



CONTRACT NO. PW 002/2022

**UPGRADING CLARENS WATER TREATMENT WORKS:
CIVIL AND BUILDING WORKS
PART B: RAW WATER PIPELINE, INLET WORKS AND
GENERAL BUILDINGS**

PROCUREMENT DOCUMENT

February 2022

Name of Tenderer: _____

ISSUED BY:

Dihlabeng Local Municipality
9 Muller Street East
BETHLEHEM
9700

Tel : (058) 303 5732
Fax : (058) 303 4703

PREPARED BY:

ECA Consulting
P O Box 2083
VRYHEID
3100

Tel : (034) 983 2825
Fax : (034) 983 2945

NAME OF BIDDING ENTITY:

PHYSICAL STREET ADDRESS:	POSTAL ADDRESS:

TELEPHONE NUMBER:

FAX NUMBER :

E-mail ADDRESS :
.....

*BID PRICE :

*(Amount brought forward from the Form of Offer and Acceptance)

Signed by authorised representative of Bidding Entity:

SIGNATURE :

DATE :

Note: should any discrepancy occur between the above amounts and those stated in the Form of Offer and Acceptance, the latter shall take precedence and apply.

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INVITATION TO TENDER DIHLABENG LOCAL MUNICIPALITY

Bid Name	Bid No.	Compulsory Briefing Session	CIDB Grading	Evaluation and Adjudication Criteria and Preference Points	Closing Date	Enquiries
Appointment of a service provider for upgrading of Clarens water treatment works: Civil and building works part B: Raw material pipeline, inlet works and general buildings CIDB REF: 100076177 Compulsory requirements: please note that local content stipulated minimum threshold is applicable on some of the items/products.	PW002/2022	Clarens Municipal Office. 17 Market street on the 18th February 2022 at 10:30	6CE or higher	Bids will be evaluated on: • Stage 1: Responsiveness • Stage 2: Functionality • Stage 3: Financial Offer and Preference Evaluation (80/20 Scoring Points) Stage 4: Risk Analysis	14 th March 2022	Mr. L Ramulwela Tel.: 058 303 5732 lawrencer@dihlabeng.co.za

The Dihlabeng Local Municipality hereby invites tenders from Contractors with a CIDB Grading of 6CE or higher.

Work on this contract will be in terms of the principles laid down by the **Expanded Public Works Programme** whereby the use of sustainable, labour intensive methods utilizing resources from the target community is to be optimized.

Bid documents will be available from **12:00** on **Monday 7th February 2022**, upon payment of a cash non-refundable document fee of R1 000,00 per set at the Dihlabeng Local Municipality, 9 Muller Street, Bethlehem, 9700.

Please note that tender document can also be accessed/download for free on the Dihlabeng Local Municipality website <http://www.dihlabeng.gov.za/stratpegic-documents/bid-documents>. And on eTender Portal. Tenderers are required to Print and Bind their tender documents after downloading them.

TENDER CLOSING DATE: 14 MARCH 2022

Bids are to be completed in accordance with the conditions and bid rules contained in the bid documents and must be sealed together with supporting documents and externally endorsed **WITH THE CONTRACT NUMBER AND DESCRIPTION** and placed in bid box, on the Ground Floor, Dihlabeng Local Municipality, 9 Muller Street, Bethlehem, 9700 not later than **12:00 on or before the date stipulated above.**

Bidders' attention is specifically drawn to the provisions of the bid rules and evaluation criteria (including Functionality) which are included in the bid documents. The highest or any bid will not necessarily be accepted and the Council reserves the right not to consider any bid not suitably endorsed or comprehensively completed. Bids completed in pencil will be regarded as invalid bids.

With effect from 1 July 2016, Dihlabeng Local Municipality must use and verify suppliers registered on the Central Supplier Database - <https://secured.csd.gov.za/>.

Failure to register will result in Dihlabeng Local Municipality not being able to conduct business with your company/ entity.

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A compulsory bid briefing session will be held, starting at **10:00** at the **Clarens Municipal Office, 17 Market Street** on Friday, **18 February 2022**.

Tenderers wishing to attend the clarification meeting are to strictly adhere to the following procedures that have been put in place in response to the current COVID-19 pandemic Regulations:

- Attendance at the clarification meeting will be limited to 1 person per company. To reserve a place company are to submit request via email to vhdtenders@ecaconsult.co.za, providing the company name, full name of attendee's, copy of the attendees' ID and proof of payment of the tender document.
- Number will be limited to a **maximum 40** attendees per meeting, and response in excess of this limit will necessitate more than one clarification meeting to be held.
- Attendees will be screened, must wear a mask, and are to adhere to strict social distancing measures.

Technical Enquiries can be directed to: Mr J Janse van Rensburg (ECA Consulting) on Tel: 034 983 2825 during office hours.

Supply Chain Management Enquiries can be directed to the SCM Manager: Mr. L Ramulwela on Tel: 058 303 5732 during office hours.

Bids must be completed in accordance with the conditions and bid rules contained in the bid documents and supporting documents must be sealed, together with supporting documents, and externally endorsed **WITH THE CONTRACT NUMBER AND DESCRIPTION** and placed in the **BID BOX No: PW 002/2022** (as per relevant tender) on the **Ground Floor, Dihlabeng Local Municipality, 9 Muller Street East, Bethlehem**, not later than the closing date and time.

CLOSING DATE & TIME: 12:00 on Monday, 14 March 2022.

Bidders' attention is specifically drawn to the provisions of the bid rules and evaluation criteria which are included in the tender documents. The lowest or any bid will not necessarily be accepted and the Council reserves the right not to consider any bid not suitably endorsed or comprehensively completed, as well as the right to accept a bid in whole or part. Bids completed in pencil will be regarded as invalid bids. Bids may only be submitted on the documentation provided by the Dihlabeng Local Municipality.

Bids will be opened in public as soon as possible after the closing time. The municipality reserves the right to reject any and all bids at any time.

B MOLATSELI
MUNICIPAL MANAGER



T1.2 Tender Data

The conditions of Tender are the Standard Conditions of Tender as contained in Annex F of the CIDB Standard for Uniformity in Construction Procurement (see www.cidb.org.za) which are reproduced without amendment or alteration for the convenience of tenderers as an Annex to this Tender Data.

The Standard Conditions of Tender makes 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 provided below is cross-referenced to the clause in the Standard Conditions of Tender to which it mainly applies.

The additional Conditions of Tender are:

Clause number	Tender Data
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F.1.1	The Employer is the Dihlabeng Local Municipality.
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F.1.2	The Tender document (Volume 1) issued by the Employer comprises:
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T1.1	Tender Notice and Invitation to Tender
T1.2	Tender Data
T2.1	List of returnable documents
T2.2	Returnable schedules

Part 1 : Agreements and contract data

C1.1	Form of offer and acceptance
C1.2	Contract data
C1.3	Form of Guarantee
C1.4	Adjudicator's appointment

Part 2 : Pricing data

C2.1	Pricing instructions
C2.2	Activity schedules / Bill of Quantities

Part 3 : Scope of work

C3	Scope of work
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Part 4 : Site information

C4	Site information
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VOLUME 2: Book of Drawings

The following documents also form part of the tender and contract, but must be purchased by the tenderer himself.

VOLUME 3: General Conditions of Contract for Construction Works (2nd Edition, 2010) issued by the South African Institution of Civil Engineering.

VOLUME 4: South African National Standards Standardized Specifications for Civil Engineering Construction (SANS 1200)

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- F.1.3 The Employer's agent is :
 Name : ECA Consulting
 Address: P O Box 2083, VRYHEID, 3100
 Tel : 034 983 2825
 Fax : 034 983 2945
 E-mail : vryheid@ecaconsult.co.za
- F.1.5 The lowest or any Tender will not necessarily be accepted. The Employer reserves the right to award the contract for different projects to different bidders.
- F.2.1 Only those bidders who are registered with the CIDB in a contractor grading designation equal to or higher than 6CE; and have adequate experience in the construction of water and/or sewer pipeline are eligible to tender.
- The tender is subjected to invitation only.
- F.2.7 The arrangements for a compulsory clarification meeting are as stated in the Tender Notice and Invitation to Tender.
- 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.
- F.2.12 No alternative Tender offers will be considered.
- F.2.13.3 Parts of each Tender offer communicated on paper shall be submitted as original, plus 0 copies.
- F.2.13.5 The Employer's address for delivery of Tender offers and identification details to be shown on each Tender offer package are:
- Location of Tender box: **Tender Box No: PW 002/2022, Dihlabeng Local Municipality, Bethlehem.**
- Physical address: **9 Muller Street East, Bethlehem.**
- Identification details: Sealed tenders endorsed: **Tender Reference Number, Title of Tender and the closing date and time of the Tender.**
- Postal address: **PO Box 551, Bethlehem, 9700**
- F.2.15.1 The closing time for submission of Tender offers is as stated in the Tender Notice and Invitation to Tender. Telephonic, telegraphic, telex, facsimile or e-mailed Tender offers will not be accepted.
- F.2.16 The Tender offer validity period is 120 Days. (Estimated construction start date: 1 May 2022)
- F.2.16.1 Add the following to the clause:
 If the tender validity expires on a weekend or public holiday, the tender validity period shall remain open until the close of business on the next working day.
- F.2.23 The Tenderer is required to submit Certificates as required under Part 2 – Returnable Documents and Schedules.
- F.3.4 Tenders will be opened immediately after the closing time for bids at the Dihlabeng Local Municipality's offices in Bethlehem.
- F.3.5 The two-envelope system will not be followed for this Tender.
- F.3.7 Add the following to the clause:
 Accept that failure to submit certificates stated in the Tender Data and failure to complete in
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full the tender document shall result in tender being regarded as non-responsive.

- F.3.11 Tender offers will be evaluated on F.3.11.2 Method 2: Financial offer and preference, using Formula 2, option 1a (table F.1).

Stage 1 – Tender Responsiveness

The following submissions are the requirements for evaluating each tenderer for responsiveness. The tenderers who failed to submit the following documents with their tender documents will be automatically disqualified and therefore will not be considered for the next stage:

- a) Proof of attendance of bid briefing and visit to site (Briefing Session Attendance Form – Schedule Q). If applicable;
- b) Company Registration document (Schedule P1);
- c) Certificate of Authority for Signatory (Schedule F);
- d) Joint Venture Agreement and Power of Attorney, if applicable (Schedule P);
- e) Proof of payment (municipal account/statement) of Municipal Services, which is not more than three (3) months old and not more than ninety (90) days in arrears. If Municipal Services are paid by the Lessee, a copy of municipal account/statement and a valid Lease Agreement (indicating the municipal account payer and the validity period of the contract) must be attached, should the municipal services be paid by the Landlord/owner, a valid Lease Agreement (indicating the municipal account payer and the validity period of the contract) must be attached. (Schedule O).
- f) The document must be completely filled in Black Ink & Corrections are countersigned
- g) Bill of Quantities must be completely filled with black ink not pencil.
- h) A rate/amount is to be entered against all items in the schedule of fees / Bill of Quantities, an item against which no rate/amount is entered will lead to immediate disqualification due to unfair price advantage.
- i) The bidder completed and signed all prescribed and compulsory bid forms
- j) **Local Content Declaration on MBD 6.2 with its Annexures C, D & E are fully completed. Supporting Declarations are required from suppliers on all applicable DTI designated and determined stipulated minimum thresholds items. (MBD6.2 & BOQ).**

A supporting letter from manufacturer / supplier stating whether their products conform to local content requirements must to be added to Schedule L – MBD 6.2 for verification purposes.

Should the templates not provide enough space, more clearly marked templates can be added as addendum to MBD 6.2.

- k) Proof of CIDB Grading Compliant.
- l) Proof of Central Supplier Database (CSD) Registration Report which is Valid/Compliant from the date of availability of tender document (Schedule AF).
- m) Valid and original (or a certified copy) proof of Bidder's compliance to B-BBEE requirements stipulated in section K (MBD 6.1)
- n) Declaration of Solvency or Liquidity (Schedule AG)
- o) Submission of 3-year Annual Financial Statements as addition to the Declaration of Financial Capacity (W1)

Stage 2 – Functionality

The functionality points will only be used to pre-qualify the bids before scoring for preferences and price points. **Please note that bids that score less than 60% (6 points) of the maximum points allocated for functionality will automatically be disqualified.** The maximum obtainable points are 60 points (100%); however, a Bid will be disqualified should it fail to meet the minimum threshold for functionality per category/criteria and in total

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as prescribed in the following table. The minimum threshold required is 36 points (60%) and the minimum per category/criteria as indicated in the "Min Pts. Required per criteria" column. Table below has reference and the points will be allocated as follows:

Stage 2 Evaluation: Minimum Threshold 60% (36pts)		
Criteria	Max Points	Min Pts. Required
1. Experience: Attach appointment letters/orders from service providers for water pipelines and building works (Schedule X)	(15)	(9)
No appointment letters attached	0	
One appointment letter attached	3	
Two appointment letters attached	10	
Three appointment letters attached	15	
2. Technical Skill: The tenderer has the ability construct water pipelines and building works. Attach CV's with qualifications of qualified and experienced personnel in constructing water and waste water concrete structures (Schedule Y)	(15)	(9)
No Qualification	0	
Qualification at least a National Diploma in Civil Engineering with less than 3 years' experience	5	
Qualification at least a National Diploma in Civil Engineering with less than 8 years' experience	10	
Qualification at least a National Diploma in Civil Engineering with 10 years or more experience	15	
3. Specific Plant and Equipment (Schedule Z)	(10)	(6)
No details	0	
Not well detailed and not indicating all key / sufficient plant and equipment (Excavator, TLB, tipper truck and roller) required to execute the works.	5	
Well detailed and not indicating all key / sufficient plant and equipment (Excavator, TLB, tipper truck and roller) required to execute the works.	10	
4. Specific Gantt Chart Programme (Schedule AA)	(10)	(6)
No Programme	0	
Out of Balance with what other experienced practitioners have indicated and/or unrealistic with insufficient detail. (Only Gantt Chart Accepted)	5	
The work activities are clearly identified, time frames are realistic and in balance with what other experienced practitioners have indicated and demonstrates a clear understanding of the scope of works (Only Gantt chart Accepted).	10	
5. Public Liability cover: Provision of Public Liability Insurance to the value of R2m or a letter of intent from an approved provider is required. (Schedule AI)	(5)	(3)
No attachment	0	
A valid copy attached	5	
6. Quality Management System: Provision of quality Management System (Schedule AI)	(5)	(3)
Not attached	0	
A valid copy attached	5	
Max points	60	36

Stage 3 – Financial Offer and Preference Evaluation

Each Bid will be evaluated in terms of price and preference in accordance with the Preferential Procurement Regulations 2017 (Government Gazette No. 40553 dated 20 January 2017).

80/20 preference point system for acquisition of goods or services for Rand value equal to or above R30 000 and up to R50 million

1. The following formula must be used to calculate the points out of 80 for price in respect of a tender with a Rand value equal to or above R30 000 and up to a Rand value of R50 million, inclusive of all applicable taxes:

$$Ps = 80 \left(1 - \frac{Pt - Pmin}{Pmin} \right)$$

Where

Ps = Points scored for bid or offer under consideration;
 Pt = Price of bid or offer under consideration, and;
 Pmin = Price of lowest acceptable bid or offer.

2. The following table must be used to calculate the score out of 20 for BBEE:

B-BBEE STATUS LEVEL OF CONTRIBUTOR	NUMBER OF POINTS
1	20
2	18
3	16
4	12
5	8
6	6
7	4
8	2
Non-compliant contributor	0

3. A tenderer must submit proof of its B-BBEE status level of contributor.

4. A tenderer failing to submit proof of B-BBEE status level of contributor or is a non-compliant contributor to B-BBEE may not be disqualified, but-
 (a) may only score points out of 80 for price; and
 (b) scores 0 points out of 20 for B-BBEE.

5. A tenderer may not be awarded points for B-BBEE status level of contributor if the tender documents indicate that the tenderer intends subcontracting more than 25% of the value of the contract to any other person not qualifying for at least the points that the tenderer qualifies for, unless the intended subcontractor is an EME that has the capability to execute the subcontract.

6. The points scored by a tenderer for B-BBEE in terms of subregulation (2) must be added to the points scored for price under subregulation (1).

7. The points scored must be rounded off to the nearest two decimal places.

8. Subject to sub-regulation (9) and regulation 11, the contract must be awarded to the tenderer scoring the highest points.

9. (a) If the price offered by a tenderer scoring the highest points is not market related, the organ of state may not award the contract to that tenderer.

(b) The organs of state may-

(i) negotiate a market-related price with the tenderer scoring the highest points or cancel the tender;

(ii) if the tenderer does not agree to a market-related price, negotiate a market-related price with the tenderer scoring the second highest points or cancel the tender;

(iii) if the tenderer scoring the second highest points does not agree to a market-related price, negotiate a market-related price with the tenderer scoring the third highest points or cancel the tender.

(c) If a market-related price is not agreed as envisaged in paragraph (b)(iii), the organ of state must cancel the tender.

Stage 4 – Risk Analysis

Risk analysis will be performed to ascertain if any of the following, as relevant, present an unacceptable commercial risk to employer.

