor (house wire)	m	780		Rate Only
5.2.11 SMME		2.5mm <sup>2</sup> PVC single core conductor (house wire)	m	320		Rate Only

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REFURBISHMENT OF THE DIMBAZA WASTEWATER TREATMENT WORKS

CONTRACT NO: ECDC/INFRA/40/122024

SECTION 5: ELECTRICAL WORKS

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
5.2.12 SMME		4mm <sup>2</sup> PVC single core conductor	m	165		Rate Only
5.2.13 SMME		Supply and install 16A + 2-pin SSO	No	2		Rate Only
<b>Carried Forward</b>						
<b>Brought Forward</b>						
		<b>MV INSTALLATION</b>				
5.2.14		11kV MV Cable 35 x 3core XLPE:	m	30		
5.2.15		Fuse Links and Fuses	No	3		
5.2.16		MV Cable Termination	No	2		
5.2.17		Main Cable from Transformer to Main LV Panel, 300mm <sup>2</sup> singles core (2 in parallel)	m	96		
5.2.18		Termination	No	8		
5.2.19		Issue Certificate of Compliance	No	1		
5.2.20		Supply and install GPRS Telemetry system to link WWTW to BCMM offices in Bhisho	P.Sum	1	R480 000.00	R480 000.00
5.2.21		Profit and Attendance to item 5.2.21	%		R480 000.00	
5.3		<b><u>Aeration Tanks</u></b>				
5.3.1		Main Cable: 25mm <sup>2</sup> x 4core Cu/PVC/ECC/PVC cable	m	660		
5.3.2		Cable Termination: 25mm <sup>2</sup> x 4core Cu/PVC/ECC/PVC cable	No	12		
5.3.3 SMME		600mm deep trench	m	90		Rate Only
5.4		<b><u>Return Activated Sludge (RAS) Pump Building</u></b>				
5.4.1 SMME		Replace existing 1500mm Long Open channel light fittings with LED Type open channel complete with 2*20W Osram LED lamps.	No	2		Rate Only
5.4.2 SMME		Replace existing exterior wall mounted floodlights with LEDFLOOD MIDI 48 LED 104W OPTIC 5120 LED FLOODLIGHT	No	1		Rate Only
5.4.3 SMME		Supply and install Electrical Sub-Distribution Board as per schematic diagram	No	1		Rate Only
5.4.4		Supply and install selector switch	No	1		

**EASTERN CAPE DEVELOPMENT CORPORATION**

REFURBISHMENT OF THE DIMBAZA WASTEWATER TREATMENT WORKS

CONTRACT NO: ECDC/INFRA/40/122024

SECTION 5: ELECTRICAL WORKS

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
5.4.5 SMME		Main Cable: 16mm <sup>2</sup> x 4core Cu/PVC/ECC/PVC cable	m	100		Rate Only
5.4.6 SMME		Cable Termination: 16mm <sup>2</sup> x 4core Cu/PVC/ECC/PVC cable	No	2		Rate Only
5.4.7 SMME		600mm deep trench	m	90		Rate Only
5.4.8 SMME		20mm PVC conduit (chased into wall or on surface)	m	32		Rate Only
<b>Carried Forward</b>						
<b>Brought Forward</b>						
5.4.9 SMME		20mm galvanised conduit (on surface)	m	10		Rate Only
5.4.10 SMME		1.5mm <sup>2</sup> PVC single core conductor (house wire)	m	385		Rate Only
5.4.11 SMME		2.5mm <sup>2</sup> PVC single core conductor (house wire)	m	260		Rate Only
5.4.12 SMME		4mm <sup>2</sup> PVC single core conductor	m	60		Rate Only
5.4.13 SMME		Supply and install 16A + 2-pin SSO	No	2		Rate Only
5.5		<b><u>Clarifiers</u></b>				
5.5.1		Minor repairs to supply cables	P.Sum	1	R15 000.00	R15 000.00
5.5.2 SMME		Replace existing exterior pole (10m) mounted floodlights with LEDFLOOD MIDI 48 LED 104W OPTIC 5120 LED FLOODLIGHT	No	16		Rate Only
5.5.3 SMME		Main Cable: 4mm <sup>2</sup> x 4core Cu/PVC/ECC/PVC cable	m	300		Rate Only
5.5.4 SMME		Cable Termination: 4mm <sup>2</sup> x 4core Cu/PVC/ECC/PVC cable	No	12		Rate Only
5.5.5 SMME		600mm deep trench	m	290		Rate Only
5.5.6 SMME		9m Galvanised Pole for Area Lighting	No	8		Rate Only
5.5.7 SMME		Cable for Area Lights: 4mm x 3core	m	400		Rate Only
5.5.8 SMME		Termination	m	32		Rate Only

**EASTERN CAPE DEVELOPMENT CORPORATION**

REFURBISHMENT OF THE DIMBAZA WASTEWATER TREATMENT WORKS

CONTRACT NO: ECDC/INFRA/40/122024

SECTION 5: ELECTRICAL WORKS

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
5.5.9 SMME		600mm deep trench (area lighting)	m	400		Rate Only
5.6		<b><u>Chlorination Tank and Building</u></b>				
5.6.1		Supply and install 0,5Ton Electric Hoist	No	1		
5.6.2 SMME		Main Cable: 16mm <sup>2</sup> x 4core Cu/PVC/ECC/PVC cable	m	190		Rate Only
5.6.3 SMME		Cable Termination: 16mm <sup>2</sup> x 4core Cu/PVC/ECC/PVC cable	No	2		Rate Only
5.6.4 SMME		600mm deep trench	m	170		Rate Only
5.6.5 SMME		Supply and install Electrical Sub-Distribution Board as per schematic diagram	No	1		Rate Only
<b>Carried Forward</b>						
<b>Brought Forward</b>						
5.7		<b><u>Office Building</u></b>				
5.7.1 SMME		Replace existing 1500mm Long Open channel light fittings with LED Type open channel complete with 2*20W Osram LED lamps.	No	12		Rate Only
5.7.2 SMME		Replace existing exterior wall mounted floodlights with LEDFLOOD MIDI 48 LED 104W OPTIC 5120 LED FLOODLIGHT	No	2		Rate Only
5.7.3 SMME		Supply and install Electrical Sub-Distribution Board as per schematic diagram	No	1		Rate Only
5.7.4 SMME		Supply and install 16A + 2-pin SSO	No	16		Rate Only
5.7.5 SMME		Main Cable: 16mm <sup>2</sup> x 2core Cu/PVC/ECC/PVC cable	m	60		Rate Only
5.7.6 SMME		Cable Termination: 16mm <sup>2</sup> x 2core Cu/PVC/ECC/PVC cable	No	2		Rate Only
5.7.7 SMME		600mm deep trench	m	50		Rate Only
5.7.8 SMME		20mm PVC conduit (chased into wall or on surface)	m	304		Rate Only
5.7.9 SMME		20mm galvanised conduit (on surface)	m	10		Rate Only
5.7.10 SMME		1.5mm <sup>2</sup> PVC single core conductor (house wire)	m	504		Rate Only

**EASTERN CAPE DEVELOPMENT CORPORATION**

REFURBISHMENT OF THE DIMBAZA WASTEWATER TREATMENT WORKS

CONTRACT NO: ECDC/INFRA/40/122024

SECTION 5: ELECTRICAL WORKS

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
5.7.11 SMME		2.5mm <sup>2</sup> PVC single core conductor (house wire)	m	576		Rate Only
5.7.12 SMME		4mm <sup>2</sup> PVC single core conductor	m	60		Rate Only
<b>Total Carried Forward To Summary</b>						

**EASTERN CAPE DEVELOPMENT CORPORATION**

REFURBISHMENT OF THE DIMBAZA WASTEWATER TREATMENT WORKS

CONTRACT NO: ECDC/INFRA/40/122024

SECTION 6: OCCUPATIONAL HEALTH AND SAFETY

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
6.1		<p>OCCUPATIONAL HEALTH AND SAFETY</p> <p>Full time safety officer</p> <p>Full time attendance on site of a SACPCMP-registered construction health and safety officer or manager from the start of construction until the end of project handover. The full time construction health and safety officer shall also be responsible for management of COVID 19 compliance</p>	Mnths	11		
6.2		<p>General</p> <p>First aiders and first aid kits</p> <p>Medical certificates of fitness Medical examination of all employees and certification of fitness by an occupational medicine practitioner. Pre-employment, annual and exit medical examination is required</p>	Lmp S	1		
6.3		<p>Emergency Equipment based on the risk exposure and emergency rescue. stretchers, neck brace, spill kits, lifting and lowering hosting equipment of the injured</p>	Lmp S	1		
6.4		<p>Competent inspectors for equipment such as examples scaffolding inspectors and lifting machine inspector</p>	Lmp S	1		
6.5		<p>Mandatory training such as risk assessments, legal liability/OHS Act, incident investigation</p>	Lmp S	1		
6.6		<p>Provide, supply and maintenance for each worker the following SANS approved personal protective equipment &amp; clothing as per the site-specific risk assessments: • Hard Hats • Overall/work suit (100% Cotton) • Safety boots/shoes (Steel-Toe) • Safety gumboots (Steel-Toe) • Ear Plugs/Muffs • Dust Mask(at least FF2 type) • Respirators • Safety goggles • Hand gloves • Reflector vests • Other</p>	Lmp S	1		
6.7		<p>Barricading and hoarding for fall arrest, SANS approved safety netting (orange color with minimum of 1,2 meters high)</p>	Lmp S	1		
6.8		<p>Waste bins on site and regular removal</p>	Lmp S	1		
6.9		<p>Construction signage, including the sign for the construction work permit number</p>	Lmp S	1		
6.10		<p>Safe scaffolding</p>	Lmp S	1		
6.11		<p>Safe lifting equipment for lifting and lowering pipes</p>	Lmp S	1		



**EASTERN CAPE DEVELOPMENT CORPORATION**

REFURBISHMENT OF THE DIMBAZA WASTEWATER TREATMENT WORKS

CONTRACT NO: ECDC/INFRA/40/122024

SECTION 6: OCCUPATIONAL HEALTH AND SAFETY

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
<b>Carried Forward</b>						
<b>Brought Forward</b>						
6.12		Occupational hygiene measurement and/or AIA certification, where required Measurement or certification of risk exposure	Lmp S	1		
6.13		Employee facilities drinking water, change facility, personal lockers, wash facilities, eating facilities) considering toilet and rest facilities along the road alignment	Lmp S	1		
6.14		Dust control measure for the prevention of dust nuisance	Lmp S	1		
<b>HEALTH AND SAFETY EDUCATION</b>						
Health and safety education						
6.15		Allow for all compulsory health and safety awareness programme (e.g. Inductions, toolbox Talks, Safety Promotions, H&S related training, etc.)	Lmp S	1		
<b>ENVIRONMENTAL</b>						
Environmental						
6.16		Provide for adequate handling and storage of materials so as to minimize contamination of ground, air or water	Lmp S	1		
6.17		Provide for the adequate and safe collection and disposal of waste material from site by an approved method	Lmp S	1		
6.18		Provide for rehabilitation on completion of site areas and temporary access routes not covered by construction or landscaping specifications. i.e. grass seeding/hydro seeding, maintenance of alien vegetation	Lmp S	1		
6.19		Provide for stockpiling of topsoil for re-use	Lmp S	1		
6.20		Provide for a responsible person to prepare and update Method Statements, conduct regular inspections, maintain records, and report to the Principal Agent	Lmp S	1		
<b>Total Carried Forward To Summary</b>						

**EASTERN CAPE DEVELOPMENT CORPORATION**

REFURBISHMENT OF THE DIMBAZA WASTEWATER TREATMENT WORKS

CONTRACT NO: ECDC/INFRA/40/122024

SECTION 7: PROVISIONAL SUMS

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
7		PROVISIONAL SUMS				
7.1		Allowance for Community Liaison Officer (CLO)	Month	11	R8 600.00	R94 600.00
7.2		Allowance for PSC members (4 members at R300 per meeting)	Month	11	R1 200.00	R13 200.00
7.3		Allowance for accredited training for local labour	Prov. Sum	1	R100 000.00	R100 000.00
7.4		Provisional amount for activities to be executed by local SMME Sub - Contractor(s)	Sum	1	R2 174 259.00	R2 174 259.00
<b>Total Carried Forward To Summary</b>						<b>R2 382 059.00</b>

**EASTERN CAPE DEVELOPMENT CORPORATION**

REFURBISHMENT OF THE DIMBAZA WASTEWATER TREATMENT WORKS

CONTRACT NO: ECDC/INFRA/40/122024

**SUMMARY OF SECTIONS**

<b>SECTION</b>	<b>DESCRIPTION</b>	<b>AMOUNT (RAND)</b>
1	SECTION 1: PRELIMINARY AND GENERAL	
2	SECTION 2: DAYWORKS	
3	SECTION 3: BUILDING AND CIVIL WORKS	
4	SECTION 4: MECHANICAL WORKS	
5	SECTION 5: ELECTRICAL WORKS	
6	SECTION 6: OCCUPATIONAL HEALTH AND SAFETY	
7	SECTION 7: PROVISIONAL SUMS	R2 382 059.00
<b>8</b>	<b>TOTAL OF SECTIONS (VAT EXCLUDED)</b>	
9	ADD: CONTINGENCIES @ 5%	
<b>10</b>	<b>SUB-TOTAL</b>	
11	ADD: VAT @ 15%	
<b>12</b>	<b>TOTAL PROJECT COST</b>	

**Part C3: Scope of Work**  
**C3.1 - Scope of Works**

### 1 Background To ECDC

#### Vision

To be an innovative leader in promoting sustainable economic growth and development of the Eastern Cape.

#### Mission

**To promote sustainable economic development in the Eastern Cape through focused:**

- a) Provision of innovative development finance
- b) Leveraging of resources, strategic alliances, investment and partnerships.

#### Legislative Mandate

ECDC draws its mandate directly from the Eastern Cape Development Corporation Act (Act 2 of 1997) and is led by the economic development priorities of the provincial government, as detailed in the Provincial Growth and Development Plan (PGDP), Eastern Cape Provincial Industrial Development Strategy (PIDS), the policy statement and budget speech of the Member of the Executive Council (MEC) of Economic Development, Environment Affairs and Tourism (DEDEAT)

Section 3 of the ECDC Act states that the Corporation shall “plan, finance, co-ordinate, market, promote and implement development of the Province and its people in the field of industry, commerce, agriculture, transport and finance”.

### 2 Scope of Works

#### 2.1 General description of the works

The description and scope of works, as described hereunder are a general guide only and may be subject to change. No liability or claim will be accepted should this information provided change or be regarded as misleading.

**The work comprises the following sections:**

#### **Head of Works (Inlet Works)**

##### Civil / Building Infrastructure

- Replace all hand railings with similar approved;
- Make good all concrete to collection chamber;
- Repaint walls of storage building;
- Replace and paint ceilings;
- Replace all rainwater goods;
- Replace damaged roof complete;
- Replace existing canopy with similar approved;
- Replace all plumbing and associated works.

### Mechanical and Electrical Infrastructure

- Provide new internal and external light fittings;
- Provide new electrical distribution board;
- Provide new Effluent Booster pumps;
- Provide a new Electro-Mechanical fine Screen;
- Provide new Conveyer system to transport of coarse, fine and compacted screenings, sludge, grit, and solids from the Mechanical Screen;
- Provide large waste collection skip bin;
- Provide new fire extinguishers.

### **Sludge Lagoons**

#### Civil / Building Infrastructure

- De-sludge sludge lagoons and transport sludge to an approved landfill site;
- Preparation of in-situ material;
- Procurement and placement of a new impermeable membrane.

### **Main Electrical Supply and Main LV Room**

#### Civil / Building Infrastructure

- Repaint walls and ceilings of building;
- Replace all rainwater goods;
- Replace damaged roof complete;
- Provide new entrance door;
- Provide new windows and frames.

### Mechanical and Electrical Infrastructure

- Replace all internal and external light fittings;
- Provide a new electrical distribution board and provide integration for Telemetry system;
- Provide a new 500kVA transformer;
- Provide the new 11kV Ring Main Unit;
- Provide a new 350kVA Stand-by Backup Generator;
- Test installation and provide a Certificate of Compliance for entire site;
- Provide new fire extinguishers;
- Provide ventilation fans;

## **Aeration Tanks**

### Civil / Building Infrastructure

- Replace all hand railings with similar approved.

### Mechanical and Electrical Infrastructure

- Replace all Aerator Motors and pumps;
- Provide new Gearboxes.

## **Return Activated Sludge (RAS) Pump Building**

### Civil / Building Infrastructure

- Repaint walls and ceilings of building;
- Replace all rainwater goods;
- Replace all broken roof tiles;
- Replace damaged roof complete;
- Provide new entrance door;
- Provide new widows and frames;
- Replace existing canopy over RAS pumps with similar approved.

### Mechanical and Electrical Infrastructure

- Replace all internal and external light fittings;
- Provide a new electrical distribution board;
- Replace selector switch;
- Replace Self Priming Gorman Rupp pumps and motors;
- Provide new fire extinguishers.

## **Clarifiers**

### Civil / Building Infrastructure

- Repair concrete to splitter box;
- Repair standpipe at the Clarifiers;
- Repair leaking clarifiers;
- Repair manhole and pipe work between Clarifier 2 and Chlorination building.

### Mechanical and Electrical Infrastructure

- Provide new Clarifiers including drive system and scraper mechanism;
- Re-instate underground feeder cables;
- Inspect and refurbish

## **Chlorination Tank and Building**

### Civil / Building Infrastructure

- Repaint walls and ceilings of building;
- Replace all rainwater goods;
- Replace damaged roof complete;
- Provide new entrance door;
- Provide new windows and frames

### Mechanical and Electrical Infrastructure

- Provide new Automatic Chlorination System with a manual override;
- Modify the existing gantry system to cater for taller bottles;
- Provide mounting brackets and safety chains full and empty cylinders;
- Provide a new Electric Hoist for 130kg cylinders including cage and beam crawler, with and bottle lifting cage for empty and full cylinders.
- Provide new fire extinguishers.

## **Discharge Channel**

### Civil / Building Infrastructure

- Repair concrete to splitter box;
- General housekeeping

## **Office Building**

### Civil / Building Infrastructure

- Repaint walls of office buildings;
- Replace and paint ceilings;
- Replace all rainwater goods;
- Replace damaged roof complete;
- Provide new entrance door;
- Provide new windows and frames
- Refurbish all plumbing and associated works.

### Mechanical and Electrical Infrastructure

- Replace all internal and external light fittings;
- Refurbish the existing electrical distribution board.



## **2.2 Variation in the Scope of Work**

The Client retains the right to omit specific sections of the work prior to signing the contract and in the event that such omissions are incorporated in the contract it is hereby agreed that no claim for loss of profit will be entertained. In addition, tenderers are required to price all work in a "stand-alone fashion" so that profit/mark-up etc are such that omission of any of the tendered works will NOT render the remaining contract work visible.

## **2.3 Temporary works, etc.**

Tenderers are advised that, in view of the nature and extent of the works temporary works are an essential part of the works. Tenderers must therefore fully examine and understand the nature and extent of the proposed works and must allow in their pricing for all access, structures, hoardings and other temporary works. Refer also to Clause 4.2: Enclosure of the Works in the Preliminaries Section of this document.

## **3. General**

### **3.1 Damage to other services**

The Contractor shall assume full responsibility in the event where he or any person in his service is directly or indirectly responsible for any damages caused to other services already installed (water, sewerage, storm water, roads, surveyors' pegs, etc.) Any such damage shall immediately be reported to the Principal Agent.

The Contractor shall be held fully responsible for the repair of such damage to the satisfaction of the Principal Agent.

The costs for the repair of such damage shall be borne by the Contractor. Claims by the Contractor in this connection will not be considered. Should any portion of the works in terms of this Contract, for which the Contractor is responsible, be damaged by other Contractors, the Contractor shall repair such damage at the tendered rate and shall submit full details of such damage to the Principal Agent so that he can recover such costs from the responsible party.

This repair work may only be done on the written instruction from the Principal Agent.

The contractor shall make provision for a full scan of the area to determine the position of services in the area.

### **3.2 Local labour and local authorities**

Local Labour:

It is intended that the project must make maximum possible use of local labour which is presently unemployed in the area of which the project is performed.

All unskilled labour shall be from the Local Municipal Supply area.

Engagement of local labour shall be controlled in a formal manner through the client's labour liaison body. It is furthermore expected that the labour liaison body will assist in the monitoring of labour goals.

### **3.3 Liaison with Local Authorities**

The contractor will have to liaise with local authorities regarding the following matters:

3.3.1 Locating of existing underground services.

3.3.2 Protection of existing services during construction.

It is the contractor's onus to immediately contact all these authorities and to accommodate their involvement in his programme of work.

The contractor should also warn the authorities at least 48 hours before the actual work commence.

Compensation for delays, losses or accidents will not be considered should the contractor at any time have failed to keep the local authorities informed.

The Principal Agent or employer must immediately be notified, should the contractor experience any problem regarding work, which involves a local authority.

### **3.4 Community Liaison and Community Relations**

In all dealings with the community and workers employed from within the community, the Contractor shall take due cognisance of the character, culture and circumstances of the community involved and shall at all times use his best endeavours to avoid the development of disputes and to foster a spirit of co-operation and harmony towards the project.

The Contractor shall at all times, keep the Principal Agent fully informed on all matters affecting the contractor and the community, and shall attend all community meetings relating to the project as may be reasonably required by the Principal Agent.

All matters concerning the community shall be discussed and where possible, resolved at such meetings. Where any resolution of a community meeting shall be contrary to the terms and provisions of the Contract, the Contractor shall not give effect thereto without a prior written instruction from the Principal Agent.

Where the Contractor is of the opinion that any instruction of the Principal Agent issued in terms of this clause will result in the incurring of additional costs which were not provided for in his tendered rates and/or that a delay in the progress of the works will result, he shall be entitled to submit a claim in terms of the conditions of contract .

### **3.5 OCCUPATIONAL HEALTH AND SAFETY ACT (ACT 85 OF 1993)**

Contractors shall meet the health and safety requirements as stipulated in health and safety plan.

#### **3.5.1 Safety Precautions**

Notwithstanding the fact that the Contractor is solely responsible for the actions of his staff and any duly appointed sub-contractors, the Principal Agent reserves the right for himself, or his nominated representative, to inspect and monitor working methods and materials handling to ensure that safe working practices are being adhered to at all times.

#### **3.5.2 Health and Safety Specifications**

Please refer to Part C.4.1 for the Health and Safety Specification.

Project title:	COMPLETION OF CIVIL, MECHANICAL AND ELECTRICAL INFRASTRUCTURE AT THE DIMBAZA WASTEWATER TREATMENT WORKS – PHASE 1
Bid No:	ECDC/INFRA/40/122024

**Tenderer herewith confirms by signing below that he has read and understands the full scope of works and associated detailed specifications of this contract.**

**The client will not entertain any additional amount claimed due to a lack of understanding the full spectrum of the works.**

Company Name:

.....

Tenderer Name

.....Signature.....Date.....

Company Authorised/

Accountable Person Name

.....Signature.....Date.....

Company Stamp:

## **PART C3.2: CONDITIONS OF SCOPE OF WORK**

### **C3.2.1 RESPONSIBILITIES AND DUTIES**

Notwithstanding the fact that a description of the services has been provided above, ECDC shall be entitled to request additional services related to deliverables required to ensure the successful completion of the services set out above on such further terms and conditions as may be agreed between the parties in writing.

The service provider shall at all times faithfully and timeously carry out and perform the Services and shall use its best endeavours to properly conduct, improve, extend and develop the business of ECDC in the provisioning of the services.

The Services Provider shall as part of his duties, attend such meetings as may be required by ECDC from time to time and submit weekly or monthly progress reports on the services as may be required and requested by ECDC.

### **C3.2.2 OBLIGATION TO PERFORM AND SUB-CONTRACTING**

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

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

### **C3.2.3 PERFORMANCE GUARANTEE**

Within fourteen (14) days of receipt of the notification of contract award, the successful bidder shall furnish to ECDC the performance security of the amount specified above.

The proceeds of the performance security shall be payable to ECDC as compensation for any loss resulting from the bidder's failure to complete his obligations under the contract.

The performance security shall be denominated in the currency of the contract or in a freely convertible currency acceptable to ECDC and shall be in one of the following forms:

A bank guarantee or an irrevocable letter of credit issued by a reputable bank located in South Africa, acceptable to ECDC, in the form provided in the bid documents or another form acceptable to ECDC; or

A cashier's or certified cheque

The performance security will be discharged by ECDC and returned to the bidder not later than thirty (30) days following the date of completion of the bidder's performance obligations under the contract, including any warranty obligations, unless otherwise specified in SCC.

Notwithstanding the provisions above, the bidder shall not be liable for forfeiture of its performance security, damages, or termination for default if and to the extent that his delay in

performance or other failure to perform his obligations under the contract is the result of an event of force majeure.

### **C3.2.4 ANTI-DUMPING AND COUNTERVAILING DUTIES AND RIGHTS**

When, after the date of bid, provisional payments are required, or anti-dumping or countervailing duties are imposed, or the amount of a provisional payment or anti-dumping or countervailing right is increased in respect of any dumped or subsidized import, ECDC is not liable for any amount so required or imposed, or for the amount of any such increase. When, after the said date, such a provisional payment is no longer required or any such anti-dumping or countervailing right is abolished, or where the amount of such provisional payment or any such right is reduced, any such favourable difference shall on demand be paid forthwith by the contractor to ECDC or ECDC may deduct such amounts from moneys (if any) which may otherwise be due to the contractor in regard to supplies or services which he delivered or rendered, or is to deliver or render in terms of the contract or any other contract or any other amount which may be due to him.

### **C3.2.5 ECDC FACILITIES**

Unless otherwise agreed in writing by ECDC, the Service Provider will work from its own office and provide its own facilities, such as transport, telephone, cell phone, fax and computer facilities to perform the services.

The service provider may use certain facilities made available by ECDC to assist in performing the services, including but not limited to computer facilities, telephone and fax facilities and stationery. In this regard the service provider agrees to:

Abide by the health, safety and security measures as prescribed by ECDC from time to time;

To use such accommodation and facilities entirely at his own risk and ECDC shall not be liable for any loss or damage whatsoever and howsoever caused arising out of or in connection with the use of these items, other than loss or damage caused as a result of ECDC's own wilful misconduct.

### **C3.2.6 FORGE MAJEURE**

If a force majeure situation arises, the bidder shall promptly notify ECDC in writing of such condition and the case thereof. Unless otherwise directed by ECDC in writing, the bidder shall continue to perform its obligations under the contract as far as is reasonably practical and shall seek all reasonable alternative means for performance not prevented by the force majeure event.

### **C3.2.7 SPARE PARTS (Not Applicable)**

The bidder may be required to provide any or all of the following materials, notifications, and information pertaining to spare parts manufactured or distributed by the bidder:

Such spare parts as ECDC may elect to purchase from the bidder, provided that this election shall not relieve the bidder of any warranty obligations under the contract; and In the event of termination of production of the spare parts:

Advance notification to ECDC of the pending termination, in sufficient time to permit ECDC to procure needed requirements; and

Following such termination, furnishing at no cost to ECDC, the blueprints, drawings, and specifications of the spare parts, if requested.

**C3.2.8 INSURANCE**

The contractor shall affect and maintain all required and/or necessary insurances in accordance with Clause 8.6 and Subclauses of the GCC2015 third edition contract (GCC 2015), as applicable.

**C3.2.9 RESPONSIBILITY TO PERFORM**

Delivery of the goods and performance of services shall be made by the bidder in accordance with the time schedule prescribed by ECDC in the contract.

If at any time during performance of the contract, the bidder or its subcontractor(s) should encounter conditions impeding timely delivery of the goods and performance of services, the bidder shall promptly notify ECDC in writing of the fact of the delay, its likely duration and its cause(s). As soon as practicable after receipt of the bidder's notice, ECDC shall evaluate the situation and may at his discretion extend the bidder's time for performance, with or without the imposition of penalties, in which case the extension shall be ratified by the parties by amendment of contract.

ECDC reserves the right to procure outside of the contract small quantities or to have minor essential services executed if an emergency arises, the bidder's point of supply is not situated at or near the place where the supplies are required, or the bidder's services are not readily available.

A delay by the bidder in the performance of its delivery obligations may render the bidder liable to the imposition of penalties, unless an extension of time is agreed upon without the application of penalties.

ECDC shall, without prejudice to its other remedies under the contract, deduct from the contract price, as a penalty, a sum calculated on the delivered price of the delayed goods or unperformed services using the current prime interest rate calculated for each day of the delay until actual delivery or performance.

ECDC may also consider termination of the contract.

**C3.2.10 DURATION OF THE CONTRACT**

The construction project duration is estimated to be **11 Months** from date of appointment.

The successful Bidder shall be required to complete and submit the signed and duly completed **client recommended Services Level Agreement**.

Upon any delay beyond the delivery period in the case of a supplies contract, ECDC shall, without cancelling the contract, be entitled to purchase supplies of a similar quality and up to the same quantity in substitution of the goods not supplied in conformity with the contract and to return any goods delivered later at the bidder's expense and risk, or to cancel the contract and buy such goods as may be required to complete the contract and without prejudice to his other rights, be entitled to claim damages from the bidder. (N/A)

### **C3.2.11 PAYMENTS AND TAX**

Payments shall only be made in accordance with the fees as quoted in this documentation. Prices charged by the bidder for goods delivered and services performed under the contract shall not vary from the prices quoted by the bidder in this bid, with the exception of any price adjustments authorized at ECDC's request for bid validity extension, as the case may be.

ECDC will reimburse the service provider for expenses and disbursements incurred subject to the submission of satisfactory proof that such expenses and disbursements have been incurred and subject to it being within the budget as indicated in this documentation.

The service provider shall from time to time during this contract duration furnish ECDC with a VAT compliant tax invoice accompanied by a copy of the delivery note and upon fulfilment of other obligations stipulated in the contract.

Each invoice must be accompanied by a detailed timesheet and expense claim forms substantiating the amount claimed.

Payments shall be made promptly by ECDC in Rand, but in no case later than thirty (30) days after submission of a VAT compliant tax invoice and supporting documentation by the service provider if the services have been properly executed as agreed.

The service provider shall retain all proof of expenditure and maintain such accounts and records as are reasonably necessary, claimed above, should ECDC require an audit to substantiate that expenditure and allows ECDC's own personnel or an independent auditor access to those records.

Should the above audit reveal that ECDC has been overcharged, the Service Provider will reimburse the ECDC the amount overcharged within 30 days inclusive of interest calculated at prime plus 2% per annum;

A foreign bidder shall be entirely responsible for all taxes, stamp duties, license fees, and other such levies imposed outside the Republic of South Africa.

A local bidder shall be entirely responsible for all taxes, duties, license fees, etc., incurred until delivery of the contracted goods to ECDC.

### **C3.2.12 CONTRACTOR'S DOMESTIC SUBCONTRACTORS**

The successful bidder shall be required to subcontract, to local emerging Small, Medium, Micro-size Enterprises (SMME's), a minimum percentage of 10% of the works. Bidders shall make allowance in their preliminaries and general for any additional costs in this regard, for example, for the preparation of work packages, management of the subcontractors including site supervision, drafting and conclusion of subcontract agreements, subcontractor OHS plan approvals, etc, that may arise due to this commitment.

A compiled database of the local subcontractors will be made available to the contractor.

The contractor shall appoint all domestic subcontractors in terms of an agreement that provides for fair and equitable conditions of contract compatible with this agreement.

All work or installations and the associated risks related to domestic subcontractors shall be the direct responsibility of the contractor.

## **Variation in the Scope of Work**

The Client retains the right to omit specific sections of the work prior to signing the contract and in the event that such omissions are incorporated in the contract it is hereby agreed that no claim for loss of profit will be entertained. In addition, tenderers are required to price all work in a "stand-alone fashion" so that profit/mark-up etc are such that omission of any of the tendered works will NOT render the remaining contract work viable.

### **1. Temporary works, etc.**

Not required.

## **2. General**

### **2.1 Damage to other services**

The Contractor shall assume full responsibility in the event where he or any person in his service is directly or indirectly responsible for any damages caused to other services already installed (water, sewerage, storm water, roads, surveyors' pegs, etc.) Any such damage shall immediately be reported to the Principal Agent.

The Contractor shall be held fully responsible for the repair of such damage to the satisfaction of the Principal Agent.

The costs for the repair of such damage shall be borne by the Contractor. Claims by the Contractor in this connection will not be considered. Should any portion of the works in terms of this Contract, for which the Contractor is responsible, be damaged by other Contractors, the Contractor shall repair such damage at the tendered rate and shall submit full details of such damage to the Principal Agent so that he can recover such costs from the responsible party.

This repair work may only be done on the written instruction from the Principal Agent.

The contractor shall make provision for a full scan of the area to determine the position of services in the area.

### **3. Local labour and local authorities**

Local Labour:

It is intended that the project must make maximum possible use of local labour which is presently unemployed in the area of which the project is performed.

All unskilled labour shall be from the Local Municipal Supply area.

Engagement of local labour shall be controlled in a formal manner through the client's labour liaison body. It is furthermore expected that the labour liaison body will assist in the monitoring of labour goals.

### **4. Liaison with Local Authorities**

The contractor will have to liaise with local authorities regarding the following matters:

4.1.1 Locating of existing underground services.

4.1.2 Protection of existing services during construction.

It is the contractor's onus to immediately contact all these authorities and to accommodate their involvement in his programme of work.



The contractor should also warn the authorities at least 48 hours before the actual work commences.

Compensation for delays, losses or accidents will not be considered should the contractor at any time have failed to keep the local authorities informed.

The Principal Agent or employer must immediately be notified, should the contractor experience any problem regarding work, which involves a local authority.

**5. Community Liaison and Community Relation**

In all dealings with the community and workers employed from within the community, the Contractor shall take due cognisance of the character, culture and circumstances of the community involved and shall at all times use his best endeavours to avoid the development of disputes and to foster a spirit of co-operation and harmony towards the project.

The Contractor shall at all times, keep the Principal Agent fully informed on all matters affecting the contractor and the community, and shall attend all community meetings relating to the project as may be reasonably required by the Principal Agent.

All matters concerning the community shall be discussed and where possible, resolved at such meetings. Where any resolution of a community meeting shall be contrary to the terms and provisions of the Contract, the Contractor shall not give effect thereto without a prior written instruction from the Principal Agent.

Where the Contractor is of the opinion that any instruction of the Principal Agent issued in terms of this clause will result in the incurring of additional costs which were not provided for in his tendered rates and/or that a delay in the progress of the works will result, he shall be entitled to submit a claim in terms of the conditions of contract.

**6. Occupational Health and Safety Act (Act 85 of 1993)**

Contractors shall meet the health and safety requirements as stipulated in health and safety plan, to be prepared by the Employer's Agent and issued to the contractor.

**6.1.1 Safety Precautions**

Notwithstanding the fact that the Contractor is solely responsible for the actions of his staff and any duly appointed sub-contractors, the Principal Agent reserves the right for himself, or his nominated representative, to inspect and monitor working methods and materials handling to ensure that safe working practices are being adhered to at all times.

**6.1.2 Health and Safety Specifications**

Please refer to part C4.1 for the Health and Safety Specification and Baseline Risk Assessment.

## **CONDITIONS SPECIFIC TO THIS BID:**

### **7. SMME Sub-contracting requirements**

**A minimum of 10%** of the building work will be allocated to SMME Sub-contractors. Contractors will be required to supply verified monthly statements/schedules (verified by their auditors) indicating the % achieved for that month. A cumulative schedule also needs to be maintained for each month that has passed.

#### **7.1 Responsibilities and duties**

Notwithstanding the fact that a description of the services has been provided above, ECDC shall be entitled to request additional services related to deliverables required to ensure the successful completion of the services set out above on such further terms and conditions as may be agreed between the parties in writing.

The service provider shall at all times faithfully and timeously carry out and perform the Services and shall use its best endeavours to properly conduct, improve, extend and develop the business of ECDC in the provisioning of the services.

The Services Provider shall as part of his duties, attend such meetings as may be required by ECDC from time to time and submit weekly or monthly progress reports on the services as may be required and requested by ECDC.

#### **7.2 Obligation to perform and sub-contracting**

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

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

#### **7.3 Performance guarantee**

Within fourteen (14) days of receipt of the notification of contract award, the successful bidder shall furnish to ECDC the performance security of the amount specified above.

The proceeds of the performance security shall be payable to ECDC as compensation for any loss resulting from the bidder's failure to complete his obligations under the contract.

The performance security shall be denominated in the currency of the contract or in a freely convertible currency acceptable to ECDC and shall be in one of the following forms:

A bank guarantee or an irrevocable letter of credit issued by a reputable bank located in South Africa, acceptable to ECDC, in the form provided in the bid documents or another form acceptable to ECDC; or A cashier's or certified cheque


The performance security will be discharged by ECDC and returned to the bidder not later than thirty (30) days following the date of completion of the bidder's performance obligations under the contract, including any warranty obligations, unless otherwise specified in SCC.

Notwithstanding the provisions above, the bidder shall not be liable for forfeiture of its performance security, damages, or termination for default if and to the extent that his delay in performance or other failure to perform his obligations under the contract is the result of an event of force majeure.


## **PART C4 – SITE INFORMATION/DRAWINGS**

## **C4.1 HEALTH AND SAFETY SPECIFICATION**

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<b>OCCUPATIONAL HEALTH AND SAFETY SPECIFICATION</b>	
<b>DOCUMENT TITLE</b>	<b>The Augmentation of Wastewater Treatment Works in Dimbaza Township</b>
<b>DATE ISSUED</b>	<b>21/10/2024</b>
<b>CLIENT</b>	 
	<b>ECDC/INFRAXX/XX2024</b>
<b>PREPARED BY</b>	<b>LUMCUS TRAINING AND CONSULTING</b>

**Acknowledgement by Principal Contractor**

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# Construction Health & Safety Specification

issued in terms of the Occupational Health and  
Safety Act, 1993  
Construction  
Regulations, 2014

## The Augmentation of Wastewater Treatment Works in Dimbaza Township

I, ..... Representing .....Principal Contractor have satisfied myself with the content of this Construction Occupational Health and Safety Specification and shall ensure that the Principal Contractor, all contractors and sub-contractors and all employees on site comply with it. It is further acknowledged that my Safety File and those of my sub-contractors will be made available within 14 days of appointment as PC or subcontractor respectively to **LUMCUS TRAINING AND CONSULTING**, and maintained on site until Final Completion.

VAT NUMBER .....  
.....

LETTER OF GOOD STANDING CERTIFICATE NUMBER .....  
.....



LETTER OF GOOD STANDING EXPIRY DATE .....  
.....

EMAIL ADDRESS .....  
.....

.....  
Signature of Principal Contractor

.....  
Date

### Acknowledgement by Contractor

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# Construction Health & Safety Specification

issued in terms of the Occupational Health and Safety  
Act, 1993  
Construction  
Regulations, 2014

## The Augmentation of Wastewater Treatment Works in Dimbaza Township

I,.....representing..... (Contractor) have satisfied myself with the content of this Construction Occupational Health and Safety Specification and shall ensure that the Contractor and sub-contractors and all employees on site comply with it. It is further acknowledged that the Safety File will be made available within 14 days of appointment to **LUMCUS TRAINING AND CONSULTING**, and maintained on site until Final Completion.

VAT NUMBER .....

LETTER OF GOOD STANDING CERTIFICATE NUMBER .....

LETTER OF GOOD STANDING EXPIRY DATE .....

EMAIL ADDRESS .....

.....

Signature of Contractor

Date



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## Definitions

For the purpose of the Construction Health and Safety Specification, the abbreviations or definitions given hereunder shall apply:

1. **“Client”** refers to the Eastern Cape Development Corporation (ECDC)
2. **“COIDA”** means Compensation for Occupational Injuries and Diseases Act 130 of 1993
3. **“Commissioning”** refers to work in connection with the constructed design which involves
  - a) Performance Acceptance Testing;
  - b) Tests on Completion
  - c) Machinery process commissioning
  - d) Machinery maintenance commissioning
  - e) Trial Operation
  - f) Training of maintenance, setting and operation
  - g) Rectification and maintenance during Defects Notification Period
4. **“construction manager”** means a competent person responsible for the management of the physical construction processes and the coordination, administration and management of resources on a construction site;
5. **“construction site”** means the construction work areas for the construction for the Wastewater Treatment Works In Dimbaza Township including all adjacent areas affected by the construction work and all the access roads and routes;
6. **“construction supervisor”** means a competent person responsible for supervising construction activities on a construction site;
7. **“construction vehicle”** means a vehicle used as a means of conveyance for transporting persons or material, or persons and material, on and off the construction site for the purposes of performing construction work; and, includes a bakkie or LDV used by the principal contractor or any contractor
8. **“Construction work”** refers to any construction work in connection with the construction for The Augmentation Of Wastewater Treatment Works In Dimbaza Township.
9. **“Contractor”** refers to a Contractor of the Principal Contractor or a sub-contractor to such a contractor and includes any employer involved in plant construction and commissioning
10. **“CHSS”** refers to this document, the Construction Health & Safety Specification
11. **“CR”** refers to the Construction Regulations, 2014
12. **“DSTI”** refers to a documented daily safe task instruction compiled and issued by a contractor and trained to all relevant employees
13. **“H&S”** refers to Health and Safety
14. **“medical certificate of fitness”** means a valid medical certificate of fitness issued by an occupational medicine practitioner after personally examining and testing the employee; such medical testing shall be relevant to the risks of the construction work on the Construction Site and shall conform to the Occupational Health and Safety Act and Regulations and to the requirements in this H&S specification. The medical certificate of fitness shall be documented on the registered doctor’s letterhead and shall contain the information required in Annexure 3 of the Construction Regulations.

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The medical certificate of fitness shall include proof of registration of the occupational medicine practitioner issuing the medical certificate and the practice number of the practitioner, including a statement that the doctor has personally examined the employee prior to issuing the medical certificate of fitness

15. **“Method statement”** refers to a document detailing the key activities to be performed in order to reduce as reasonably as practicable the hazards identified in the risk assessment.
16. **“OHS Act”** refers to the Occupational Health & Safety Act of 1993
17. **“Principal Contractor”** means an employer who performs construction work for the client.
18. **“Process Method Statements”** it is anticipated that the Principal Contractor shall define (or have in operation) standard operating procedures dealing with the different professional aspects of the scope of work; the Process Method Statements in this CHSS may be limited to activities with a direct physical bearing on the construction work associated with the installation of perimeter fencing.
19. **“Project Manager”** refers to the Engineer, who is an employee of Eastern Cape Development Corporation (ECDC) and is duly authorised in writing to perform the role thereof in terms of the Contract.
20. **“Regulations”** refers to the Regulations issued under the Occupational Health & Safety Act.
21. **“S”** refers to a Section in the Occupational Health & Safety Act of 1993.
22. **“Site”** refers to the construction site and means a workplace where construction work is being performed and includes all the access roads and routes
23. **“SMME or EME”** means employers appointed as contractors or sub-contractors of the principal contractor; these may be a broad range of formally registered employers;
24. **“Sub-Contractor”** means an employer appointed by a contractor of the Principal Contractor or by the Principal Contractor to perform construction work on the Site; also means an employer appointed by a sub-contractor to perform work on the Site.

## **1. Introduction to this Construction H&S Specification**

1. This Construction Health & Safety Specification is published in terms of the Occupational Health & Safety Act of 1993 (OHS Act), Construction Regulations 2014, Regulation 5(1)(b).
2. The CHSS does not replace the Construction Regulations, 2014, but is a supplementary specification as required in terms of the Regulations. Partial references to or quotes from the Regulations do not imply that the sections not referred to or quoted from are of lesser importance or are not applicable.
3. The Principal Contractor is, at all times required to and will remain responsible to fully address all requirements and standards of the Occupational Health and Safety Act, Regulations and the full Construction Regulations in the Health and Safety Plan and the implementation thereof.
4. The client is committed to ensuring that the highest standards of health and safety prevail and this CHSS may contain standards which are more onerous than the statutory standards.

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5. This Health & Safety Specification must be included in all tender documents for the site's construction work. It shall be known as the Construction Health & Safety Specification for The Augmentation Of Wastewater Treatment Works In Dimbaza Township project.
6. It may be supplemented during the project with further specific Construction Health & Safety Specifications which deal with health & safety issues as these arise.
7. The client has appointed LUMCUS TRAINING AND CONSULTING who will (inter alia) be responsible for the approval of all Principal Contractors' H&S Plans, for the auditing of the Principal Contractors' implementation thereof, and for maintaining the document control associated with the CHSS.
8. The client also requires the Principal Contractor and their Subcontractors to make use of the **ECDC CHSS to develop, submit and maintain for the duration of the project**, their files for approval.

## **2. Limitation of liability**

1. The client or its consultant shall not be responsible for any acts or omissions of any Contractor which may directly or indirectly result from the application of the CHSS or any project specific version thereof.
2. All contractors must ensure that articles, work, equipment, machinery, plant and work practices are, at all times, compliant to the legal requirements as these apply.
3. The client shall limit its responsibility to the application of the Construction Regulations' Client Requirements only.
4. The Principal Contractor shall enter into a Mandatary Agreement with the client, as defined in Section 37(2) of the Occupational Health and Safety Act (see tender documents).
5. The Principal Contractor shall ensure that each contractor appointed by the Principal Contractor and each and sub-contractor appointed by a contractor also enter into a Mandatary Agreement with the client, as defined in Section 37(2) of the Occupational Health and Safety Act. These agreements shall be included in the Principal Contractor's H&S file on site and be valid for the duration of the contractor's work on the construction site. The agreement shall be in the prescribed format of the client.

## **3. Purpose of the Construction H&S Specification**

1. The purpose of the CHSS is for the specification to be used as the standard on which the Principal Contractors and all contractors' H&S Planning and safe work execution must be based.
2. This CHSS will be applicable to all construction work at The Wastewater Treatment Works in Dimbaza Township.

## **4. Implementation of the Construction H&S Specification**

1. This CHSS forms an integral part of the Contract, and the Principal Contractor is required to make it an integral part of their contracts with subcontractors and suppliers.
2. Any Contractor performing construction work at Wastewater Treatment Works In Dimbaza Township shall provide sufficient evidence of:

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- a) Adequate provision for the cost of health and safety measures;
  - b) The contractor's access to and intention to appoint persons with the necessary competencies to carry out the construction work safely;
  - c) The contractor's access to the necessary resources to carry out the construction work safely;
3. Page 2 of this document must be signed by the Principal Contractor and placed, together with this CHSS in the H&S file.
  4. Page 3 of this document must be signed by each Contractor and placed, together with this CHSS in the contractors H&S plan.
  5. All Contractors shall allow for the cost of complying with the requirements of this CHSS; resources for the following H&S controls shall be in place:

No	H&S Cost Item	Description
1.	Competent H&S Design	Services of competent designers where applicable
2.	Registered H&S officer	SACPCMP-registered construction health and safety officer services
3.	First aiders (training, rehearsal)	Standard first aid training
4.	Competent inspectors (trained, certified competent)	Statutory inspections of fire extinguishers, ladders, construction vehicles and mobile plant, portable electrical equipment, electrical installations, etc.
5.	Mandatory training in site legal register and risk assessments	Training of all employees holding statutory appointments as 'competent' persons, ensuring that they are familiar with the Occupational Health and Safety Act and Regulations H&S induction and Risk Assessment training all employees Daily safe task instructions
6.	Training of employees in H&S	Occupational health and safety training in accordance with the skills matrix included in the approved H&S plan
7.	Medical certificates of fitness	Medical examination of all employees and certification of fitness by an occupational medicine practitioner in accordance with the occupational health requirements in this CHSS
8.	Medical surveillance in hearing conservation program	Pre-placement, periodical and exit audiometry by registered audiometrist
9.	Medical surveillance in respiratory conservation program	Pre-placement, periodical and exit spirometry by competent spirometry technician Chest X rays for exposed employees working with Hazardous Chemical Substances or HBA
10.	Supply & training for PPE	Standard set for all employees Special sets including: respiratory, adapted hearing protection, adapted hand protection, adapted eye and face protection
	First aid facilities	Standard first aid box per first aider

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## 6. Scope

1. This CHSS covers the client's requirements for addressing, mitigating and controlling Occupational Health and Safety related risks, problems, incidents and injuries during the construction work.
2. The scope addresses legal compliance, hazard identification and risk assessment, and the promotion of a health and safety culture amongst those working on the construction work.
3. The CHSS contains clauses that are generally applicable to building, engineering and construction and imposes controls associated with activities that impact on human health and safety.
4. The Principal Contractor is required to comply with the provisions of the OHSA, all applicable Regulations and this CHSS.
5. This CHSS is based on the client's H&S policy for the site, which requires zero harm and zero tolerance:
  - a) No person shall be required or permitted to perform risk-work unless all controls formulated in the approved H&S plan are fully and permanently met.
  - b) Any person found in breach of risk controls formulated in the H&S plan may be removed off site immediately and permanently.
6. The client H&S consultant will monitor the Principal Contractor's compliance with the requirements of the OHSA and their H&S Plan.
7. The scope of work includes:
  - Preliminaries
  - Earthworks
  - Excavations
  - Concrete, Formwork And Reinforcement
  - Masonry
  - Waterproofing
  - Structural Steelwork
  - Plumbing And Drainage
  - Electrical Work

## 7. Compensation for Occupational Injuries and Diseases Act

1. The Principal Contractor, each contractor and each sub-contractor shall submit proof of registration as an employer, and proof of Good Standing with the COIDA Commissioner, prior to starting any work on the site.

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2. A copy of the Letter of Good Standing with the COIDA Commissioner must be included in the **H&S Plan** of each contractor working on the site and must remain updated for the duration of the construction work.

## **8. Notification of Intention to Commence Construction Work**

1. The Principal Contractor shall notify the Provincial Director of the Department of Labour before work commences.
2. The notification shall be in the format defined in the Construction Regulations.
3. A copy of the fully completed and signed notification letter to the Provincial Director and proof of notification must form part of the H&S Plan presented for approval by the client H&S consultant.

## **9. Health and Safety Competency**

1. Contractor competency: the Principal Contractor shall submit verifiable proof of competency as a contractor, in respect of the scope of work, in his H&S plan.
2. Competent person competency: in abeyance of CR 1, requiring that each competent person is familiar with the OHS and with the applicable regulations made under the Act, the principal Contractor shall ensure that the H&S plan includes evidence of such competence for every competent person designated to this construction site.
3. Evidence of H&S competence: the client or its H&S Consultant shall only allow work to commence if there is sufficient evidence of H&S competence for each person designated in the H&S plan; unless otherwise specified in this CHSS and as a minimum, this shall include:
  - a) Proof of training in the OHSA, CR and evidence that a training provider certifies the designated person to be familiar with the OHSA and with the applicable regulations made under the OHSA.
  - b) Proof of competency in the specific skill of the designation; amongst other this may include supervisory training, risk assessment training, the formulation of fall protection controls, the inspection of safety critical equipment (such as ladders, fire extinguishers, portable electrical machinery etc.) or high-risk construction (such as scaffolds, fall prevention measures) and any other H&S skills.
4. All above requirements shall mutatis mutandi apply to contractors and sub-contractors of the Principal Contractor.
5. All competencies must be included in the electronic file when submitting on the LUMCUS TRAINING AND CONSULTING [heidi@lumcus.co.za](mailto:heidi@lumcus.co.za).

## **10. Construction Manager**

1. The principal contractor shall appoint a full-time competent person as the construction manager with the duty of managing all the construction work on the Site.
2. The construction manager must be dedicated exclusively to the and is not permitted to manage any construction work on or in any Wastewater Treatment Works site.



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3. Proof of competency of the construction manager shall be incorporated in the H&S plan; the client or its H&S consultant shall only allow work to commence if the designated construction manager has sufficient evidence of competence and, as a minimum this shall include:
  - a) Proof of professional training
  - b) Proof of experience in the construction scope of work defined in this CHS
  - c) Proof of experience in H&S management for work as defined in the scope
  - d) Proof of training in the OHSA, CR and evidence that a training provider certifies the construction manager to be familiar with the OHSA and with the applicable regulations made under the Act.
4. The construction manager shall be responsible to ensure that the following duties are executed and shall actively communicate with the client-agent in order to:
  - a) Confirm and provide proof of compliance; and
  - b) Discuss any compliant constraints which may be experienced.
5. The construction manager may be assisted by duly appointed assistants.
6. Where the construction manager may be absent from site, an alternate construction manager must be appointed.
  - a) **The alternate must be a full-time competent person with the duty of managing all the construction work on the site, including the duty of ensuring occupational health and safety compliance in the absence of the construction manager**
  - b) **The alternate construction manager may not manage construction work on any construction site other than the site in respect of which appointed.**
  - c) The letter of appointment for the alternate construction manager appointee and the H&S plan must:
    - i. Indicate that he / she is the alternate construction manager for the site.
    - ii. Define the duties and responsibilities of the alternate construction manager as per the CHSS
    - iii. Indicate the period of absence on the letter of appointment of the alternate construction manager.
7. The construction manager may be assisted by the safety officer and, where such an arrangement is planned, the H&S plan of the Principal Contractor shall clearly define the respective duties of the construction manager and of the safety officer.
8. The construction manager shall present the site-specific health and safety plan, based on this health and safety specifications to the client agent and shall discuss and amend the H&S plan until finally approved by the client H&S consultant on the LUMCUS TRAINING AND CONSULTING.
9. The construction manager shall ensure that the H&S plan is applied from the commencement of and for the duration of the construction work.
10. The construction manager shall ensure that the H&S plan is reviewed and updated as work progresses.
11. The construction manager shall open and keep the Site health and safety file and ensure that, at all times, this file is on site and available to an inspector, the client, the client's H&S consultant or a contractor.

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12. The construction manager shall provide sub-contractors with this CHSS and instructions on developing their files based on CHSS.
13. The construction manager shall only approve a H&S plan by a sub-contractor if there is sufficient evidence that the contractor:
  - a) Has made sufficient provision for health and safety measures during the construction process
  - b) Has the necessary competencies to perform the construction work safely; and
  - c) Has made the necessary resources available to perform the construction work safely.
14. The construction manager shall ensure that all contractors appointed by the Principal Contractor have a compliant H&S plan, prior to appointing the contractor and prior to allowing the contractor to start working on site.
15. The construction manager shall ensure that contractors have evidence of both registration and good standing in terms of COIDA and shall not permit any contractor to start work or to continue with work on site unless a valid Certificate of Good Standing is on site.
16. Additional to the requirements of the Construction Regulations, the Principal Contractors' construction manager shall ensure that all sub-contractors appointed by any of the contractors of the Principal Contractor comply with the construction regulations and, in particular, the construction manager shall:
  - a) Assess and finally approve H&S plans of all these sub-contractors; without such approval, these contractors are not permitted onsite;
  - b) Ensure that employees of these contractors are also inducted in the H&S induction program of the Principal Contractor;
  - c) Appoint these contractors on the site in writing;
  - d) Audit these contractors monthly;
  - e) Stop unsafe work or work not in accordance with the approved H&S plan.
  - f) Inform the H&S consultant in writing (via e-mail [heidi@lumcus.co.za](mailto:heidi@lumcus.co.za)) whenever a contractor or sub-contractor's H&S plan is approved.
17. The construction manager shall ensure that daily inspections of the health and safety compliance of all contractors and all sub-contractors on site are performed and documented in the Principal Contractors' H&S file.
18. The construction manager shall ensure that monthly site audits and document verification is conducted of all contractors and all sub- contractors on site (that includes those appointed by the Principal Contractor and those appointed by contractors of the Principal Contractor).
19. The construction manager shall stop all construction work which is not in accordance with this CHSS or with the principal contractor's health and safety plan or which poses a threat to the health and safety of persons.
20. The construction manager shall ensure that, where changes are brought about to the design and construction on the Site, sufficient health and safety information and appropriate resources are made available to any contractor to which the changes apply.
21. The construction manager shall hand over a consolidated health and safety file to the client agent / consultant upon completion of the construction work.