Bid offer will only be accepted if:

- a) The Bidder has submitted, with the offer, all relevant documentation as required in stage 1
- b) The bidder or any of its directors is not listed on the register of Bid Defaulters in terms of the Prevention and Combating of Corrupt Activities Act of 2004 as a person prohibited from doing business with the public sector.
- c) The Bidder is not in arrears for more than 3 months with Municipal rates and taxes and Municipal Service Charges;
- d) The Bidder has not:
 - (i) Abused the Employer's Supply Chain Management System or
 - (ii) Failed to perform on any previous contract
- (e) All chemicals comply with NSF International standards. Copies of NSF certificate of analysis for all proposed flocculants are submitted with the tender document.
- (f) Proposed Chemical Sample and Certificate of Analysis are handed to the municipality during the live jar test session.

F3.13.1 Tender offers will only be accepted if:

- a) the tenderer has in his or her possession a certified copy of a valid Tax Clearance Certificate issued by the South African Revenue Services or has made arrangements to meet outstanding tax obligations;
- b) the tenderer is registered with the Construction Industry Development Board with a grading of 6CE or higher;
- c) the tenderer or any of its directors is not listed on the Register of Tender Defaulters in terms of the Prevention and Combating of Corrupt Activities Act of 2004 as a person prohibited from doing business with the public sector;
- d) the tenderer has not:
 - i) abused the Employer's Supply Chain management system; or
 - ii) failed to perform on any previous contract and has been given a written notice to this effect; and
- e) the tenderer has completed the Compulsory Enterprise Questionnaire and there is no conflict of interest which may impact on the tenderer's ability to perform the contract in the best interests of the Employer or potentially compromise the tender process.
- f) the tenderer does not have arrears on municipal rates and levies exceeding 3 months.
- g) the tenderer has completed all forms.

F.3.17 The number of paper copies of the signed contract to be provided by the Employer is one.

The additional conditions of tender are:

All returnable schedules are to be completed and all relevant certificates attached where indicated.

ANNEX F: STANDARD CONDITIONS OF TENDER

(As published in Annex F of the CIDB Standards for Uniformity in Construction Procurement in Board Notice 86 of 2010 in Government Gazette No 33239 of 26 May 2010))

F.1 General**F.1.1 Actions**

F.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 F.2 and F.3, timeously and with integrity, and behave equitably, honestly and transparently, comply with all legal obligations and not engage in anticompetitive practices.

F.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.

F.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.

F.1.2 Tender Documents

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

F.1.3 Interpretation

F.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.

F.1.3.2 These conditions of tender, the tender data and tender schedules which are only required for tender evaluation purposes, shall not form part of any contract arising from the invitation to tender.

F.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 fulfill his or her duties impartially;
 - ii) An individual or organization is in a position to exploit a professional or official capacity in some way for their personal or corporate benefit; or
 - iii) Incompatibility or contradictory interests exist between an employee and the organization which employs that employee.
- b) **Comparative offer** means the tenderer's financial offer after the factors of non-firm prices, all unconditional discounts and any other tendered parameters that will affect the value of the financial offer 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; and
- d) **Fraudulent practice** means the misrepresentation of the facts in order 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
- e) **Organization** means a company, firm, enterprise, association or other legal entity, whether incorporated or not, or a public body
- f) **Quality (functionality)** means the totality of features and characteristics of a product or service that bear on its ability to satisfy stated or implied needs

F.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.

F.1.5 The employer's right to accept or reject any tender offer

F.1.5.1 The employer may accept or reject any variation, deviation, tender offer, or alternative tender offer, and may cancel the tender process and reject all tender offers at any time before the formation of a contract. The employer shall not accept or incur any liability to a tenderer for such cancellation and rejection, but will give written reasons for such action upon written request to do so.

F.1.5.2 The employer may not subsequent to the cancellation or abandonment of a tender process or the rejection of all responsive tender offers re-issue a tender covering substantially the same scope of work within a period of six months unless only one tender was received and such tender was returned unopened to the tenderer.

F.1.6 Procurement procedures**F.1.6.1 General**

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

F.1.6.2 Competitive negotiation procedure

F.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 F.3.4, the employer shall announce only the names of the tenderers who make a submission. The requirements of F.3.8 relating to the material deviations or qualifications which affect the competitive position of tenderers shall not apply.

F.1.6.2.2 All responsive tenderers, or not less than three responsive tenderers that are highest ranked in terms of the evaluation method and evaluation criteria stated in the tender data, shall be invited in each round to enter into competitive negotiations, based on the principle of equal treatment and keeping confidential the proposed solutions and associated information. Notwithstanding the provisions of F.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.

F.1.6.2.3 At the conclusion of each round of negotiations, tenderers shall be invited by the employer to make a fresh 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.

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

F.1.6.3 Proposal procedure using the two stage-system**F.1.6.3.1 Option 1**

Tenderers shall in the first stage submit technical proposals and, if required, cost parameters around which a contract may be negotiated. The employer shall evaluate each responsive submission in terms of the method of evaluation stated in the tender data, and in the second stage negotiate a contract with the tenderer scoring the highest number of evaluation points

and award the contract in terms of these conditions of tender.

F.1.6.3.2 Option 2

F.1.6.3.2.1 Tenderers shall submit in the first stage only technical proposals. The employer shall invite all responsive tenderers to submit tender offers in the second stage, following the issuing of procurement documents.

F.1.6.3.2.2 The employer shall evaluate tenders received during the second stage in terms of the method of evaluation stated in the tender data, and award the contract in terms of these conditions of tender.

F.2 Tenderer's obligations

F.2.1 Eligibility

F.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.

F.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.

F.2.2 Cost of tendering

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 complies with requirements.

F.2.3 Check documents

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

F.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.

F.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.

F.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.

F.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.

F.2.8 Seek clarification

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

F.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.

F.2.10 Pricing the tender offer

F.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 14 days before the closing time stated in the tender data.

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

F.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.

F.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.

F.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. Erasures and the use of masking fluid are prohibited.

F.2.12 Alternative tender offers

F.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.

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

F.2.13 Submitting a tender offer

F.2.13.1 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, services or supply identified in the contract data and described in the scope of works, unless stated otherwise in the tender data.

F.2.13.2 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.

F.2.13.3 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.

F.2.13.4 Sign 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.

UPGRADING CLARENS WATER TREATMENT WORKS: CIVIL AND BUILDING WORKS: PART B

- F.2.13.5** 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.
- F.2.13.6** 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.
- F.2.13.7** 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.
- F.2.13.8** 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.
- F.2.13.9** Accept that tender offers submitted by facsimile or e-mail will be rejected by the employer, unless stated otherwise in the tender data.
- F.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.
- F.2.15** **Closing time**
- F.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.
- F.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.
- F.2.16** **Tender offer validity**
- F.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.
- F.2.16.2** If requested by the employer, consider extending the validity period stated in the tender data for an agreed additional period.
- F.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.
- F.2.16.4** Where a tender submission is to be substituted, submit a substitute tender in accordance with the requirements of F.2.13 with the packages clearly marked as "SUBSTITUTE".
- F.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 F.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.

F.2.18 Provide other material

F.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.

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

F.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.

F.2.20 Submit securities, bonds, policies, etc.

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.

F.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.

F.2.22 Return of other tender documents

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

F.2.23 Certificates

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

F.3 The employer's undertakings**F.3.1 Respond to requests from the tenderer**

F.3.1.1 Respond to a request for clarification received up to five working days before the tender closing time stated in the Tender Data and notify all tenderers who drew procurement documents.

F.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.

F.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 seven 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 drew documents.

F.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.

F.3.4 Opening of tender submissions

F.3.4.1 Unless the two-envelope system is to be followed, open and read out 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.

F.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, preferences claimed and time for completion for the main tender offer only.

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

F.3.5 Two-envelope system

F.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.

F.3.5.2 Evaluate the quality 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 quality evaluation more than the minimum number of points for quality stated in the tender data, and announce the score obtained for the technical proposals and the total price and any preferences claimed. Return unopened financial proposals to tenderers whose technical proposals failed to achieve the minimum number of points for quality.

F.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.

F.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.

F.3.8 Test for responsiveness

F.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.

F.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.

F.3.9 Arithmetical errors, omissions and discrepancies

F.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.

F.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 F.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.

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

F.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.

F.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.

F.3.11 Evaluation of tender offers

F.3.11.1 General

Appoint an evaluation panel of not less than three persons. Reduce each responsive tender offer to a comparative offer and evaluate them using the tender evaluation methods and associated evaluation criteria and weightings that are specified in the tender data.

F.3.11.2 Method 1: Financial offer

In the case of a financial offer:

- a) Rank tender offers from the most favourable to the least favourable comparative offer.
- b) Recommend the highest ranked tenderer for the award of the contract, unless there are compelling and justifiable reasons not to do so.
- c) Re-rank all tenderers should there be compelling and justifiable reasons not to recommend the highest ranked tenderer and recommend the highest ranked tenderer, unless there are compelling and justifiable reasons not to do so and the process set out in this sub-clause is repeated.

F.3.11.3 Method 2: Financial offer and preference

In the case of a financial offer and preferences:

- a) Score each tender in respect of the financial offer made and preferences claimed, if any, in accordance with the provisions of F.3.11.7 and F.3.11.8.
- b) Calculate the total number of tender evaluation points (**TEV**) in accordance with the following formula:

$$\text{TEV} = \text{NFO} + \text{NP}$$

Where:

NFO is the number of tender evaluation points awarded for the financial offer made in accordance with F.3.11.7;

NP is the number of tender evaluation points awarded for preferences claimed in accordance with F.3.11.8.

- c) Rank tender offers from the highest number of tender evaluation points to the lowest.
- d) Recommend the tenderer with the highest number of tender evaluation points for the award of the contract, unless there are compelling and justifiable reasons not to do so.
- e) Rescore and re-rank all tenderers should there be compelling and justifiable reasons not to recommend the tenderer with the highest number of tender evaluation points, and recommend the tenderer with the highest number of tender evaluation points, unless there are compelling and justifiable reasons not to do so and the process set out in this sub-clause is repeated

F.3.11.4 Method 3: Financial offer and quality

In the case of a financial offer and quality:

- a) Score each tender in respect of the financial offer made and the quality offered in accordance with the provisions of F.3.11.7 and F.3.11.9, rejecting all tender offers that fail to score the minimum number of points for quality stated in the tender data, if any.
- b) Calculate the total number of tender evaluation points (**TEV**) in accordance with the following formula:

$$\text{TEV} = \text{NFO} + \text{NQ}$$

Where:

NFO is the number of tender evaluation points awarded for the financial offer made in accordance with F.3.11.7;

NQ is the number of tender evaluation points awarded for quality offered in accordance with F.3.11.9.

- c) Rank tender offers from the highest number of tender evaluation points to the lowest.
- d) Recommend tenderer with the highest number of tender evaluation points for the award of the contract, unless there are compelling and justifiable reasons not to do so.
- e) Rescore and re-rank all tenderers should there be compelling and justifiable reasons not to recommend the tenderer with the highest number of tender evaluation points and recommend the tenderer with the highest number of tender evaluation points, unless there are compelling and justifiable reasons not to do so and the process set out in this sub-clause is repeated.

F.3.11.5 Method 4: Financial offer, quality and preferences

In the case of a financial offer, quality and preferences:

- a) Score each tender in respect of the financial offer made, preference claimed, if any, and the quality offered in accordance with the provisions of F.3.11.7 to F.3.11.9, rejecting all tender offers that fail to score the minimum number of points for quality stated in the tender data, if any.
- b) Calculate the total number of tender evaluation points (**TEV**) in accordance with the following formula:

$$\text{TEV} = \text{NFO} + \text{NP} + \text{NQ}$$

Where:

- NFO** is the number of tender evaluation points awarded for the financial offer made in accordance with F.3.11.7;
- NP** is the number of tender evaluation points awarded for preferences claimed in accordance with F.3.11.8.
- NQ** is the number of tender evaluation points awarded for quality offered in accordance with F.3.11.9.

- c) Rank tender offers from the highest number of tender evaluation points to the lowest.
- d) Recommend the tenderer with the highest number of tender evaluation points for the award of the contract, unless there are compelling and justifiable reasons not to do so.
- e) Rescore and re-rank all tenderers should there be compelling and justifiable reasons not to recommend the tenderer with the highest number of tender evaluation points and recommend the tenderer with the highest number of tender evaluation points, unless there are compelling and justifiable reasons not to do so and the process set out in this sub-clause is repeated.

F.3.11.6 Decimal places

Table F.1: Formula for calculating the value of A

Formula	Comparison aimed at achieving	Option 1 ^a	Option 2 ^a
1	Highest price or discount	$A = (1 + \frac{P - P_m}{P_m})$	$A = P / P_m$
2	Lowest price or percentage commission / fee	$A = (1 - \frac{P - P_m}{P_m})$	$A = P_m / P$
^a P _m is the comparative offer of the most favourable comparative offer. P is the comparative offer of the tender offer under consideration.			

Score financial offers, preferences and quality, as relevant, to two decimal places.

F.3.11.7 Scoring Financial Offers

Score the financial offers of remaining responsive tender offers using the following formula:

$$NFO = W1 \times A$$

Where:

- NFO** is the number of tender evaluation points awarded for the financial offer.
- W1** is the maximum possible number of tender evaluation points awarded for the financial offer as stated in the Tender Data
- A** is a number calculated using the formula and option described in Table F.1 as stated in the Tender Data.

F.3.11.8 Scoring preferences

Confirm that tenderers are eligible for the preferences claimed in accordance with the provisions of the tender data and reject all claims for preferences where tenderers are not eligible for such preferences. Calculate the total number of tender evaluation points for preferences claimed in accordance with the provisions of the tender data.

F.3.11.9 Scoring quality

Score each of the criteria and sub criteria for quality in accordance with the provisions of the Tender Data. Calculate the total number of tender evaluation points for quality using the following formula:

$$NQ = W2 \times SO / MS$$

Where:

SO is the score for quality allocated to the submission under consideration;
MS is the maximum possible score for quality in respect of a submission, and
W2 is the maximum possible number of tender evaluation points awarded for the quality as stated in the tender data

F.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.

F.3.13 Acceptance of tender offer

F.3.13.1 Accept the tender offer, if in the opinion of the employer, it does not present any unacceptable commercial 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, bankrupt or being wound up, has his affairs administered by a court or a judicial officer, has suspended his 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.

F.3.14 Prepare contract documents

F.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
- c) other revisions agreed between the employer and the successful tenderer.

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

F.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.

F.3.16 Notice to unsuccessful tenderers

F.3.16.1 Notify the successful tenderer of the employer's acceptance of his tender offer by completing and returning one copy of the form of offer and acceptance before the expiry of the validity period stated in the tender data, or agreed additional period.

F.3.16.2 After the successful tenderer has been notified of the employer's acceptance of the tender, notify other tenderers that their tender offers have not been accepted.

F.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.

F.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.

T2.1..List of Returnable Documents

Bidders are required to submit the following returnable documents with their bids, neatly bound in a separate file.

Returnable Documents

- a) Certified valid tax clearance pin certificate (in terms of the Preferential Procurement Regulations, 2001 published in Government Gazette No 22549 dated 10 August 2001),
- b) Certified copy of Certificate of Incorporation (if Tenderer is a Company)
- c) Certified copy of Founding Statement (if Tenderer is a Closed Corporation)
- d) Certified copy of Partnership Agreement (if Tenderer is a Partnership)
- e) Certified copy of Identity Document (if Tenderer is a One-man concern),
- f) Joint venture agreement (if the Tenderer is a Joint Venture).
- g) Proof of CIDB Registration (main and sub-contractors)
- h) B-BBEE Status Level Verification Certificate (main and sub-contractors)

T2.2 List of Returnable Schedules

The bidder must complete the following returnable schedules:

1. Returnable Schedules required only for bid evaluation purposes

- Schedule A: Record of Addenda to Bid Documents
 - Schedule B: Proposed Amendments and Qualifications
 - Schedule C: Present Work Commitments
 - Schedule D: Proposed Subcontractors
 - Schedule E: Compliance with OHSA (Act 85 of 1993)
 - Schedule F: Authority of Signatory
 - Schedule G: Invitation to Bid (MBD 1)
 - Schedule H: Tax Clearance Requirements (MBD 2)
 - Schedule I: Declaration of Interest (MBD 4)
 - Schedule J: Declaration for procurement above R10 million (all applicable taxes included) (MBD 5)
 - Schedule K: Preferential Procurement Policy Framework Act, 05 of 2000 and Regulation of 2017 (MBD 6.1)
 - Schedule L: Declaration Certificate for Local Production and Content for Designated Sectors including its Annexures C, D & E (MBD 6.2)
 - Schedule M: Declaration of Bidder's past Supply Chain Management Practices (MBD 8)
 - Schedule N: Certificate of Independent Bid Determination (MBD 9)
 - Schedule O: Municipal Services, Rates and Taxes Clearance Certificate for Supply Chain Manages
 - Schedule P: Certificate of Authority of an Entity
 - Schedule P1: Certificate of Registration of entity (CIDB and B-BBEE)
 - Schedule Q: Certificate of Bidder's attendance at Compulsory Clarification Meeting
 - Schedule R: Workmen's Compensation registration certificate
 - Schedule S: UIF Registration Certificate
 - Schedule T: Compulsory Enterprise Questionnaire
 - Schedule U: Affidavit of Good Standing that will be incorporated into contract.
 - Schedule V: Schedule of all work Provided for an organ of the state over the last 5 years
 - Schedule W: Banking Details
 - Schedule W1: Declaration of Financial Capacity
 - Schedule X: Schedule of the Tenders Experience
 - Schedule Y: Competency of Key Personnel
 - Schedule Z: Declaration of Available Plant and Equipment to execute the works
 - Schedule AA: Tender Programme
 - Schedule AB: Schedule of Labour Content
 - Schedule AC: Training Schedule
 - Schedule AD: Tax clearance Certificate
 - Schedule AE: Proforma forms to be completed by successful Tender
 - Schedule AF: National Treasury's Central Suppliers Database
 - Schedule AG: Declaration of Solvency or Liquidity
 - Schedule AH: Contract Participation Goals
 - Schedule AI: Public Liability Cover and Quality Management System
- Preferential Procurement Policy Framework Act, 05 of 2000 and Regulations of 2011

2. Other documents required only for bid evaluation purposes

- All returnable schedules will be incorporated into the Contract.