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22. The construction manager shall ensure that a comprehensive and updated list of all the contractors on the site (that is both those directly accountable to the principal contractor and those accountable to contractors) is displayed at the site office. The list must refer also to the work performed by the contractors, the approved H&S plan and any agreements between the parties.
23. The construction manager shall ensure that no employee accesses the worksite unless that employee is in possession of a valid medical certificate of fitness specific to the construction work to be performed and filed on site in the H&S file.
24. The construction manager shall ensure that site rules and regular communication processes are in place in order to obtain co-operation between all contractors on site.
25. The construction manager shall ensure that all persons on site have undergone the relevant site health and safety induction of the Principal Contractor.
26. The construction manager shall ensure that all heights work is performed in accordance with the fall protection plan and that, at all times, an updated fall protection plan is filed in the H&S file on site.
27. The construction manager shall ensure that all work on site is performed under supervision of a competent person appointed by the Principal Contractor. This applies also when sub-contractors are working on site in the absence of personnel of the Principal contractor; the rule is “no work unless under the supervision of a competent and authoritative supervisor appointed by the Principal Contractor”.
28. Where traffic is planned to be affected, a traffic management plan shall be compiled by the construction manager, assisted by a competent traffic controller.
29. The construction manager shall appoint the most senior person in charge of each contractor as construction supervisor, appointed by the principal contractor.
30. Contractors and sub-contractors shall (also) appoint a Construction Supervisor with the exact same duties and requirements as listed for the Principal Contractors’ Construction Manager.

## **11. Construction Health and Safety Officer**

1. The Principal Contractor may appoint a competent person to perform the functions of a Construction Health and Safety Officer for the construction work at the client.
2. Unless the construction manager (or the assistant) is competent and given the resources required to manage all aspects of the H&S on the site, the construction H&S officer shall be full time on site.
3. The decision whether a full-time construction H&S officer shall be required shall be made by the Client H&S Consultant.
4. The Principal Contractor shall define the duties of the appointed safety officer in the H&S plan.
5. The safety officer shall be registered with the South African Council for the Projects and Construction Management Professions.
6. Proof of competence and registration of the appointed construction safety officer must be included in the H&S Plan.
7. The authority and relationship of the safety officer with the construction manager must be documented in the H&S plan.

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## 12. Principal Contractor's Health & Safety Plan

1. The Principal Contractor shall submit a suitable, sufficiently documented and coherent specific health and safety plan and start-up H&S file to **LUMCUS TRAINING AND CONSULTING** for the construction work, in accordance with the legal requirements and prior to work starting.
2. The Principal Contractor's health and safety plan shall formulate the H&S risk controls for all risks identified for all site-specific risk-bearing activities, as identified in the scope of work. This includes all risk-bearing activities performed by contractors, sub-contractors, SMME and employers involved in the Wastewater Treatment Works in Dimbaza Township. The Principal Contractor's health and safety plan shall, shall therefore be a comprehensive holistic H&S plan applicable to the Principal Contractor, to all contractors and to all sub-contractors.
3. All contractors, sub-contractors, SMME and employers involved in the project shall adopt the Principal Contractor's health and safety plan integrally on the client CHSS.
4. This H&S plan & file must be presented to and approved by the client's H&S consultant prior to the site being handed over to the Principal Contractor and prior to the Principal Contractor being allowed on site. No work may start- by any Principal or other Contractor unless the relevant health and safety plan is approved.
5. The H&S plan shall be presented as part of the start-up H&S file; all evidence of controls which are documented in the H&S plan must be placed in the H&S file; this start-up H&S file, including the H&S plan, must be presented for approval to the client H&S consultant prior to any work starting by the Principal Contractor in a safety file.
6. The H&S file and plan must follow the exact index as defined in Annexures A and B respectively.
7. Chapters not relevant in the table of contents must be left blank, but the numbering must be continuous and identical to the Annexures.
8. Additional controls or chapters may be added at the end.
9. Besides the legal requirements, the site-specific health and safety plan and file for approval shall include:
  - a) A cover page indicating:
    - i. The contract reference;
    - ii. The name and address of the Contractor and the name and address of the CEO;
    - iii. The name and signature of the designated person in terms of section 16(2) and of the Construction Manager;
    - iv. A space for the client H&S consultant to sign for approval;
  - b) An index for the H&S file and an index for the H&S plan
  - c) The Principal Contractors' Occupational Health and Safety Policy;
  - d) A detailed site-specific overview of the scope and activities of the project; this overview must include all work controlled by the Principal Contractor, whether directly or through the services of a sub-contractor;
  - e) An overview of the machinery and plant used in the project; this overview must include all machinery and plant directly or indirectly (through the services of a sub-contractor) controlled by the Principal Contractor;
  - f) A site-specific organisational chart of the staff deployed in the project, which identifies legal appointments, responsibilities, fitness for work and competency;

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- g) Proof of competency in the occupational health and safety fields of the Principal Contractor.
  - h) Proof of competency or registration, where applicable, of responsible persons;
  - i) Signed letters of appointment of all responsible persons;
  - j) An overview of the site-specific budgeted resources specific for occupational health and safety;
  - k) A site-specific baseline hazard identification and risk assessment, as performed by the appointed baseline risk assessor (see below);
    - i. Risk assessments of all activities identified in the scope of work shall form an integral part of the Health and Safety plan.
    - ii. The baseline risk assessment will include all work which is planned to be done by all sub-contractors.
    - iii. All risk assessments shall be conducted in terms of an acceptable and documented methodology, prior to commencement of work and in accordance with the provisions of the CR;
    - iv. The risk assessment must be based on the scope of work and the machinery and plant as defined above;
  - l) Controls for identified hazards must be formulated in method statements for the activities of the project; the method statements must be based on the scope of work and the risk assessment;
  - m) A detailed outline of the site-specific emergency and accident arrangements on site;
  - n) An outline of the PPE to be used and the management of such PPE on site;
  - o) A list of the inspection registers which will be kept on site;
  - p) A training versatility chart indicating employee's competency in safe working processes;
  - q) Medical certificates of fitness for all employees and baseline medical surveillance for employees exposed to occupational health risks requiring medical surveillance;
  - r) A list of all employees engaged in the projects, including their name, ID number, designation, expiry date of medical fitness certification
  - s) The Principal Contractor's actions to ensure that all appointed contractors and subcontractors of contractors fully comply with the Regulations and with this CHSS, including but not limited to:
    - i. The approval methodology for H&S plans of contractors and sub-contractors;
    - ii. An inclusion of signed agreements in terms of Section 37(2) between the client and every contractor & sub-contractor;
  - t) The site-specific health and safety induction document used to ensure that all employees and all visitors on site are conversant with the risks on site and the content of the health and safety plan and what role they are expected to play in ensuring health and safety on the construction site.
10. All above requirements shall mutatis mutandi apply to contractors and sub-contractors of the Principal Contractor.

### **13. Hazard Identification and Risk Assessment**

1. The Principal Contractor shall include the construction health and safety risk assessment in the H&S plan.

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2. The Principal Contractor shall appoint a competent person to perform a site-specific baseline- and, thereafter, ongoing issue-based hazard identification and risk assessment. There may be more than one risk assessor appointed if this is required.
3. The competent risk assessor shall form part of the full-time construction team working on the construction site.
4. The risk assessment must be based on the scope of work, the site-specific materials required, and the site-specific machinery, equipment and structures applied during the construction work.
5. Risk assessments of all site-specific risk-bearing activities identified in the scope of work, including those performed by contractors, sub-contractors, SMME and employers involved in the construction work, shall form an integral part of the H&S Plan and all risk controls (including those executed by contractors and sub-contractors) shall be documented.
6. The baseline assessment, based on the Process- and commissioning Method Statements, shall be included in the H&S Plan.
7. Additional risk assessments shall always be conducted and communicated to the H&S Consultant, when:
  - a) The scope of work is revised, and new H&S hazards are identified
  - b) A new machine is introduced onto site
  - c) A system for work is changed or operations altered
  - d) After an accident or near miss has occurred
  - e) New knowledge comes to light and information is received which may influence the level of risk to employees on site.
8. All risk assessments shall be conducted in terms of an acceptable and documented methodology, prior to commencement of work and in accordance with the provisions of the CR. As a minimum standard, such controls must be identified and documented as
  - a) Engineering controls
  - b) Administrative controls
    - i. Competency and responsibility appointments
    - ii. Method statements and/or safe work instructions, training and competency
    - iii. Occupational hygiene measurements
    - iv. Workplace organisation, including demarcation, signage, colour coding, routing, housekeeping, storage, stacking, access
    - v. Emergency controls
    - vi. Medical testing, surveillance and job placement
    - vii. PPE
9. The baseline assessment shall be included in the H&S Plan.
10. Issue-based risk assessment, risk monitoring and risk review shall be done at the hand of daily safe task instructions ('DSTI') which require:
  - a) A daily documented listing of hazardous events;
  - b) A daily documented listing of controls;
  - c) Proof of communication of the above to all employees
  - d) Risk review ensuring that all risks on site are adequately managed
11. The Principal Contractor shall include a template DSTI document in the H&S plan.
12. The risk assessment must refer to all controls which the Contractor plans to put in place.

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## 14. Health & Safety File

1. The Principal Contractor shall provide and maintain a H&S File, containing all relevant documents as prescribed in the OHS Act and Regulations and all forms or records referred to in the H&S Plan.
2. The start-up file shall be presented together with the H&S plan for approval prior to work starting.
3. The H&S File shall be kept on the construction site and available for inspection by the client H&S consultant or the Department of Employment and Labour's Inspectors.
4. The content of the H&S file shall strictly follow a specific order as per Annexure B.
5. Chapters not relevant in the table of contents in Annexure B must be left blank, but the numbering must be continuous and remain identical to Annexure B.
6. Additional controls or chapters may be added at the end.
7. The H&S File shall include an index as per Annexure B.
8. The H&S File becomes the property of the client after completion of the project. The principal contractor is also required to scan the file in an electronic format and hand over the electronic format.
9. All above requirements shall mutatis mutandi apply to contractors and sub-contractors of the Principal Contractor.
10. The Principal contractor is required to compile a consolidated file and hand this to the H&S Consultant at the end of the construction; the consolidated file shall include:
  - a) A copy of the approved H&S plan of the principal contractor;
  - b) An index of the H&S file archived by the contractor;
  - c) A reference record of all drawings, designs and materials used;
  - d) A reference record of all operational manuals for machinery handed over to the client;
  - e) The comprehensive list of all the contractors on site accountable to the principal contractor, including a list of the agreements between the parties and the type of work being done;
  - f) An index of all inspections and reference to the inspection registers for the site;
  - g) A list of all responsible persons appointed in statutory positions for the duration of the project;
  - h) A list of all occupational injuries and diseases including the name of the injured, the reference number of the Annexure I document and the reference number of the COIDA notification of the injury (if any).
  - i) All documents relating to any reportable injury or disease during the construction work, as defined in Section 24 and 25, of the Occupational Health and Safety Act, respectively.

## 15. Induction

1. The Principal Contractor shall develop project-specific induction training programme in health and safety for the construction work, to ensure that all employees on site are conversant with:
  - a) The risks of the construction project
  - b) The controls documented in the H&S Plan
  - c) The role they are expected to play in ensuring health and safety on the construction site.

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- d) Any emergency arrangements which the Principal Contractor may put in place.
- e) The general health and safety rules applicable to the site.
2. The Principal Contractor shall ensure that all employees have gone through the induction training before commencing duties on site.
3. The contents of the site-specific induction programme and method of ensuring that all employees are inducted in the site's H&S requirements, will be documented in the H&S Plan.
4. When working on the site, each employee of any contractor accessing the site, including management, shall complete the principal contractors' induction; the principal contractor shall ensure that none of his or his contractors' employees accesses the site unless having been inducted by the principal contractor.
5. Each visitor to the site shall be inducted in the risks and risk controls which the visitor may be exposed to; the visitor's induction and method to ensure compliance shall be documented in the H&S plan.

## **16. Health and Safety Training**

1. Competency of employees and ongoing training in H&S matters shall be documented by including a training & competency matrix in the H&S plan.
2. The matrix in the H&S plan shall be a training needs-matrix and shall indicate competency requirements and all start-up employees' current competency in safe working processes:
  - a) Each applicable safe work instruction must be included in the H&S Plan
  - b) The method of training and ensuring competence must be included in the H&S Plan.
3. The Principal Contractor shall ensure that specific daily pre-task health and safety instructions are given to all employees.
4. The methods for ensuring that training in safe work instructions and that daily pre-task instructions occur, including the method of documenting the contents and attendance, shall be described in the H&S Plan.
5. All above training and competency requirements shall, mutatis mutandi, apply to contractors and sub-contractors of the Principal Contractor.

## **17. Inspection, Monitoring and Reporting**

1. The Principal Contractor shall carry out daily safety inspections on the site (or more frequent, where so required in the Regulations), and shall take steps to rectify any unsafe condition of which he is aware.
2. The appointed Construction Manager and/or Health and Safety Officer shall perform regular inspections and document these in the H&S File.
3. The relevant inspection templates and the frequency of inspections shall be included in the H&S Plan.
4. The H&S Plan shall contain a list and template of all the inspection registers which shall be kept on site:
  - a) The templates must correlate with the machinery and equipment listed on site.
  - b) The inspector responsible for the inspection and maintenance of the register must be appointed in writing, and competency to perform the inspections must be documented.



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## 18. Contractors and Sub-contractors, Including SMME / EME

1. All contractors and sub-contractors must be given a copy of this H&S Specification and any additional specification issued by the client and shall comply with these specifications integrally.
2. Contractors, sub-contractors and SMME must confirm their compliance to the CHSS by signing page 3 of this CHSS and placing the signed page with the CHSS in their H&S file on site and on the LUMCUS TRAINING AND CONSULTING.
3. All employers working on this site shall conform to the standard in the CHSS. All the duties of a Principal Contractor in this CHSS equally apply, in full, to contractors of such Principal Contractor and to sub-contractors of such contractors.
4. Each contractors', sub-contractors' and EME's, SMME's H&S plan shall adopt the Principal Contractor's health and safety plan integrally. The H&S plan may include amendments and additions where risks are identified which were not addressed in the Principal Contractor's health and safety plan. The Principal Contractor shall ensure that all contractors, sub-contractors and SMME under his control, plan the construction work in a H&S Plan, approved by the Principal Contractor; such H&S plan and H&S file shall be in accordance with Annexures A and B respectively.
5. SMME contractors' H&S planning shall be incorporated in the Principal Contractor's health and safety plan, which shall formulate the H&S risk controls for all risks identified for all the SMME's scope of work. The Principal Contractor's health and safety plan shall be made available to all SMME as suitable, sufficiently documented and coherent SMME-specific health and safety plan incorporating all work to be risk-controlled.
6. The Principal Contractor's construction manager or health and safety officer shall assist SMME contractors with the final formulation of their H&S plan and any legal template documents (including but not limited to template letters of appointment, DSTI forms, risk assessment forms, inspection registers, and incident management documents). Where the SMME H&S plan requires amendments or additions for risks not addressed in the Principal Contractor's health and safety plan, the Principal Contractor's construction manager or health and safety officer shall assist the SMME with the H&S planning process. Evidently it will remain the SMME's sole responsibility to ensure that the legal documents (including, but not limited to the proof of competence, COIDA LOGS, employee's competence, employee's medical fitness for work and medical surveillance), contractual H&S
7. The Principal Contractor shall ensure that all contractors and all sub-contractors under his control conform to all standards defined in this CHSS and plan the construction work in a H&S Plan, approved by the Principal Contractor; such H&S plan and H&S file shall be in accordance with Annexures A and B respectively.
8. Whenever a contractor or sub-contractor's H&S plan is approved, the Principal Contractor shall communicate with the client H&S Consultant (at [ntombela3@gmail.com](mailto:ntombela3@gmail.com)) prior to work by the contractor commencing.
9. Principal Contractors shall ensure that all contractors (including those sub-contractors appointed by contractors of the principal contractor) comply with this CHSS, with their H&S Plans, with the requirements of the OHS Act and all other relevant legislation.
10. Monthly audits of all contractors and sub-contractors by the Principal contractor must be recorded and filed in the principal contractor's H&S File, for inspection by the client H&S consultant.

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11. The Principal Contractor shall ensure that the comprehensive and updated list of all the contractors on site accountable to the Principal Contractor includes:  
A reference to the agreements between the parties, including the Section 37(2) agreements between the Principal Contractor and each sub-contractor and the Section 37(2) agreements between each sub-contractor and the client.
  - a) The type of work being done.
  - b) The date of the approval of the H&S plan.
  - c) The date of expiry of the COIDA certificate of good standing.
  - d) The date of the last monthly audit.
12. Principal Contractors shall ensure that each contractor and each sub-contractor enters into a Section 37(2) Mandatory Agreement with the client and that these agreements are signed and in place prior to approval of the contractor's or sub-contractors' H&S plan. The original agreement must be filed in the H&S file of the principal contractor.
13. The Principal Contractors' H&S Plan must include the Principal Contractor's procedures to ensure that all contractors and all sub-contractors fully comply with this CHSS and with the Regulations; this must include, but is not limited to, defining the submission and approval method (including the nominated responsible person) of H&S Plans of contractors and the signing of a mandatory agreement between the client and each contractor.
14. Except for the Notification duty, all duties and standards applicable to a Principal Contractor as defined in the CHSS shall apply to any contractor or sub-contractor.

## **19. Incidents, Accidents and Emergencies**

1. All near misses, incidents and accidents must be recorded, investigated and managed in accordance with the statutory provisions.
2. Each H&S incident and accident must be recorded in a register kept in the H&S file; a template of the register shall be included in the H&S Plan.
3. Every accident shall be reported to the client and the client H&S consultant immediately; that is as soon as the construction manager or the supervisor or the principal contractor becomes aware of it. Such reporting must occur via direct contact (person-to-person or via telephone) and via e mail to [heidi@lumcus.co.za](mailto:heidi@lumcus.co.za), 043 110 0198.
4. Each H&S incident and accident must be recorded in a register kept in the H&S file; a template of the register shall be included in the H&S Plan.
5. A record of all incident investigations shall be kept in the health and safety file and all records shall be made available to the client without exception; this includes records relating to Section 24 of the OHSA.
6. Where a fatality or permanent disabling injury or any incident referred to in Section 24 occurs on the construction site, the Principal Contractor must ensure that the provincial director is provided with a report contemplated in section 24 of the Act, in accordance with regulations 8 and 9 of the General Administrative Regulations, 2013, and that the report includes the measures that the Principal Contractor intends to implement to ensure a safe construction site as far as is reasonably practicable. The Principal Contractor shall ensure that contractors apply the same measure and shall require that this process is documented in the contractor's H&S plan. The Principal Contractor's H&S plan shall include a specific procedure in this regard,

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which shall include that all documents and instructions in respect of any incident referred to in Section 24 shall immediately and unconditionally be forwarded to [heidi@lumcus.co.za](mailto:heidi@lumcus.co.za)

7. The contractor shall organise and document detailed emergency and accident arrangements on site and outline these, in detail, in the H&S Plan. These arrangements shall be specific for the site H&S risks and shall make specific provisions for:
  - a) A specified ambulance service;
  - b) A registered medical practitioner and the registered hospital service which can deal with the identified emergencies (in terms of facility, equipment and competence of emergency personnel);
  - c) A method to ensure that the appropriate COIDA documents are available on site, so that prompt medical aid, as defined in the COIDA, may be available to any injured employee.
8. The emergency arrangements shall be displayed on site and shall include:
  - a) A comprehensive emergency and evacuation plan;
  - b) An emergency flow chart;
  - c) An updated list of emergency telephone numbers.
9. A site emergency and evacuation plan shall be included in the H&S plan.

## **20. Audits and Inspections**

1. The client OHS consultant shall conduct regular health & safety audits to ensure compliance with the OHSA, its Regulations and the Principal Contractors' H&S Plan.
2. Records of audits shall be kept in the Principal Contractor's H&S File together with a record of any non-conformance report, investigation and corrective & preventative action.
3. The Principal Contractor shall document corrective action planning and forward this to the Client H&S consultant within 24 hours of receiving a finding.
4. The Principal Contractor's H&S Plan shall document the corrective and preventative action procedure applicable to the project, including the planned method to ensure that non-conformities are managed immediately.
5. The client H&S consultant shall stop all or any work which does not conform to the H&S Plan, which is contradictory to statutory requirements or which poses a threat to the health and safety of persons.
6. The Principal Contractor shall conduct regular site H&S inspections, including but not limited to planned task observations and planned inspections, and shall include the frequency, competent inspector's name and proof of competence and the applicable template in the H&S plan.
7. The Principal Contractor shall conduct and document monthly health & safety audits of all contractors and sub-contractors to ensure compliance with the OHSA, its Regulations, the Principal Contractors' H&S Plan and each contractor's H&S plan. This includes the auditing of sub-contractors appointed by the principal contractor's contractors.

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8. Records of Principal Contractor inspections and of audits of all contractors and sub-contractors on site shall be kept in the Principal Contractor's H&S File together with a record of any non-conformance report, investigation and corrective & preventative action by sub-contractors and shall be made available to the client H&S Consultant upon request.

## **21. Excavation Work**

1. The construction work includes risk excavation work, presenting:
  - a) The risk of unidentified electrical (and other such as water- and sewer) services.
  - b) The risk of collapse
  - c) Risks of persons falling in the excavation
  - d) Risk of other persons and drivers entering risk zones during excavations in the road
  - e) Loading of the edges during rigging procedures and others.
  - f) Excavations in residential areas affecting resident's safe use of the road or access to their houses.
2. The letters of appointment and proof of competency of the competent excavation supervisors and inspectors shall be placed in the H&S plan.
3. A template of the inspection registers must be placed in the start-up H&S file.
4. The principal contractor shall take cognisance of the geotechnical risks and shall enquire with the project manager in respect of any study pertaining to the conditions at the construction site; the principal contractor must plan all excavation work in accordance with the recommendations of the professional engineer.
5. The H&S plan shall include a method statement for the identification of unknown services.
6. The H&S plan shall include a method statement for the traffic control during excavations crossing any roads.
7. The excavation method statement shall include a permit-to-excavate system, dealing with instances where excavation work may affect the stability of structures, the safety of traffic or the safety of residents / students on the campus.
8. The principal contractor must ensure that all excavation work on site is planned and included in the traffic safety-, fall protection- and housekeeping/storage plans.
9. Open excavations or uneven terrain within campus areas shall be closed daily so as to safeguard the public; where trenches are left open, a solid barrier shall prevent accidental access and sufficient sign writing shall be in place.
10. The principal contractor must ensure that every excavation, including all bracing and shoring, is inspected daily, prior to the commencement of each shift and that no person enters the excavation or works in a risk zone until the excavations is assessed and declared safe.
11. All excavations must be left open for the minimum of time required and those that are left open on the site must be protected by a solid barrier or a fence of at least one metre in height, as close to the excavation as is practicable. The protective barrier or fence must adequately prevent persons from falling in the excavation and barrier taping is not sufficient for this purpose. The excavation method statement shall include measures to ensure that excavations in residential areas are left open for a minimum of time and are rendered safe at night and during weekends; where access to private

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property is affected by excavations, such access shall be safely made available to residents within the shortest delay.

12. Excavation shoring and bracing, if required, shall be designed by a designer appointed in writing, who shall inspect and approve the installed shoring and bracing.
13. Where persons work, inspect or test excavations, warning signs must be in place next to an excavation.
14. Vehicles, plant or trucks must not enter the excavation area unless controlled by a responsible person at the excavation site.
15. Equipment which needs to be placed inside an excavation shall be subject to a risk assessment and all rigging shall occur under supervision of an appointed competent supervisor.
16. The risk controls for ensuring excavation safety, including working inside and around excavations must be documented in the H&S plan.
17. All above excavation safety requirements shall, mutatis mutandi, apply to contractors and sub-contractors of the Principal Contractor.

## **22. Hot Work, Fire Risks, Fire Extinguishers and Fire Fighting Equipment**

1. No open fires are allowed on site.
2. No smoking is allowed on site, except in designated smoke areas, identified by the Principal Contractor in the H&S Plan.
3. No flammable products may be stored on site.
4. The Principal Contractor shall provide suitable fire extinguishers, which shall be serviced regularly, in accordance with the manufacturer's recommendations.
5. Safety signage shall be prominently displayed in all areas where fire extinguishers are located. The Principal Contractor shall arrange for the training of the relevant personnel, in the use of fire extinguishers.
6. The fire extinguisher inspection register and the letter of appointment of the competent inspector shall be included in the H&S Plan.
7. No hot work is permitted unless a permit is issued by the client, the H&S consultant or the project manager. In all circumstances, appropriate screens, fire prevention, fire extinguishing and a documented safe work permit system shall be in place. If the principal contractor plans hot work, a method statement must be included in the H&S plan for approval.

## **23. Live Energy Work and Electrical Reticulations and Machinery**

1. The Principal Contractor shall define a method statement for the identification and safeguarding of all electrical services during the construction work.
2. The Principal Contractor shall appoint a competent electrician who shall ensure zero potential of all electrical reticulations worked on and who shall ensure that dedicated power sources are safely installed for the use during the construction. The electrician shall also be responsible to ensure safe and compliant electrical installations in the newly built sections.

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3. The letters of appointment, proof of competency and inspection registers shall be included in the H&S Plan.
4. All electrical cables shall be assumed “alive” and, where applicable, the Principal Contractor shall take adequate steps to ensure that employees and members of the public are prevented from accessing any electrical cables.
5. All existing electrical services must be assumed live at all times.
6. The Principal Contractor shall include a method statement on the safe use of electrical reticulations.
7. No live energy work shall be performed.
8. Contractors will ensure that all energy is brought to zero potential, that residual energy is purged, that energy sources are switched off and locked out by all employees working in the danger zone and are tagged, prior to any work being performed on the energy source or reticulation. The contractor shall include a zero Potential, Lock Out and Tag Out method statement and safe work instruction(s) in the H&S Plan.
9. No electrical machinery shall be allowed to have any joined leads.
10. The principal Contractor shall ensure that all electrical testing equipment to be used on site has a valid calibration and that the calibration sticker is affixed to the equipment, clearly indicating the calibration date and the next due date.
11. Any unsafe condition shall be reported immediately to the client and the Principal Contractor shall take immediate steps to prevent employees or members of the public from gaining access to the dangerous installation and the area surrounding it.
12. The Principal Contractor shall appoint a competent person to inspect all portable electrical tools, including leads.
13. The letter of appointment and template of the inspection register shall be included in the H&S Plan.
14. The Principal Contractor shall include a method statement for the safe use of portable electrical tools, including the management of the hazards of extension leads.
15. Where the electrical reticulation is worked on, a COC for all installations shall be provided; for temporary installations, the COC shall be placed in the H&S File on site.

## **24. Personal Protective Equipment (PPE) and Clothing**

1. The Principal Contractor shall ensure that every employee is issued with, and wears SABS-approved PPE, consisting of all PPE identified in the risk assessment.
2. All the contractors’ employees shall wear full length overalls and shall wear identification with respect to the employer.
3. All employees performing construction work shall wear steel-capped safety boots.
4. The H&S Plan shall contain an outline of the PPE to be used and the management of such PPE on site, including the issuing of PPE, overnight storage, any sanitising of PPE and all disposal of PPE.
5. Where there are drop hazards, a hard hat must be worn.
6. Employees using impact tools shall use impact glasses.
7. Employees accessing noise zones shall use appropriate hearing protectors.
8. Loose clothing (including ties), hair, jewellery and rings may not be worn around machines.
9. Disposal of PPE must conform to the Environmental legislation.

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## **25. Occupational Health and Safety Signage**

1. The Principal Contractor shall erect and maintain quality safety signage.
2. The signage shall include, but is not limited to:
  - a) Access restrictions at the work site
  - b) A sign indicating that all visitors must report to the site office and must be accompanied by the principal contractor when accessing the site;
  - c) Signage at the traffic control during excavations crossing roads.
  - d) Signage at excavations.
  - e) Fall risk signs and inspections signs
  - f) The name and telephone number of the responsible person(s);
  - g) Emergency telephone number(s);
  - h) PPE to be worn at the site;
  - i) Where falling objects may occur, relevant barricading and warning signs must be erected.

## **26. Fall Protection, Work on Heights and Rescue Plan**

1. The Principal Contractor shall define a risk-based site specific, coherent fall protection plan for approval by the client H&S consultant; this fall protection plan shall strictly comply with the requirements of the OHS Act and the planning shall be commensurate with the heights-work risk.
2. The fall protection plan shall be included in the H&S plan.
3. The Principal Contractor shall submit the name and the curriculum vitae of the competent person who has been appointed to prepare a fall protection plan together with the signed letter of appointment. The fall protection plan developer must be a person employed by the Principal Contractor and who works on this contract.
4. Any contractor shall ensure that:
  - a) All heights work is planned and forms part of the daily safe task instructions; note that work from a ladder or work where ladders are used as access tool are potential exposures of employee to falling either from, off or into and such work is considered 'heights work'.
  - b) Only trained and competent persons with a valid medical certificate of fitness are permitted to work on heights;
  - c) All medical certificates of fitness for heights work are issued by a registered occupational medical practitioner and are included in the H&S Plan;
  - d) All elevated areas are reached by means of a ladder, scaffold or man cage; and climbing on machinery, installations or make-shift means of access is not permitted;
  - e) No person must be allowed to work under an area where there is a risk of falling tools or materials;
  - f) All openings through which persons can fall are closed off with material which can support the weight of a person; such material shall be permanently fixed over the opening;
  - g) Where openings cannot be closed, a sturdy barricade of at least 1.5 m high, which adequately prevents persons from falling through the opening, shall be in place at all times.

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5. A copy of the fall protection plan, the signed appointment letter and proof of competency must be included in the H&S Plan.
6. Where the use of any harnesses is indicated in the fall protection plan, the H&S Plan shall contain the following:
  - a) The need for the use of fall prevention- or fall arrest harnesses;
  - b) The safe application, attachment and maintenance processes for harnesses;
  - c) The type of harness and the type of hook to be used and the specific attachment points applicable to the heights work;
  - d) The method of storing the harnesses when not in use;
  - e) The method and register for the safety inspection of harnesses.
  - f) A fall recovery method statement.
7. Where a fall-risk is identified in work requiring access to temporary works, structural steel structures, high walls, decks, platforms or roofs, a lifeline will be available and used at all times; the lifeline will be designed and erected by a competent person appointed in writing; a life line inspection method and record will be included in the H&S Plan; adequate provisions for fall recovery must be documented.
8. Where work is performed inside roofs, ceilings or other areas where there is a fall-through risk, the drop zone shall be evacuated; explicitly, no work shall be performed inside such roofs, ceilings or other areas when there are persons underneath.

## **27. Lifting and rigging**

The following shall apply to any lifting machine or equipment used on site, including truck mounted cranes on delivery vehicles:

1. Each crane shall have (in the cab or operating area), the following legal documents on site at all times:
  - a) The latest and up-to-date load certificate of the crane;
  - b) A record of the 6-monthly inspection of the crane by a registered inspector;
  - c) The crane operator(s) current crane license;
  - d) The crane operator(s) medical certificate of fitness, issued by an occupational medical practitioner;
  - e) The inspection register or certification of 3-monthly inspection of all lifting equipment used with the crane;
2. The H&S Plan shall include the method statement for safe use of the crane, including the method of communication, the protection of fall zones and the method of determining whether the weather permits safe crane work.
3. Any fixed crane's load test certificates shall be included in the H&S file.
4. All lifting equipment and gear used on site shall be identified, SWL-indicated and listed in a register contained in the H&S file.
5. A template inspection register of the lifting gear shall be included in the H&S Plan.
6. Where TLB, front-end loaders or excavators are used for lifting or rigging, the principal contractor shall ensure that:
  - a) The lug or attachment point is certified and that a SWL is identified;
  - b) The operator is trained as a lifting machine operator and has a license as defined in Driven machinery regulation 18 of the OHS Act.
7. The requirements for cranes and lifting operations apply equally to delivery trucks and the principal contractor shall ensure that all deliveries requiring lifting or rigging comply with the legal requirements.



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8. The H&S plan shall include a specific method statement listing the planned lifts and the planned methods of attachment and rigging.
9. Where man-lift equipment is used, the principal contractor shall ensure compliance with Driven Machinery Regulation 18 and that competent persons are appointed in writing to ensure:
  - a) That all scissors lifts, cherry pickers, forklift with man-cages or any other lifting machine used to lift personnel are used only by a trained and competent operator in possession of a competency certificate issued by and accredited provider who holds a valid accreditation issued by an authorised body, in terms of the SAQA Act, and who is approved by the Chief Inspector, in terms the Driven Machinery Regulation 18.
  - b) That all lifting machines are load tested and inspected as required in Driven Machinery Regulation 18 and that the records thereof are either with the machine or in the principal contractor's H&S file.
10. The principal Contractor shall ensure that deliveries using cranes comply with the above requirements and that all legal documents are kept in the cab of the delivery truck whilst on the Client's site.
11. Where concrete pumps are planned to be used, a specific method statement shall be included in the H&S plan.
12. All above lifting and rigging requirements shall, mutatis mutandi, apply to delivery trucks, contractors and sub-contractors of the Principal Contractor.

## **28. Ladders**

1. Ladders shall be compliant to the statutory requirements.
2. Ladders shall only be used for the purpose for which they are designed.
3. Ladders shall be inspected regularly, and the record of the inspection shall be kept in the H&S file.
4. A-frame ladders shall have a patent spreader bar system.
5. Ladders shall extend at least 90 cm above any level or opening accessed with the ladder.
6. No vertical ladders shall be accessed by any person unless firmly attached at the bottom and top or held in place by a fixed installation or a buddy.

## **29. Temporary Work**

1. The Principal Contractor shall meet the following standards:
  - a) The Principal Contractor shall appoint a Temporary works designer in writing.
    - i. The Principal Contractor shall submit the proof of competency and appointment letter of the competent person(s) appointed as temporary works designer.
    - ii. The temporary works designer shall be competent to design, inspect and approve the erected temporary works on site before use.
    - iii. The principal contractor, the construction manager and the temporary works designer shall ensure that:

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- The temporary works drawing, or any other relevant document includes construction sequences and methods statements;
  - The temporary works designer has been issued with the latest revision of any relevant structural design drawing;
  - The temporary works design and drawing is used only for its intended purpose and for a specific portion of a construction site;
  - The temporary works drawings are approved by the temporary works designer before the erection of any temporary works.
  - The temporary works design and drawing are used solely for its intended purpose.
- b) The Principal Contractor shall appoint a temporary works supervisor
- i. The Principal Contractor shall submit the proof of competency and appointment letter of the competent person(s) appointed as temporary works supervisor.
  - ii. The temporary works supervisor shall supervise all temporary works operations and shall ensure that all equipment used in temporary works structure are carefully examined and checked for suitability before being used.
- c) The Principal Contractor shall define risk controls which ensure:
- i. That a team of competent persons adequately erect, support brace and maintain all temporary works structures; all persons required to erect, move or dismantle temporary works structures are to be provided with adequate training and instruction to perform those operations safely;
  - ii. That all temporary works structures are capable of supporting all anticipated vertical and lateral loads that may be applied to them and that no loads are imposed onto the structure that the structure is not designed to withstand; this includes the requirement that the foundation conditions are suitable to withstand the loads caused by the temporary works structure and any imposed load in accordance with the temporary works design;
  - iii. That all temporary works structures are done with close reference to the structural design drawings;
  - iv. That, where any uncertainty exists, the services of a structural designer are available, and that consultation and advice is acquired prior to risk work performed;
  - v. That detailed activity-specific drawings pertaining to the design of temporary works structures are kept in the H&S file;
  - vi. That all erected temporary works structures are inspected and approved by the temporary works designer before use. This process shall be defined and shall include a written letter of approval by the temporary work designer upon completion of the structure's construction.
  - vii. That all temporary works structures are inspected by the temporary works supervisor immediately before, during and after the placement

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- of concrete, after inclement weather or any other imposed load and at least on a daily basis until the temporary works structure has been removed; the inspector must be appointed in writing and proof of competency must be included. The register documenting the results of the inspection must be placed in the H&S file;
- viii. That no person casts concrete or place a load on a temporary work structure until authorization in writing has been given by the designer;
  - ix. That after casting concrete, the temporary works structure is left in place until the concrete has acquired sufficient strength to safely support its own weight and any imposed load, and is not removed until authorization in writing has been given by the temporary works supervisor;
  - x. That any non-conformity identified during work with temporary works structures is prevented and corrected;
  - xi. Safe use of solvents or oils or any other similar substances used in temporary works operations (see also hazardous chemical substances);
  - xii. That all access to temporary work structure is solely by means of secured ladders or staircases for all work to be carried out above the foundation bearing level and fall prevention structures must be erected preventing persons from falling off the temporary work structure during erection & dismantling, during the casting of concrete, during inspections and during any work performed on top of the structure after casting. Where no fall prevention can be secured, a fall arrest system shall be included in the design and shall be complied with at all times.

### **30. Scaffolding**

Where scaffolding is planned, the following controls shall be in place:

1. The Principal Contractor shall submit the appointment letter and proof of competency of the competent person(s) appointed:
  - a) As scaffold designer
  - b) As scaffold erectors
  - c) As competent person to inspect, maintain, move or dismantle scaffolds,
  - d) As competent person to supervise all scaffolding operations
2. The H&S Plan must include the signed letters of appointment and the proof of competency.
3. The Principal Contractor shall ensure that all scaffolding complies with the requirements of the OHS Act and Regulations and with the requirements of Temporary Works in this CHSS.
4. Scaffold erectors and inspectors must be formally trained and certified competent; such training must conform to the requirements of SANS 10085.
5. Scaffolds must be clearly tagged with safe access signage; scaffolds must be inspected daily prior to use and weekly by the scaffold inspector. All scaffolds on site must be individually identified and display a safe/not safe sign.

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6. Inspections by the scaffold inspector must be documented on the scaffold tag and in a register; a template of the tag and of the register shall be included in the H&S Plan.
7. All scaffolds must be accessed with a ladder only. Ladders must be inside the scaffolds and hatches must close ladder-openings in decks.
8. All scaffold decks must be fully covered and barricaded so as to prevent persons working there from falling off.
9. Scaffold erectors must attach a fall prevention harness at all times; the double lanyards must be fitted with scaffold hooks only.
10. The H&S Plan shall include the safe work instruction applicable to all employees working on scaffolds and the method of ensuring competency.
11. Standard scaffolding designs approved by a competent designer of the Principal Contractor may be included in the H&S plan and all such scaffolds on site must conform to this standard.

### **31. Public Health**

1. Access to the construction site shall be controlled by the principal contractor; such controls shall prevent unauthorised access to all construction work.
2. Appropriate public health and safety signage shall be posted; the type of signage planned for must be documented in the H&S Plan.
3. The requirements for excavation safety affecting the public are detailed in the chapter on excavation safety.
4. The Principal Contractor shall ensure that each person visiting the site shall be inducted to the site and such abridged induction shall outline the hazards likely to arise from on-site activities and the precautions to be observed to avoid or minimise those risks.
5. The Principal Contractor shall document a method statement for the erection, maintenance and control of barricades or fences and controlled access points, to prevent the entry of unauthorized persons. As a minimum all access to the site shall be prevented by a physical- or personnel barrier and all visitors shall be required to report to the site office from which they will be accompanied on site by a member of the Principal Contractor's construction team. The control system must ensure that no persons other than the following are on site:
  - a) Inducted employees of the Principal Contractor;
  - b) Inducted employees of contractors and sub-contractors appointed in writing by the Principal Contractor;
  - c) Inducted and authorised client personnel, the client H&S consultant, the construction consultant team;
  - d) Inducted and authorised visitors accompanied by a representative of the principal contractor.

### **32. Night Work & Week-End Work**

1. No night- or week-end work shall be performed unless authorised by the Project Manager.

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2. Where week-end work is planned, the principal contractor shall ensure that its construction supervisor is on site; this applies even if only sub-contractors are working on the site
3. Where week-end work is planned, each sub-contractor shall ensure that its construction manager is on site; this applies even if the principal contractors' manager or supervisor is on the site.

### **33. Facilities for Employees**

1. The Principal Contractor shall document the construction site's method to ensure the statutory application of employee's rights in terms of employee facilities as defined in the OHS Act, the General Safety Regulations and the Construction Regulation, including:
  - a) The provision of facilities for safekeeping and changing
  - b) The method of ensuring that employees requiring to change on site can do so in privacy
  - c) The provision of an eating area
  - d) The provision and maintenance of sufficient toilets on site.
2. Contractor's chemical toilets must be:
  - a) Supplied with a toilet flushing system and a hand washing facility
  - b) Fixed so as to avoid becoming wind-blown
  - c) Sign-written: 'Male' and 'Female' use
  - d) Sanitised daily; an inspection and sanitising record must be kept in the H&S file
  - e) Inspected daily and, where bucket collections are in place, emptied at least twice a week and one of these occasions must be on Fridays.

### **34. Storage and use of flammable liquids**

1. No flammable substance must be stored on site.
2. The H&S Plan shall include a method statement detailing the safe use, decanting and spill controls for all flammable liquids used on site.
3. Storage management must comply with Environmental legislation.

### **35. Hazardous- Chemical Substances**

1. With respect to hazardous chemical substances used, the contractor shall ensure that:
  - a) All MSDS are included in the H&S plan and the risk assessment includes these substances.
  - b) The safe use, storage, emergency procedures and safe disposal of hazardous substances are addressed in a method statement/s, included in the H&S Plan.
  - c) Proof of competency and signed letters of appointment of the person responsible for chemical handling, is included in the H&S file.
2. Any hazardous chemical substance intended to be applied on site during the project (i.e., after approval of the H&S Plan) shall be subject to an issue-based risk assessment and method statement, which must be presented to the client H&S consultant prior to the substance being introduced on site.

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3. Employees working with hazardous chemical substances shall be subject to a specific control program compliant to the Hazardous Chemical Substances Regulations of the OHS Act; the program shall include:
  - a) Identification of hazardous substances, including cement, caustic substances, chlorine-containing substances, K permanganate, petrol, diesel, cement and all other chemicals planned for use.
  - b) Educating and training of exposed employees.
  - c) Assessing the potential exposure risks.
  - d) Zoning of risk areas.
  - e) Air monitoring where airborne hazardous dusts or vapours may be present.

### **36. Housekeeping, Stacking, Storage and Drop Zones**

1. The Principal Contractor shall appoint a person responsible for general housekeeping and stacking and storage of materials and equipment on the entire site.
2. Where the risk assessment identifies the risk of falling materials, a method statement for the safe management of the drop zone and the safe lowering of materials shall be included in the H&S Plan.
3. All deliveries of building materials shall be controlled by the appointed person and no haphazard storage shall occur.

### **37. Waste**

1. The Principal Contractor shall appoint a person responsible for site-wide control & removal of scrap, waste and debris;
2. No hazardous waste, combustible materials and containers shall accumulate on the construction site;
3. The Principal Contractor shall document a waste management method statement in the H&S Plan. Such method statement shall include all liquid, gaseous or solid waste produced during the construction process.
4. Waste management must comply with the Environmental legislation.
5. All waste skips removed from site must be recorded and a proof of final deposit at a registered waste site (waste disposal certificate) must be on record in the H&S file.
6. Waste bins for domestic waste must:
  - a) Be placed at all eating areas;
  - b) Have a functional lid, which prevents windblown dust;
  - c) Be emptied daily.

### **38. Designer risk management**

1. The scope of the construction work includes design-as-you-go processes, where structures require new work- or construction process designs.
2. Such designs may be issued by the contractor.

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3. Where new designs are required, the designer shall discuss these with the H&S consultant who shall perform a specific H&S risk assessment and make this available to the designer.
4. Designers shall be responsible to ensure full conformance to the duties defined in the Construction Regulation and the Project Manager shall verify such conformance.

### **39. Occupational Health**

1. The H&S Plan shall include:
  - a) All medical certificates of fitness for all employees working on the site.
  - b) All pre-placement medical surveillance records of employees who are or are required to be under medical surveillance; this record may be the latest periodical medical examination report.
2. The standard for the occupational medical testing is defined hereunder.
3. Only medical certificates of fitness issued by a registered occupational medicine practitioner are deemed valid, provided the following is complied with:

All medical certificates of fitness must:

- a) Be issued after the Occupational Health Practitioner has personally examined and evaluated the employee and the relevant tests
  - b) Be medical stationary, as required by the Health Professions Council of South Africa and include the name of the provider as registered with the Health Professions Council and the registration number
  - c) Must be in the format defined in Annexure 3 to the Construction Regulations and therefore include certification that the doctor personally examined the employee
  - d) Medical certificates issued by Professional Nurses or General Medical Practitioners are explicitly not acceptable.
4. The Principal contractor shall identify a duly registered occupational medical practitioner in the H&S plan.
  5. The Principal contractor shall document the methodology for ensuring that medical testing of all construction personnel working on site (whether employed by consultants, the principal contractor, any contractor) is planned and executed prior to such persons commencing work on site.

### **40. First Aid Management**

1. Every Contractor shall ensure that adequately trained first aiders are on site at all times when construction employees are on site; this applies even if less than 10 employees are on site.
2. First aiders shall be identified and shall have immediate access to a comprehensively stocked first aid box.
3. Such first aid box shall be stocked to include all first aid equipment as per the minimum requirements listed under General Safety Regulation 3, and any additional items identified in the risk assessment.

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4. Each first aider shall have access to the contractor's emergency and accident arrangements on site with respect to the specified ambulance service, the registered medical practitioner and the registered hospital service which can deal with the identified emergencies.
5. All the above controls shall be documented in the H&S Plan.

#### **41. Access, traffic management and camp site**

1. The principal contractor shall ensure that all employees, all sub-contractors and all delivery trucks are made aware of the risk of residents/ students in the vicinity of the work-areas.
2. The principal contractor shall ensure that no employees (including those of sub-contractors) enter any other college private area than those worked in.
3. All employees of all contractors working at the construction site shall access the construction sites in vehicles which have seats firmly secured and adequate for the number of employees to be carried; this means that strictly no personnel may be transported in the load body of an LDV or a truck and that all construction personnel must be brought to site in a bus, taxi or inside the cab of a vehicle.
4. All construction vehicles traveling, working or operating on the client's roads must comply with the requirements of the National Road Traffic Act, 1996.

#### **42. Environmental precautions**

1. Water must be used sparingly, and taps must not be left to run or leak.
2. No construction plant, machinery or vehicles may be serviced on the construction site;
3. No construction plant, machinery or vehicle may leak oil or fuel; where this the case, the offending item is removed off site.
4. Fuel must not be stored on site.
5. Refuelling must ensure that possible spills are contained with a bunding system.
6. All cement mixing must occur in a contained environment preventing spillage on the earth or in stormwater.

#### **43. Staffing on site**

1. The Principal Contractor shall compile a list of all employees on site indicating:
  - a) Name and ID number
  - b) Designation (job title)
  - c) Date of OHS Induction for the site
  - d) Date of expiry of medical COF
  - e) Competency in the safe work instructions included in the H&S plan
2. This list shall be included in the start-up H&S file and maintained thereafter.



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#### **44. Traffic risks**

1. The Principal Contractor shall identify the traffic risk associated with the work and define risks and method statements to ensure the H&S of employees and also of members of the public.
2. Open excavations or uneven terrain within residential areas shall be closed daily so as to safeguard the public; where trenches are left open, a solid barrier shall prevent accidental access and sufficient sign writing shall be in place.
3. Where traffic is planned to be affected, a traffic management plan shall be compiled by the construction manager; a competent traffic controller shall be appointed, and all flagmen and women shall be trained in the traffic controls.

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## **ANNEXURE A**

### **CONTENTS AND NUMBERING SYSTEM FOR THE H&S PLAN**

1. Index of the H&S Plan
2. Letter of good standing COIDA
3. Notification to DOEL and proof of delivery
4. Principal Contractor's Occupational Health and Safety Policy
5. Proof of competency of the Principal Contractor
6. Signed S 37(2) mandatory agreement between principal contractor and the client
7. Process Method Statements (dealing with all aspects of the scope of work)
8. Commissioning method statement
9. Project-specific baseline hazard identification and risk assessment & risk register, based on the process- and commissioning method statements
10. Health and Safety Resources and Budget
11. Organisational chart including list of competent person appointments and method of proof of competency and OHS competency
12. Principal Contractor H&S management processes (method statements or operating procedures):
  - 1) Management of the issue based risk-, risk review- and risk monitoring
  - 2) H&S Competency management (including H&S Induction, Safe work instructions, training and competency)
  - 3) General record keeping management
  - 4) Contractor, Sub-contractor and SMME management
  - 5) Site camp-, employee facilities- stacking, -storage-housekeeping
  - 6) Delivery, offloading, stacking, storage and housekeeping management
  - 7) Occupational health & hygiene, first aid, accident & emergency management
  - 8) Fire prevention and equipment management
  - 9) Safety signage management
  - 10) Identification of services
  - 11) Excavation method statement, including pipe laying
  - 12) Fall protection plan
  - 13) Temporary- and concrete work method statement
  - 14) Access & on site traffic and public H&S management
  - 15) Rigging, lifting management
  - 16) Electrical installation management, including LOTO
  - 17) Hazardous chemical substances management
  - 18) Safety Inspections and Inspection Register management
  - 19) Waste management
  - 20) Traffic management
  - 21) Other

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## **ANNEXURE B**

### **CONTENTS AND NUMBERING SYSTEM FOR THE H&S FILE**

1. Index of the H&S File
2. H&S Plan
3. Issue Based Risk Assessments, Registers and DSTI records
4. Organisational chart including:
  - a) Updated List of employees
  - b) Updated List of competent person appointments
  - c) Signed letters of appointed competent persons
  - d) Evidence of competency and OHS competency
  - e) Medical certificates of fitness of all employees
5. Induction Training Programme & Records
6. Safe working instruction training records
7. Visitor Induction Records
8. Incident Register & Investigation reports & COIDA Accident and incident management
9. Inspection & Maintenance Registers
10. PPE Issue Register
11. MSDS of all hazardous chemicals planned to be used
12. Letters of approval of contractors and sub-contractors H&S Plans
13. Letters appointment of contractors and sub-contractors
14. Section 37(2) agreement between the client and each contractor and sub-contractor
15. This CHSS with signed page 2/3
16. OHSA
17. Client audits and corrective action
18. Fall protection plan (where applicable)
19. Updated LOGS
20. Other

## **C4.2 – MECHANICAL AND ELECTRICAL SPECIFICATION**

### C3.1: MECHANICAL INSTALLATION DETAILED SPECIFICATIONS

#### 1. MECHANICAL EQUIPMENT

##### 1.1 SCOPE OF WORKS

This Specification covers the general requirements for the detail design, manufacture, supply, delivery, erection, installation, testing on site, commissioning and maintaining of the mechanical equipment specified under this Contract. The complete installation shall comply with this Specification. General Specifications for specific items of mechanical equipment are covered by Separate Particular Specifications included in this document.

The mechanical scope of work consists mainly of the replacing and refurbishment of existing mechanical equipment at the Dimbaza Wastewater Treatment Works. For replacement items, the contractor shall replace each item with the exact type and specification of the existing item or similar approved equal. All alternatives shall be approved by the Engineer prior to the sourcing and purchasing of such items.

Where required the Contractor shall be fully responsible for the detail design and drawing of specific items as directed by the Engineer. The Contractor shall also be responsible for the programming and planning of the design, manufacturing, delivery, erecting, installation, testing and commissioning of all equipment under this contract.

The table below shows the extent of the scope of works for mechanical equipment;

Item	EXISTING EQUIPMENT	SPECIFICATIONS: REPAIRS AND REFURBISHMENTS
1	<b>Head of Works (Inlet Works)</b>	
1.1	BOOSTER 5 FMH 8B-53 Horizontal Multistage pump 3ph	Supply and install effluent booster pumps. BOOSTER 5 FMH 8B-53 Horizontal Multistage pump 3ph or similar approved equal
1.2	Make: Huber Technology, Model: Rotamat Ro2	Service existing Rotary Drum Fine Screen
1.3	There is no conveyer system. Screenings are transported manually to a large skip 25m away from the Mechanical screen	Supply and install Conveyer system to transport of coarse, fine and compacted screenings, sludge, grit, and solids from the Mechanical Screen.  <b>HUBER Screw Conveyer Ro8 T 273 12000</b> Screw conveyor consisting out of a machine trough with plastic liners and transport screw. The machine trough is designed as a rigid edge- and weld construction with multisegmented covers in a water-proof design. Maximum service lifetime is ensured by the implemented plastic liners in PE-UHMW. The use of sidelong material down holders guarantees a reliable material transport also with problematic material attributes. The gear drive is flashed to one machine face -side, directly coupled with the screw shaft and operable in back and forward direction. The machine screw is made of stainless steel with a central shaft for an optimum torque distribution alongside the total machine length. This design ensures maximum running smoothness without screw corrosion. All components in touch with the medium are made of stainless steel (except fittings, drives and bearings), and acid-treated in a pickling

bath. Maximum permissible hydrogen sulphide content in the air: 6 ppm

The complete plant is conforming to EC machinery directive 2006 / 42 EC

- Electrical switchboard and control panel complying with 2006/95/EC (DIN EN 60204-1), 2004/108/EC and EN 60439-1
- and manufactured in compliance with quality standards DIN EN ISO 9001.

Customer-supplied items must comply with applicable country-specific standards, e.g. machinery directive, standards (DIN, EN, ANSI, ... , safety standards GUV, UVV, VDI), e.g., guards, protective equipment against falls from a height, safe accesses to machine, etc.

Standard operating instructions in compliance with EN 82079-1 on CD or in printed form, in German or English language, in triplicate (additional copies available against extra charge).

We expressly point out that maintenance and repair work is only allowed to be carried out on the machine after the machine has been disconnected from the mains.

By default, the machine can only be disconnected via the main switch of the entire system by the operating staff itself.

Only qualified electricians are allowed to disconnect plant components.

Individual drives or system components of the machines can be equipped with repair switches against extra charge. If the electrical control system is supplied by a third party, the machine controls must be executed according to HUBER's instructions.

#### Technical data

Transport medium screenings (compacted)

Max. throughput approx. 2 m<sup>3</sup>/h

Transport length approx. 11180 mm

Total machine length 12000 mm

Installation angle 15 °

Trough diameter 273 mm

Conveying direction Screw shaft pushing

Material trough 304L (1.4307) or equal quality

Material Screw shaft 304L (1.4307) or equal quality

Weight approx. 1300 kg

Drive motor Asynchronous motor

Motor quantity 1

Efficiency class IE3

Performance P = 1,1 kW

Nominal current I = 2,45 A

Power factor cos phi = 0,76

Voltage U = 400 Y V

Frequency f = 50 Hz

Rotary speed of output shaft n = 12 min-1

Rotary speed of motor shaft n = 1440 min-1

Protection grade IP65

		Insolation class F
1.4	Portable Fire Extinguishers Installation	Fire extinguisher cubicle to mount fire extinguishers  9 kg Dry Chemical Powder (DCP) handheld fire extinguisher.
1.5	Fire Signage Installation	
	No signage	Fire Extinguisher (Down Arrow) - 190 x 190
	No signage	Emergency Exit Arrow - 190 x 190
	No signage	Assembly points sign boards - 290 x 290
	No first aid kit	First Aid Kit
2	<b>Main Electrical Supply and Main LV Room</b>	
2.1	This building currently does not have mechanical ventilation	Supply and install ventilation fans. Industrial Axial Fan 230V 0.1Kw 1800M3/H
3	<b>Aeration Tanks</b>	
3.1	AERATOR WEG IE1 W22 Class H Insulation Flange mounted motor. Size 45kW, 400V The existing unit are Hansen Transmissions, Model: RND 36 AN, Motor Size: 45kW	Supply and install Vertical Aerator complete with 45kW Motor, Drive unit. Mounting plate: Carbon steel Shaft: stainless steel Fan: stainless steel grade.
4	<b>Return Activated Sludge (RAS) Pump Building</b>	
4.1	The existing pumps are Gorman Rupp (GR Pumps), Model T8A3-B (T- Series, Motor Size: 11kW	Supply and Install RAS Pumps and motors, Gorman Rupp (GR Pumps), Model T8A3-B (T- Series), Motor Size: 11kW
5	<b>Clarifiers</b>	
5.1	The WWTW has 2 clarifiers with 0.75kW motor and rotating gear.	Provisionals Sum has been allowed for design, supply and installation of new Clarifiers.
6	<b>Chlorination Tank and Building</b>	
6.1	No brackets are provided to secure cylinders.	Supply and install mounting brackets and safety chains 130kg full and empty cylinders
6.2	The existing system is not functional	Supply and install new Wallace+Tieran 0-2kg Gas Chlorination System comprising of the following:  2xW&T S10K vacuum regulators. (Built in auto change-over) 2x70kg wall mount heated trap manifolds. 2xFlexible connections. 1x-2kg W&T V10K auto flow controller.