3. Returnable Schedules that will be incorporated into the contract

- The offer portion of the C1.1 Offer and Acceptance
- C1.2 Data provided by the Contractor
- C2.2 Schedule of Quantities
- C2.3 Summary of Schedules
- Part C3: Scope of Works

SCHEDULE A: RECORD OF ADDENDA TO BID DOCUMENTS

We confirm that the following communications received from the Employer or his Agent before the submission of this Tender Offer, amending the tender documents, have been taken into account in this tender offer:

	Date	Title or Details
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		

Attach additional pages if more space is required.

Signature

Date

Name

Position

Tenderer

The Tenderers attention is drawn to clause F.3.8 of the Standard Conditions of Tender referenced in the Tender Data regarding the employer's handling of material deviations and qualifications.

[illegible]

Date

Position.....

Tenderer

SCHEDULE C: PRESENT WORK COMMITMENTS

Consulting Engineer / Employer contact person and telephone number.	Description of works	Value of work inclusive of VAT (Rand)	Duration and completion date

Signature

Date

Name

Position.....

Tenderer

| Bidder Initial:..... | Bidder Witness: | DLM initial: | DLM Witness: |

SCHEDULE D: PROPOSED SUBCONTRACTORS

We notify you that it is our intention to employ the following Subcontractors for work in this contract.

If we are awarded a contract, we agree that this notification does not change the requirement for us to submit the names of proposed Subcontractors in accordance with requirements in the contract for such appointments. If there are no such requirements in the contract, then your written acceptance of this list shall be binding between us.

	Name and address of proposed Subcontractor	Nature and extent of work to be Subcontracted	Previous experience with Subcontractor or recent work executed by the Subcontractor.
1.			
2.			
3.			
4.			
5.			

Signature

Date

Name

Position

Tenderer

SCHEDULE E: COMPLIANCE WITH OHSA (ACT 85 OF 1993)

Tenderers are required to satisfy the Employer and the Engineer as to their ability and available resources to comply with the above by answering the following questions and providing the relevant information required below:

1. Is the Tenderer familiar with the OHSA (Act 85 of 1993) and its regulations? **YES / NO**

2. Who will prepare the Tender's Health and Safety Plan (Provide a copy of the persons/s curriculum vitae/s or company profile).

3. Does the Tenderer have a health and safety policy? (If yes, provide a copy). **YES / NO**
How is this policy communicated to all employees?

4. Does the Tenderer keep records of safety aspects of each construction site? **YES / NO**
If yes, what records are kept?

5. Does the Tenderer conduct monthly safety meetings? **YES / NO**
If yes, who is the chairperson of the meeting and who attend these meetings?

6. Does the Tenderer have a safety officer in his employment, responsible for the overall safety of his company? **YES / NO**
If yes, please explain his duties and provide a copy of his CV.

7. Does the Tenderer have trained first aid employees? If yes, indicate who. **YES / NO**

8. Does the Tenderer have a safety induction training programme in place? **YES / NO**
If yes, provide a copy.

Signature Date

Name Position.....

Tenderer

SCHEDULE F: AUTHORITY OF SIGNATORY

We, the undersigned, hereby authorize Mr / Mrs acting in his/her capacity

as of the business trading as to sign all

documentation in connection with Tender

NAME OF MEMBERS / DIRECTORS	SIGNATURE	DATE

Note: If bidders attached a copy of their Authorised Signatory is it not necessary to complete this form

Signature

Date

Name

Position.....

Tenderer

MBD1**SCHEDULE G: INVITATION TO BID**

YOU ARE HEREBY INVITED TO BID FOR REQUIREMENTS OF THE DIHLABENG LOCAL MUNICIPALITY

BID NUMBER: PW 002/2022 ... CLOSING DATE: 14 MARCH 2022

CLOSING TIME: 12h00

UPGRADING CLARENS WATER TREATMENT WORKS:

CIVIL AND BUILDING WORKS

PART B: RAW WATER PIPELINES, INLET WORKS AND GENERAL BUILDING

THE SUCCESSFUL BIDDER WILL BE REQUIRED TO FILL IN AND SIGN A WRITTEN CONTRACT FORM

DEPOSITED IN THE BID BOX SITUATED AT

DIHLABENG LOCAL MUNICIPALITY, 9 MULLER STREET EAST, BETHLEHEM, 9700

BIDDERS SHOULD ENSURE THAT BIDS ARE DELIVERED TIMEOUSLY TO THE CORRECT ADDRESS. IF THE BIDDER IS LATE, IT WILL NOT BE ACCEPTED OR CONSIDERED.

ALL BIDS MUST BE SUBMITTED ON THE OFFICIAL FORMS – (NOT TO BE RE-TYPED)

THIS BID IS SUBJECT TO THE PREFERENTIAL PROCUREMENT POLICY FRAMEWORK ACT AND THE PREFERENTIAL PROCUREMENT REGULATIONS, 2011, THE GENERAL CONDITIONS OF CONTRACT (GCC) AND IF APPLICABLE, ANY OTHER SPECIAL CONDITIONS OF CONTRACT

NB; NO BIDS WILL BE CONSIDERED FROM PERSONS IN THE SERVICE OF THE STATE (as defined in Regulation 1 of the Local Government: Municipal Supply Chain Management Regulations)

***THE FOLLOWING PARTICULARS MUST BE FURNISHED
(FAILURE TO DO SO MAY RESULT IN YOUR BID BEING DISQUALIFIED)***

NAME OF BIDDER:

POSTAL ADDRESS:

STREET ADDRESS:

TELEPHONE NUMBER:

CELLPHONE NUMBER:

FACSIMILE NUMBER:

E-MAIL ADDRESS:

VAT REGISTRATION NUMBER:

HAS AN ORIGINAL TAX CLEARANCE CERTIFICATE BEEN ATTACHED (MBD2) YES/NO

HAS A B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE BEEN SUBMITTED (MBD6.1) YES/NO

IF YES, WHO WAS THE CERTIFICATE ISSUED BY?

AN ACCOUNTING OFFICER AS CONTEMPLATED IN THE CLOSE CORPORATION ACT (CCA) ☐
A VERIFICATION AGENCY ACCREDITED BY THE SOUTH AFRICAN NATIONAL
ACCREDITATION SYSTEM (SANAS) ☐
A REGISTERED AUDITOR ☐
(Tick applicable box)

(A B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE MUST BE SUBMITTED IN ORDER TO QUALIFY FOR PREFERENCE POINTS FOR B-BBEE)

**ARE YOU THE ACCREDITED REPRESENTATIVE IN SOUTH AFRICA FOR THE
GOODS/SERVICES OFFERED BY YOU? YES/NO
(IF YES INCLUDE PROOF)**

SIGNATURE OF BIDDER:

DATE:

CAPACITY UNDER WHICH THIS BID IS SIGNED:

TOTAL BID PRICE: (INCL VAT)

ANY ENQUIRIES REGARDING THE BIDDING PROCEDURE MAY BE DIRECTED TO:

**DIHLABENG LOCAL MUNICIPALITY
DEPARTMENT: FINANCE (SUPPLY CHAIN MANAGEMENT UNIT)
TEL: 058 303 5732**

ANY ENQUIRIES REGARDING TECHNICAL INFORMATION MAY BE DIRECTED TO:

**CONTACT PERSON: Mr Jaco Janse van Rensburg
TEL: 034 983 2825
FAX: 034 983 2945
E-MAIL: jaco@ecaconsult.co.za**

SCHEDULE H: TAX CLEARANCE CERTIFICATE REQUIREMENTS

It is a condition of bid that the taxes of the successful bidder **must** be in order, or that satisfactory arrangements have been made with South African Revenue Service (SARS) to meet the bidder's tax obligations.

- 1 In order to meet this requirement bidders are required to complete in full form TCC 001 "Application for a Tax Clearance Certificate" and submit it to any SARS branch office nationally. The Tax Clearance Certificate Requirements are also applicable to foreign bidders / individuals who wish to submit bids.
- 2 SARS will then furnish the bidder with a Tax Clearance Certificate that will be valid for a period of 1 (one) year from the date of approval.
- 3 The certified copy of the Tax Clearance Certificate must be submitted together with the bid. Failure to submit the original and valid Tax Clearance Certificate will result in the invalidation of the bid. Certified copies of the Tax Clearance Certificate will not be acceptable.
- 4 In bids where Consortia / Joint Ventures / Sub-contractors are involved; each party must submit a separate Tax Clearance Certificate.
- 5 Copies of the TCC 001 "Application for a Tax Clearance Certificate" form are available from any SARS branch office nationally or on the website www.sars.gov.za.
- 6 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.

Signature

Date

Name

Position.....

Tenderer

SCHEDULE I: DECLARATION OF INTEREST

1. No bid will be accepted from persons in the service of the state¹.*.
2. Any person, having a kinship with persons in the service of the state, including a blood relationship, may make an offer or offers in terms of this invitation to bid. In view of possible allegations of favouritism, should the resulting bid, or part thereof, be awarded to persons connected with or related to persons in service of the state, it is required that the bidder or their authorised representative declare their position in relation to the evaluating/adjudicating authority.
3. In order to give effect to the above, the following questionnaire must be completed and submitted with the bid.
 - 3.1 Full Name of bidder or his or her representative:.....
 - 3.2 Identity Number:
 - 3.3 Position occupied in the Company (director, trustee, shareholder²):.....
 - 3.4 Company Registration Number:
 - 3.5 Tax Reference Number:.....
 - 3.6 VAT Registration Number:
 - 3.7 The names of all directors / trustees / shareholders / members, their individual identity numbers and state employee numbers must be indicated in paragraph 4 below.
 - 3.8 Are you presently in the service of the state? **YES / NO**
 - 3.8.1 If yes, furnish particulars.
 -
 - 3.9 Have you been in the service of the state for the past twelve months? **YES / NO**
 - 3.9.1 If yes, furnish particulars.....
 -
 - 3.10 Do you have any relationship (family, friend, other) with persons in the service of the state and who may be involved with the evaluation and or adjudication of this bid? **YES / NO**

¹MSCM Regulations: "in the service of the state" means to be –

- (a) a member of –
 - (i) any municipal council;
 - (ii) any provincial legislature; or
 - (iii) the national Assembly or the national Council of provinces;
- (b) a member of the board of directors of any municipal entity;
- (c) an official of any municipality or municipal entity;
- (d) an employee of any national or provincial department, national or provincial public entity or constitutional institution within the meaning of the Public Finance Management Act, 1999 (Act No.1 of 1999);
- (e) a member of the accounting authority of any national or provincial public entity; or
- (f) an employee of Parliament or a provincial legislature.

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

UPGRADING CLARENS WATER TREATMENT WORKS: CIVIL AND BUILDING WORKS: PART B

3.10.1 If yes, furnish particulars.

.....

.....

3.11 Are you, aware of any relationship (family, friend, other) between any other bidder and any persons in the service of the state who may be involved with the evaluation and or adjudication of this bid? **YES / NO**

3.11.1 If yes, furnish particulars

.....

.....

3.12 Are any of the company's directors, trustees, managers, principle shareholders or stakeholders in service of the state? **YES / NO**

3.12.1 If yes, furnish particulars.

.....

.....

3.13 Are any spouse, child or parent of the company's directors trustees, managers, principle shareholders or stakeholders in service of the state? **YES / NO**

3.13.1 If yes, furnish particulars.

.....

.....

3.14 Do you or any of the directors, trustees, managers, principle shareholders, or stakeholders of this company have any interest in any other related companies or business whether or not they are bidding for this contract. **YES / NO**

3.14.1 If yes, furnish particulars:

.....

.....

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

Full Name	Identity Number	State Employee Number

Signature Date

Name Position.....

Tenderer

MBD 5

SCHEDULE J: DECLARATION FOR PROCUREMENT ABOVE R10 MILLION (ALL APPLICABLE TAXES INCLUDED)

For all procurement expected to exceed R10 million (all applicable taxes included), bidders must complete the following questionnaire:

1 Are you by law required to prepare annual financial statements for auditing? ***YES / NO**

1.1 If yes, submit audited annual financial statements for the past three years or since the date of establishment if established during the past three years.

.....

.....

2 Do you have any outstanding undisputed commitments for municipal services towards any municipality for more than three months or any other service provider in respect of which payment is overdue for more than 30 days? ***YES / NO**

2.1 If no, this serves to certify that the bidder has no undisputed commitments for municipal services towards any municipality for more than three months or other service provider in respect of which payment is overdue for more than 30 days.

2.2 If yes, provide particulars.

.....

.....

.....

.....

3 Has any contract been awarded to you by an organ of state during the past five years, including particulars of any material non-compliance or dispute concerning the execution of such contract? ***YES / NO**

3.1 If yes, furnish particulars

.....

.....

4. Will any portion of goods or services be sourced from outside the Republic, and, if so, what portion and whether any portion of payment from the municipality / municipal entity is expected to be transferred out of the Republic? ***YES / NO**

4.1 If yes, furnish particulars

.....

.....

* Delete if not applicable

CERTIFICATION

I, THE UNDERSIGNED (NAME)

CERTIFY THAT THE INFORMATION FURNISHED ON THIS DECLARATION FORM IS CORRECT.

I ACCEPT THAT THE STATE MAY ACT AGAINST ME SHOULD THIS DECLARATION PROVE TO BE FALSE.

Signature

Date

Name

Position.....

Tenderer

MBD 6.1**SCHEDULE K: PREFERENTIAL PROCUREMENT POLICY FRAMEWORK ACT, 05 OF 2000 AND REGULATIONS OF 2017**

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

NB: BEFORE COMPLETING THIS FORM, BIDDERS MUST STUDY THE GENERAL CONDITIONS, DEFINITIONS AND DIRECTIVES APPLICABLE IN RESPECT OF B-BBEE, AS PRESCRIBED IN THE PREFERENTIAL PROCUREMENT REGULATIONS, 2011.

1. GENERAL CONDITIONS

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

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

1.2 The value of this bid is estimated to not exceed R50 000 000 (all applicable taxes included) and therefore the **80/20** system shall be applicable.

1.3 Preference points for this bid shall be awarded for:

- (a) Price; and
- (b) B-BBEE Status Level of Contribution.

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

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

1.5 Failure on the part of a bidder to submit proof of B-BBEE Status level of contributor together with the bid, will be interpreted to mean that preference points for B-BBEE status level of contribution are not claimed.

1.6. The purchaser reserves the right to require of a bidder, either before a bid is adjudicated or at any time subsequently, to substantiate any claim in regard to preferences, in any manner required by the purchaser.

2. DEFINITIONS

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

3. POINTS AWARDED FOR PRICE

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

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

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

Where:

P_s = Points scored for comparative price of bid under consideration
 P_t = Comparative price of bid under consideration
 $P_{\min}$ = Comparative price of lowest acceptable bid

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

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

B-BBEE Status Level of Contributor	Number of points (90/10 system)	Number of points (80/20 system)
1	10	20
2	9	18
3	8	16
4	5	12
5	4	8
6	3	6
7	2	4
8	1	2
Non-compliant contributor	0	0

5. BID DECLARATION

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

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

- 6.1 B-BBEE Status Level of Contribution: = **20** (maximum of 10 or 20 points)

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

7. SUB-CONTRACTING

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

(Tick applicable box)

Yes	☐	NO	☐
-----	--------------------------	----	--------------------------

- 7.1.1 If yes, indicate:

- (i) what percentage of the contract will be subcontracted?.....%
- (ii) the name of the sub-contractor?
- (iii) the B-BBEE status level of the sub-contractor?
- (iv) whether the sub-contractor is an EME or QSE?

(Tick applicable box)

Yes	☐	NO	☐
-----	--------------------------	----	--------------------------

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

Designated Group: An EME or QSE which is at least 51% owned by:	EME √	QSE √
Black people		
Black people who are youth		
Black people who are women		
Black people with disabilities		
Black people living in rural or underdeveloped areas or townships		
Cooperative owned by black people		
Black people who are military veterans		
OR		
Any EME		
Any QSE		

8. DECLARATION WITH REGARD TO COMPANY/FIRM

8.1 Name of company /firm

8.2 VAT registration number :

8.3 Company registration number :

8.4 TYPE OF COMPANY/ FIRM

- ☐ Partnership/Joint Venture / Consortium
☐ One person business/sole propriety
☐ Close corporation
☐ Company
☐ (Pty) Limited

[TICK APPLICABLE BOX]

8.5 DESCRIBE PRINCIPAL BUSINESS ACTIVITIES

.....

.....

.....

.....

.....

8.6 COMPANY CLASSIFICATION

- ☐ Manufacturer
☐ Supplier
☐ Professional service provider
☐ Other service providers, e.g., transporter, etc.

[TICK APPLICABLE BOX]

8.7 MUNICIPAL INFORMATION

Municipality where business is situated

.....

Registered Account Number

Stand Number

8.8 Total number of years the company/firm has been in business?

UPGRADING CLARENS WATER TREATMENT WORKS: CIVIL AND BUILDING WORKS: PART B

8.9 I/we, the undersigned, who is / are duly authorised to do so on behalf of the company/firm, certify that the points claimed, based on the B-BBEE status level of contribution indicated in paragraph 4.1 and 6.1 of the foregoing certificate, qualifies the company/ firm for the preference(s) shown and I / we acknowledge that:

- (i) The information furnished is true and correct;
- (ii) The preference points claimed are in accordance with the General Conditions as indicated in paragraph 1 of this form.
- (iii) In the event of a contract being awarded as a result of points claimed as shown in paragraph 1.4 and 1.6, the contractor may be required to furnish documentary proof to the satisfaction of the purchaser that the claims are correct.
- (iv) If the B-BBEE status level of contribution has been claimed or obtained on a fraudulent basis or any of the conditions of contract have not been fulfilled, the purchaser may, in addition to any other remedy it may have –
 - (a) disqualify the person from the bidding process;
 - (b) recover costs, losses or damages it has incurred or suffered as a result of that person's conduct;
 - (c) cancel the contract and claim any damages which it has suffered as a result of having to make less favourable arrangements due to such cancellation;
 - (d) restrict the bidder or contractor, its shareholders and directors, or only the shareholders and directors who acted on a fraudulent basis, from obtaining business from any organ of state for a period not exceeding 10 years, after the audi alteram partem (hear the other side) rule has been applied; and
 - (e) forward the matter for criminal prosecution.

WITNESSES 1. 2.	 SIGNATURE(S) OF BIDDERS(S) DATE: ADDRESS
--	---

**B-BBEE EXEMPTED AFFIDAVIT FOR EXEMPTED MICRO ENTERPRISES
(ISSUED IN TERMS OF AMENDED CONSTRUCTION SECTOR CODE)**

(Gazette Vol. 630 No. 41287)

Issued in terms of paragraph 3.6.2.4.1 (B)

I, the undersigned,

Full name & Surname	
Identity Number	

Hereby declare under oath as follows:

1. The contents of this statement are to the best of my knowledge a true reflection of the facts.
2. I am a member / director / owner of the following enterprise and am duly authorized to act on its behalf:

Enterprise Name			
Trading Name (If Applicable):			
Registration Number			
Physical Address			
Type of Entity (CC, (Pty) Ltd, Sole Prop etc)			
Nature of Construction Business: Indicate the applicable category with a tick	BEP (Built Environment Professional)	Contractor	Supplier
Definition of "Black People"	As per the Broad-Based Black Economic Empowerment Act 53 of 2003 as Amended by Act No 46 of 2013 "Black People" is a generic term which means Africans, Coloureds and Indians- Who are citizens of the Republic of South Africa by birth or descent; or who became citizens of the Republic of South Africa by naturalization before 27 April 1994; or after 27 April 1994 and who would have been entitled to acquire citizenship by naturalization prior to that date.		
Definition of "Black Designated Groups"	"Black Designated Groups" means: (a) Unemployed black people not attending and not required by law to attend an educational institution and not awaiting admission to an educational institution; (b) Black people who are youth as defined in the National Youth Commission Act of 1996; (c) Black people who are persons with disabilities as defined in the Code of Good Practice on employment of people with disabilities issued under the Employment Equity Act; (d) Black people living in rural and under developed areas; (e) Black military veterans who qualifies to be called military veteran in terms of the Military Veterans Act 18 of 2011.		

3. I hereby declare under Oath that as per Amended Code Series 100 of the Amended Codes of Good Practice issued under section 9(1) of B-BBEE Act No 53 of 2003 as Amended by Act No 46 of 2013,

- The enterprise is _____ % Black Owned;
- The enterprise is _____ % Black Female Owned;
- The enterprise is _____ % Owned by Black Designated Group (provide Black Designated Group Breakdown below as per the definition in the table above)
 - Black Youth % _____ %
 - Black Disabled % _____ %
 - Black Unemployed % _____ %
 - Black People living in Rural areas % _____ %
 - Black Military Veterans % _____ %

UPGRADING CLARENS WATER TREATMENT WORKS: CIVIL AND BUILDING WORKS: PART B

- Based on the Financial Statements/Management Accounts and other information available on the latest financial year-end of _____, the annual Total Revenue was less than the applicable amount confirmed **by ticking the applicable box below.**

BEP	R 1.8 million	
Contractor	R 3.0 million	
Supplier	R 3.0 million	

If the turnover exceeds the applicable amount in the table above then this affidavit is no longer applicable and an EME certificate must be obtained from a rating agency accredited by SANAS or when applicable a B-BBEE Verification Professional Regulator appointed by the Minister of Trade and Industry.

- Please confirm on the table below the B-BBEE level contributor, **by ticking the applicable box.**

100% black owned	Level One (135% B-BBEE Procurement recognition)	
At least 51% black owned	Level Two (125% B-BBEE Procurement recognition)	
At least 30% black owned	Level Four (100% B-BBEE Procurement recognition)	
Less than 30% black owned	Level Five (80% B-BBEE Procurement recognition)	

- I know and understand the contents of this affidavit and I have no objections to take the prescribed oath and consider the oath binding on my conscience and on the owners of the enterprise which I represent in this matter.
- The sworn affidavit will be valid for a period of 12 months from the date signed by commissioner.

Deponent Signature: _____

Date: _____

Commissioner of Oaths
Signature & Stamp

MBD 6.2**SCHEDULE L: DECLARATION CERTIFICATE FOR LOCAL PRODUCTION AND CONTENT FOR DESIGNATED SECTORS**

This Municipal Bidding Document (MBD) 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 Preferential Procurement Regulations, 2011 and 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 Preferential Procurement Regulations, 2011 (Regulation 9) makes provision for the promotion of local production and content.
- 1.2 Regulation 9.(1) prescribes that in the case of designated sectors, where in the award of bids local production and content is of critical importance, such bids must be advertised with the specific bidding condition that only locally produced goods, services or works or locally manufactured goods, with a stipulated minimum threshold for local production and content will be considered.
- 1.3 Where necessary, for bids referred to in paragraph 1.2 above, a two stage bidding process may be followed, where the first stage involves a minimum threshold for local production and content and the second stage price and B-BBEE.
- 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

is the imported content in Rand

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 the South African Reserve Bank (SARB) at 12:00 on the date of advertisement of the bid as required 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%20development/ip.jsp) at no cost

- 1.6 A bid may be disqualified if –
 - (a) this Declaration Certificate and the Annex C (Local Content Declaration: Summary Schedule) are not submitted as part of the bid documentation; and
 - (b) the bidder fails to declare that the Local Content Declaration Templates (Annex C, D and E) have been audited and certified as correct.

2. Definitions

- 2.1 **“bid”** includes written price quotations, advertised competitive bids 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, where only locally produced services, works or goods or locally manufactured goods meet the stipulated minimum threshold for local production and content;
- 2.5 **“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).
- 2.6 **“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 which costs are inclusive of the costs abroad (this includes labour and intellectual property costs), 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;
- 2.7 **“local content”** means that portion of the bid price which is not included in the imported content, provided that local manufacture does take place;
- 2.8 **“stipulated minimum threshold”** means that portion of local production and content as determined by the Department of Trade and Industry; and
- 2.9 **“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.

3. 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:

Description of services, works or goods Stipulated minimum threshold

_____	%
_____	%
_____	%

4. Does any portion of the services, works or goods offered have any imported content?

(Tick applicable box)

YES		NO	
-----	--	----	--

- 4.1..... 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 the SARB for the specific currency at 12:00 on the date of advertisement of the bid.

The relevant rates of exchange information is accessible on

UPGRADING CLARENS WATER TREATMENT WORKS: CIVIL AND BUILDING WORKS: PART B

www.reservebank.co.za.

Indicate the rate(s) of exchange against the appropriate currency in the table below (refer to Annex A of SATS 1286:2011):

Currency	Rates of exchange
US Dollar	
Pound Sterling	
Euro	
Yen	
Other	

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

5. Were the Local Content Declaration Templates (Annex C, D and E) audited and certified as correct?

(Tick applicable box)

YES		NO	
-----	--	----	--

- 5.1 If yes, provide the following particulars:

- (a) Full name of auditor:
- (b) Practice number:
- (c) Telephone and cell number:
- (d) Email address:

(Documentary proof regarding the declaration will, when required, be submitted to the satisfaction of the Accounting Officer / Accounting Authority)

6. Where, after the award of a bid, challenges are experienced in meeting the stipulated minimum threshold for local content the dti must be informed accordingly in order for the dti to verify and in consultation with the Accounting Officer / Accounting Authority provide directives in this regard

**LOCAL CONTENT DECLARATION
(REFER TO ANNEX B OF SATS 1286:2011)**

LOCAL CONTENT DECLARATION BY 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 Municipality / Municipal Entity):

..... NB

1 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.

2 Guidance on the Calculation of Local Content together with Local Content Declaration Templates (Annex C, D and E) is accessible on <http://www.thedti.gov.za/industrialdevelopment/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.** Declarations D and E should be kept by the bidders 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:

(a) The facts contained herein are within my own personal knowledge.

(b) I have satisfied myself that

- (i) 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
- (ii) the declaration templates have been audited and certified to be correct.

(C) The local content percentages (%) 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 above and the information contained in Declaration D and E which has been consolidated in Declaration C

Bid price, excluding VAT (y)	R
Imported content (x), as calculated in terms of SATS 1286:2011	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 / Municipality /Municipal Entity 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 / Municipal / Municipal Entity imposing any or all of the remedies as provided for in Regulation 13 of the Preferential Procurement Regulations, 2011 promulgated under the Preferential Policy Framework Act (PPPFA), 2000 (Act No. 5 of 2000).

SIGNATURE: _____

DATE: _____

WITNESS No. 1: _____

DATE: _____

WITNESS No. 2: _____

DATE: _____

Annex C

Local Content Declaration - Summary Schedule

(C1)	Tender No.												Note: VAT to be excluded from all calculations
(C2)	Tender description:												
(C3)	Designated product(s)												
(C4)	Tender Authority:												
(C5)	Tendering Entity name:												
(C6)	Tender Exchange Rate:	Pula		EU		GBP							
(C7)	Specified local content %												

Calculation of local content								Tender summary			
Tender item no's	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)
								(C20) Total tender value R			
Signature of tenderer from Annex B								(C21) Total Exempt imported content R			
								(C22) Total Tender value net of exempt imported content		R 0	
								(C23) Total Imported content R			
								(C24) Total local content R			
Date:								(C25) Average local content % of tender			

Imported Content Declaration - Supporting Schedule to Annex C

(D1)	Tender No.									Note: VAT to be excluded from all calculations
(D2)	Tender description:									
(D3)	Designated Products:									
(D4)	Tender Authority:									
(D5)	Tendering Entity name:									
(D6)	Tender Exchange Rate:		Pula		EU		GBP			

[illegible]

SATS 1286.2011

Annex E

Local Content Declaration - Supporting Schedule to Annex C

(E1)	Tender No.					Note: VAT to be excluded from all calculations
(E2)	Tender description:					
(E3)	Designated products:					
(E4)	Tender Authority:					
(E5)	Tendering Entity name:					

	Local Products (Goods, Services and Works)	Description of items purchased	Local suppliers	Value
		(E6)	(E7)	(E8)
		(E9) Total local products (Goods, Services and Works)		R
(E10)	Manpower costs	(Tenderer's manpower cost)		R
(E11)	Factory overheads	(Rental, depreciation & amortisation, utility costs, consumables etc.)		R
(E12)	Administration overheads and mark-up	(Marketing, insurance, financing, interest etc.)		R
		(E13) Total local content		R
		This total must correspond with Annex C - C24		
Signature of tenderer from Annex B				
	Date:			

Bidder Initial:..... | Bidder Witness: | DLM initial: | DLM Witness:

Attach to this page all THE CONFIRMATION LETTERS FROM MANUFACTURER / SUPPLIER stating whether their products conform to local content requirements.

Should the templates not provide enough space, more CLEARLY MARKED templates can be copied and added as addendum to MBD 6.2.

SCHEDULE M: DECLARATION OF BIDDER'S PAST SUPPLY CHAIN MANAGEMENT PRACTICES

- 1 This Municipal Bidding Document must form part of all bids invited.
- 2 It serves as a declaration to be used by municipalities and municipal entities in ensuring that when goods and services are being procured, all reasonable steps are taken to combat the abuse of the supply chain management system.
- 3 The bid of any bidder may be rejected if that bidder, or any of its directors have:
 - a. abused the municipality's / municipal entity's supply chain management system or committed any improper conduct in relation to such system;
 - b. been convicted for fraud or corruption during the past five years;
 - c. wilfully neglected, reneged on or failed to comply with any government, municipal or other public sector contract during the past five years; or
 - d. been listed in the Register for Tender Defaulters in terms of section 29 of the Prevention and Combating of Corrupt Activities Act (No 12 of 2004).
- 4 **In order to give effect to the above, the following questionnaire must be completed and submitted with the bid.**

Item	Question	Yes	No
4.1	Is the bidder or any of its directors listed on the National Treasury's database as a company or person prohibited from doing business with the public sector? (Companies or persons who are listed on this database were informed in writing of this restriction by the National Treasury after the <i>audi alteram partem</i> rule was applied). The Database of Restricted Suppliers now resides on the National Treasury's website(www.treasury.gov.za) and can be accessed by clicking on its link at the bottom of the home page.	Yes ☐	No ☐
4.1.1	If so, furnish particulars:		
4.2	Is the bidder or any of its directors listed on the Register for Tender Defaulters in terms of section 29 of the Prevention and Combating of Corrupt Activities Act (No 12 of 2004)? The Register for Tender Defaulters can be accessed on the National Treasury's website (www.treasury.gov.za) by clicking on its link at the bottom of the home page.	Yes ☐	No ☐
4.2.1	If so, furnish particulars:		
4.3	Was the bidder or any of its directors convicted by a court of law (including a court of law outside the Republic of South Africa) for fraud or corruption during the past five years?	Yes ☐	No ☐

UPGRADING CLARENS WATER TREATMENT WORKS: CIVIL AND BUILDING WORKS: PART B

4.3.1	If so, furnish particulars:		
Item	Question	Yes	No
4.4	Does the bidder or any of its directors owe any municipal rates and taxes or municipal charges to the municipality / municipal entity, or to any other municipality / municipal entity, that is in arrears for more than three months?	Yes ☐	No ☐
4.4.1	If so, furnish particulars:		
4.5	Was any contract between the bidder and the municipality / municipal entity or any other organ of state terminated during the past five years on account of failure to perform on or comply with the contract?	Yes ☐	No ☐
4.7.1	If so, furnish particulars:		

CERTIFICATION

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

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

Signature Date

Name Position.....

Tenderer

| Bidder Initial:..... | Bidder Witness: | DLM initial: | DLM Witness: |

SCHEDULE N: CERTIFICATE OF INDEPENDENT BID DETERMINATION

1. This Municipal Bidding Document (MBD) must form part of all bids ¹ invited.
2. Section 4 (1)(b)(iii) of the Competition Act No. 89 of 1998, as amended, prohibits an agreement between, or concerted practice by, firms, or a decision by an association of firms, if it is between parties in a horizontal relationship and if it involves collusive bidding (or bid rigging)². Collusive bidding is a *pe se* prohibition meaning that it cannot be justified under any grounds.
3. Municipal Supply Regulation 38(1) prescribes that a supply chain management policy must provide measures for the combating of abuse of the supply chain management system, and must enable the accounting officer, among others, to:
 - a. take all reasonable steps to prevent such abuse;
 - b. reject the bid of any bidder if that bidder or any of its directors has abused the supply chain management system of the municipality or municipal entity or has committed any improper conduct in relation to such system; and
 - c. cancel a contract awarded to a person if the person committed any corrupt or fraudulent act during the bidding process or the execution of the contract.
4. This MBD serves as a certificate of declaration that would be used by institutions to ensure that, when bids are considered, reasonable steps are taken to prevent any form of bid-rigging.
5. In order to give effect to the above, the attached Certificate of Bid Determination (MBD9) must be completed and submitted with the Bid:

¹ Includes price quotations, advertised competitive bids and proposals.