		1x19mm injector. 2xPlatform Scales with remote displays. 1xGas alarm system, complete with display, sensor, siren and strobe. 1xBacking board to house equipment mounted in safe side. 1xStrip and clean with all pipes, fittings, accessories, installation, set-up, Commissioning and travelling. 1xFull set of safety signage. 1xSafety box complete with mask, canisters and accessories. 1xBooster pump set complete with pump control panel and electronic no flow protection. 1xElectrical hoist (500kg) complete with manual trolley and lifting cage. 2x3 bottle holders for full/empty bottle storage. 1xInline Extraction fan
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## 1.2 GENERAL CONTRACT REQUIREMENTS

### 1.2.1 Contractor's Drawings

#### (a) Approval of Drawings

Within one month after the Contractor has been notified in writing of the acceptance of his Tender, and before manufacture and supply of equipment, the Contractor shall submit to the Engineer, for his approval, 2 (two) prints of all detail drawings giving full dimensions and details of the mechanical equipment included under this Contract.

The Engineer may require from the Contractor further detail drawings, calculations and/or information in order to clarify features not adequately shown on the submitted drawings. The Engineer will return to the Contractor one set of the submitted drawings which will be marked "APPROVED" or marked with changes which are deemed necessary by the Engineer. The Contractor shall immediately modify the drawings and resubmit for the approval of the Engineer. The nature and date of each modification and a distinguishing symbol shall be added to the drawings. The approved drawings shall become part of the Contract, and the Contractor shall supply 3 (three) of each such approved drawing as working drawings to the Engineer.

The Contractor shall not proceed with the purchasing, manufacturing and/or acquisition of any particular mechanical equipment item, prior to the final approval by the Engineer of all drawings detailing that specific mechanical equipment item. The approval of drawings by the Engineer as specified above shall not relieve the Contractor of any responsibility in terms of the Contract.

The Contractor shall be responsible for any discrepancies, errors or omissions in the drawings and other particulars supplied by him, whether such drawings and/or particulars have been approved by the Engineer or not, provided that such discrepancies, errors or omissions are not due to inaccurate information or particulars furnished in writing to the Contractor by the Engineer.

#### (b) As-built Drawings

Upon completion of the erection and installation the Contractor shall supply one set of reproducible drawings detailing the equipment as erected and installed, including complete parts lists.

The cost of drawings, calculations, reproductions etc. as set out in this clause shall be deemed to be included in the Contract Price under the item Detail Design Planning and Drawings in the Schedule of Quantities.



## 1.2.2 Manufacture, Supply and Delivery on Site at Point of Installation

### a) Inspection and Testing at the place of manufacture and supply

The quality of materials, workmanship and performance of all items of equipment shall be thoroughly tested at the place of manufacture and supply, and test certificates, in triplicate and in the ruling language shall be submitted to the Engineer prior to the shipment, railing or transport to the equipment concerned. The Contractor shall give reasonable notice in writing of the time and place of tests to enable the Engineer to inspect and witness tests of materials and equipment.

The acceptance by the Engineer of any plant item, following such inspection and tests at the place of manufacture and supply, shall not relieve the Contractor of any obligations under this Contract.

All cost of such tests and inspections and the necessary testing facilities shall be deemed to be included in the Contract Price under the item Manufacture, Supply and Delivery on Site in the Schedule of Quantities.

### b) Storage

Equipment and materials to be supplied under the Contract shall, on completion of fabrication, be stored at the Contractor's factory, store or yard until it is required for incorporation in the works. The Contractor shall ensure that the items are fully protected from the weather and damage of any kind. The cost of repair of any damage shall be to the Contractor's account.

### c) Loading, Transport and off-loading

The loading, transport to and off-loading at the Site of all equipment and materials supplied by him shall be the responsibility of the Contractor.

Items shall be handled with proper care at all times. Sufficient labour and equipment shall be on hand before loading and unloading is commenced. Under no circumstances shall items be dropped from vehicles and large or heavy items shall be carried out under proper supervision. Ropes, chains, sling, etc. shall be attached only at the correct lifting points and care shall be taken to ensure that they cause no damage.

During transport, all materials shall be properly placed in the vehicle to prevent undue movement and coverings; padded supports, packing or dunnage shall be provided as necessary to prevent damage from either the weather or the motion of the vehicle. All packing materials shall remain the property of the Contractor and shall be removed from the Site by him. Breakage, damage or loss in transporting, handling, etc. shall be for the account of the Contractor.

An item shall be off-loaded at a locality and on a place and time arranged with the Engineer. All costs in connection with loading transport and off-loading of the equipment shall be deemed to be included in the contract price for Manufacture, Supply and Delivery on Site in the Schedule of Quantities.

## 1.2.3 Erection, Installation, Site testing and Commissioning

### a) Erection and Installation

The Contractor shall supply everything required for erecting, installation and handling on Site of the mechanical equipment. The Contractor shall supply everything required for the protection of persons on the Site, the equipment and materials supplied and the civil works during the period of erection and installation.

All equipment shall be erected by or under the direction of experienced and competent fitters. It shall be accurately placed and shall be true to line and level.

Drift pins, jacking equipment and the like shall not be used to bring improperly fabricated pipe work and mechanical equipment items into place. A moderate degree of cutting and reaming may be employed to correct minor misfits only if, in the opinion of the Engineer, this will not be detrimental to the appearance or strength of the installation. Burning of holes will not be permitted without the written approval of the Engineer.

Pipe work shall, before installation, be checked to ensure that it is in good order and condition and each item shall be thoroughly cleaned inside and outside. Any pipes showing cracks, blowholes, broken flanges or

other defects shall be set aside and the Engineer called upon to determine whether they are to be repaired or replaced, all at the Contractor's expense.

Skilled and experienced pipe layers shall carry out the fitting of the pipe work. Pipes shall be fixed accurately to line and level, and vertical pipes shall be truly plumb. Rubber joint rings shall be placed without distortion and pipes drawn together without straining. No flange bolts shall be omitted, and all shall be fully tightened.

On completion of erection, the Contractor shall paint or repaint all parts of the equipment, steelwork, pipe work, etc. on the Site. The colours used shall be as specified by the Engineer. The work shall be executed in accordance with this Specification.

All paintwork shall be neatly finished off, free from defects and to the satisfaction of the Engineer, or it shall be made good or removed and repainted, as required. Care shall be taken to protect other parts of the plant and structure from spillage, drips, etc., and on completion all paint marks, spots and the like on other surfaces shall be carefully removed.

On completion of erection and installation, the Site shall be cleaned of all surplus material and debris and left in a cleaned and tidy condition.

#### d) Testing on Site

At completion of erection and installation of all mechanical equipment and before commissioning of the plant all components of mechanical installation, included in this Contract will be subjected to testing in the presence of the Engineer and to his satisfaction. All cost of such testing as outlined below and specified in the Project Specification for Mechanical Equipment shall be deemed to be included into the Contract Price.

The Contractor shall give reasonable notice in writing of the time of testing to enable the Engineer to inspect and witness tests of materials and equipment.

The Contractor shall at his own cost render all assistance and supply all labour, appliances and any other materials including power, water and chemicals, as the Engineer may require to check the setting out, to measure, inspect and test any portions of the Works at any stage during construction, erection, installation or painting. During such operations, the Contractor shall, if required by the Engineer, suspend any or all of the Works without having a claim for loss or damage as a result thereof.

At the commencement of and during the whole of the testing, the Contractor shall have available on Site all essential spares and tools considered necessary to enable repairs of defective parts to be carried out immediately in the event of a breakdown.

The Contractor shall be responsible for the proper operation and maintenance of the plant throughout the period of the testing.

Acceptance by the Engineer of any plant item, following such inspection or tests, shall not relieve the Contractor of any obligations under this Contract.

The test on Site after completion of the erection and installation of the equipment shall include the following:

- All electrical and electronic equipment and installations shall be tested for correct connection, installation, insulation, losses, output, earthing and overheating, whichever may be applicable for the part or installation to be tested.
- All electrical and electronic equipment and installations shall be subjected to a complete operational test to check the correct operation thereof in terms of the operational requirements specified in the Project Specification for Mechanical Equipment.
- All mechanical equipment and installations shall be tested for correct positioning, alignment, fixing and all such items, which may affect the satisfactory operation thereof.

- All mechanical equipment and installations shall be subjected to a complete operational test to check the correct operational requirements specified in the Project Specification for Mechanical Equipment.
- Complete operational tests of hydraulic equipment shall include for effective, efficient and adequate performance of each component individually and in concert according to the operational requirements specified.

e) Commissioning

At the completion of all work on the plant and after the successful testing of all civil, electrical and mechanical work the complete plant shall be commissioned. The Contractor will be responsible for the commissioning of all equipment supplied, erected and installed by him at a time arranged by the Engineer to enable the plant as a whole to be put into operation.

It is unlikely that the scheduling for the commissioning of the plant will follow directly after the completion of the erection and installation phase. The Contractor shall therefore allow for the return of site for commissioning as well as the adequate protection for equipment in the interim period between erection and installation and commissioning shall be deemed to be included into the Contract Price.

The Contractor shall at his own cost render all assistance and supply all labour, appliances and any other materials excluding power, water and chemicals, as may be required during commissioning. The Employer will supply power, water and chemicals required during the commissioning period.

At the commencement of and during the commissioning period, the Contractor shall have available on Site all essential spares and tools considered necessary to enable repairs of defective parts to be carried out immediately in the event of a breakdown.

On completion of the commissioning of equipment the plant shall be put into normal operation and the final adjustments of the equipment shall be made. Thereafter the Tests on Completion shall be carried out in the presence of the Engineer to ensure that the plant will fulfil the functions for which it has been supplied.

Such Tests on Completion shall include the following:

- Simulated tests for all alarm and safety cut-out equipment to prove the operation of the equipment.
- Simulated tests on automatic controls to prove the ability of the controls to rectify conditions which are outside the required design conditions. The tests shall be carried out by manually changing the desired values to produce an incorrect condition and then resetting the controls to the design conditions and checking the operation of valves, etc. to restore the design conditions.
- Operational tests on the plant to demonstrate that it is giving the rated output and efficiency.
- After a Pump Station as a whole has been put into a condition of smooth operation, the Contractor shall operate it for a further 36-hour continuous test run.

The Contractor shall provide all necessary temporary measuring and recording equipment. The equipment shall be of a type generally used for this type of testing and shall be approved by the Engineer. All instruments shall be accurately calibrated before the tests commence.

On completion of the commissioning of all the mechanical equipment, and provided the Contractor is satisfied that the entire plant is operating satisfactorily and will fulfil the function for which it has been supplied, he shall submit to the Engineer duplicate copies on all the tests called for in the Specifications. The Engineer shall reserve the right to ask for any reasonable additional tests in order to prove that the operation of the plant is satisfactory and in accordance with the Specifications and Drawings.

During the commissioning and 36-hour test run, the Contractor shall train and instruct the personnel as appointed by the Employer as plant supervisors in the correct working and operation of the equipment supplied by him. The Contractor shall, however, be responsible for the proper operation and maintenance of the plant throughout the period of the testing.

The Engineer will only issue a Completion Certificate after all aspects of the commissioning procedures have been complied with to his satisfaction.

f) Operating and Maintenance Manuals

The Contractor shall provide complete and adequate Operating and Maintenance Manuals in duplicate. The manuals shall be made up in book form with loose pages and shall include drawings, diagrams and cross-sectional drawings specially prepared and coloured in and marked to indicate relevant details.

The Operating and Maintenance Manuals shall be compiled in an orderly and logical manner following as far as possible the sequence below and containing at least the information indicated.

- Index
- Components and functions of equipment
- Normal operation
- Guidelines and rules for abnormal operation: low flows; high flows; emergencies; components out of operation, bypassing certain components, etc.
- Maintenance; routine maintenance and lubrication instructions; major maintenance; detailed instructions; list of spare parts that should be held in stock; complete schedule of all spare parts for use when ordering; address and telex, fax and telephone numbers of all equipment suppliers; technical brochures of individual items.

The text of the instructions, notations and titling of drawings shall be in English.

Draft manuals shall be available at commencement of site testing of the equipment and two copies shall be submitted to the Engineer for approval. The Engineer shall return to the Contractor one copy of the draft manual on which amendments regarded as essential have been indicated, and which is marked "Approved in Principle".

The Contractor shall update the manuals before commissioning and deliver two copies of the final manual to the Engineer.

No separate item for payment for Operating and Maintenance Manuals is included in the Schedule of Quantities, but payment for these will be deemed to be included in the item for "Erection, Installation, Site Testing and Commissioning".

#### 1.2.4 Maintenance Period

The maintenance period will commence with the issue of a Completion Certificate. The maintenance period shall be 12 months, and the Contractor shall be responsible for all preventative maintenance as well as the repair of any defects and/or malfunctioning of the mechanical equipment during this period of time.

Repairs to any mechanical equipment shall be carried out promptly and at least within one week after receiving written notification from the Engineer. The Employer at the expense of the Contractor will carry out repairs if the above-mentioned conditions are not fulfilled.

The maintenance period will be extended by a proportional period of time if the mechanical equipment was not a fully operational condition for at least 10 months of the maintenance period. The Contractor shall not have any claim for interest payment on retention money, surety, etc. during such an extended maintenance period.

### **1.3 GENERAL REQUIREMENTS FOR MANUFACTURING, SUPPLY, ERECTION AND INSTALLATION**

### 1.3.1 Quality of Materials and General Design

All materials used in manufacture and erection of the equipment to be supplied shall be new of the respective classes best suited for the intended duty, and of the best quality, to the approval of the Engineer. Moving parts shall operate reasonably silently and shall be so arranged as to be easily and readily accessible for removal, maintenance and repair. Adequate protection shall be provided, to the satisfaction of the Engineer, for the exclusion of vermin, birds and insects from all moving, enclosed or live parts and to prevent damage to insulation by vermin.

The equipment shall be of the most modern but proven design and shall conform to the applicable standards and regulations. Unless otherwise specified in this Document, or otherwise specifically agreed to by the Engineer in writing, the latest edition of the relevant South African or British Standard Specification or Code or Practice shall be applied by the Contractor for determining the minimum requirements in respect of quality of material, working stresses, safety factors and tests (such as physical-, electrical-, hydraulic- and chemical performance) as may be required to prove that the equipment or portions or parts thereof will function safely and reliably for the duties required thereof in terms of the Contract. The South African Standards, where these exist, shall take preference over the corresponding British Standards.

All fabricated components shall be stress relieved. The Contractor shall ensure that the erected equipment shall be free from harmful vibration. The Contractor shall also ensure that all moving parts, links, rotating shafts, belt drives and similar items are adequately protected, to ensure the safety of the construction works as well as operating and maintenance personnel in compliance with the requirements of the relevant regulations. The Contractor shall provide with the equipment the necessary precautionary devices so that the equipment cannot be operated by unauthorised persons or incorrectly operated by the operating staff. All switch units to which unauthorised persons may have access shall be provided with suitably hinged or completely removable covers with locks. All locks shall have duplicate keys, and the keys shall be clearly labelled with the name of the equipment to be protected on by attaching suitable non-corrosive metal label plates. All locks or groups of locks shall be of a similar locking system and the Contractor shall also supply the appropriate master key(s) for the system(s).

Belts, bolts, nuts and of the devices for clamping and fixing of renewable parts and stainless-steel parts shall be made of stainless steel. Corrosion-resisting steel shall be used for all bolts and nuts when either or both are subject to contact with water and/or frequent adjustment or removal, and for bolts projecting from concrete with nuts subject to removal. Split pins or other approved locking devices shall be provided by the Contractor for nuts, which may become loose after erection and during operation of the equipment. All grease nipples shall be of the hexagonal hook-on type and shall, where necessary, be fitted with adaptors or bushings. The Contractor shall provide a grease gun for each appropriate type of grease to be used.

### 1.3.2 Equipment and material to be complete

The equipment and materials to be supplied by the Contractor shall be complete in respect of all parts, fixing bolts, anchorages, controls and all other items so as to ensure a complete, adequate and satisfactory permanent installation at the site as well as the operation and maintenance thereof, even though some parts may not be listed specifically or separately in the Specifications, Drawings or Schedule of Quantities.

### 1.3.3 Numbering and Marking of Materials, Equipment and Parts

All items of the equipment, parts and materials to be supplied under this Contract shall be clearly numbered and marked to ensure the correct assembling and erection thereof on Site.

All site work necessary for the complete and satisfactory erection and operation of all mechanical and electrical equipment shall be executed by the Contractor and shall be deemed to be included in the Contract price. The Contractor shall be responsible for the delivery and storage of equipment on site and for handling and transporting thereof to positions of permanent erection or storage. The Contractor shall provide all the necessary plant and appliances for the erection of the equipment, and he shall be responsible for the safety and adequacy of such erection plant and appliances.

### 1.3.4 Holding down bolts

The Civil Engineering Contractor will leave pockets and recesses. The Contractor shall be responsible for the provision of, alignment, grouting in and tightening up of all holding down bolts.

#### 1.3.5 Pipes and other equipment through walls of structure

Holes and recesses will be left by the Civil Engineering Contractor in brick walls, floors and concrete structures to accommodate items of equipment to be built in.

The Contractor shall be responsible for the positioning, alignment, anchoring, levelling and fixing of equipment to be built in, where after grouting and making good will be carried out by the Civil Engineering Contractor.

### C3.1: ELECTRICAL INSTALLATION DETAILED SPECIFICATIONS

#### 2. ELECTRICAL SPECIFICATION

##### 2.1 SCOPE OF WORKS

This Specification covers the general requirements for the detail design, manufacture, supply, delivery, erection, installation, testing on site, commissioning and maintaining of the electrical equipment specified under this Contract. The complete installation shall comply with this Specification. General Specifications for specific items of mechanical equipment are covered by Separate Particular Specifications included in this document.

The mechanical scope of work consists mainly of the replacing and refurbishment of existing electrical equipment at the Dimbaza Wastewater Treatment Works. For replacement items, the contractor shall replace each item with the exact type and specification of the existing item or similar approved equal. All alternatives shall be approved by the Engineer prior to the sourcing and purchasing of such items.

Where required the Contractor shall be fully responsible for the detail design and drawing of specific items as directed by the Engineer. The Contractor shall also be responsible for the programming and planning of the design, manufacturing, delivery, erecting, installation, testing and commissioning of all equipment under this contract.

The table below shows the extent of the scope of works for mechanical equipment;

Item	EXISTING EQUIPMENT	SPECIFICATIONS: REPAIRS AND REFURBISHMENTS
<b>1</b>	<b>Head of Works (Inlet Works)</b>	
1.1	2*58w Open Channel Florescent Fittings	Supply and Install 1500mm Long, LED Open channel light fittings, complete with 2*20W Osram LED lamps. SABS Approved.
1.2	Wall mounted HPS floodlights	Supply and install LEDFLOOD MIDI 48 LED 104W OPTIC 5120 LED FLOODLIGHT. Beka or similar approved equal.
1.3	Flush mounted electrical panel with 60A double pole main switch.	Supply and install Electrical Sub-Distribution Board as per schematic diagram
<b>2</b>	<b>Main Electrical Supply and Main LV Room</b>	
2.2	2*58w Open Channel Florescent Fittings	Supply and Install 1500mm Long, LED Open channel light fittings, complete with 2*20W Osram LED lamps. SABS Approved.
2.3	Wall mounted HPS floodlights	Supply and install LEDFLOOD MIDI 48 LED 104W OPTIC 5120 LED FLOODLIGHT. Beka or similar approved equal.
2.4	Flush mounted electrical panel with 60A double pole main switch.	Supply and install Electrical Sub-Distribution Board as per schematic diagram

2.5	500kVA, 11000/420V Outdoor transformer fed from an existing 11kV overhead line. The transformer was manufactured in 1982 and has been in services since the inception of the WWTW.	Supply and install 500kVA, 11 000/420V, Miniature substation to BCMM specification Complete with a Ring Main Unit (Schneider RM6)
2.6	The existing overhead line terminate onto fuse-link. A 11kV cable connects the OH Line to the 500kVA Transformer.	Ring Main Unit to be supplied with the Minisub.
2.7	The WWTW does not have stand-by back-up power system.	Supply and Install 350kVA Silent Weatherproof Diesel Back-up generator as per BCMM Standard Specification.
2.8	The existing panel was manufactured, and stall installed at the inception of the WWTW. It uses old protection technology with is not in line with current standard. Also, it does not have the capability to integrate with a telemetry system.	<p>Replace existing Main LV Panel and make provision for Telemetry Integration. The new LV Panel shall be manufactured in accordance with the BCMM standard Specifications. Refer to drawings for details.</p> <p>For the integration of the telemetry system, the main control panel shall be replaced with new. The new control panel shall be manufactured in terms of the BCMM standard specification and to fit within the existing control room. The proposed control panel shall include protection for the following power centre (also refer to drawings for general arrangements):</p> <p>Aerators: 6 x 45kW, 400V  Clarifiers: 2 x 0.75kW, 400V  RAS Pumps: 2 x 11kW, 400V  Waste Mix Lagoon Pump: 2 x 7.5kW  Effluent Re-use Pump: 2 x 7.5kW, 400V</p> <p>Sub-Distribution</p> <ul style="list-style-type: none"> <li>• SDB Inlet Works- Mechanical Screen</li> <li>• SDB Main LV Room</li> <li>• SDB Chlorination</li> <li>• SDB Offices/ Control Room</li> <li>• SDB Area Lighting</li> <li>• SDB House 1 &amp; 2</li> </ul>
3	<b>Aeration Tanks</b>	
3.1	Existing 45kW motors are old and new to be replaced. The existing cable are functional	Supply and install new LV Cables to 45kW motors.
4	<b>Return Activated Sludge (RAS) Pump Building</b>	
4.1	2*58w Open Channel Florescent Fittings	Supply and Install 1500mm Long, LED Open channel light fittings, complete with 2*20W



		Osram LED lamps. SABS Approved.
4.2	Wall mounted HPS floodlights	Supply and install LEDFLOOD MIDI 48 LED 104W OPTIC 5120 LED FLOODLIGHT. Beka or similar approved equal.
4.3	Flush mounted electrical panel with 60A double pole main switch.	Supply and install Electrical Sub-Distribution Board as per schematic diagram
<b>5</b>	<b>Clarifiers</b>	
5.1	The existing underground cable have damaged and require repairs	Minor repairs to supply cables
5.3	HPS Floodlight mounted on 10m Galvanised pole.	Replace existing exterior pole (10m) mounted floodlights with LEDFLOOD MIDI 48 LED 104W OPTIC 5120 LED FLOODLIGHT
<b>6</b>	<b>Chlorination Tank and Building</b>	
6.1	The chlorination room is elevated from the road level. This makes it difficult to load the 130kg cylinders into the room. There is a gantry system for lifting cylinder but it uses a manual chain block system.	Supply and install 0,5Ton Electric Hoist
<b>7</b>	<b>Office Building</b>	
7.1	2*58w Open Channel Florescent Fittings	Supply and Install 1500mm Long, LED Open channel light fittings, complete with 2*20W Osram LED lamps. SABS Approved.
7.2	Wall mounted HPS floodlights	Supply and install LEDFLOOD MIDI 48 LED 104W OPTIC 5120 LED FLOODLIGHT. Beka or similar approved equal.
7.3	Flush mounted electrical panel with 60A double pole main switch.	Supply and install Electrical Sub-Distribution Board as per schematic diagram
7.4	Socket outlet do not meet SANS 10142 requirements	Supply and install 16A + 2-pin SSO
<b>8</b>	<b>Living Quarters</b>	
8.1	2*58w Open Channel Florescent Fittings	Supply and Install 1500mm Long, LED Open channel light fittings, complete with 2*20W Osram LED lamps. SABS Approved.
8.2	Wall mounted HPS floodlights	Supply and install LEDFLOOD MIDI 48 LED 104W OPTIC 5120 LED FLOODLIGHT. Beka or similar approved equal.
8.3	Flush mounted electrical panel with 60A double pole main switch.	Supply and install Electrical Sub-Distribution Board as per schematic diagram

<p><b>9</b></p> <p>9.1</p>	<p><b>Telemetry System</b></p> <p>The site currently does not have a Telemetry System.</p>	<p>Supply and install 16A + 2-pin SSO</p> <p>Supply and install GPRS Telemetry system to link WWTW to BCMM offices in Bhisho</p> <p><b>Telemetry equipment consists of:</b></p> <p>1 x tele-Flex CPU (32 Digital Inputs,8 Digital Outputs,8 Analog Inputs, 2 RS232, 1 RS485, 1 Ethernet, 1 USB)</p> <p>2 x 32 Opto Isolated Digital Inputs  2 x 8 Analog Inputs (12 bit)  1 x 5 Way Backplane  1 x Telemetry Radio  1 x Yagi Antenna 3 Element (incl 15m cable &amp; connectors)  1 x Galvanised Mast  1 x Wall Mount Bracket  1 x Earth Kit  1 x Battery 12V  1 x 7A Charger  1 x Enclosure - IP55 - MB604 (600x400x260)  1 x Assembly, Run-up and Test</p>
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## 2.2 MV INSTALLATION: GROUND MOUNTED DISTRIBUTION TRANSFORMERS

All transformers shall comply with SANS 780 for oil immersed and SANS 60076-11 for Dry-type transformer and this specification.

2.2.1 Nothing in this specification shall lessen the obligations of the supplier. The supplier shall be fully responsible for the design and its satisfactory performance in service. Approval by BCMM shall not relieve the supplier of the responsibility for the adequacy of the design.

2.2.2 In accordance with SANS 780 and SANS 60076-11, the following construction details shall be applicable:

- a) Transformers shall have bolted lids;
- b) Robust oil level indicators (glass, not Perspex) are required;
- c) Drain valves are not required;
- d) Transformers shall be provided with wheels for increased mobility.

2.2.3 All transformers shall be three phase with a Dyn 11 vector group.

2.2.4 The MV nominal voltage shall be 6,6/11 kV (dual ratio) and 11 kV (single ratio). The rated voltage ( $U_m$ ) of the transformer shall be 7,2 kV and 12 kV for 6,6 kV and 11 kV systems respectively. The transformer shall be capable of operating continuously at  $U_m$  without loss of life due to over-fluxing of the core.

2.2.5 The rated impulse voltage withstand level (BIL), and the rated short-duration power frequency withstand rms voltage (1 minute) of the transformer (including cable termination enclosures) shall be as specified in Table 1 below.

Rated voltage(kV rms)	BIL (kV peak)	Rated short-duration power frequency withstand rms. voltage (kV rms – 1 minute)
12 or 7,2	95	28
0,415	30	8

*Table 1: Rated insulation levels*

2.2.6 All oil immersed transformers shall be supplied filled with new insulating oil complying with SANS 555. The oil level must be at least 150 mm above any live part.

2.2.7 All transformers shall be supplied with a self-adhesive temperature rise thermal indicator sticker complying with CP\_TSSPEC\_081 which shall indicate any overloading that occurs. The sticker shall be situated alongside the tap-changer and shall change colour if the tank temperature exceeds 88

2.2.8 All neutral conductors within the transformer shall have the same cross-sectional area as the phase conductors and in addition shall be rated to carry the full phase current continuously.

2.2.9 The final colour of the transformers shall be Avocado Green (C12 of SANS 1091).

2.2.10 Any transformer faults occurring within the first 12 (twelve) months of a transformer being put into service, and that cannot be explained adequately by BCMM personnel will be referred to the supplier. Such faults must be investigated by the supplier and a detailed written report submitted to BCMM within one month of the supplier being notified of the fault.

2.2.11 The distribution transformers covered by this specification are required to be installed in chambers with access openings of limited dimensions. The orientation and dimensions of all transformers covered by this specification shall be designed such that any transformer can be rolled on its wheels into a chamber with a door width of 1,4 m without the need for removal of any part of the transformer. The transformer height shall not exceed 1,8 m and the length shall not exceed 2,0 m.