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

CERTIFICATE OF INDEPENDENT BID DETERMINATION

I, the undersigned, in submitting the accompanying bid:

(Bid Number and Description)

in response to the invitation for the bid made by:

(Name of Municipality / Municipal Entity)

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

I certify, on behalf of: _____ that:
(Name of Bidder)

1. I have read and I understand the contents of this certificate;
2. I understand that the accompanying bid will be disqualified if this Certificate is found not to be true and complete in every respect;
3. I am authorised by the bidder to sign this Certificate, and to submit the accompanying bid, on behalf of the bidder;
4. Each person whose signature appears on the accompanying bid has been authorised by the Bidder to determine the terms of, and to sign, the bid on behalf of the Bidder;
5. For the purposes of this Certificate and the accompanying bid, I understand that the word "competitor" shall include any individual or organisation, other than the Bidder, whether or not affiliated with the Bidder, who:
 - (a) has been requested to submit a bid in response to this bid invitation;
 - (b) could potentially submit a bid in response to this bid invitation, based on their qualifications, abilities or experience; and
 - (c) provides the same goods and services as the Bidder and/or is in the same line of business as the Bidder.
6. The Bidder has arrived at the accompanying bid independently from, and without consultation, communication, agreement or arrangement with any competitor. However, communication between partners in a joint venture or consortium³ will not be construed as collusive bidding.
7. In particular, without limiting the generality of paragraph 6 above, there has been no consultation, communication, agreement or arrangement with any competitor regarding:
 - (a) prices;
 - (b) geographical area where product or service will be rendered (market allocation);
 - (c) methods, factors or formulas used to calculate prices;
 - (d) the intention or decision to submit or not to submit, a bid;
 - (e) the submission of a bid which does not meet the specifications and conditions of the bid; or
 - (f) bidding with the intention not to win the bid.
6. In addition, there have been no consultations, communications with any competitor regarding the quality, quantity, specifications and conditions or delivery particulars of the products or services to which this bid invitation relates.

³ Joint venture or Consortium means an association of persons for the purpose of combining their expertise, property, capital, efforts skill and knowledge in an activity for the execution of a contract

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

Signature Date

Name Position.....

Tenderer

**SCHEDULE O: MUNICIPAL SERVICES, RATES AND TAXES CLEARANCE CERTIFICATE
FOR SUPPLY CHAIN MANAGEMENT PURPOSES****DIHLABENG LOCAL MUNICIPALITY**

9 Muller Street East
Bethlehem
9700
Tel: 058 303 5732

PO Box 551
Bethlehem
9700
Fax: 058 303 4731

Enquiries : Supply Chain Management Unit

**MUNICIPAL SERVICES, RATES AND TAXES CLEARANCE CERTIFICATE FOR SUPPLY
CHAIN MANAGEMENT PURPOSE**

The purpose of this form is to obtain prove that municipal services, rates and taxes of the service provider are not more than three months in arrears with the relevant municipality / landlord in the municipal area where the service provider conducts his / her business. **This form is to be completed only if the service provider's rates and taxes are not in arrears for more than three months.**

PART A – to be completed by the relevant municipality in the case where the service provider is the registered owner of the site / owner pays for municipal services / tenant pays for municipal services

OR

PART B – to be completed by the landlord in the case where the service provider is renting the premises / rental paid by tenant include municipal services.

UPGRADING CLARENS WATER TREATMENT WORKS: CIVIL AND BUILDING WORKS: PART B

PART A (TO BE COMPLETED BY THE RELEVANT MUNICIPALITY)	
Name of the Municipality:	
Property Physical Address:	
Registered Name:	
Official's Name: _____ Signature : _____ Date: _____	Municipality Stamp Here
Please tick whether in arrears or up-to-date Rates and taxes : Up-to-date / in arrears for more than 3 months Water: Up-to-date / in arrears for more than 3 months Electricity: Up-to-date / in arrears for more than 3 months Refuse : Up-to-date / in arrears for more than 3 months Other services: Up-to-date / in arrears for more than 3 months	
PART B (TO BE COMPLETED BY THE LANDLORD)	
Name of the Landlord:	
Property Physical Address:	
Landlord Signature:	
Date: _____ here	Landlord's business stamp Or an Affidavit from SAPS (in the event the landlord does not have a business stamp)
Please tick whether up-to-date or in arrears Rental: Up-to-date / in arrears for more than 3 months Municipal services: Up-to-date / in arrears for more than 3 months	

SCHEDULE P1: CERTIFICATE OF AUTHORITY OF AN ENTITY

Indicate the status of the tenderer by ticking the appropriate box hereunder. The tenderer must complete the certificate set out below for the relevant category.

(I) Company	(II) Close Corporation	(III) Partnership	(IV) Joint Venture	(V) Sole Proprietor

(I) CERTIFICATE FOR COMPANY

I, chairperson of the Board of Directors of hereby confirm by resolution of the Board (copy attached) taken on 20....., that
Mr/Ms, acting in the capacity of was authorised to sign all documents in connection with this tender and any contract resulting from it on behalf of the company.

Signature of Chairman:

Signature of Signatory:

As Witnesses:

1..... Name in Block Letters.....

2..... Name in Block Letters.....

Date:

(II) CERTIFICATE FOR CLOSE CORPORATION

We, the undersigned, being the key members in the business trading as

.....hereby authorise
Mr/Ms.....

acting in the capacity of, to sign all documents

in connection with the tender for Contract No and any contract resulting from it on our behalf.

Signature of Signatory:

As Witnesses:

1..... Name in Block Letters.....

2..... Name in Block Letters.....

Date:

NAME	ADDRESS	SIGNATURE	DATE

Note: *This certificate is to be completed and signed by all of the key members upon whom rests the direction of the affairs of the Close Corporation as a whole.*

(III) CERTIFICATE FOR PARTNERSHIP

We, the undersigned, being the key members in the business trading as

.....hereby authorise
Mr/Ms.....

acting in the capacity of, to sign all documents

in connection with the tender for Contract No and any contract resulting from it on our behalf.

Signature of Signatory:

As Witnesses:

1..... Name in Block Letters.....

2..... Name in Block Letters.....

Date:

NAME	ADDRESS	SIGNATURE	DATE

Note: *This certificate is to be completed and signed by all of the key partners upon who rests the direction of the affairs of the Partnership as a whole.*

(IV) CERTIFICATE FOR JOINT VENTURE

We, the undersigned, are submitting this tender offer in Joint Venture and hereby authorize

Mr/Ms....., authorized signatory of the company,

.....acting in the capacity of lead partner, to sign all documents in

connection with the tender offer for Contract Noand any contract resulting from it on our behalf.

This authorization is evidenced by the attached power of attorney signed by legally authorized signatories of all the partners to the Joint Venture.

Signature of Signatory:

As Witnesses:

1..... Name in Block Letters.....

2..... Name in Block Letters.....

Date:

NAME OF FIRM	ADDRESS	AUTHORISING SIGNATURE, NAME AND CAPACITY
Lead partner		

Note: *This certificate is to be completed and signed by all of the key partners upon who rests the direction of the affairs of the Partnership as a whole.*

(V) CERTIFICATE FOR SOLE PROPRIETOR

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

Signature of Sole owner:

As Witnesses:

1..... Name in Block Letters.....

2..... Name in Block Letters.....

Date:

SCHEDULE P: CERTIFICATE OF REGISTRATION OF AN ENTITY (CIDB & B-BBEE)**ENTITY REGISTRATION:**

[Important note to Tenderer: Registration Certificates for Companies, Close Corporations and Partnerships and ID documents for Sole Proprietors, must be inserted here. In the case of a Joint Venture, a copy of a duly signed Joint Venture Agreement clearly setting out the roles and responsibilities of the parties must be included with particular reference to the guarantees required in terms of the Contract Data. The Joint Venture Agreement must also clearly indicate how payment is to be affected to the entity and distributed to the parties].

CIDB REGISTRATION:

Tenderers must also indicate their CIDB registration details in the space provided.
(If not registered, attach proof that the enterprise can be registered with the CIDB within 10 days).

Registered Name	Registration Number

B-BBEE CERTIFICATE

The Tenderer must also attach hereto a certified copy of their B-BBEE verification Certificate from a Verification Agency accredited by the South African Accreditation System (SANAS), or a sworn affidavit confirming annual turnover and level of black ownership in case of all EMEs and QSEs.

COMPANY REGISTRATION DOCUMENTATION

Tenders must attach their company registration documentation to this page.

Signature

Date

Name

Position.....

Tenderer

SCHEDULE Q: CERTIFICATE OF BIDDER'S ATTENDANCE AT THE COMPULSORY CLARIFICATION MEETING

A compulsory site inspection will be held on Friday, **18 February 2022**.

The meeting point for the site inspection will be at the Municipal Office, 17 Market Street, Clarens.

Compulsory Site Inspection Certificate

It is hereby certified that I have attended the Compulsory Site Inspection and have satisfied myself of the conditions and circumstances which may influence the Works and the cost thereof.

This is to certify that I, (*Name in print*)

Representative of (Bidder)

Of (Address) _____

Telephone number _____

Fax number _____

Attended the Clarification Meeting on (date) _____

SIGNATURE OF BIDDER'S REPRESENTATIVE _____

SIGNATURE OF DIHLABENG LOCAL MUNICIPALITY REPRESENTATIVE

Signature: _____ Date: _____

SCHEDULE R: WORKMEN'S COMPENSATION REGISTRATION CERTIFICATE

Attach original (or certified copy) of the Workmen's Compensation Letter of Good Standing to this page. When applicable the option to submit an original or certified copy of the letter from the Agent authorized by the Workmen's Compensation Commissioner will be accepted.

NOTE: Failure to do so will lead to your tender being disqualified.

Signature Date

Name Position.....

Tenderer

SCHEDULE S: UIF REGISTRATION CERTIFICATE

[The Tenderer's Unemployment Insurance Fund (UIF) Registration Certificate to be inserted here]

SCHEDULE T: COMPULSORY ENTERPRISE QUESTIONNAIRE

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.

Section 1: Name of enterprise:

Section 2: VAT registration number, if any:

Section 3: CIBD registration number, if any:

Section 4: Particulars of sole proprietors and partners in partnerships

Name*	Identity number *	Personal income tax number *

*Complete only if sole proprietor or partnership and attach separate page if more than 6 partners.

Section 5: Particulars of companies and close corporations

Company registration number	
Close corporation number	
Tax reference number	

Attach a certified copy of valid CIPC Certificate to this page.

Section 6: Record of service of the state

Indicate by marking the relevant boxes with a cross, if any sole proprietor, partner in a partnership or director, manager, principal shareholder or stakeholder in a company or close corporation is currently or has been within the last 12 months in the service of any of the following:

☐ a member of any municipal council	☐ an employee of any provincial department, national or provincial public entity or constitutional institution within the meaning of the Public Finance Management Act, 1999 (Act 1 of 1999)
☐ a member of any provincial legislature	☐ a member of an accounting authority of any national or provincial public entity.
☐ a member of the National Assembly or the National Council of Province	☐ an employee of Parliament or a provincial legislature
☐ a member of the board of directors of any municipal entity.	
☐ an official of any municipality or municipal entity	

If any of the above boxes are marked, disclose the following:

UPGRADING CLARENS WATER TREATMENT WORKS: CIVIL AND BUILDING WORKS: PART B

Name of sole proprietor, partner, director, manager, principal shareholder or stakeholder	Name of institution, public office, board or organ of state and position held	Status of service (tick appropriate column)	
		Current	Within last 12 months

* insert separate page if necessary

Section 7: Record of spouses, children and parents in the service of the state

Indicate by marking the relevant boxes with a cross, if any spouse, child or parent of a sole proprietor, partner in a partnership or director, manager, principal shareholder or stakeholder in a company or close corporation is currently or has been within the last 12 months been in the service of any of the following:

☐ a member of any municipal council	☐ an employee of any provincial department, national or provincial public entity or constitutional institution within the meaning of the Public Finance Management Act, 1999 (Act 1 of 1999)
☐ a member of any provincial legislature	☐ a member of an accounting authority of any national or provincial public entity.
☐ a member of the National Assembly or the National Council of Province	☐ an employee of Parliament or a provincial legislature
☐ a member of the board of directors of any municipal entity.	
☐ an official of any municipality or municipal entity	

Name of sole proprietor, partner, director, manager, principal shareholder or stakeholder	Name of institution, public office, board or organ of state and position held	Status of service (tick appropriate column)	
		Current	Within last 12 months

* insert separate page if necessary

The undersigned, who warrants that he/she is duly authorized to do so on behalf of the enterprise:

- i) authorizes the Employer to obtain a tax clearance certificate from the South African Revenue Services that my / our tax matters are in order;
- ii) confirm that the neither the name of the enterprise or the name of any partner, manager, director or other person, who wholly or partly exercises, or may exercises, or may exercise, control over the enterprise appears on the Register of Tender Defaulters established in terms of the Prevention and Combating of Corrupt Activities Act of 2004;
- iii) confirms that no partner, member, director or other person, who wholly or partly exercises, or may exercise, control over the enterprise appears, has within the last five years been convicted of fraud or corruption;

UPGRADING CLARENS WATER TREATMENT WORKS: CIVIL AND BUILDING WORKS: PART B

-
- iv) confirms that I/we are not associated, linked or involved with any other Tendering entities submitting Tender offers and have no other relationship with any of the Tenderers or those responsible for compiling the scope of works that could cause or be interpreted as a conflict of interest;
- v) confirms that the contents of this questionnaire are within my personal knowledge and are to the best of my belief both true and correct.

Signature Date

Name Position.....

Tenderer

SCHEDULE U: AFFIDAVIT OF GOOD STANDING THAT WILL BE INCORPORATED INTO THE CONTRACT

The Tenderer hereby certifies that neither it nor any of the principals of the enterprise is listed on the register of Tender Defaulters in terms of the Prevention and Combating of Corrupt Activities Act of 2004 as a person prohibited from doing business with the public sector. The Tenderer further certifies that none of its principals have ever been convicted of fraud.

DECLARATION *(to be signed in the presence of a Commissioner of Oaths)*

The undersigned, who warrants that he / she is duly authorised to do so on behalf of the firm, confirms that the contents of this Affidavit are within my personal knowledge, and save where stated otherwise to the best of my belief both true and correct.

Signature:

Duly authorized to sign on behalf:

Address:

.....

.....

Telephone:

Signed and sworn to before me at..... on

this theday ofby the Deponent, who

has acknowledged that he/she knows and understands the contents of this Affidavit, that its true and correct to the best of his/her knowledge and that he/she has no objection to taking the prescribed oath, and that the prescribed oath will be binding on his/her conscience.

Commissioner of oaths

NOTE: This affidavit comprises one (1) page all of which must be initialled by both the Deponent and the Commissioner of Oaths

**SCHEDULE V: SCHEDULE OF ALL WORK PROVIDED FOR AN ORGAN OF THE STATE
OVER THE LAST FIVE YEARS**

[Tenderers are to attach a schedule detailing the name of each project, the organ of state for which the project was undertaken and the date the project was completed. If not complete list the project as “current”]

SCHEDULE W: BANKING DETAILS

Tenderers financial capacity to finance and undertake a contract of this nature will also be checked and consequently it is a requirement that the details below be provided.

NAME OF TENDERER					
NAME OF ACCOUNT HOLDER AT BANK					
TYPE OF ACCOUNT (Please tick)	CURRENT/CHEQUE		SAVINGS		TRANSMISSION
BANK					
BRANCH NAME					
ACCOUNT NUMBER					
BRANCH CODE					
BANK TELEPHONE NO					
BANK ADDRESS					
NAME OF BANK MANAGER					
TELEPHONE NUMBER					
FAX NUMBER					
NO OF YEARS ABOVE ACCOUNT HAS BEEN WITH BANK					
CREDIT FACILITIES AVAILABLE (State Amount)					

Signature Date

Name Position.....

Tenderer
.....

SCHEDULE W1: DECLARATION OF FINANCIAL CAPACITY

The following particulars must be furnished in support of the preceding returnable to test financial capacity.

- No bid will be accepted from persons who cannot prove adequate financial capacity to execute the contract according to the specifications and scope of work and withing the stipulated timeframe.
- In order to prove financial capacity, the tenderer must attach the following:
 - a) A letter from the bank with bank stamp confirming that the tenderer has an active bank account.
 - b) Proof of bank account and letter of good standing with a credit rating.
 - c) If the tenderer is unable to demonstrate sufficient credit facility available, the tenderer must at least provide written undertaking/proof of guarantee or financial capacity from a reputable and accredited financial service provider/lender.

CERTIFICATION

I, THE UNDERSIGNED (NAME):

CERTIFY THAT THE INFORMATION FURNISHED ON THIS DECLARATION FORM IS CORRECT. I ACCEPT THAT THE STATE MAY ACT AGAINST ME SHOULD THE DECLARATION PROVE TO BE FALSE.

Signature Date

Name Position.....

Tenderer
.....

SCHEDULE X: SCHEDULE OF THE TENDERER'S EXPERIENCE

Tenderers are to provide references for **FIVE (5)** other recent projects (last five years) of a similar nature with which the company has been involved.

The information provided here will be used to evaluate the Tenderer's eligibility to undertake the contract. It is important that the Tenderer ensure that sufficient and legible information is provided to enable the Employer to evaluate the criteria noted in the table in F3.11.2.

Name and Telephone Number of Client	Project	Name and Telephone Number of Consulting Engineer / Implementing Agent	Details of service provided

Signature Date

Name Position.....

Tenderer
.....