2.2.12 All windings (MV and LV) shall be copper. Aluminium windings shall not be accepted.

2.2.13 If an alternative to oil immersed distribution transformers is to be provided, (e.g. Dry type distribution transformers), all data sheets and type test reports are to be submitted as per SANS 60076-11.

### **2.3 MAIN CONTROL PANEL**

Fault Level:

35 kA

Earthing:

Earth bar (of suitable size), gland plate and structure to be bonded with 70 mm<sup>2</sup> (minimum) stranded earth wire, which is to be connected to a separate earth electrode system to be installed adjacent to the Main Electrical Building.

Labels:

Engraved ivory for panel name, incomer name and for the name of each designated feeder circuit, with a minimum letter height of 20 mm.

Fascia Panel:

Cut outs to be provided to suit all switchgear. Fascia panels of each section to be removable to allow access to switchgear, gland plate and associated wiring. All fascia panels to be fixed using captive fasteners; no self-tapping screws or dome nuts are permitted. All fascia panels to be fitted with approved handles to facilitate removal.

Surge Protection:

Three phase and neutral on main incoming circuit.

Voltage Protection:

Under- and over-voltage required on main incoming circuit.

Phase Protection:

Phase Failure / Phase Imbalance required on main incoming circuit, as per Amatola Water Specification.

Telemetry:

All connections to the telemetry and telecontrol equipment shall be made from terminal blocks located in the lower terminal compartment of the panel, which the switchboard manufacturer shall provide and integrate within the internal panel wiring.

Equipment:

All connections to the electrical motors and the associated control equipment shall be made from terminal blocks located in the lower terminal compartment of the panel, which the switchboard manufacturer shall provide and integrate within the internal panel wiring. Connected by means of 4 core Cu PVC SWA ECC PVC cables, with stranded conductors

Instrumentation:

The main incoming electricity supply to be equipped with:

- 1) Control display providing the following measurements:
  - o Voltage (phase to phase and phase to neutral),
  - o Current,
  - o Power factor,
  - o Frequency,
  - o Power (kW, kVA, kVA<sub>r</sub>).
- 2) Each outgoing panel to be equipped with:
  - o Auto / Off / Manual three position selector switch, that will enable the pumping operation to be selected for the following operation sequences, namely :-
  - o Off: The off selection shall prevent the operation of the pump, and shall be used for maintenance and testing purposes;
  - o Manual : The manual selection shall enable the operator to start and stop the motor pump set, with overload protection;
  - o Auto: The auto selection shall be supplied for starting and stopping the pump with the Ball Float switch;
  - o Start (green) / Stop (black) push buttons;
  - o Hour run meter.
  - o Remote (SCADA): Remote selection shall enable the operator to start and stop the motor pump set via the telemetry/SCADA.

- 2) Control display providing the following measurements:
  - Voltage (phase to phase and phase to neutral),
  - Current,
  - Power factor,
  - Frequency,
  - Power (kW, kVA, kVA<sub>r</sub>),
  - Three-digit LED display of motor speed (%).
  - All above signals to be reflected on an HMI interface.
- 3) LED pilot light indicators for:
  - Motor off: white,
  - Motor run: green,
  - Motor stop: orange,
  - Motor trip: red.
- 4) Twist-to-release lock emergency stop push button (over and above the twist-to-release lock emergency stop positioned at a suitable position at the motor),
- 5) Overload, high / low voltage, loss of phase discrimination motor protection.
- 6) Voltage Protection, Under- and over-voltage required on main incoming circuit, as per Amatola Water Specification.
- 7) Phase Protection: Phase Failure / Phase Imbalance required on main incoming circuit, as per Amatola Water Specification.
- 8) Motor heater controls during standing periods when the motor is switched off, and Motor temperature protection tripping circuits.
- 9) Proposed Switchgear layout:

Refer to Engineer drawings.

## **2.4 ELECTRICAL EQUIPMENT**

All equipment and fittings supplied must be in accordance with the quality specification suitable for the relevant supply voltage and frequency and must be approved by the ENGINEER.

## **2.5 DRAWINGS**

The drawings generally show the scope and extent of the proposed work and shall not be held as showing every minute detail of the work to be executed.

The position of power points, switches and light points that may be influenced by built-in furniture must be established on site, prior to these items being built in.

## **2.6 BALANCING OF THE LOAD**

The Electrical Contractor is required to balance the load as equally as possible over the multiphase supply.

## **2.7 SUPERVISION**

The work shall at all times, for the duration of the contract be carried out under the supervision of a skilled and competent representative of the contractor, who will be able and authorised to receive and carry out instructions on behalf of the contractor. A sufficient number of workmen shall be employed at all times to ensure satisfactory progress of the work.

## **2.8 SUPPLY OF MATERIAL**

The Client/ Employer reserves the right to supply any item of material or equipment required for this service. The contractor shall take delivery and install such material or equipment.

## **2.9 SERVICE CONDITIONS**

All plant shall be designed for the climatic conditions appertaining to the service.

### **2.10 EARTHING AND BONDING**

The Contractor will be responsible for all earthing and bonding of the building and installation; the Earthing and Bonding is to be carried out strictly as described under

### **2.11 MAINTENANCE OF ELECTRICAL SUPPLY**

All interruptions of the electrical supply that may be necessary for the execution of the work will be subject to prior arrangement between the Contractor and the client's representative.

### **2.12 SUPPLY AND CONNECTION**

The supply will be at 11000/400/230 Volts 50 Hz.

### **2.13 CONDUIT AND WIRING**

Conduit and conduit accessories shall be stainless steel/stainless steel screwed conduit or epoxy/galvanised plain end conduit in accordance with SABS 162, 763 and 1007 respectively. All conduits, regardless of the system employed, shall be installed strictly as described in the applicable paragraphs of technical specification of the specification. Wiring of the installation shall be carried out as directed in technical specification of this specification.

### **2.14 PREMISES IN OCCUPATION**

Should the premises be occupied during the contract, the contractor shall make every endeavour to cause as little discomfort or inconvenience as possible. He shall further ensure that the occupants are notified timeously regarding any disruption, and that sufficient power points and or lights are in working order to enable the occupants to proceed in an as normal manner as possible.

### **2.15 MAKING GOOD**

The successful tenderer will be responsible for making good in all trades of any damage to buildings, ceilings, walls or other services which he or his employees may have incurred during construction of the work.

The contractor will be responsible for keeping the site clean and tidy and shall remove all litter and rubbish resulting from the construction of electrical works.

### **2.16 QUALITY CONTROL OF MATERIAL**

All materials shall be the best of their respective kinds described in the specification and shall in every way be suitable for the purpose for which they are intended to be used.

All materials and equipment supplied shall fully comply with the requirements laid down in this specification and the latest editions of the relevant SABS, BS, IEEE, CCITT, EIA, ISO and DIN specifications or as otherwise specified.

Any item not complying with the following shall be substituted with an approved new component at no cost to the Employer, the acceptance or rejection of such work being determined by the Engineer.

The contractor shall maintain adequate and effective quality control standards while manufacturing or installing of the specified equipment.

The Engineer shall have the prerogative of inspecting the equipment in the contractor's factory or on site, or to call for manufacturer's test certificates of such equipment at any reasonable time. The Engineer shall check accuracy of dimensions, completeness, configuration, quality of workmanship, correct identification, proper use of and type of materials, equipment used and finishes to equipment.

Samples of all equipment must be submitted for approval before installation is commenced.

Such approval shall not relieve the contractor of his responsibility for design, detail and dimension and shall in no way exonerate him from his liability to carry out the work in accordance with the terms of the contract and specification.

All such samples may be retained until completion of the contract. All such samples must have labels securely attached thereto designating the contract by name and number, the name of the contractor and any further relevant information.

## **2.17 WORKMANSHIP**

The contractor shall only employ competent Engineers, Technicians and Artisans to erect the installation on site.

The contract shall be executed with the best workmanship in a workmanlike manner to the satisfaction of the Engineer.

The contractor must maintain a high quality of workmanship and the Engineer shall be in full control to determine whether the installation or individual portions thereof are acceptable or not.

The contractor shall be informed in writing should the equipment or workmanship not be to the satisfaction of the Engineer and thus not acceptable. In such a case the contractor shall replace the equipment and/or perform the remedial work immediately at the cost of the contractor. All rejected material shall be removed from site.

The Engineer may upon request of the contractor visit existing installations or prototype assemblies in the factory to determine that the workmanship are of the required standard.

The contractor shall be held liable for all damage to other services and if such damage is not repaired to the satisfaction of the Engineer within a reasonable period the Engineer shall be entitled to appoint another contractor to repair such damage and debit the account of the contractor.

### 3. EMERGENCY STANDBY GENERATOR

#### 3.1 General

Supply, deliver, install, commission, test and maintain a self-contained weatherproof 3CR12 emergency generating set at Dimbaza Water Treatment Works.

The set must be installed next the existing Main LV Room. New concrete plinth shall be constructed by a building sub-contractor.

#### 3.2 Output And Voltage

After the de-rating factors for the engine and generator due to site conditions have been taken into account, the set must have a site output and voltage as follows: -

No load voltage	:	400/230 Volt
Rating	:	350kVA
Power at 0,8 power factor	:	280kW
Frequency	:	50Hz
Fault Level	:	5kA

#### 3.3 Switchboard/Control Panel Unit

All switch- and control gear shall be rated for a fault current level of 5kA.

The switchboard/control panel unit shall be incorporated into the generator weatherproof housing.

The generator shall feed the following circuits;

<b>Main LV Panel: Connected Electrical Loads</b>						
<b>Loads</b>	<b>Load (kW)</b>	<b>Duty (1)/ Standby (0)</b>	<b>Duty Loads (kW)</b>	<b>Starting+ Running</b>	<b>Starting+ Running (kW)</b>	
Aerator 1	45	1	45	4	180	
Aerator 2	45	1	45	1	45	
Aerator 3	45	0	0	0	0	
Aerator 4	45	0	0	0	0	
Aerator 5	45	0	0	0	0	
Aerator 6	45	0	0	0	0	
Clarifier 1	0,75	1	0,75	1	0,75	
Clarifier 2	0,75	0	0	0	0	
RAS Pumps	11	1	11	1	11	
RAS Pumps	11	0	0	0	0	
Waste Mix Lagoon Pump 1	7,5	1	7,5	1	7,5	
Waste Mix Lagoon Pump 2	7,5	0	0	0	0	
Effluent Re-use Pump 1	7,5	1	7,5	1	7,5	
Effluent Re-use Pump 2	7,5	0	0	0	0	
Inlet Works- Mechanical Screen	1,5	1	1,5	1	1,5	
Inlet Works- Lights and Plugs	4	1	4	1	4	
General Lights and Plugs	1,5	1	1,5	1	1,5	
Chlorination	4	1	4	1	4	



	334,5	127,75	262,75kW
Worse Case Loads: Duty Loads Running, plus Aerator 1 Starting using a Soft Starter (4 x running load)			262,75kW
Expected Running Loads for normal operations			127,75kW
Recommended Generator size			300kW
Power factor			0,85
Recommended Generator size			353kVA
Standard Size			<b>350kVA</b>

### 3.4 Cables

The contractor will be responsible for all electrical cable connections associated with the complete generating set installation.

The following cables will be supplied, installed and terminated at the Switchboard by others. Adequate provision shall be made for the termination of these cables at the Switchboard:

<u>DB fed</u>	<u>PVC PVC ECC PVC Cable</u>
DB-Gen-DB	150 mm <sup>2</sup> (2 in parallel)

### 3.5 Engine

A sump drainpipe must be fitted with a shut-off valve placed in a convenient position outside the base frame to facilitate drainage.

Recommended oil types must be indicated on the engine, or base frames, by means of suitable labels.

All engine instruments shall have clear markings on the faceplates, indicating the normal operating zone(s), maximum and minimum allowable values/limits and danger zone(s).

The flywheel shall be covered by approved hoods.

### 3.6 Alternator

The Alternator shall be of the low harmonic type.

### 3.7 Load Acceptance

The generator set shall be capable of accepting 75% of the specified site electrical output 10 seconds after the starter motor is energised and the remaining 25%, 5 seconds thereafter, i.e. 100% load acceptance shall not exceed 15 seconds.

### 3.8 Alarms

The successful tenderer must pay particular attention to the requirements of the alarms as described in the Equipment Requirements, Section 2.

One alarm hooter and red light shall be supplied and installed on the outside wall of the generator room in the position as shown on the drawing in this specification.

The hooter shall consist of an electronic unit similar and equal to a "Klaxon" - type SY2/725 hooter with a continuously rated output and 110 dB at a distance of 2 metres and shall be IP55 weatherproof rated.

The warning light shall consist of a 40W flashing red light, which shall be mounted on a galvanised steel frame together with the hooter.

The hooter and light shall be switched on or off simultaneously after initiation or cancellation of an alarm condition. The supply and installation of the wiring between the control board and the alarm unit forms part of this contract.

The successful tenderer must ensure that the hooter control circuit resets automatically after cancellation due to a low fuel condition or battery charger failure, but the visible fault indication must remain, i.e., should the operator continue to run the set, the hooter must sound, should any other condition develop.

A remote alarm panel shall be supplied and installed by the contractor in the control room. This shall be of surface mounting, enamelled sheet metal (colour to approval), minimum depth construction, and shall incorporate a flashing red pilot alarm light, adjustable electronic sounder, and a silence push button. The silence button shall not switch off the pilot light - this shall only be switched off when the alarm is reset at the Generator Panel.

A 2,5mm<sup>2</sup> x 4-core PVC SWA PVC cable will be supplied, installed and terminated by others between the Generator Panel and the Charge Office. The Contractor shall connect this cable at both ends and shall supply and install all switch gear relays, etc. to ensure satisfactory operation of the Remote Alarm Panel.

### **3.9 Fuel Drip Tray**

A drip tray approximately 100mm deep shall be mounted below the fuel tank and must be large enough to collect any fuel that drips from the tank accessories. The drip tray shall be manufactured from black mild steel. The thickness of the drip tray sheet steel shall not be less than 2mm.

### **3.10 Fuel Supply Tank**

The fuel tank shall be a free-standing type, which shall be installed in the plant room. The tank shall have sufficient capacity for the generating set to run the engine on full load for a period of 12 hours.

A drip tray approximately 100mm deep shall be mounted below the fuel tank and must be large enough to collect any fuel that drips from the tank accessories. The drip shall be manufactured from black mild steel with a thickness of not less than 2mm.

## 4. ELECTRICAL SUPPLY

### 4.1 DEFINITIONS

The following words and expressions shall have the meanings assigned to them hereunder, except where the context otherwise requires:

Local Supply Authority :	BCMM
LV :	Low Voltage, i.e., 400/230V
MV :	Medium Voltage, i.e., 11,5kV or 11,0kV
Schedules :	The Schedules of quantities as included in the Specification.
Contract Works :	Electrical connection to Pump Stations
Site :	The area as identified on the locality plans

### 4.2 LAWS, BYE-LAWS, REGULATIONS, STANDARDS AND CODES

#### 4.2.1 Compliance

The Contractor shall be responsible to ensure that the Works comply in full with the requirements laid down by the following laws, regulations, standards and codes of which the latest issues and revisions shall apply:

- a) The Occupational Health and Safety Act, Act 85 of 1993
- b) Code of Practice for the Wiring of Premises, SANS 10142: 1993
- c) The Regulations of the Local Supply Authority.
- d) The Regulations of Telkom SA.
- e) The Standard Regulations of any Government Department or Public Service Company where applicable.
- f) Specifications and codes by the South African Bureau for Standards where applicable.
- g) The technical guidelines and/or technical specifications as issued by the relevant Local Supply Authority and applicable to electrical installations within the Local Supply Authority's area of jurisdiction.

#### 4.2.2 Notices and Fees

The Contractor shall complete and submit all notices and pay all the fees in respect of the Works as may be required by the Local Authority and the Local Supply Authority, except for the electricity connection cost which will be paid by the Employer directly to the Local Supply Authority or via the Contractor if indicated in the Schedule of Quantities.

#### 4.2.3 Exemption

The Contractor shall exempt the Employer from all liabilities, losses, costs or expenditure which may arise as a result of the Contractor's negligence to comply with the requirements of the laws, by-laws, regulations, standards and codes specified above.

#### 4.2.4 Contradictions

It is assumed that the Contractor is conversant with the above-mentioned laws, regulations, standards and codes. Should any law or regulation contradicting the requirements of this Specification apply or become applicable during construction of the Works, such law or regulation shall overrule the requirements of this Specification. The Contractor shall immediately inform the Engineer of such a contradiction, if possible, prior to the ordering of any materials affected and prior to the execution of any work affected. Under no

circumstances shall the Contractor carry out any variations to the Works in terms of such contradictions without first obtaining the written permission to do so from the Engineer.

### **4.3 OPERATION AND MAINTENANCE DOCUMENTATION**

#### **4.3.1 Record drawings**

During the construction of the Works, the Contractor shall record the as built conditions on a set of drawings to be supplied by the Engineer for that purpose. On completion of the Contract Works, the Contractor shall submit a complete set of record drawings to the Engineer.

#### **ES1.3.2 Handing Over Certificate**

The submission of operation and maintenance documentation will form part of the Contract Works and the Handing Over Certificate will not be issued unless acceptable and complete documentation had been submitted to the Engineer.

### **4.4 REPAIRS AND CLEARING**

#### **4.4.1 Repair of Incidental Damage**

The Contractor shall be liable for the repair of any incidental damage caused by the Contractor or his personnel on Site. Such repairs shall be affected to the satisfaction of the Engineer and the Engineer reserves the right to call for the replacement of any items which are badly damaged. All such repairs and replacements shall be affected at the cost of the Contractor.

#### **4.4.2 Clearing**

On completion of the Contract Works, the Contractor shall clear away and remove from Site all excess materials and rubble resulting from the execution of the Contract. The Contractor shall further tidy and clean the Site to the satisfaction of the Engineer.

### **4.5 MATERIAL EQUIPMENT AND INSTALLATION**

### **4.6 QUALITY OF MATERIALS AND EQUIPMENT**

All material to be supplied in terms of this Contract shall be new and unused. Where specific manufacturers' materials or equipment were not prescribed in the Specification, materials and equipment supplied shall be of the best quality available. Preference shall be given to materials of South African manufacture and in particular to materials bearing the SABS mark of quality. The Engineer reserves the right to call for the replacement of any materials found on Site which do not conform with the above requirements, provided that alternative materials which do conform with the above requirements, are available. Any such replacements shall be effected by the Contractor at his own cost and the cost shall not be recoverable from the Employer or the Engineer.

### **4.7 DELIVERY OF MATERIALS AND EQUIPMENT**

The Contractor shall ensure that all materials required for the completion of the Works, shall be timeously ordered and delivered. Delivery dates and possible delays shall be established at an early stage. No claims for extension of the Contract period as a result of delays in delivery of materials shall be considered by the Engineer, unless such delivery periods are in excess of the Time for Completion.

### **4.8 FINISHES ON MATERIALS AND EQUIPMENT**

#### **4.8.1 General**

All materials and equipment to be supplied for the Works shall have durable finishes to withstand the weather conditions on Site for acceptable periods of time. The Contractor shall exercise care regarding materials to be utilised in corrosive areas.

The types of finishes required on various materials and equipment and the final colour are specified in the relevant sections of the Technical Specification.

In the event of painting, baked enamel and electrostatically applied powder coating, the metal surfaces shall be prepared as follows prior to painting. All sharp edges shall be smoothed and rounded to ensure that the finishing layer(s) will adhere properly to the entire metal surfaces. Surface preparation shall comply with the requirements of SABS 064. All metal parts shall be thoroughly cleaned of corrosion, millscale, grease and foreign matter to a continuous metal finish. Sand or shot blasting or acid pickling and washing shall be employed for this purpose.

## 4.9 OPERATING CONDITIONS

All material and equipment supplied by the Contractor and all installation methods applied by the Contractor shall be suitable for the following operating conditions:

### Electrical Conditions

Supply voltage	:	Medium Voltage (MV): 11 000V $\pm$ 6%
Low Voltage (LV)	:	400V $\pm$ 10% line voltage 230V $\pm$ 10% phase voltage
Frequency	:	50Hz
Vector Group	:	Dyn 11
Fault level	:	35kA
Phase rotation	:	to be confirmed with Local Supply Authority
Earth system	:	Solidly earthed neutral at distribution transformers

## 4.10 LOW VOLTAGE DISTRIBUTION CABLES

### 4.10.1 GENERAL

The Contractor shall supply and install the low voltage cables as detailed on the applicable construction drawing and as stated in the Schedule of Quantities.

All low voltage distribution cables shall conform with the following requirements:

Manufacturer	:	Aberdare or similar and equal
Type	:	PVC/PVC/SWA/PVC
Conductor material	:	Copper
Applicable specification:	:	SABS 1507-1990 (Cables shall bear the SABS mark of approval)

### 4.10.2 THROUGH JOINTS

Through joints shall typically be of the Scotchcast or Durocast resin type, or the Raychem heatshrink type, chosen and installed in accordance with the cable manufacturer's recommendations. The number of joints shall be kept to an absolute minimum and joints will only be allowed where cable runs exceed full drum lengths, unless otherwise authorised in writing by the Engineer.

Cable joints shall be marked on the kerb stones opposite the joints. In addition, the exact location of each joint shall be indicated on the record drawings, complete with dimensions from fixed reference points such as erf boundaries (in two directions).

### 4.10.3 TERMINATIONS

Cable terminations throughout the system shall follow the same phase rotation.

Suitable tinned lugs, terminals, and other fittings shall be used to match the different sizes and construction of cables. The correct type of crimping tools shall be used to crimp the lugs, terminals and other fittings onto the cores. Cable lugs shall be complete with a colour coded heat shrink covering. The lugs shall be installed directly onto the busbars, terminals or other fittings. Lugs shall be of the correct size to suit both the conductors and the bolts they have to be connected with. Oversize lugs will not be accepted. Suitably sized washers shall be installed on top of the lugs and split washers shall be used underneath nuts for all bolted terminations. Densal paste shall be applied at all terminations to prevent the ingress of moisture.

Conductor tails shall be of sufficient length to terminate the cable in a neat and workmanlike manner. Excess length of tails shall be removed. The tails shall be neatly bound together with PVC straps and secured where possible.

SABS approved type cable glands, complete with neoprene shrouds, shall be used wherever suitable gland plates are available for the securing of cables at termination points. Where suitable unistruts are available, suitable K-clamps shall be used to secure the cables. In the event that cable ends are exposed to the weather, such ends shall be sealed against the ingress of water. For cable glands

suitable inner seals will be acceptable. For non-cable gland terminations, suitable heat shrink cable end seals shall be provided.

All armouring at cable ends shall be suitably bonded to earth. In the event of cable glands, suitably sized earth tags shall be provided as an integral part of the glands. The earth tags shall be connected to the earth bar by means of a stranded copper earth conductor of the same cross-sectional area as the cable cores, or alternatively a cross-sectional area chosen in accordance with the requirements of the Wiring Code (SANS 10142).

The conductor shall be crimped into suitable lugs which shall be bolted onto the earth tag and the earth bar. In the event of K-clamps, one third of the armouring shall be twisted together and crimped into a suitable lug which shall be bolted onto the earth bar. Should the length of armouring be insufficient, the armouring shall be connected to a length of stranded copper earth conductor of a size as specified above for the cable gland and connected in a similar way. A suitable line tap shall be used to connect the armouring to the earth conductor.

At each cable termination the cable shall be provided with a label. The labels shall be of the Bowthorpe Hellerman or the stainless steel Dymotape type and shall be secured to the cables just underneath the glands or K-clamps by means of PVC strapping. The labels shall nevertheless always be visible and should the positions below the glands or K-clamps not be visible, the labels can be secured to the cable tails just above the glands or K-clamps. The labels shall indicate the following information:

- a) size of the cable
- b) conductor material of the cable
- c) identity of the equipment at the other end of the cable

A typical label shall read: "70mm<sup>2</sup>, CU to M1K7" (as applicable for the LV connection cable to each kiosk)

#### 4.10.4 INSTALLATION

Cables shall be handled and stored in accordance with the manufacturer's instructions and shall be installed in a workmanlike fashion and in accordance with generally accepted standards. Cables shall never be installed over any sharp edges without suitable protection for the cable against damage. Two or more cables installed next to each other shall be installed parallel and shall not cross each other unnecessarily. The cable installation shall further be planned in advance in order to minimize the number of times that cables installed parallel shall have to cross at turn off points. The distance between adjacent cables shall not be less than 2 x the diameter of the larger cable. No cable shall be bent to a radius of less than 10 x the overall diameter of such a cable in accordance with the requirements of the Wiring Code (SANS 10142:1993 Annexure J).

Cables installed into trenches shall be installed with the aid of suitable cable rollers to avoid damage to the cable due to the installation process.

A maximum of one distribution cable shall be installed through one cable sleeve. A maximum of two service connection and/or street-lighting cables shall be installed through one cable sleeve.

#### 4.10.5 PROTECTION OF CABLES INSTALLED UP POLES

Wherever a cable is installed on the surface up a wooden pole, the cable shall be installed in a kickpipe. Each cable shall be installed in a separate kickpipe of adequate diameter. The kickpipe shall consist of a 3m length of galvanised steel water pipe. The bottom end of the kickpipe shall be 500mm below the final ground level.

The kickpipe shall be secured to the pole by means of 12mm wide stainless-steel straps at regular intervals not exceeding 1,0m. The open end of the pipe shall be reamed and all burrs removed to prevent damage to the cable during installation.

From the top of the kickpipe to the cable termination point, the cable shall be secured to the pole by means of 12mm wide stainless-steel straps at regular intervals not exceeding 1,0m.

#### 4.11 INSPECTIONS, TESTING AND COMMISSIONING

##### 4.11.1 Inspections by the Engineer

a) Engineer's responsibility:

Inspections by the Engineer will take place on a sampling basis only. The Engineer is not responsible to ensure that the Contractor meets with the requirements of the Specification but will assist the Contractor in an effort to identify problem areas at an early stage. **At no time will an inspection by the Engineer alleviate the Contractor of his responsibility to provide the Employer with a Contract Works which conforms in all respects with the requirements of the Specification.**

b) At manufacturers' premises:

Wherever applicable, manufacturers shall inspect and test equipment and materials in accordance with the requirements of this Specification and the applicable SABS specifications. The Engineer shall have the right to attend such inspections and/or tests and shall therefore be given notice of such intended inspections and tests. Notice shall be in writing and shall reach the Engineer at least forty-eight (48) hours prior to the inspection or test time. The Engineer shall decide at his own discretion whether to attend the inspections or tests, or not.

Should the Engineer attend the inspections and or tests at the manufacturer's premises, such inspections shall be regarded as assistance only to the Contractor in an effort to identify any possible shortcoming at an early stage. The fact that the Engineer may attend the inspections or tests and approve the relevant equipment or materials at that stage, will in no way alleviate the Contractor of his responsibility to ensure that the equipment or materials meet with the requirements of the Specification.

c) On Site:

The Engineer will inspect the Contract Works as the work progresses. Typical unacceptable work will be identified, and the Contractor will be expected to rectify such work and to prevent the recurrence thereof.

d) Contractor to be liable for cost of aborted first Handing Over inspection by the Engineer:

Should the Engineer have been advised in writing by the Contractor of the completion of the Contract Works and then find during the first Handing Over inspection that the Contract Works are incomplete, the inspection will be aborted, and the Contractor shall have to arrange for a further inspection upon completion of the outstanding work. Furthermore, the Contractor will then be liable to pay the Engineer full professional fees on a time and cost basis for the time wasted during the aborted inspection. Should the Contractor fail to settle the Engineer's account, the Engineer reserves the right to issue a variation order on the Contract to omit an amount of money equal to the cost involved in which case the Engineer's account will be submitted to the Employer for settlement.

##### 4.11.2 Inspections by the Contractor

In terms of the Contract, the Contractor is responsible to ensure that the Contract Works conform with all the requirements of the Specification. To this effect, it is recommended that the Contractor shall inspect all materials and equipment prior to the installation thereof. In addition, the Contractor shall regularly inspect the Contract Works in order to ensure quality control.

Upon receipt of a written advice from the Contractor, requesting a first Take Over inspection, the Engineer will conduct an inspection in the presence of the Contractor or his representative and compile a fault list.

Upon receipt of a written advice from the Contractor that the remedial work has been completed and that a further Take Over inspection is requested, the Engineer will conduct a further inspection. Provided the Contract Works are acceptable, and all required documentation has been submitted, the Engineer shall then issue a Taking Over Certificate.

Upon receipt of a written advice from the Contractor that a Completion inspection is required on the expiry of the Defects Liability Period, the Engineer will arrange for a final inspection (if deemed necessary by the Engineer). Provided the Contract Works are acceptable, the Engineer shall then issue a Completion Certificate.

#### 4.11.3 Requirements for Testing

The Contractor shall provide, at his own cost, the tools, instruments, equipment and consumables necessary for the performance of the tests as required. The Contractor shall further arrange for the tests to be performed at times suitable for the Engineer, the Local Supply Authority and the Employer. The Contractor shall perform the tests in the presence of and to the satisfaction of the parties represented.

In general, the following tests shall be performed:

- a) Phase Identification and Rotation: All overhead networks the correct phase order and rotation at terminal connections. Phase order and rotation of new installations shall match that of existing installations.
- b) Pressure Tests on LV Cables and Overhead Bundle Conductors: LV cables and bundle conductors shall be subjected to 1000V pressure test. The insulation resistance shall be noted.
- c) Pressure Tests on MV Cables and Overhead Bundle Conductors: MV cable and bundle conductors shall be subjected to 15-minute DC pressure test between the conductors and the shield of 18kV. All equipment shall be isolated before the test and reconnected after the tests. The leakage current shall be noted.
- d) Continuity Tests: All cores of cables and bundle conductors shall be tested for continuity with a resistance tester. The resistance shall be noted.
- e) Earth Resistance Tests: The earth resistance of each earth installation shall be tested with an earth resistance meter. The earth resistance shall be noted. Earth resistance measurements shall be taken in at least two directions at 90° to each other and not directly above the earth conductors.

After the successful completion of the tests, the Contractor shall issue the necessary certificates and submit same to the Engineer. In the case of the certificate of compliance by installation electricians which shall be issued in terms of the Act on Occupational Health and Safety, the original of the certificate shall be submitted to the Local Supply Authority and a copy to the Engineer.

#### 4.11.4 Commissioning

The Contractor shall commission the Contract Works upon approval thereof by both the Engineer and the Local Authority, after which the Taking Over of the Contract Works will take place.

The Contractor shall provide a generator for testing and commissioning of the streetlight installation.

#### 4.11.5 Testing and Commissioning Documentation

The Contractor shall hand over the original copies of the required test certificates to the Engineer on completion of the project regarding the following:

- a) Test certificates with the results of insulation tests on LV cables.
- b) Original certificate of compliance (COC) for the LV installation.



- c) Testing and commissioning sheets.
- d) Record drawings and documentation.

#### **4.12 TRAINING OF PERSONNEL**

During the commissioning of the pump stations, the Contractor shall train appointed personnel of the Employer in the operation of the pump stations and control systems. For this purpose, the draft operation and maintenance manuals shall be made available to such personnel for study. The training of personnel shall be to the satisfaction of the Engineer.

#### **4.13 CERTIFICATE OF COMPLETION**

The Contract Works will only be considered to be completed, and the Certificate of Completion will only be issued when all of the following conditions have been met:

- The Contract Works have been successfully tested and commissioned.
- The record drawings have been provided.
- The operation and maintenance manuals have been provided.
- The Site has been cleared and tidied to the satisfaction of the Engineer.
- All other conditions of the Specifications have been met.

#### **4.14 QUALITY ASSURANCE**

The Contractor shall be responsible for ensuring that the performance of the pumps is in accordance with the Specifications.

The governing standards for the entire installation shall be those stated by the South African laws and regulations and the latest SABS standards.

In the absence of SABS standards, the relevant BS, DIN, Japanese or American standards will suffice.

Where foreign countries' standards are quoted in the Specifications, the equivalent standard from any country can be used provided that the Contractor can satisfy the Engineer that the standard is equal to the standard specified.

The static equipment offered shall have a lifespan of 40 years and particular attention shall be given to the internal pipe corrosion aspect i.e. galvanising.

The dynamic equipment shall have a lifespan of 40 000 hours and particular attention shall be given to the pump and motor bearings and seals, as well as the motor starter contacts and control relays.

The orders for the pumps and motors, valves and the electrical control panel shall be approved by the Engineer before they are issued to the subcontractor/supplier by the Contractor.

Workshop drawings for manufactured items i.e. the pipe work and the control panel shall be approved by the Engineer before manufacture commences.

All equipment brought out by the Contractor shall be inspected for compliance with the order and the Specifications at the supplier/manufacturer before delivery to Site.

## **C3.5: BUFFALO METRO MUNICIPALITY: STANDARD SPECIFICATIONS GUIDELINES FOR PUMP STATIONS SPECIFICATIONS**

### CIVILS

#### Pump Station Sumps and Buildings

##### Emergency Storage

- A minimum emergency sump storage capacity representing a capacity equivalent to 4 hours flow at the average flow rate should be provided over and above the capacity available in the sump at normal top water level (i.e. the level at which the duty pump cuts in)
- Additional 24-hour open or closed emergency storage to be provided depending on the pump station location and subject to special consideration in consultation with the local authority concerned
- This provision applies only to pump stations serving not more than 250 dwelling units
- For pump stations serving larger numbers of dwelling units the sump capacity should be subject to special consideration in consultation with the local authority concerned
- Emergency storage capacity should be subject to location (e.g. near rivers, streams and beaches)
- Emergency storage may be provided inside or outside the pump station.

##### Sizing

In all pump stations sumps should be so sized and pump operating controls so placed as to restrict pump starts to a maximum of six per hour

##### Flooding

Care should be taken in the design of pump station to avoid flooding of dry well and/or electrical installation by storm water or infiltration

##### Screens

Adequate protection, where necessary, in the form of screens or mechanical screens, should be provided at the inlets to the pump station for the protection of the pumping equipment.

##### Submersible Pumps Installation

- Lockable cast iron or galvanized inspection covers and frames to be used.
- High security locking mechanisms to be used.
- Inspection covers should have lifting handles and locking bars.
- Inspection covers to be positioned in a way to allow for easy access to pumps and couplings.
- Overflow pipe to cope with peak incoming flow (minimum diameter of 150 mm)
- An overflow pipe to be fitted with a T piece at the mouth and baffle plates to prevent solids passing through the overflow pipe in the event of an overflow.
- Overflow pipes to be fitted with a hinged gate or a goose neck at the outlet in order to prevent venting from the sump

##### Valve Chambers

- The layout of the valve chamber should be to allow easy access to individuals, items of equipment, without obstruction by valves and pipe work
- Valve chambers to have a drainpipe Note: Not to discharge back into the sump
- Lockable cast iron or galvanized lids and frames to be used.
- High security locking mechanisms to be used.
- Inspection covers to be positioned in such a way to allow for easy access to valves and pipe work.
- Water points to be supplied inside the valve chamber.

## Dry Well Pump Installation

- Pumps, motors and valves to be positioned to allow for maintenance work and removal
- Pumps and motors to be mounted on a plinth with a minimum height of 200 mm above floor level
- Sump pump to be installed with an independent float switch and power supply
- A liquid level control monitor to be installed 100 mm above floor level (Detects water in dry well and shuts all pumps down)
- Liquid level control unit to be linked to the telemetry in order to generate an overflow alarm
- Crawl beams must be positioned in such a way as to maximize access to pumps, motors and valves
- Pipe work to be colour coded as per S.A.B.S standards
- Mechanical equipment to meet all the above-mentioned standards and regulations
- Pump house to have good lighting inside.
- Extractor fans to be installed in the dry well, screening chamber and control room
- A water point to be provided inside the dry well for mechanical seal flushes (Water pressure to accede mechanical seal stuffing box pressure by 10 %)
- Pump Station inlet to be screened.
- Overflow pipe to cope with peak incoming flow (minimum diameter of 150 mm)
- Overflow pipe to be fitted with a T piece at the mouth and baffle plates to prevent solids passing through the overflow pipe in the event of an overflow
- Overflow pipes to be fitted with a hinged gate or a goose neck at the outlet in order to prevent venting from the sump
- Where it is known that the pump station will operate under corrosive conditions then electrical panel to be housed in a separate sealed room

## Flow Meter Chambers

- The layout of the meter chamber should be such as to allow easy access to individuals and items of equipment, without obstruction.
- Lockable cast iron or galvanized lids and frames to be used.
- High security locking mechanisms to be used.
- Inspection covers to be positioned in such a way to allow for easy access to flow meter and pipe work

## Control Panel Cubical

- Cubical to accommodate the electrical pump control panel, telemetry control panel and flow meter interface
- Face bricks or clinker bricks to be used in the construction of a cubical incorporating a reinforced concrete roof
- Stainless steel or galvanized enclosures can also be used in the case of smaller control panels.
- Lockable galvanized doors and frames to be used.
- Stainless steel doors to be considered in very corrosive areas.
- High security locking mechanisms to be used.
- High voltage warning signs to be clearly displayed on pump station doors.
- Control panel and telemetry box to be positioned a minimum of 1 (one) meter above floor level
- The light switch must be positioned so that it is easily seen from the door and the bulkhead light must be mounted to give maximum light into the control panel
- Telemetry antenna bracket to be mounted on the side of cubical
- Allow for easy access to electrical control panel and telemetry.
- All electrical cables to run in PVC ducts.
- PVC cable duct to be used between control cubical and flow meter chamber.
- Pump and level control sensor cables to run in separate ducts
- Cable ducts should be sealed off once cables have been pulled through in order to prevent sewerage gases entering the cubical and damaging sensitive electronic components

## Silt-Traps

- Silt-Traps to be designed according to peak flow plus 35 %
- Position silt – trap in an easily accessible location
- Silt- Trap to have two separate chambers controlled by penstocks so one chamber can be isolated for maintenance and cleaning purposes
- Penstocks to be stainless steel (preferred) or galvanized.
- Inspection covers to be positioned in a way to allow for easy access to penstocks and chambers (maintenance and cleaning purposes)
- Lockable cast iron or galvanized lids and frames to be used.
- High security locking mechanisms to be used.

#### Security Gates and Fencing

- Concrete reinforced 1.8-meter palisade fencing to be used around pump station parameter (preferred)
- Reinforced concrete walling or galvanized palisade fencing can also be used
- Razor wire to be placed on top of the fencing (Depending on location)
- Gates to be a minimum of 3 meters wide by 1.8 meter high
- Double gates to be used.
- Gates to be galvanized.
- High security locking mechanisms to be used.
- Security lights to be installed at all pump stations with daylight sensors or remote control on / off switches
- Pepper spray security system to be installed inside a control panel cubical depending on location

#### Access Roads

All pump stations and silt-traps to have an access road constructed in such a way that the pump stations and silt-traps are accessible under all weather conditions

#### Safety precautions

All pump stations should be OHS and SABS compliant.

#### Ventilation

All sumps and dry wells should be adequately ventilated

#### Handrails

- Handrails should be provided to all landings and staircases and to the sides of open sumps and dry wells
- Handrails should be made out of stainless steel.
- Handrails to be compliant with OHS requirements.

#### Walking surfaces

Skid – proof surfaces should be provided to all steps and floors  
 Dry well pump station floors to be painted with an epoxy paint  
 The floors should be washable.

#### Access

The layout of the pumps, pipe work and equipment should be such as to allow easy access to individuals, items of equipment, without obstruction by pipe work

#### 4.14.1 PIPEWORK AND VALVES

## Pipework

- All pipe work in sumps and valve chambers have to be flanged and galvanized. (Note: all flange bolts have to be stainless steel)

### 4.14.2

#### 4.14.3 Rising Mains

- Pipe material and class to conform with SABS standards (Minimum - one and a half times the pumping pressure)

#### 4.14.4 Velocities

- The minimum velocity of flow in a rising main should be 0.7 meters per second
- The maximum velocity of flow in a rising main should be 2.5 meters per second

#### 4.14.5 Minimum diameter

- The minimum diameter of a rising main should be 100 mm except where a macerator system is used in which case the diameter can be reduced to 75 mm

#### 4.14.6 Gradient

- Wherever practicable rising mains should be graded so as to avoid the use of air and scour valves

#### 4.14.7 Stilling chambers

- Stilling chambers should be provided at the heads of all rising mains and should be so designed that the liquid level always remains above the level of the soffit of the rising main where it enters the chamber.
- Stilling chambers should preferably be ventilated.

## Installation options

#### 4.14.8 Stationary wet installation with a header coupling

- Flexible high pressure reinforced rubber hose to be used.
- Stainless steel hose clamps to be used.
- Suspension brackets and positioning chains to be stainless steel (preferable) or galvanized
- Ensure a good free passage beneath the suction elbow of the pump after installation at least the same as the suction diameter.
- Quick release couplings have to be galvanized or made out of stainless steel
- Ensure motor is adequately cooled. (Minimum level is 2/3 of the motor housing)

#### 4.14.9 Stationary wet installation with quick- release guide bar coupling type

- Guide rails and positioning brackets have to be made out of stainless steel and mounted within the well cover clearance.
- Guide rails and positioning brackets to be mounted with stainless steel bolts
- Both guide rails must stand vertical (maximum tolerance three degrees)
- Bottom elbow, rubber joint and coupling adaptor "duck foot couplings" have to be bolted on the sump floor and sump walls with stainless steel bolts.
- Ensure motor is adequately cooled. (Minimum level is 2/3 of the motor housing)

#### 4.14.10 Dry well installation

- A flexible coupling to be used between pump and motor assembly (The coupling type to be specified by the pump manufacturer)
- Pump and motor alignment to be done by means of laser
- All bolts used to be made from stainless steel.

- Type of installation depended on design / Vertical or Horizontal (Installation type to co-onsides with the pump and motor manufacturers specifications)

#### 4.14.11 Valves

- Non-return and gate valves to be used at all pump station installations.
- All pumps to have a separate non - return and gate valve
- Non-return valves, gate valves and air valves to be flanged to a table D or 10 depending on the diameter.
- All valves to be epoxy coated.
- Only flanged cast iron valves to be used.
- Stainless Steel bolts to be used

#### 4.14.12 Solenoid Valves

- Two-way normally closed, pilot operated, floating diaphragm valve to be used
- The valve body should be made from brass.
- Electrical wiring should conform to local authority's codes of practices and regulations

### **PUMPS**

- All pump stations should be provided with at least one standby pump of a capacity at least equal to the capacity of the largest duty pump
- The standby pump must come into operation automatically if a duty pump or its driving motor fails due to mechanical failure
- Pumps should be selected according to peak flow plus 15%

#### 4.14.13 Submersible Pumps

#### 4.14.14 Motors

To consist of the following:

- Thermo switches in motor windings
- Water detection in motor and oil housings
- Degree of protection - IP 68
- Insulation - Class F (155° c)

#### 4.14.15 Pump Materials – Construction

To consist of the following:

- Pump housing – Cast iron.
- Impellor – sg cast iron – Back vaned
- Bolts – Stainless steel (304)
- Shaft – Stainless steel (431) – Tapered.
- Cables – Neoprene HO 7 – 10 Meters (Min)
- Oil – Shell tellus 46 or approved
- Bearings – Heavy duty greased for life ZZC3 (SKF – FAG)
- Pump spares to be readily available.

### **Dry Well Mechanical Pumps**

#### 4.14.16 Pump

- Pump casing – Cast Iron
- Horizontal installation

- Impellor – Semi Enclosed cast iron / non-clogging or to suite
- Shaft – Stainless Steel – Tapered
- Bearings – Heavy duty ZZC3 (SKF – FAG)
- Mechanical Seals - Silicon Carbide / Silicon Carbide / Viton with Flush
- Pump spares to be readily available.
- Electromagnetic solenoid valves to control flush on mechanical seals.

#### 4.14.17 Motors

#### **4.15 Only totally enclosed fan cooled three phase induction motors to be used**

Three – phase induction motor T.E.F.C (Totally enclosed fan cooled)

##### **To consist of the following:**

- Thermistors
- Heater - 220 V separate terminals
- Cast Iron foot mount.
- Frequency – 50 Hz
- Voltage – 400 V
- Degree of protection - IP 55
- Insulation - Class F (155° c)
- Bearings D.E – Heavy duty NU–319-C3 (SKF – FAG)
- Bearings N.D.E – Heavy duty 6316-C3 (SKF – FAG)

#### 4.15.1 Sump pumps

#### **4.16 Dry single phase submerged pump to be used with level control float**

##### 4.16.1 Pump Technical Data

##### **To consist of the following:**

- Impellor - Stainless Steel / Semi Open
- External liner material - Stainless Steel
- Seal Cover Material - Stainless Steel
- Intake grid material - Stainless Steel
- Delivery Diameter - 50 mm (Minimum)
- Bearing Type - Shielded ball bearing
- Mechanical Seals - Double mechanical seal

##### 4.16.2 Motor Technical Data

##### To consist of the following:

- Type - Dry Submerged
- Poles - Two pole.
- Insulation Class - Class F (155° c)
- Degree of protection – IP 68
- Overload Protection - Thermal protection
- Shaft Material - Stainless Steel
- Cable Material - Neoprene (Minimum 10 meters)

##### Munchers / Macerator

- **Depending on the pump station location a muncher should be installed (e.g. low-cost housing)**
- Munchers should be sized according to the maximum flow into a pump station

- Muncher control panel to be separate from the main panel

#### 4.16.3 Mechanical Seals (Submersible pumps)

Pump (Wet side)

#### 4.17 Silicon Carbide / Silicon Carbide / Viton

Motor (Dry side)

Carbon / Ceramic / Nitrille

Preferred Type Burgmann MG 9

### **ELECTRICAL CONTROL PANELS**

#### 4.17.1 Submersible Pump Panel (See attached drawings)

The drawing is for star-delta starting, if the pumps are small or wired for direct online the additional components may be omitted.

The equipment inside the dotted line section, top left of drawing, must be housed in a separate wall mounted DB next to the control panel. The incoming MCB and the Pump Panel MCB are to be rated in accordance with the supply available and not less than 5kA.

A 15A switched socket outlet must be mounted on the wall in a suitable position.

The light switch must be positioned so that it easily seen from the door and the bulkhead light must be mounted to give maximum light into the control panel.

Security lights to be installed at all pump stations with daylight sensors or remote control on / off switches.

The bulkhead light fitting to be a 125-Watt halogen light, mounted on a pole giving maximum light around the pump station.

The other drawings show a proposed layout of the equipment. The inside view shows the components mounted and the slotted trunking. All wires to be numbered using the Le Grand CAB3 type markers as per the drawing and all control wiring ends to be fitted with bootlace ferrules. Motor circuit breakers, Q3 and Q4, to be "D" curve and incorporating 300mA earth leakage and an auxiliary contact.

Q1 to be a base mounted isolator with a door-interlocked handle.

F1, F2 and F3 should be a TP DIN fuse carrier with 10x38 2A cylindrical fuses.

LM is a line monitor and must operate on 400 Volts; a unit having an option of a three-minute delay after a fault is preferred.

The motor power leads that come into the panel must be fitted with lugs and the terminal blocks must be of a type that can accept these lugs. Control circuits can use standard stirrup type terminals.

The earth bar at the bottom of the panel must have enough ways to accommodate all the earth wires from the pumps as well as some spares. The bar must be wired back to the system earth using copper conductors.

The Endress + Hauser FMU 860 ultra-sonic level controller must be mounted on the panel door as shown.

Pump station control panels to be fitted with an external power point with two base mounted isolators (Standby Generator)

Three phase plug to be installed for electric hoist (Dry Well Installation)

Fire detection

In the case of a Dry Well Installation all of the above electrical requirements apply including an additional safety feature – Fire lock out.

In the case of a panel fire the board has to be automatically isolated by means of a smoke detector



If pump motors exceed 90 Kilowatts, fire protection should be installed in a control panel  
The following apply;

- The power circuit for each motor must operate independent from each other.
- Each power circuit should be insulated and monitored by a smoke sensor.
- In the event of an electrical fire the smoke detector will isolate the affected power circuit keeping the other circuit and pump operational
- Once the smoke detector has been triggered an alarm should be generated via the telemetry system

All electrical drawings to be supplied and displayed inside the control panel

#### Standby Generator

- **Depending on the pump station location and emergency storage requirements, a standby generator should be provided and be subject to special consideration in consultation with the local authority concerned.**
- Standby generator to be housed in a separate building.
- Standby generator to be rated according to full current requirements.
- Standby generator control panel to meet all above-mentioned electrical requirements.

#### SUMP LEVEL CONTROL

Pump Station levels should only be controlled with an ultrasonic level control unit.

Ultrasonic Level Controllers

Only 5 Relay Endress + Hauser ultrasonic controllers to be used (See Technical Data)

#### **Note:**

- Ultrasonic unit should be programmed to enable pumps to alternate
- Ultrasonic unit to be programmed that in the event of a power failure the overflow relay (normally relay 5) should latch out, generating an overflow alarm via the telemetry system
- Sensor head brackets should be made from stainless steel and bolted to the sump wall with stainless steel bolts

#### 4.17.2 ELECTROMAGNETIC FLOW MEASURING METER

**Pump Stations pumping more than 50 liters a second should be fitted with a flow meter**

**Only Endress + Hauser electromagnetic flow meter (promag) to be used (See Technical Data)**

#### **Note:**

- Flow meters have to be linked to the telemetry system in order to monitor flows.
- Flow meters to be installed with in a separate chamber from the pump station (See civil section)

#### TELEMETRY OUTSTATION SPECIFICATIONS

**All pump Stations to be equipped with a telemetry system that monitors the following:**

- Pump starts and stops.
- Pump trip and runs.
- Overflows (Alarms generated to be sent via SMS text to a designated cell phone)\*
- Failure in electrical supply
- Intruders (Telemetry control panel)
- Flow meter readings
- Hours pumped.
- Pump trends

(\* SMS text messages to consist of the pump station name and the date and time the alarm was generated)

#### 4.17.3 System Description and Requirements

**Pump Station Telemetry Outstation Consists of the following:**

- Tele – RANGER CPU
- 16 Digital Inputs
- 16 Digital Outputs
- 4 Analog Inputs (12 Bit)
- 4 Counter Inputs
- Telemetry Radio (25 Watt)
- Folded Dipole Antenna
- Galvanised Mast
- Wall Mounted Bracket
- Earth Kit
- Battery 12 Volt 18 a/h
- 6 Amp Charger
- Enclosure – Mega 6 (3CR12)

**4.18 Only Spectrum telemetry outstations to be used**

**Above mentioned system to be installed and connected to the electrical control panel and commissioned before handover (See attached drawing)**

### C3.5: BUFFALO METRO MUNICIPALITY: STANDARD SPECIFICATIONS:

#### Industrial Control Panel Specification

No.	Item	Specification	Rating	Make
1	Panel Enclosure	<p><b><u>1. Sheet Metal enclosure (RAL2000 Electric orange)</u></b>                      -Dimension ranges but not limited from ( 350x250x170 to 1150x850x330)                      -Supplied with internal white powder-coated chassis plate( 2mm thick)                      -Supplied with 6mm square drive, key lock and mounted brackets.</p>	IP65	EM
		<p><b><u>2. 3RC12 Stainless steel enclosure (RAL2000 Electric orange)</u></b>                      -Dimension ranges but not limited from ( 350x250x170 to 1150x850x330)                      -Supplied with internal white powder-coated chassis plate( 2mm thick)                      -Supplied with 6mm square drive, key lock and mounted brackets.</p>	IP65	EM
2	Switchgears	<p><b><u>1. Switch disconnectors</u></b>                      -Sizes are selected as per load specifications                      -Supplied with door interlock handles</p>	230v- 400v	Mitsubishi electric
		<p><b><u>2. On/OFF Isolators</u></b>                      -Sizes are selected as per load specifications                      -Supplied with padlockable handle</p>	230v- 400v	EM
		<p><b><u>3. Contactors</u></b>                      Sizes are selected as per load specifications                      Coupled with overload protection integrated with overload settings</p>	230v- 400v	Mitsubishi electric
		<p><b><u>4. Variable Speed control drive( VSDs)</u></b>                      -Sizes are selected as per load specifications                      -Supplied with external keypad with screen display used for setting parameters, control and monitoring)                      -Integrated with 4-20mA Signal for external motor speed control.</p>	400v	Mitsubishi electric

		<p><b>5. <u>Soft- Starters</u></b>  Sizes are selected as per load specifications  Integrated with touch screen display used for setting parameters, control and monitoring)</p>	400v	Mitsubishi electric
3	Controls & Metering	<p><b>1. <u>Push Button &amp; Selector Switches</u></b>  -LPC B103 Platinum series 22mm diameter  -Material resistant to oil, solvent and hydrocarbons  Can be used in extreme temperatures</p>	24v-230v	Lovato
		<p><b>2. <u>Signaling Pilot lamps</u></b>  LPM LB3 Monoblock LED lights, 22mm diameter  Material resistant to oil, solvent and hydrocarbons  Can be used in extreme temperatures</p>	24v	Lovato
		<p><b>3. <u>Signaling Pilot lamps</u></b>  -LPM LB4 Monoblock LED lights, 22mm diameter  -Material resistant to oil, solvent and hydrocarbons  can be used in extreme temperatures</p>	230v	Lovato
		<p><b>4. <u>Volts-Meter</u></b>  AC moving ion  Integrated with voltmeter selector switch</p>	230-400v	EM
		<p><b>5. <u>Ammeter</u></b>  -Sizes are selected as per load to be metered  -Wired direct to phase wire or through ring type current transformers</p>	IP67	EM
4	Relays ,Timers and monitoring devices	<p><b>1. <u>24v and 230v Relays</u></b>  -Plug-in relays and direct connection terminal base  -AC and DC coil voltages  -Lockable test / override button</p>	24v-230v	finder

		<p><b><u>2.Timers and counters</u></b>  Selection is always based on operation specification require  Direct connection terminal base and plug in module for easy replacement and maintenance</p>	24v-230v	Electro
		<p><b><u>2.Voltage monitoring</u></b>  -Under and over voltage monitor (safety feature)  -Monitors own supply ( phase to phase) protect 3 phase equipment in case of any changes in phase rotation and pre-determined voltage increased or drop  -Direct connection terminal base and plug in module for easy replacement and maintenance</p>	400v	Electro
		<p><b><u>4. Thermistor Protection Relay</u></b>  This device is used as safety feature to protect the motor in case of rising temperature of motor windings  -Direct connection terminal base and plug in module for easy replacement and maintenance</p>	230-400v	EM
		<p><b><u>5. Ammeter</u></b>  Sizes are selected as per load to be metered  wired direct to phase wire or through ring type current transformers</p>	IP67	EM
5	Panel Wires	<p><b><u>1. Red, White &amp; blue Panel wires</u></b>  Used for power circuit  Sizes are selected as per load to be supplied</p>	1000V	N&R
		<p><b><u>2. Grey and Black Panel wire</u></b>  1mm size panel wire  Grey is used for 230v Control circuit  Black is used for neutral</p>	1000V	N&R

		<b>3. <u>Orange and Purple Panel wire</u></b> 1mm size panel wire Orange is used for 24v Control circuit Purple is used for 0v	1000V	N&R
		<b>3. <u>Green/Yellow Panel wire</u></b> 1mm - 16mm size panel wire is used for earth and bonding purposes	1000V	N&R

**ANNEXURE A**

**SCHEDULES OF TECHNICAL INFORMATION  
Deisel Generator**

**1. Engine**

<b>NO</b>	<b>ITEM</b>	<b>REMARKS</b>
1.	Manufacturer's Name	
2.	Country of Origin	
3.	Manufacturer's model No. and year of manufacture	
4.	Continuous sea level rating after allowing for ancillary equipment : a) In b.h.p. b) In kW	
5.	Percentage de-rating for site conditions, in accordance with BS 551.4 a) For altitude b) For temperature c) For humidity d) Total de-rating	
6.	Net output on site in kW	
7.	Nominal speed in r.p.m.	
8.	Number of cylinders	
9.	Strokes per working cycle	
10.	Stroke in mm	
11.	Cylinder bore in mm	
12.	Swept volume in cm <sup>3</sup>	
13.	Mean piston speed in m/min	
14.	Compression ratio	
15.	Cyclic irregularity	
16.	Fuel consumption of the complete generating set on site in l/h of alternator output at : a) Full load b) ¾ load c) ½ load  NOTE :  A tolerance of 5% shall be allowed above the stated value of fuel consumption.	
17.	Make of fuel injection system.	
18.	Capacity of fuel tank in litres	
19.	Is gauge glass fitted to tank?	
20.	Is electric pump for filling the fuel tank included?	