SCHEDULE Y: COMPETENCY OF KEY PERSONNEL

Tenderers shall provide details of the Contracts Manager, Construction Manager, Construction Supervision and Construction Health & Safety Officer's experience in work of a similar nature to that for which their tender is submitted.

a) Contracts Manager

CONTRACTS MANAGER		NAME:	
NB: - Attached a detailed CV and Proof of Qualification and Proof of Professional Registration - Qualification, Professional Registration and Experience must be of same caliber as proposed during pre-qualification to panel of contractors of better			
CLIENT & NATURE OF WORK	POSITION HELD	VALUE OF WORK	PROJECT DURATION

b) Construction Manager – To be appointed in line with 8(1) of the Construction Regulations, 2014

CONSTRUCTION MANAGER		NAME:	
NB: • Minimum Qualification shall be National Diploma in Civil Engineering • Attach proof of Qualification • Attach a detailed CV indicating training and promotion through the ranks up to the position of Construction Manager			
CLIENT & NATURE OF WORK	POSITION HELD	VALUE OF WORK	PROJECT DURATION

UPGRADING CLARENS WATER TREATMENT WORKS: CIVIL AND BUILDING WORKS: PART B

c) Construction Supervisor – To be appointed in line with 8(7) of the Construction Regulations, 2014

CONSTRUCTION SUPERVISOR (Foreman)		NAME:	
NB: • Attach a detailed CV • The experience must be of same caliber as proposed during pre-qualification to panel of contractors of better			
CLIENT & NATURE OF WORK	POSITION HELD	VALUE OF WORK	PROJECT DURATION

CONSTRUCTION HEALTH & SAFETY OFFICER		NAME:	
CLIENT & NATURE OF WORK	POSITION HELD	VALUE OF WORK	PROJECT DURATION

Tenderer

SCHEDULE Z: DECLARATION OF AVAILABLE PLANT AND EQUIPMENT TO EXECUTE THE WORK

The bid of any bidder may be rejected if that bidder fails to provide surety within 14 days of intention to award, either owned or hired plant and equipment as may be required to fully execute the works:

This Clause is applicable even after the bid is awarded.

The undersigned bidder, declare that they will fully provide all plant and equipment as may be required before the work can be awarded to them, failing within the contract intention or after award may be terminated.

No	Name of Available Plant & Equipment	Owned by the Bidder	Hired by the Bidder
		(Tick appropriate column)	

DECLARATION

The undersigned, who warrants that he/she is duly authorized to do so on behalf of the enterprise and hereby declare that, the bidder of this bid PW, will make all necessary plant and equipment available within 14 days of intention to award of this contract, failing within the contract intention or after award, this contract may be terminated.

The undersigned, who warrants that he / she is duly authorized to do so on behalf of the firm, confirms that the contents of this Declaration are within my personal knowledge, and save where stated otherwise to the best of my belief both true and correct.

NAME:.....

SIGNATURE: DATE:

Duly authorized to sign on behalf of (Bidder Name):.....

NOTE: This declaration comprises one (1) page all of which must be also initialed.

SCHEDULE AA: TENDER PROGRAMME

The Tenderer shall detail below or attach a preliminary programme reflecting the proposed sequence and tempo of execution of the various activities comprising the work for this tender in Gantt Chart or similar format.

The programme must indicate all key activities, time frames and must clearly demonstrate the Tenderer's understanding of the scope of works.

The competency and clarity of the programme will help to inform the Employer's assessment of the Tenderer's eligibility to execute the contract.

[Attach Gantt Chart Programme to this page to claim points under Functionality.]

SCHEDULE AB: SCHEDULE OF LABOUR CONTENT

The tenderer must complete a standard table reflecting the labour force anticipated to be employed on this contract, including labour employed by sub-contractors. The Specified target value is 15%

Type of Labour	Man-Days	Minimum Wage Rate per unit	Total Wage Cost (Excl. VAT)
Permanent Staff			
Temporary Staff			
SMME/HDEs Labour			
		Total	
		Percentage	

Notes to Tenderer:

Labour is defined as hourly paid personal

The penalty for non-compliance during the contract or fraudulent disclosure is discussed in contract data (item 5.13.2) .

The minimum Labour Content for this Project shall be 15 % calculated as the amount spend on labour wage divided by the total value of the project. The minimum job creation targets on the project shall be:

	Total	Women	Youth	Disabled
Work Opportunities	35	10	10	1
Person Days	3 500	1 000	1 000	150
Training Days	3	3	3	3

SCHEDULE AC: TRAINING SCHEDULE

Name of Training Institution :

Name of Programme :

Trainers Name	Qualification	Subject

Note to tenderer:

Provide details here, or attached hereto, the subjects to be covered and the manner in which training is to be delivered.

SCHEDULE AD: TAX CLEARANCE CERTIFICATE**IMPORTANT NOTES:**

- The following is an abstract from the Preferential Procurement Regulations 2001 promulgated with the Preferential Policy Framework Act No 5 of 2000:

"Tax clearance certificate

16. No contract may be awarded to a person who has failed to submit an original Tax Clearance Certificate from the South African Revenue Service ("SARS") certifying the taxes of that person to be in order or that suitable arrangement have been made with SARS."

SARS has implemented a new Tax Compliance Status (TCS) system in terms of which a taxpayer is now able to authorise any 3rd party to verify its compliance status in one of two ways: either through the use of an electronic access PIN, or through the use of a Tax Clearance Certificate obtained from the new TCS system. Respondents are required to provide the following to Dihlabeng in order to enable it to verify their tax compliance status:

Tax reference number: _____

Tax Clearance Certificate & TCC Number: _____ **and PIN:**

Each party to a Consortium/Joint Venture/Sub-contractors must complete a separate Tax Clearance Certificate information form.

TAX CLEARANCE CERTIFICATE

[Tax Clearance Certificate obtained from SARS to be attached to this page]

SCHEDULE AE: PROFORMA FORMS TO BE COMPLETED BY SUCCESSFUL TENDERER

- PERFORMANCE GUARANTEE
- DISCLOSURE STATEMENT
- ADJUDICATION BOARD MEMBER AGREEMENT
- PRO FORMA NOTIFICATION FORM IN TERMS OF OHSA 1993 CONSTRUCTION REGULATIONS 2014

PRO FORMA PERFORMANCE GUARANTEE

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

GUARANTOR DETAILS AND DEFINITIONS

“Guarantor” means:

Physical address:

“Employer” means:

“Contractor” means:

“Engineer” 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 Contracts 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 of R

Amount in words:

“Expiry Date” means:

CONTRACT DETAILS

Engineer issues: Interim Payment Certificates, Final Payment Certificate and the Certificate Completion of the Works as defined in the Contract.

PERFORMANCE GUARANTEE

1. The Guarantor’s liability shall be limited to the amount of the Guaranteed Sum.
2. The Guarantor’s period of liability shall be from and including the date of issue of this Performance Guarantee and up to and including the Expiry Date or the date of issue by the Engineer of the Certificate of Completion of the Works or the date of payment in full of the Guaranteed Sum, whichever occurs first. The Engineer and/or the Employer shall advise the Guarantor in writing of the date on which the Certificate of Completion of the Works has been issued.
3. The Guarantor hereby acknowledges that:
 - 3.1 any reference in this Performance Guarantee to the Contract is made for the purpose of convenience and shall not be construed as any intention whatsoever to create an accessory obligation or any intention whatsoever to create a suretyship;
 - 3.2 its obligation under this Performance Guarantee is restricted to the payment of money.
4. Subject to the Guarantor’s maximum liability referred to in 1, the Guarantor hereby undertakes to pay the Employer the sum certified upon receipt of the documents identified in 4.1 to 4.3:

UPGRADING CLARENS WATER TREATMENT WORKS: CIVIL AND BUILDING WORKS: PART B

-
- 4.1 A copy of a first written demand issued by the Employer to the Contractor stating that payment of a sum certified by the Engineer in an Interim or Final Payment Certificate has not been made in terms of the Contract and failing such payment within seven (7) calendar days, the Employer intends to call upon the Guarantor to make payment in terms of 4.2;
 - 4.2 A first written demand issued by the Employer to the Guarantor at the Guarantor's physical address with a copy to the Contractor stating that a period of seven (7) days has elapsed since the first written demand in terms of 4.1 and the sum certified has still not been paid;
 - 4.3 A copy of the aforesaid payment certificate which entitles the Employer to receive payment in terms of the Contract of the sum certified in 4.

 5. Subject to the Guarantor's maximum liability referred to in 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:
 - 5.1 the Contract has been terminated due to the Contractor's default and that this Performance Guarantee is called up in terms of 5; or
 - 5.2 a provisional or final sequestration or liquidation court order has been granted against the Contractor and that the Performance Guarantee is called up in terms of 5; and
 - 5.3 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.

 6. It is recorded that the aggregate amount of payments required to be made by the Guarantor in terms of 4 and 5 shall not exceed the Guarantor's maximum liability in terms of 1.

 7. Where the Guarantor has made payment in terms of 5, the Employer shall upon the date of issue of the Final Payment Certificate submit an expense account to the Guarantor showing how all monies received in terms of this Performance Guarantee have been expended and shall refund to the Guarantor any resulting surplus. All monies refunded to Guarantor in terms of this Performance Guarantee shall bear interest at the prime overdraft rate of the Employer's bank compounded monthly and calculated from the date payment was made by the Guarantor to the Employer until the date of refund.

 8. Payment by the Guarantor in terms of 4 or 5 shall be made within seven (7) calendar days upon receipt of the first written demand to the Guarantor.

 9. Payment by the Guarantor in terms of 5 will only be made against the return of the original Performance Guarantee by the Employer.

 10. The Employer shall have the absolute right to arrange his/her affairs with the Contractor in any manner which the Employer may deem fit and the Guarantor shall not have the right to claim his/her release from this Performance Guarantee on account of any conduct alleged to be prejudicial to the Guarantor.

 11. The Guarantor chooses the physical address as stated above for the service of all notices for all purposes in connection herewith.

 12. This Performance Guarantee is neither negotiable nor transferable and shall expire in terms of 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.

 13. This Performance Guarantee, with the required demand notices in terms of 4 or 5, shall be regarded as a liquid document for the purposes of obtaining a court order.

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

Signed at

Date

Guarantor's signatory (1)

Capacity

Guarantor's signatory (2)

Capacity

Witness signatory (1)

Witness signatory (2)

PRO FORMA DISCLOSURE STATEMENT

(Please note that words in italics within brackets are items which should be stated)

Date:

Contract: **UPGRADING CLARENS WATER TREATMENT WORKS: CIVIL AND BUILDING WORKS PART B: RAW WATER PIPELINE, INLET WORKS AND GENERAL BUILDING**

Contractor:

Employer: **Dihlabeng Local Municipality**

Engineer: ECA Consulting (Pty) Ltd

Dear Sirs

I am willing and available to serve as ad-hoc Adjudication Board Member in the abovementioned Contract.

In accordance with the General Conditions of Contract for Construction Works Adjudication Board Rules relating to disclosure statements by selected or nominated persons to the adjudication, I hereby state that:

- I shall act with complete impartiality and know of nothing at this time, which could affect my impartiality.
- I have had no previous involvement with this project.
- I do not have any financial interest in this project.
- I am not currently employed by the Contractor, Employer or Engineer.
- I do not have any financial connections with the Contractor, Employer or Engineer.
- I do not have or have had a personal relationship with any authoritative member of the Contractor, Employer or the Engineer which could affect my impartiality.
- I undertake to immediately disclose to the parties any changes in the above position which could affect my impartiality or be perceived to affect same.

Should there be any deviation from the foregoing statements, details shall be given.

I further declare that I am experienced in the work which is carried out under the Contract and in interpreting contract documentation.

Name in full:

Signature:

PRO FORMA ADJUDICATION BOARD MEMBER AGREEMENT

(Please note that words in italics within brackets are items which should be stated)

This Agreement is entered into between:

Adjudication Board Member: *(Name, physical address, postal address, email address, fax number, telephone number and mobile number)*.

Contractor: *(Name, physical address, postal address, email address, fax number, telephone number and mobile number)*.

Employer: *(Name, physical address, postal address, email address, fax number, telephone number and mobile number)*.

The Contractor and the Employer will hereinafter be collectively referred to as the Parties.

The Parties entered into a Contract for *(name of project)* which provides that a dispute under or in connection with the General Conditions of Contract for Construction Works, Third Edition, 2015, must be referred to *(ad-hoc adjudication/standing adjudication)*.

The undersigned natural person has been appointed to serve as Adjudication Board Member and together with the undersigned Parties agree as follows:

1. The Adjudication Board Member accepts to perform his/her duties in accordance with the terms of the Contract, the General Conditions of Contract for Construction Works Adjudication Board Rules and this Agreement.
2. The Adjudicator undertakes to remain independent and impartial of the Contractor, Employer and Engineer for the duration of the Adjudication Board proceedings.
3. The Adjudication Board Member agrees to serve for the duration of the Adjudication Board proceedings.
4. The Parties may at any time, without cause and with immediate effect, jointly terminate this Agreement.
5. Unless the Parties agree, the Adjudication Board Member shall not act as arbitrator or representative of either Party in any subsequent proceedings between the Parties under the Contract. No Party may call the Adjudication Board Members as a witness in any such subsequent proceedings.
6. The standing Adjudication Board's duties shall end upon the Adjudication Board Member(s) receiving notice from the Parties of their joint decision to disband the Adjudication Board.
7. The Adjudication Board Member shall be paid in respect of time spent upon or in connection with the adjudication including time spent travelling:
 - a. A monthly retainer of *(amount)* for *(number)* of months, and /or
 - b. A daily fee of *(amount)* based on a *(number)* hour day, and/or
 - c. A hourly fee of *(amount)*, and/or
 - d. A non-recurrent appointment fee of *(amount)* which shall be accounted for in the final sums payable.
8. The Adjudication Board Member's expenses incurred in adjudication work shall be reimbursed at cost.

Upon submission of an invoice for fees and expenses to the Parties, the *(Contractor/Employer*)* shall pay the full amount within 28 days of receipt of the invoice and he shall be reimbursed by the other party by half the amounts so that the fees and expenses are borne equally by the Parties. Late payment of such invoice shall attract interest at prime plus 3% points compounded monthly at the prime rate charged by the Adjudication Board Member's bank.

This Agreement is entered into by:

Contractor's signature:
 Contractor's name:
 Place:
 Date:

UPGRADING CLARENS WATER TREATMENT WORKS: CIVIL AND BUILDING WORKS: PART B

Employer's signature:
 Employer's name:
 Place:
 Date:

Adjudication Board Member's signature:
 Adjudication Board Member's name:
 Place:
 Date:

**Delete the inapplicable party*

PRO FORMA NOTIFICATION FORM IN TERMS OF THE OCCUPATIONAL HEALTH AND SAFETY ACT 1993, CONSTRUCTION REGULATIONS 2014

[This form must be completed and forwarded, prior to commencement of work on site, by all Contractors that qualify in terms of Regulation 4 of the Construction Regulations 2014, to the office of the Department of Labour]

NOTIFICATION OF CONSTRUCTION WORK

- 1(a) Name and address of Principal Contractor: _____
- 1(b) Name and telephone number of Principal Contractors contact person: _____
- 2 Principal Contractors compensation registration number: _____
- 3(a) Name and postal address of Client: _____
- 3(b) Name and telephone number of clients contact person or agent: _____
- 4(a) Name and postal address of Designer/s of this project: _____
- 4(b) Name and telephone number of the Designer/s contact person: _____
- 5 Name and tel. no. of Principal Contractor's Construction Manager on site appointed in terms of Construction Regulation 8(1): _____
- 6 Name/s of Principal Contractor's Construction Supervisor on site appointed in terms of Construction Regulations 8(7): _____
- 7 Exact physical address of construction site or site office: _____
- 8 Nature of construction work: _____
- 9 Expected commencement date: _____
- 10 Expected completion date: _____
- 11 Estimated maximum number of persons at the construction site:
Total: _____ Male: _____ Female: _____
- 12 Planned number of contractors on the construction site accountable to Principal Contractor: _____
- 13 Name/s of contractors already chosen: _____

Principal Contractor

Date

Client's Agent (where applicable)

Date

Client

Date

SCHEDULE AF: NATIONAL TREASURY'S CENTRAL SUPPLIER DATABASE

Tenderers are required to self-register on National Treasury's Central Supplier Database (CSD) which has been established to centrally administer supplier information for all organs of state and facilitate the verification of certain key supplier information. Dihlabeng is required to ensure that price quotations are invited and accepted from prospective bidders listed on the CSD. Business may not be awarded to a Tenderer who has failed to register on the CSD. Only foreign suppliers with no local registered entity need not register on the CSD. The CSD can be accessed at <https://secure.csd.gov.za/>. Tenderers are required to provide the CSD summary form and the information below to Dihlabeng in order to enable it to verify information on the CSD:

Supplier Number: _____ Unique registration reference number:
_____.

[PLEASE ATTACH THE RESENT CERTIFICATE TO THIS PAGE. IT MAY NOT BE OLDER THAN THREE MONTHS]

SCHEDULE AG: DECLARATION OF SOLVENCY OR LIQUIDITY

The bid of any bidder may be rejected if that bidder, or any of its directors are:

- a. Under liquidation
- b. Sequestration
- c. Insolvency.

This Clause is applicable even after the bid is awarded.

We, the undersigned directors, declare that they are not under liquidation, sequestration or insolvent.

No	Name of Director	ID number	Signature

➤ **DECLARATION OF SOLVENCY/ LIQUIDITY**

- All tenderers attention is drawn to this Form (declaration of Solvency or Liquidity of the tenderer).
- All tenderers are therefore required to complete It.
- Failure to complete the form or attempt to falsify or hide this information may render the tender non-responsive.