NO	ITEM	REMARKS
21.	Method of starting	
22.	Voltage of starting system	

23.	Method of cooling	
24.	Type of radiator if water-cooled	
25.	Type of heater for warming cylinder heads	
26.	Capacity of heater in kW	
27.	Method of protection against high temperature	
28.	Method of protection against low oil pressure	
29.	Type of governor	
30.	Speed variation in % a. Temporary b. Permanent	
31.	Minimum time required for as assumption of full load in seconds	
32.	Recommended interval in running hours for : a. Lubricating oil change b. Oil filter element change c. Decarbonising	
33.	Type of base	
34.	Can plant be placed on solid concrete floor?	
35.	Are all accessories and ducts included?	
36.	Is engine naturally aspirated?	
37.	Are performance curves attached?	
38.	Diameter of exhaust pipe	
39.	Noise level in plant room in dBA	N/A
40.	Noise level at tail of exhaust pipe in dBA	
41.	BMEP (4 stroke) at continuous rating (kPa)	
42.	% Load acceptance to BS 5514, Part 4, with 10% transient speed drop	

2. Alternator

NO	ITEM	REMARKS
1.	Maker's name and model no.	
2.	Country of Origin and year of manufacture	
3.	Type of enclosure	
4.	Nominal speed in r.p.m.	
5.	Number of bearings	



NO	ITEM	REMARKS
6.	Terminal voltage	
7.	Sea level rating kVA at 0,8 power factor	
8.	De-rating for site conditions	
9.	Input required in kW	

10.	Method of excitation	
11.	Efficiency at 0,8 power factor and : a) Full load b) $\frac{3}{4}$ load c) $\frac{1}{2}$ load	
12.	Maximum permanent voltage variation in %	
13.	Transient voltage dip on full load	
14.	Voltage recovery on full load application in milli-seconds	
15.	Is alternator brushless?	
16.	Class of insulation of windings	
17.	Is alternator tropicalised?	
18.	Symmetrical short circuit current at terminals n Ampere	
19.	Type of Coupling	

### **3. Switchboard**

NO	ITEM	REMARKS
1.	Maker's Name	
2.	Country of Origin	
3.	Is board floor mounted?	
4.	Finish of board	
5.	Make of volt, amp, and frequency meters	
6.	Dial size of meters in mm	
7.	Scale range of voltmeter	
8.	Scale range of ammeters	
9.	Ration of current transformers	
10.	Make of hour meter	
11.	Range of cyclometer counter	
12.	Smallest unit shown on counter (Item 11)	
13.	Make of circuit breaker	
14.	Type of circuit breaker	
15.	Rating of circuit breaker in Amp and fault level in kA	

NO	ITEM	REMARKS
16.	Setting range of overload trips	
17.	Setting range of instantaneous trips	
18.	Make of change-over equipment	
19.	Make of voltage relay	
20.	Is control and protection equipment mounted on a small removable panel?	
21.	Type of control equipment	

22.	Make of mains isolator	
23.	Type of indicators for protective devices	
24.	Make of rectifier	
25.	Type of rectifier	
26.	Is battery charging	
27.	Are volt- and ammeters provided for charging circuit?	
28.	Is the alarm hooter of the continuous duty type?	
29.	Rating in Amps of : a. Change-over equipment b. Mains on load isolator c. By-pass switch d. Circuit breaker to outgoing feed	
30.	Is manufacture of switchboard/control panel to be sub-let?	
31.	If yes, state name and address of specialist manufacturer	

#### **4. Battery**

NO	ITEM	REMARKS
1.	Maker's Name	
2.	Country of Origin	
3.	Type of battery	
4.	Voltage of battery	
5.	Number of cells	
6.	Capacity in cold crank amp	

#### **5. Dimensions**

NO	ITEM	REMARKS
1.	Overall dimensions of set-in mm	
2.	Overall mass	



## ANNEXURE B

### SCHEDULE OF IMPORTED MATERIALS AND EQUIPMENT TO BE COMPLETED BY TENDERER

The Contractor shall list imported items, materials and/or equipment which shall be excluded from the Contact Price Adjustment Provisions and shall be adjusted in terms of currency fluctuations only. Copies of the supplier's quotations for the items, materials or equipment (not higher than the Contract rate as listed below) should be lodged with the Representative/Agent of the Department of Public works within 60 (sixty) days from the date of acceptance of the tenders. No adjustment of the contractor's profit, local VAT amount, discount, mark-up, handling costs, etc. shall be allowed.

ITEMS	MATERIAL / EQUIPMENT	RAND (R) EXCLUDING VAT
1		
2		
3		
4		
5		
6		

#### FORMULA:

The net amount to be added to or deducted from the contract sum:

$$A = V \times \frac{Z}{Y}$$

A = the amount (R) of adjustment

V = the net amount (R) (Supplier's Quotation) of the imported item  
(Material or Equipment)

Y = exchange rate at the closing date of tender submission

Z = exchange rate on the date of payment

## C4.3 – DRAWINGS



LEGEND				
No.	BLOCK NAME	FED FROM	CABLE SIZE	CABLE NO.
1	LV ROOM	LV ROOM	300mm single core	0
2	INLETS WORKS	LV ROOM	16mm x 2C	1
3	AERATOR MOTOR 1	LV ROOM	16mm x 4C	2
4	AERATOR MOTOR 2	LV ROOM	16mm x 4C	3
5	AERATOR MOTOR 3	LV ROOM	16mm x 4C	4
6	AERATOR MOTOR 4	LV ROOM	16mm x 4C	5
7	AERATOR MOTOR 5	LV ROOM	16mm x 4C	6
8	AERATOR MOTOR 6	LV ROOM	16mm x 4C	7
9	CLARIFIER 1	LV ROOM	2.5mm x 4C	8
10	CLARIFIER 2	LV ROOM	2.5mm x 4C	9
11	RAS PUMP ROOM	LV ROOM	4mm x 4C	10
12	RAS PUMP 1	LV ROOM	4mm x 4C	11
13	RAS PUMP 2	LV ROOM	4mm x 4C	12
12	CHLORINATION ROOM	LV ROOM	16mm x 2C	13
13	OFFICE & CONTROL	LV ROOM	16mm x 2C	14
14	ACCOMODATION	LV ROOM	-	15
15				

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NOTES


Rev	Dm	Date	Description

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Client



End User  
**BCM**

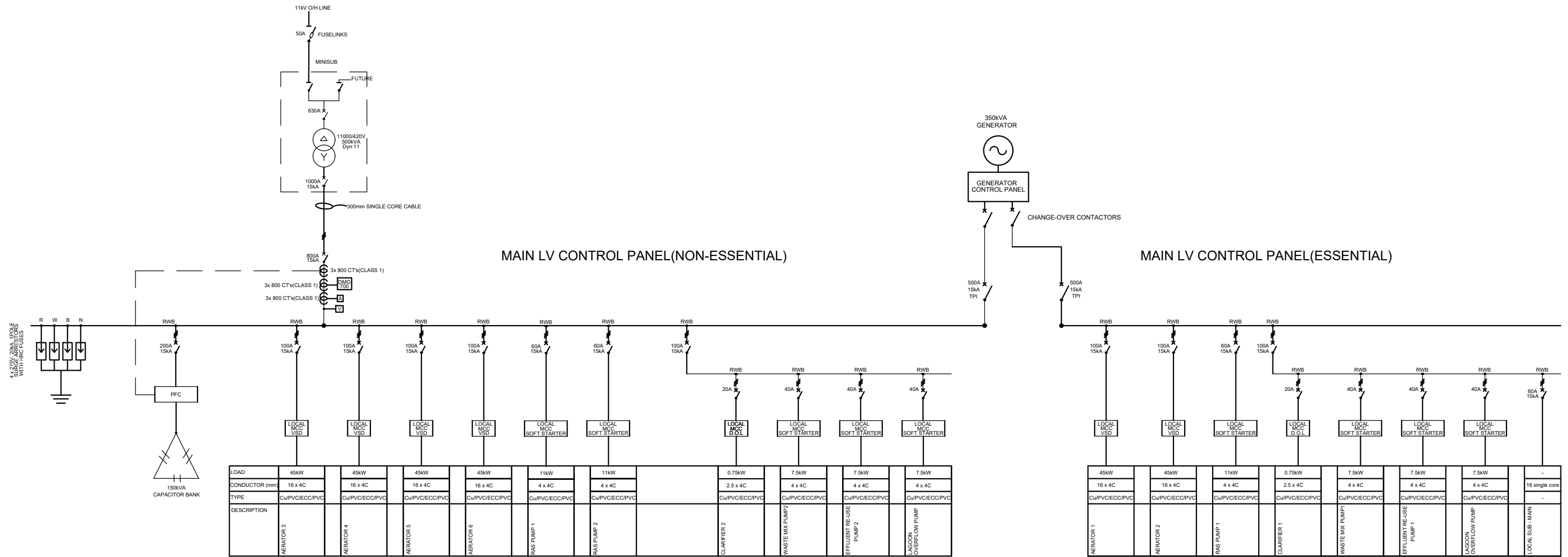
Project Name  
**DIMBAZA WASTE WATER TREATMENT WORKS**

Drawing Title  
**SITE PLAN: CABLE LAYOUT**

Discipline ELECTRICAL			
Drawing Originator GATYENI CONSULTING			
Checked By LG	Checked Date 13/05/2024	Drawn By NIB	Plot Date 13/05/2024
Approved By ECSA 200870255	Approval Date 2024/05/13	Scale 1:500	

CAD Reference  
C:\projects\gatyeni\4450\DWG\EL\JACONRE\w\XBN\KJ\FWA\Project\2022-106 Dimbaza WWTW\Wwmg\Dimbaza Site plan

Project No 2022-106	Type WD	Drawing No 2022-106-00	Revision
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Project Name  
DIMBAZA WATER WASTE TREATMENT WORKS

Drawing Title  
MAIN LV CONTROL PANEL:  
SCHEMATIC DIAGRAM

Rev	Date	Description
A	18/10/24	LV CONTROL PANEL GENERATOR SET POSITION EDITED
Discipline ELECTRICAL		
Drawing Originator GATYENI CONSULTING		

Checked By LG	Checked Date 18/10/2024	Drawn By Y.N	Drawn Date 18/10/2024
Approved By 200870255 ECSA	Approval Date 2024/10/18	Scale N.T.S	
CAD Reference G:\shortcut-targets-by-id\0BxiYE0JA2GNREswLXBndzJFNvkl\Projects\2022-106 Dimbaza WWT\drawings\Office control room			Paper Size A3
Project No 2022-106	Dicipline ELECT.	Type WD	Drawing No. 2022-106/SCH/01
			Revision A

General Notes

Colour Door architrave	Grey
Colour: Faceplate	Grey
Type	Flush
Doors	Lockable
Breakers	CBI
Contactors	Mitsubishi Electric
Colour: Faceplate	5kA

Cable No.	-
Conductor Type	Cu/PVC/ECC/PVC
Size (mm <sup>2</sup> )	16mm x 2C
Fed from	MAIN DISTRIBUTION BOARD
Ref. Drawing	-



CIRCUIT NO.	L1	P1	G1
NO. OUTLETS	4		1
CONDUCTOR (mm )			
EARTH			
DESCRIPTION	LIGHTS	16A SWITCHED SOCKETS	GEYSER

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Client



EASTERN CAPE  
DEVELOPMENT CORPORATION

Project Name  
DIMBAZA WATER WASTE TREATMENT WORKS

Drawing Title  
SDB OFFICE & CONTROL ROOM SCHEMATIC DIAGRAM

Rev	Date	Description
Discipline ELECTRICAL		
Drawing Originator GATYENI CONSULTING		

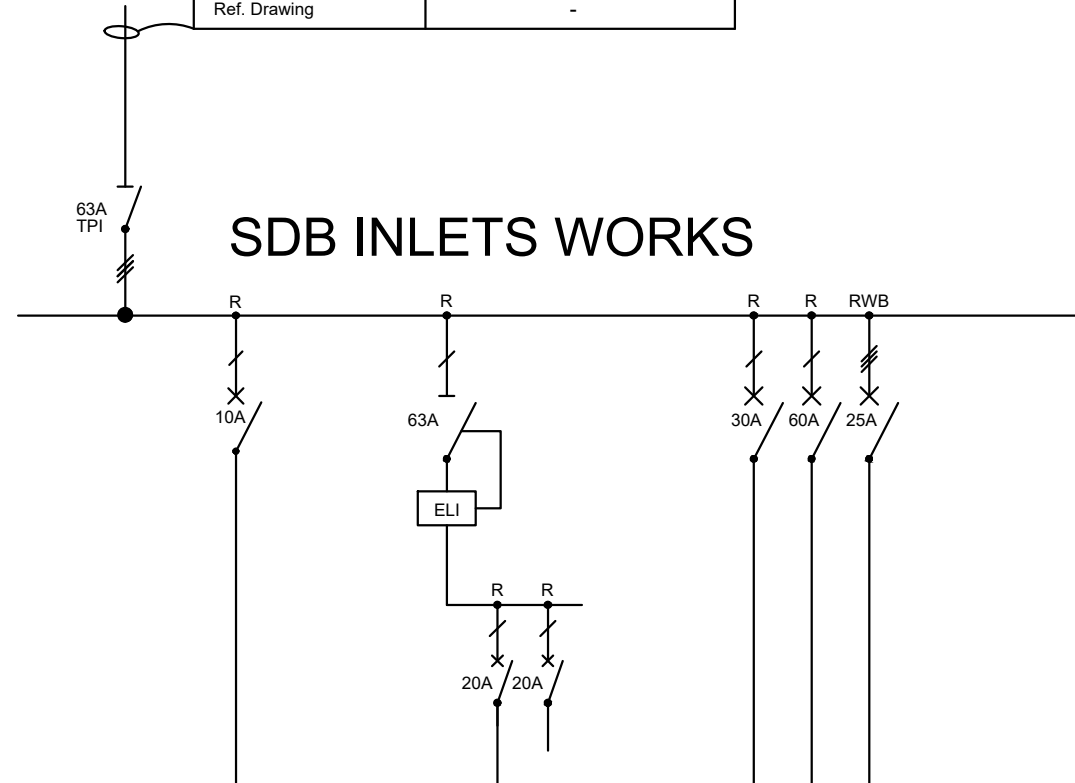
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Approved By	Approval Date 2024/05/09	Scale N.T.S	
CAD Reference G:\shortcut-targets-by-id\0Bxii\YE0JA2GNREswLXBndzJFNVk\Projects\2022-106 Dimbaza WWTW\drawings\Office control room			Paper Size A3
Project No 2022-106	Dicipline ELECT.	Type WD	Drawing No. 2022-106/SCH/02
			Revision . A



General Notes

Colour Door architrave	Grey
Colour: Faceplate	Grey
Type	Flush
Doors	Lockable
Breakers	CBi
Contactors	Mitsubishi Electric
Colour: Faceplate	5kA

Cable No.	-
Conductor Type	Cu/PVC/ECC/PVC
Size (mm <sup>2</sup> )	16mm x 4C
Fed from	MAIN DISTRIBUTION BOARD
Ref. Drawing	-



## SDB INLETS WORKS

CIRCUIT NO.	L1		P1		PP1	PP2	PP3
NO. OUTLETS							
CONDUCTOR (mm )							
EARTH							
DESCRIPTION	LIGHTS		16A SWITCHED SOCKETS		PUMP	FLATS	HUBER SCREEN

Consulting Engineers



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Client



EASTERN CAPE  
DEVELOPMENT CORPORATION

Project Name  
DIMBAZA WATER WASTE TREATMENT WORKS

Drawing Title  
SDB INLETS WORKS SCHEMATIC DIAGRAM

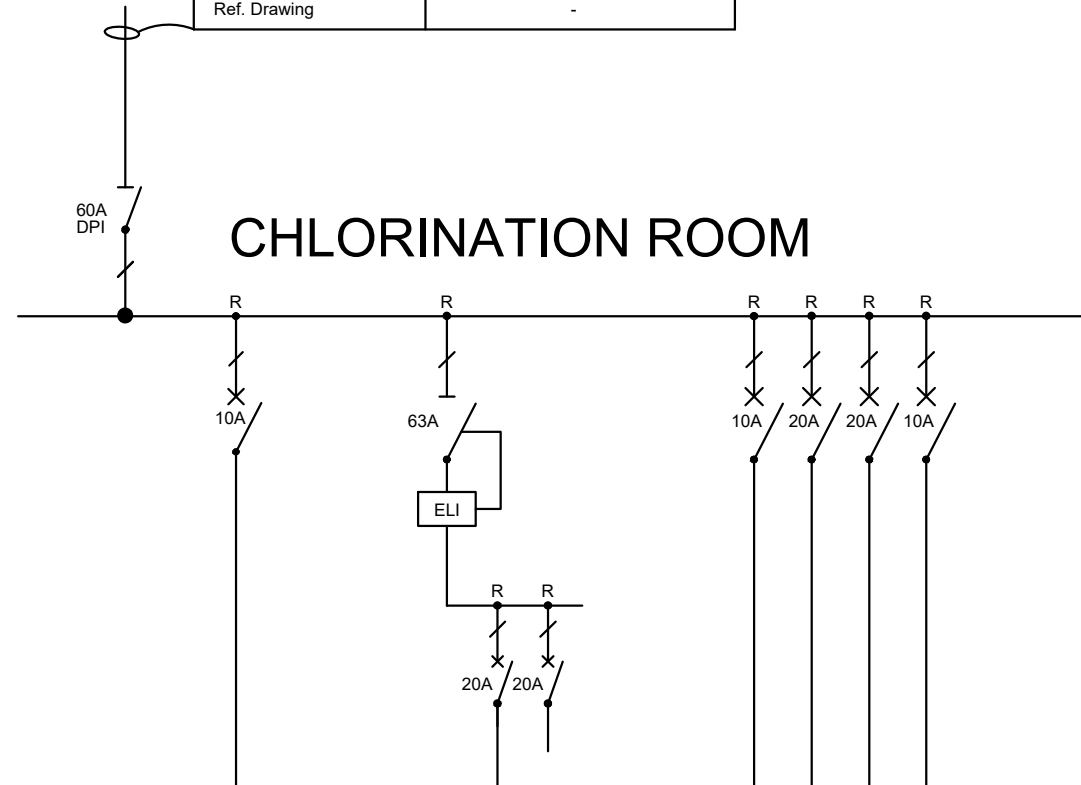
Rev	Date	Description
Discipline ELECTRICAL		
Drawing Originator GATYENI CONSULTING		

Checked By LG	Checked Date 09/05/2024	Drawn By Y.N	Drawn Date 09/05/2024
Approved By	Approval Date 2024/05/09	Scale N.T.S	
CAD Reference G:\shortcut-targets-by-id\0Bxii\YE0JA2GNREswLXBndzJFNVk\Projects\2022-106 Dimbaza WWTW\drawings\Office control room			Paper Size A3
Project No 2022-106	Dicipline ELECT.	Type WD	Drawing No. 2022-106/SCH/03
			Revision . A

General Notes

Colour Door architrave	Grey
Colour: Faceplate	Grey
Type	Weather proof
Doors	Lockable
Breakers	CBI
Contactor	Mitsubishi Electric
Colour: Faceplate	5kA

Cable No.	-
Conductor Type	Cu/PVC/ECC/PVC
Size (mm <sup>2</sup> )	16mm x 2C
Fed from	MAIN DISTRIBUTION BOARD
Ref. Drawing	-



CIRCUIT NO.	L1	P1	PP1	PP2	PP3	PP4
NO. OUTLETS						
CONDUCTOR (mm )						
EARTH						
DESCRIPTION	LIGHTS	16A SWITCHED SOCKETS	POWER POINT1	POWER POINT2	POWER POINT3	POWER POINT4

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EASTERN CAPE  
DEVELOPMENT CORPORATION

Project Name  
DIMBAZA WATER WASTE TREATMENT WORKS

Drawing Title  
SDB CHLORINATION ROOM:  
SCHEMATIC DIAGRAM

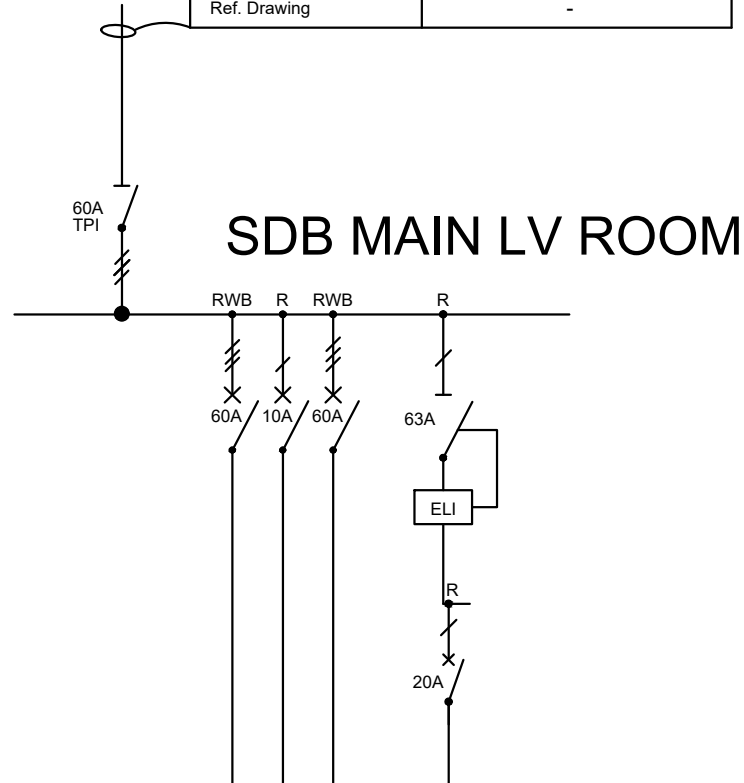
Rev	Date	Description
Discipline ELECTRICAL		
Drawing Originator GATYENI CONSULTING		

Checked By LG	Checked Date 09/05/2024	Drawn By Y.N	Drawn Date 09/05/2024
Approved By ECSA 200870255	Approval Date 2024/05/09	Scale N.T.S	
CAD Reference G:\shortcut-targets-by-id\0BxiiYE0JA2GNREswLXBndzJFNVk\Projects\2022-106 Dimbaza WWTW\drawings\Office control room			Paper Size A3
Project No 2022-106	Dicipline ELECT.	Type WD	Drawing No. 2022-106/SCH/04
			Revision A

General Notes

Colour Door architrave	Grey
Colour: Faceplate	Grey
Type	Flush
Doors	Lockable
Breakers	CBI
Contactor	Mitsubishi Electric
Colour: Faceplate	5kA

Cable No.	-
Conductor Type	Cu/PVC
Size (mm <sup>2</sup> )	4 x 16mm x single core
Fed from	LOCAL SUB-MAIN (MAIN LV PANEL)
Ref. Drawing	-



CIRCUIT NO.				P1
NO. OUTLETS				
CONDUCTOR (mm )				
EARTH				
DESCRIPTION	POWER POINT1	POWER POINT2	POWER POINT3	16A SWITCHED SOCKETS

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EASTERN CAPE  
DEVELOPMENT CORPORATION

Project Name  
DIMBAZA WATER WASTE TREATMENT WORKS

Drawing Title  
SDB MAIN LV ROOM SCHEMATIC DIAGRAM

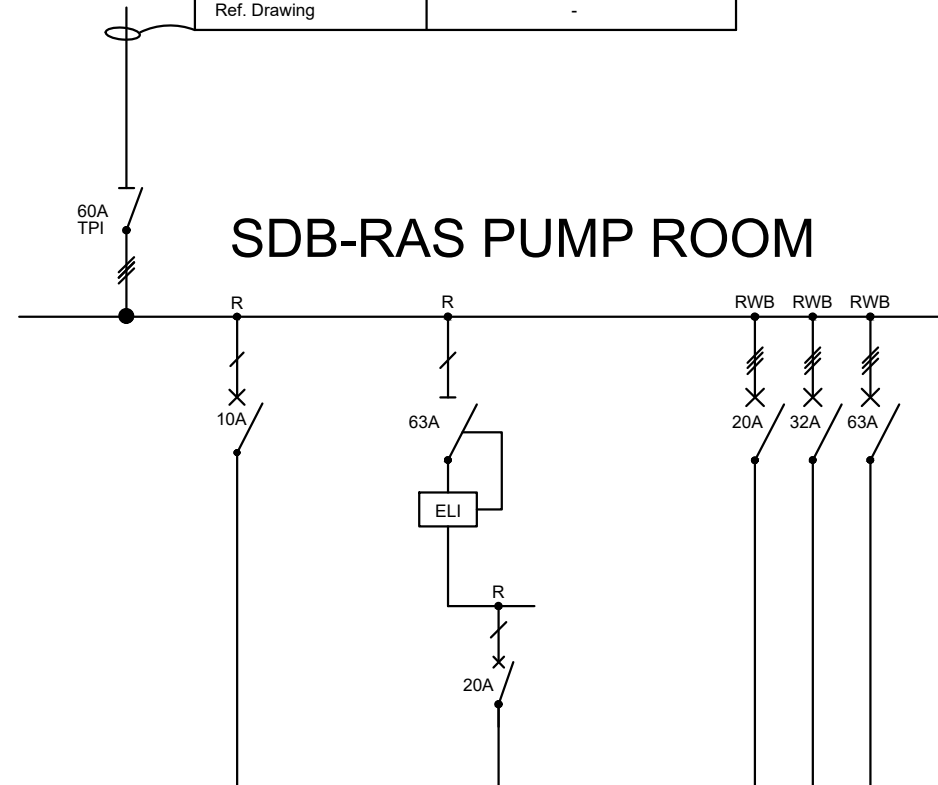
Rev	Date	Description
Discipline ELECTRICAL		
Drawing Originator GATYENI CONSULTING		

Checked By LG	Checked Date 09/05/2024	Drawn By Y.N	Drawn Date 09/05/2024
Approved By	Approval Date 2024/05/09	Scale N.T.S	
CAD Reference G:\shortcut-targets-by-id\0Bxii\YE0JA2GNREswLXBndzJFNVk\Projects\2022-106 Dimbaza WWTW\drawings\Office control room			Paper Size A3
Project No 2022-106	Dicipline ELECT.	Type WD	Drawing No. 2022-106/SCH/05
			Revision A

General Notes

Colour Door architrave	Grey
Colour: Faceplate	Grey
Type	Flush
Doors	Lockable
Breakers	CBI
Contactor	Mitsubishi Electric
Colour: Faceplate	5kA

Cable No.	-
Conductor Type	Cu/PVC/ECC/PVC
Size (mm <sup>2</sup> )	4mm x 4C
Fed from	MAIN DISTRIBUTION BOARD
Ref. Drawing	-



CIRCUIT NO.	L1		P1		PP1	PP2	PP3
NO. OUTLETS							
CONDUCTOR (mm )							
EARTH							
DESCRIPTION	LIGHTS		16A SWITCHED SOCKETS		SUB PUMP	3 PHASE PLUG	RAS PUMP

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EASTERN CAPE  
DEVELOPMENT CORPORATION

Project Name  
DIMBAZA WATER WASTE TREATMENT WORKS

Drawing Title  
SDB RAS PUMP ROOM SCHEMATIC DIAGRAM

Rev	Date	Description
Discipline ELECTRICAL		
Drawing Originator GATYENI CONSULTING		

Checked By LG	Checked Date 09/05/2024	Drawn By Y.N	Drawn Date 09/05/2024
Approved By	Approval Date 2024/05/09	Scale N.T.S	
CAD Reference G:\shortcut-targets-by-id\0Bxii\YE0JA2GNREswLXBndzJFNVk\Projects\2022-106 Dimbaza WWTW\drawings\Office control room			Paper Size A3
Project No 2022-106	Dicipline ELECT.	Type WD	Drawing No. 2022-106/SCH/06
			Revision A