SCHEDULE AH: CONTRACT PARTICIPATION GOALS

CONTRACT PARTICIPATION GOALS – CONSTRUCTION

1. Objective

The objective of Dihlabeng Local Municipality's B-BBEE policy is to bring about meaningful transformation in the built environment construction industry through the following:

- Meaningful economic participation;
- Local economic development;
- Transfer of technical, management and entrepreneurial skills; and
- Creation of sustainable large black owned enterprises

2. Contract Participation Goals

Contract Participation Goal (CPG) – the **final** value of services paid to the CPG Partner/s are based on the **Final Contract Value**.

At the time of awarding the contract the 20% minimum CPG amount will be based on the **Contract Award Value** exclusive of the following:

- The Contingencies, CPA and VAT.

During contract implementation, adjustments relating to Provisional Sums and Contingencies linked to the CPG allocation will be agreed upon between the parties to the contract, as and when the need arises.

CPG Partner/s – Service provider/s are to be selected from Dihlabeng Local Municipalities Supply Chain Management (SCM) Enterprise Development Database (available upon request). However, should the database not contain suitable CPG Partner/s, the tenderer may propose suitable CPG Partner/s for consideration, the approval of which will be at the sole discretion of Dihlabeng Local Municipality.

A CPG Partner must be an EME or QSE which is at least 51% owned by black people.

Dihlabeng Local Municipality requires a minimum of 20% Contract Participation Goals (CPG) of the value of goods, services and works paid to one or more targeted enterprises to comply with the 2017 Regulations pertaining to the Preferential Procurement Policy Framework Act (PPPFA).

- 20% excludes the Contingencies, CPA and VAT.
- The tenderer will be required to achieve the actual Rand value committed for CPG, adjusted according to the following:
 - Variation Orders – Each VO will be evaluated by Dihlabeng Local Municipality and the Employer's Agent to determine whether it should be counted, in its entirety or partially, as part of the CPG or not.
 - Provisional Items (including CPA, Contingencies, and provisional sums) – Each provisional item change will be evaluated by the Dihlabeng Local Municipality and the Employer's Agent to determine whether it should be counted as part of CPG or not.

Within 14 days of the award of contract, the tenderer will be required to submit a cash flow projection for the main contractor and the CPG Partner/s.

3. Applicability

The CPG target may be applicable to all contracts over R10 million and will be adjudicated through Dihlabeng Local Municipalities procurement process and shall be achieved through the following mechanisms: CPG Partner/s selection is concluded **after** adjudication of tenders and **before** contract award is made.

- The CPG Partner/s shall be selected according to the following criteria:
 - CPG Partner/s are to be obtained from Dihlabeng Local Municipalities Enterprise Development Database specifically earmarked for CPG purposes.
 - In the event of services where Dihlabeng Local Municipality does not have an applicable service provider on its database, the tenderer may propose a suitable CPG Partner/s for consideration, the approval of which will be at the sole discretion of Dihlabeng Local Municipality.
- The Tenderer may propose a suitable CPG Partner/s, but Dihlabeng Local Municipality reserves the right to provide or arrange a CPG Partner/s to work with the successful company.
- The Tenderer may propose suitable works for the CPG Partner/s, but Dihlabeng Local Municipality reserves the right to identify suitable works for the CPG Partner/s to be undertaken under the main Contract.
- The Tenderer will need to successfully complete CPG negotiations with Dihlabeng Local Municipality prior to the signing of the Contract.
- Value of the work to be undertaken by CPG Partner/s shall be a minimum of 20% (to a maximum of 30%) of the total contract value excluding the procurement of the o-PVC pipes, Contingencies, CPA and VAT.
- CPG Partner/s are to be assigned work in accordance with their particular CIDB Code and Grading. Works assigned may not exceed 20% of the maximum applicable CIDB grading without written approval from Dihlabeng Local Municipality. This is will aid in the sharing of the CPG works value in targeted areas.
- In terms of Clause 4.4.3 of GCC 2015 the Contractor shall be liable for the acts, defaults and negligence of any subcontractor, his agents or employees as fully as if they were the acts, defaults or negligence of the Contractor.
- Furthermore, in terms of Clause 4.4.4 of GCC 2015 the contractual relationship between the Contractor and any subcontractors selected by the Contractor in consultation with the requirements of and a procedure set out in the Scope of Works, shall be the same as if the Contractor had appointed the subcontractor in terms of Clause 4.4.3.
- Furthermore, in terms of Clause 4.4.5 of GCC 2015 any appointment of a subcontractor in accordance with Clause 4.4.4 shall not amount to a contract between the Employer and the subcontractor, or a responsibility or liability on the part of the Employer to the subcontractor and shall not relieve the Contractor from any liability or obligation under the Contract.
- The Contractor thus remains fully liable for his CPG subcontractors and no claims for extension of time and/or costs will be entertained due to poor workmanship, defective materials, or delays caused by his CPG subcontractors.
- Sub-contracting works to the CPG Partner/s at least the same rate / price that the tenderer would have offered to Dihlabeng Local Municipality whilst making profit margins consistent to the profit margins that the main contractor would have made under normal trading processes.
- The main contractor is to pay applicable P&G's to the CPG Partner/s in proportion to the value of works executed by their CPG Partner/s consistent with the main contractors P&G's / rate pricing strategy.
- CPA is payable to the CPG Partner/s as per the indices stipulated in the contract document.
- The work allocated to the CPG Partner/s shall be performed by the CPG Partner/s directly and may not be allocated or sub-contracted out to other contractors/consultants/service providers.

UPGRADING CLARENS WATER TREATMENT WORKS: CIVIL AND BUILDING WORKS: PART B

- The main contractor shall not substitute any CPG Partner/s without the written approval of Dihlabeng Local Municipality.
- The working capital arrangements between the main contractor and the CPG Partner/s must be agreed upon between the two parties prior to commencement of works to ensure that the CPG Partner/s does not have cash flow challenges during contract implementation.
- The Main Contractor may free issue construction material to the CPG Partner/s at the same purchase price including all discounts as procured by the Main Contractor.
- The Main Contractor may hire out plant and machinery to the CPG Partner/s at the same rate as tendered including all discounts.
- Skilled staff may be seconded by the Main Contractor to the CPG Partner/s at the same rate as tendered including associated overheads and discounts.

4. Enterprise Development Support, Mentoring and Skills Transfer to Targeted Enterprise/s

It is envisaged that such mechanisms/approaches will involve one or more entities, one or more being a targeted enterprise(s).

A Targeted enterprise is defined as an EME (Exempted Micro Enterprise) or QSE (Qualifying Small Business Enterprise) with at least 51% Black-ownership, selected from Dihlabeng Local Municipalities Enterprise Development Database. A targeted enterprise must be registered with the CIDB for the nature and value of construction works to be undertaken. Targeted enterprises, which will undertake construction works, are differentiated from other CPG Partner/s which may play more of a supportive role on the construction contract such as providing security, PPE or portable toilet hire etc. Both may still count towards the CPG target spend.

Eligibility criteria for Targeted Enterprise:

- Developed enterprise must not have equity holding exceeding 20%, either directly or through a flow-through principle
- CIDB registration ≥ 1 to ≤ 5
- SARS registration and tax clearance
- CIPC registration
- Registered on the CSD
- Must be at least 51% Black-owned as an EME (Exempted Micro Enterprise) or QSE (Qualifying Small Business Enterprise).

The intention is for skills to be transferred from the developed enterprise to the targeted enterprise hence joint ventures formed by two or more targeted enterprises are not desirable. Engaging sub-contractors will be a preferred method.

The contractor shall perform a needs analysis on all targeted enterprises and provide internal mentorship which improves the targeted enterprise's performance in at least two development areas. Such development areas should be guided by the requirements of the CIDB Best Practice Contractor Recognition Scheme as well as the NCDP exit requirements for accreditation contractors and may include but are not limited to:

- 1) Management of labour skills transfer
- 2) Establishment of administrative systems
- 3) Establishment of cost control systems
- 4) Establishment of construction management systems and plans (health and safety, quality and environmental)
- 5) Planning, tendering and programming skills transfer
- 6) Business skills transfer with emphasis on entrepreneurial and negotiation skills
- 7) Technical skills transfer with the emphasis on innovation
- 8) Legal compliance
- 9) Procurement skills transfer
- 10) Establish credit rating/history
- 11) Establish financial loan capacity/history
- 12) Contractual knowledge transfer

The needs analysis shall be mutually agreed upon between the contractor and the targeted enterprise.

5. Invoicing and Payment

The monthly measurement and payment to be submitted to the Employers Agent by the 25th of each month and shall will be according to the following guideline:

- The submission of payment certificate to the Employer's Agent by the Contractor shall include the signature of the CPG Partner/s indicating agreement with the measurements and rates applicable to the work undertaken by the CPG Partner/s.
- The CPG Partner/s must be paid within reasonable time but no later than 3 working days after the Main Contractor has been paid by Dihlabeng Local Municipality; and
- The submission from the Contractor must include a schedule in Dihlabeng Local Municipality standard format (available upon request) that clearly shows the following:
 - Total Contract Sum
 - Total amount payable to CPG Partner/s excluding current month
 - Amount payable to CPG Partner/s for current month
 - % split of Total amount payable to Main contractor and CPG Partner/s
- Dihlabeng Local Municipality reserves the right to request proof of payment to CPG Partner/s.

6. Monitoring and Reporting on CPG

- The agreement/s between the main contractor and CPG Partner/s to be submitted within 14 days from date of award, clearly detailing the work packages to be performed.
- Tracking of CPG targets including proof of payments, as described in section 5 above, is to be reported on monthly.
- The Contractor is include in their monthly progress report updated information on enterprise development support, mentoring and skills transfer.
- Dihlabeng Local Municipality will monitor CPG implementation on site. This may include direct contact with CPG Partner/s on site for verification purposes.
- The CPG Partner/s shall be in agreement with the measurement and payment for work completed, for the purposes of submitting payment certificates, as determined by the Contractor. Should disagreements arise, Dihlabeng Local Municipality reserves the right to intervene to resolve the disagreement.
- CPG Partner/s shall attend all contractual meetings relevant to their scope of work including contract award negotiations, monthly contract site progress and technical meetings.

7. Penalties for not achieving the minimum CPG or finishing late

In the event that the principal contractor fails to substantiate that any failure to achieve the 20% Contract Participation Goal expenditure was due to reasons beyond the contractor's control which may be acceptable solely at the discretion of the employer, the following shall apply.

In the case where the minimum CPG expenditure of 20% is not achieved, the Contractor may be penalized as follows:

- The CPG expenditure amount not achieved in Rands will be multiplied by a factor of 0.7. The factored amount in Rands will be deducted from the Contractor's final payment certificate.

8. Eligibility Criteria

For tenders where the CPG target is applicable, those that do not offer a **minimum** CPG participation of **20%** according to the requirements mentioned above, will be deemed **ineligible**.

DECLARATION REGARDING CONTRACT PARTICIPATION GOALS

I, the undersigned, in submitting the accompanying bid:

(Bid Number and Description)

in response to the invitation for the bid made by: **DIHLABENG LOCAL MUNICIPALITY** do hereby make the following declaration and certify the statements contained herein to be true and complete in every respect:

I certify, on behalf of: _____ that
(Name of Bidder)

1. I have read and I understand the contents of this Declaration and the fully completed bid document accompanying this declaration;
2. I understand and declare that the accompanying bid will, and must, be disqualified if this Declaration is found not to be true and complete in every respect;
3. I understand and declare that in the event that this bid is successful, I will be required to, and shall, fully implement the commitments that are submitted with this bid, in particular regarding the Bidder's contract participation goals and commitments towards the allocation of certain portion of the contract to qualifying targeted enterprises. Failure to implement such commitments as outlined in the bid document and or failure to provide the relevant information within the prescribed period as determined in the Letter of Intention to Award the Bid, shall automatically disqualify this bid from further consideration and the Employer has the right to, and must, then award the bid to the next highest ranked bidder; and as a result I or the bidder or any of its directors shall have no recourse against Dihlabeng Local Municipality.
4. I understand and declare that I shall remain fully liable for my appointed CPG subcontractors and no extension of time and/or costs will claimed due to poor workmanship, defective materials, or delays caused by my CPG subcontractors.
5. I am authorized by the bidder to sign this Declaration, and to submit the accompanying bid, on behalf of the bidder;
6. Each person whose signature appears on the accompanying bid has been authorized by the bidder to determine the terms of, and to sign the bid, on behalf of the bidder;
7. I understand and accept that although I may propose a suitable CPG Partner/s, Dihlabeng Local Municipality reserves the right to provide or arrange a CPG Partner/s to work with the successful company and I understand and accept that the signing of this Contract is contingent upon the completion of successful CPG negotiations with Dihlabeng Local Municipality.
8. I am aware that, and do consent to, the disqualification of my or the bidder's future bids with Dihlabeng Local Municipality in the event of the commitments made herein are not fulfilled and that such non-fulfilment amounts to abuse of Dihlabeng Local Municipality's supply chain policies and procedures and/or empowerment objectives, which must be penalized, over and above the contractual sanctions as agreed to in line with the contract signed with Dihlabeng Local Municipality, with a sanction of restricting me and or my company (the bidder) and or any of its directors from conducting business with Dihlabeng Local Municipality for a period not exceeding five (5) years.
9. I consent that should my company (the Bidder) deviate from the commitments and the spirit of the CPG objectives as agreed to, shall amount to a repudiation of the contractual arrangement between the two parties (Dihlabeng Local Municipality and the Bidder); and Dihlabeng Local

UPGRADING CLARENS WATER TREATMENT WORKS: CIVIL AND BUILDING WORKS: PART B

Municipality has the right to terminate the contract following prior notice and reasonable time given to remedy the breach. Furthermore, should my company (the Bidder) fail to meet the CPG financial targets as agreed to, Dihlabeng Local Municipality has the right to institute penalties as set out in Section 7.

Full Names & Surname
(Duly Authorised)

Signature

Date

Position

Name of Bidder

Witness 1

Full Names & Surname

Signature

Date

Witness 2

SCHEDULE AI: PUBLIC LIABILITY COVER AND QUALITY MANAGEMENT SYSTEM**PUBLIC LIABILITY COVER**

Provision of Public Liability Insurance to the value of R 2 million or a letter of intent from an approved provider is required. Please attach documentation to this page in order to obtain points under the functionality criteria.

QUALITY MANAGEMENT SYSTEM

Provision of a Quality Management system is required. Please attach relevant certification to this page in order to obtain points under the functionality criteria.

VOLUME 2: CONTRACT

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Bidder Initial:.....

Bidder
.....

Witness:

DLM initial:

DLM Witness:

C1 AGREEMENTS AND CONTRACT DATA

C1.1 FORM OF OFFER AND ACCEPTANCE

OFFER

The Employer, identified in the acceptance signature block, has solicited offers to enter into a contract for the procurement of the Contract No: PW 002/2022 Upgrading Clarens Water Treatment Works: Civil And Building Works Part B: Raw Water Pipeline, Inlet Works and General Building.

The Tenderer, identified in the offer signature block, has examined the documents listed in the tender data and addenda thereto as listed in the returnable schedules, and by submitting this offer has accepted the conditions of tender.

By the representative of the Tenderer, deemed to be duly authorised, 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:

.....

.....Rand (*Print clearly In words*)

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

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 tender data, whereupon the Tenderer becomes the party named as the Contractor in the conditions of contract identified in the contract data.

Signature: (*of person authorized to sign the tender*):

Name: (*of signatory in capitals*):

Capacity: (*of Signatory*):

Name of Tenderer: (*organisation*):

Address:

.....

Telephone number: **Fax number:**

Witness:

Name / Signature:

Date:

Bidder Initial:.....	Bidder	Witness:	DLM initial:	DLM Witness:
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ACCEPTANCE

By signing this part of this form of offer and acceptance, the Employer identified below accepts the Tenderer's offer. In consideration thereof, the Employer shall pay the Contractor the amount due in accordance with the conditions of contract identified in the contract data. Acceptance of the Tenderer's offer shall form an agreement between the Employer and the Tenderer 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:

- Part C1 Agreements and contract data, (which include this agreement)
- Part C2 Pricing data
- Part C3 Scope of work
- Part C4 Site information

Drawings and documents or parts thereof, which may be incorporated by reference into the above listed parts.

Deviations from and amendments to the documents listed in the tender data and any addenda thereto as listed in the Tender Schedules, as well as any changes to the terms of the Offer agreed by the Tenderer and the Employer 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 contained in this schedule, which must be duly signed by the authorized representative(s) of both parties.

The Tenderer shall within two weeks after receiving a completed copy of this Agreement, including the Schedule of Deviations (if any), contact the Employer's agent (whose details are given in the contract data) to arrange the delivery of any securities, bonds, guarantees, proof of insurance and any other documentation to be provided in terms of the Conditions of Contract identified in the contract data at, or just after, the date this Agreement comes into effect. Failure to fulfill 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 Tenderer receives one fully completed original copy of this document, including the Schedule of Deviations (if any). Unless the Tenderer (now Contractor) 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.

For the Employer:

Signature:

Name: (in capitals)

Capacity:

Name of Employer : DIHLABENG LOCAL MUNICIPALITY

Address: 9 Muller Street, Bethlehem, 9700

Witness:

Name / Signature:

Date:

Bidder Initial:.....	Bidder	Witness:	DLM initial:	DLM Witness:
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SCHEDULE OF DEVIATIONS

Notes:

1. The extent of deviations from the tender documents issued by the Employer before the tender closing date is limited to those permitted in terms of the Conditions of Tender.
2. A Tenderer's covering letter shall not be included in the final contract document. Should any further 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 documents and which it is agreed by the parties becomes an obligation of the contract shall also be recorded here.
4. Any change or addition to the tender documents arising from the above agreements and recorded here shall also be incorporated into the final draft of the contract.

1. **Subject:**
Details:

2. **Subject:**
Details:

3. **Subject:**
Details:

4. **Subject:**
Details:

By the duly authorised representatives signing this Schedule of Deviations, the Employer and the Tenderer agree to and accept the foregoing Schedule of Deviations as the only deviations from and amendments to the documents listed in the Tender Data and Addenda thereto as listed in the Tender Schedules, as well as any confirmation, clarification or changes to the terms of the Offer agreed by the Tenderer and the Employer during this process of Offer and Acceptance.

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

Bidder Initial:.....	Bidder	Witness:	DLM initial:	DLM Witness:
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UPGRADING CLARENS WATER TREATMENT WORKS: CIVIL AND BUILDING WORKS: PART B

For the Tenderer:

For the Employer:

Signature

Name

Capacity

Name and address of organisation:

Name and address of organisation:

Witness Signature

Witness Name

Date

Bidder Initial:.....

Bidder

.....

Witness:

DLM initial:

DLM Witness:

CONFIRMATION OF RECEIPT

The Tenderer, (now Contractor), identified in the Offer part of this Agreement hereby confirms receipt from the Employer, identified in the Acceptance part of this Agreement, of one fully completed original copy of this Agreement, including the Schedule of Deviations (if any) today:

the _____ (day)

of _____ (month)

20 _____ (year)

at _____ (place)

For the Contractor:

.....
Signature

.....
Name

.....
Capacity

**Signature and Name
of Witness:**

.....
Signature

.....
Name

C1.2 CONTRACT DATA

C1.2.1 CONDITIONS OF CONTRACT

GENERAL CONDITIONS OF CONTRACT

The General Conditions of Contract for Construction Works Third Edition 2015 published by the South African Institution of Civil Engineering are applicable to this contract. Copies of these conditions of contract may be obtained from the South African Institution of Civil Engineering (Tel: 011-805 5947 and 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.

Each item of data given below is cross-referenced to the clause in the General Conditions of Contract for Construction Works (3rd Edition 2015) to which it mainly applies.

VARIATIONS TO THE GENERAL CONDITIONS OF CONTRACT

PART 1: DATA TO BE PROVIDED BY THE EMPLOYER

REF. CLAUSE NO.	DATA BY EMPLOYER
1.1.1.13	The Defects Liability Period is: 12 months
1.1.1.15	The name of the Employer is: Dihlabeng Local Municipality
1.1.1.26	The Pricing Strategy is: Re-measurement
1.2.1.2	The address of Employer:
	Physical Postal:
	9 Muller Street P O Box 551
	BETHLEHEM, 9700 BETHLEHEM, 9700
	Telephone No: (058) 303 5732 Fax No: (058) 303 4703
1.1.1.16	Name of Engineer ECA Consulting
1.2.1.2	Address of Engineer:
	Physical: Postal:
	161 High Street P O Box 2083
	VRYHEID, 3100 VRYHEID, 3100
	Telephone No : (034) 983 2825.....Fax No: (034) 983 2945 / 086 690 0635 e-mail: vryheid@ecaconsult.co.za

Bidder Initial:.....

Bidder
.....

Witness:

DLM initial:

DLM Witness:

UPGRADING CLARENS WATER TREATMENT WORKS: CIVIL AND BUILDING WORKS: PART B

REF. CLAUSE NO.	DATA BY EMPLOYER
5.3.1	The documentation required before commencement with Works execution are:
	• Health and Safety File, approved by the Safety Agent (Refer to Clause 4.3) • Initial programme (Refer to Clause 5.6) • Performance Guarantee (Refer to Clause 6.2) • Insurance (Refer to Clause 8.6) • Letter of Good Standing with Compensation Commissioner • Construction Notice with the Department of Labour
5.3.2	The time to submit the documentation required before commencement with Works execution is: 14 Days
	Non-working days are: Sundays
5.8.1	The special non-working days are: Public holidays and the year-end break which commences on the first working day after 15 December and ends on the first Tuesday after 5 January of the next year; and statutory public holidays.
5.13.1	The penalty for failing to complete the Works is: the lesser of R2500 or 1/20 of 1% of the offered total of prices excluding VAT per calendar day.
5.16.3	The latent defect period is: 10 years
	The percentage allowances to cover overhead charges:
6.5.1.2.3	• 10% of the gross remuneration of workmen and foremen actually engaged in the daywork; and • 7.5% on the net cost of materials actually used
6.8.2	The value of the certificates issued shall be adjusted in accordance with the Contract Price Adjustment Schedule with the following values: The value of "x" is 0.1 The values of the coefficients are: A = 0.30 B = 0.10 C = 0.55 D = 0.05 Base Date = February 2022
6.10.1.5	The percentage advance on materials not yet built into the Permanent Works is: 80% provided a cession in favour of the Employer is provided from both the supplier and the Contractor.
6.10.3	The retention money: The percentage retention on the amounts due to the Contractor is 10% up to a limit of 5% of the contract value with 50% being released on issuing of Certificate of Completion.
6.10.5	The defects Liability Period is specified as being 12 Months.
8.6.1	INSURANCE EFFECTED BY THE EMPLOYER NIL INSURANCE EFFECTED BY THE CONTRACTOR a) The Contractor and Sub-contractor shall where applicable provide as a minimum the following:

Bidder Initial:.....

Bidder
.....

Witness:

DLM initial:

DLM Witness:

UPGRADING CLARENS WATER TREATMENT WORKS: CIVIL AND BUILDING WORKS: PART B

	i) CONTRACT WORKS AND SASRIA SPECIAL RISKS Insurance - which will provide cover against accidental physical loss or damage to the Works, Temporary Works and materials intended for incorporation in the Works. ii) PUBLIC LIABILITY Insurance - which will provide indemnity against legal liability in the event of accidental death of or injury to third persons and/or loss of or damage to third party property arising directly from the execution of the contract and occurring during the period of insurance with a limit of indemnity of R2 000 000.00 in respect of all claims arising from any one occurrence or series of occurrences consequent on or attributable to one source or original cause. iii) Insurance of Construction Plant and Equipment (including tools offices and other temporary structures and contents) and other things (except those intended for incorporation into the Works) brought onto the site for a sum sufficient to provide for their replacement; iv) Insurance in terms of the provisions of the Compensation for Occupational Injuries and Diseases Act (COIDA) Act No 130 of 1993; v) Employers Common Law Liability Insurance with a limit of indemnity of not less than R 1 000 000.00; vi) Motor Vehicle Liability Insurance comprising (as a minimum) "balance of Third Party" Risks including Passenger Liability indemnity of not less than R 1 000 000.00 (one million Rand) ; and vii) Where the Contract involves manufacturing and/or fabrication of the Works or parts thereof at premises other than at the Contract Site the Contractor shall satisfy the Employer that all materials and equipment for incorporation in the Works are adequately insured during manufacture and/or fabrication. In the event of the Employer having an insurable interest in such Works during manufacture or fabrication then such interest shall be noted by the endorsement to the relevant Policies of Insurance. b) The insurance to be provided by the Contractor and his Sub-contractor shall be effected with Insurers and on terms approved by the Employer (which approval shall not be unreasonably withheld) and shall be maintained in force for the duration required (including any period of maintenance). The Contractor shall within fourteen (14) days of commencement of the contract produce to the Employer the relevant Policies of Insurance. c) If the Contractor fails to effect and keep in force the insurances referred to then the Employer may effect and keep in force any such insurances and pay such premiums as may be necessary for that purpose and from time to time deduct the amount paid by the Employer from any monies due or which may become due to the Contractor or recover same as a debt from the Contractor..
8.6.1.1.3	R Nil
10.4	Dispute resolution by amicable settlement.
10.5.3	The number of Adjudication Board Members to be appointed is: Nil

Bidder Initial:.....

Bidder

Witness:

DLM initial:

DLM Witness:

UPGRADING CLARENS WATER TREATMENT WORKS: CIVIL AND BUILDING WORKS: PART B

PART 2 : DATA TO BE PROVIDED BY CONTRACTOR

REF. CLAUSE No	DATA BY CONTRACTOR				
1.1.1.9	Name of Contractor:				
1.2.1.2	Address of Contractor:				
	<u>Physical</u> :..... <u>Postal</u> :				
					
					
	<u>e-mail</u> :				
	<u>Telephone No</u> : <u>Fax No</u> :.....				
1.1.1.14	Time for achieving Practical Completion of the whole of the Works is: (Max 10 months)				
6.2.1	The security to be provided by the Contractor shall be one of the following: <i>VAT is to be excluded from the Contract Sum/ value of Works for calculating the percentages</i>				
	<table border="1"> <thead> <tr> <th>Type of Security</th><th>Contractor's choice Indicate "Yes" or No"</th></tr> </thead> <tbody> <tr> <td>Performance guarantee of 10% of the Contract Sum</td><td></td></tr> </tbody> </table>	Type of Security	Contractor's choice Indicate "Yes" or No"	Performance guarantee of 10% of the Contract Sum	
Type of Security	Contractor's choice Indicate "Yes" or No"				
Performance guarantee of 10% of the Contract Sum					

SIGNATURE:
(of person authorised to sign on behalf of the Tenderer)

DATE:

Bidder Initial:.....	Bidder	Witness:	DLM initial:	DLM Witness:
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UPGRADING CLARENS WATER TREATMENT WORKS: CIVIL AND BUILDING WORKS: PART B

C1.2.2 AGREEMENT IN TERMS OF SECTION 37(2) OF THE OCCUPATIONAL HEALTH AND SAFETY ACT No 85 OF 1993

THIS AGREEMENT is made between
 (hereinafter called the Employer) of the one part, herein represented by:

.....
 in his capacity as:;

AND:

(hereinafter called the Contractor) of the other part, herein represented by

.....
 in his capacity as:

duly authorized to sign on behalf of the Contractor.

WHEREAS the Contractor is the Mandatory of the Employer in consequence of an agreement between the Contractor and the Employer in respect of

**CONTRACT NO: PW 002/2022: UPGRADING CLARENS WATER TREATMENT WORKS:
 CIVIL AND BUILDING WORKS: PART B: RAW WATER PIPELINE, INLET WORKS AND GENERAL
 BUILDING**

for the construction, completion and maintenance of the works;

AND WHEREAS the Employer and the Contractor have agreed to enter into an agreement in terms of the provisions of Section 37(2) of the Occupational Health and Safety Act No 85 of 1993, as amended by OHS Act Amendment Act No 181/1993 (hereinafter referred to as the Act);

NOW THEREFORE the parties agree as follows:

1. The Contractor undertakes to acquaint the appropriate officials and employees of the Contractor with all relevant provisions of the Act and the regulations promulgated in terms thereof.
2. The Contractor undertakes to fully comply with all relevant duties, obligations and prohibitions imposed in terms of the Act and Regulations: Provided that should the Employer have prescribed certain arrangements and procedures that same shall be observed and adhered to by the Contractor, his officials and employees. The Contractor shall bear the onus of acquainting himself/herself/itself with such arrangements and procedures.
3. The Contractor hereby accepts sole liability for such due compliance with the relevant duties, obligations, prohibitions, arrangements and procedures, if any, imposed by the Act and Regulations, and the Contractor expressly absolves the Employer and the Employer's Consulting Engineers from being obliged to comply with any of the aforesaid duties, obligations, prohibitions, arrangements and procedures in respect of the work included in the contract.
4. The Contractor agrees that any duly authorized officials of the Employer shall be entitled, although not obliged, to take such steps as may be necessary to ensure that the Contractor has complied with his undertakings as more fully set out in paragraphs 1 and 2 above, which steps may include, but shall not be limited to, the right to inspect any appropriate site or premises occupied by the Contractor, or to take such steps it may deem necessary to remedy the default of the Contractor at the cost of the Contractor.
5. The Contractor shall be obliged to report forthwith to the Employer any investigation, complaint or criminal charge which may arise as a consequence of the provisions of the Act and Regulations, pursuant to work performed in terms of this agreement, and shall, on written demand, provide full details in writing of such investigation, complaint or criminal charge.

Bidder Initial:.....	Bidder	Witness:	DLM initial:	DLM Witness:
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Thus signed at for and on behalf of the **CONTRACTOR**
on this the day of 20.....

SIGNATURE:

NAME AND SURNAME:

CAPACITY:

WITNESSES: 1.

2.

Thus signed at for and on behalf of the **EMPLOYER** on this
the day of 20.....

SIGNATURE:

NAME AND SURNAME:

CAPACITY:

WITNESSES: 1.

2.

Bidder Initial:.....

Bidder
.....

Witness:

DLM initial:

DLM Witness:

C1.3 FORM OF GUARANTEE

PRO FORMA PERFORMANCE GUARANTEE

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

GUARANTOR DETAILS AND DEFINITIONS

"Guarantor" means:

Physical address

"Employer" means:

"Contractor" means:

"Engineer" 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 Contracts 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 of R

Amount in words:

"Expiry Date" means "date of Practical Completion"

CONTRACT DETAILS

Engineer issues: Interim Payment Certificates, Final Payment Certificate and the Certificate Completion of the Works as defined in the Contract.

PERFORMANCE GUARANTEE

15. The Guarantor's liability shall be limited to the amount of the Guaranteed Sum.

16. The Guarantor's period of liability shall be from and including the date of issue of this Performance Guarantee and up to and including the Expiry Date or the date of issue by the Engineer of the Certificate of Completion of the Works or the date of payment in full of the Guaranteed Sum, whichever occurs first. The Engineer 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.

17. The Guarantor hereby acknowledges that:

17.1 any reference in this Performance Guarantee to the Contract is made for the purpose of convenience and shall not be construed as any intention whatsoever to create an accessory obligation or any intention whatsoever to create a suretyship;

17.2 its obligation under this Performance Guarantee is restricted to the payment of money.

Bidder Initial:.....	Bidder	Witness:	DLM initial:	DLM Witness:
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UPGRADING CLARENS WATER TREATMENT WORKS: CIVIL AND BUILDING WORKS: PART B

18. Subject to the Guarantor's maximum liability referred to in 1, the Guarantor hereby undertakes to pay the Employer the sum certified upon receipt of the documents identified in 4.1 to 4.3:
- 18.1 A copy of a first written demand issued by the Employer to the Contractor stating that payment of a sum certified by the Engineer in an Interim or Final Payment Certificate has not been made in terms of the Contract and failing such payment within seven (7) calendar days, the Employer intends to call upon the Guarantor to make payment in terms of 4.2;
- 18.2 A first written demand issued by the Employer to the Guarantor at the Guarantor's physical address with a copy to the Contractor stating that a period of seven (7) days has elapsed since the first written demand in terms of 4.1 and the sum certified has still not been paid;
- 18.3 A copy of the aforesaid payment certificate which entitles the Employer to receive payment in terms of the Contract of the sum certified in 4.
19. Subject to the Guarantor's maximum liability referred to in 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:
- 19.1 the Contract has been terminated due to the Contractor's default and that this Performance Guarantee is called up in terms of 5; or
- 19.2 a provisional or final sequestration or liquidation court order has been granted against the Contractor and that the Performance Guarantee is called up in terms of 5; and
- 19.3 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.
20. It is recorded that the aggregate amount of payments required to be made by the Guarantor in terms of 4 and 5 shall not exceed the Guarantor's maximum liability in terms of 1.
21. Where the Guarantor has made payment in terms of 5, the Employer shall upon the date of issue of the Final Payment Certificate submit an expense account to the Guarantor showing how all monies received in terms of this Performance Guarantee have been expended and shall refund to the Guarantor any resulting surplus. All monies refunded to Guarantor in terms of this Performance Guarantee shall bear interest at the prime overdraft rate of the Employer's bank compounded monthly and calculated from the date payment was made by the Guarantor to the Employer until the date of refund.
22. Payment by the Guarantor in terms of 4 or 5 shall be made within seven (7) calendar days upon receipt of the first written demand to the Guarantor.
23. Payment by the Guarantor in terms of 5 will only be made against the return of the original Performance Guarantee by the Employer.
24. The Employer shall have the absolute right to arrange his affairs with the Contractor in any manner which the Employer may deem 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.
25. The Guarantor chooses the physical address as stated above for the service of all notices for all purposes in connection herewith.
26. This Performance Guarantee is neither negotiable nor transferable and shall expire in terms of 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.

Bidder Initial:.....	Bidder	Witness:	DLM initial:	DLM Witness:
----------------------	-----------------	----------	--------------------	--------------------

UPGRADING CLARENS WATER TREATMENT WORKS: CIVIL AND BUILDING WORKS: PART B

27. This Performance Guarantee, with the required demand notices in terms of 4 or 5, shall be regarded as a liquid document for the purposes of obtaining a court order.
28. Where this Performance Guarantee is issued in the Republic of South Africa the Guarantor hereby consents in terms of Section 45 of the Magistrate's Courts Act No 32 of 1944, as amended, to the jurisdiction of the Magistrate's Court of any district having jurisdiction in terms of Section 28 of the said Act, notwithstanding that the amount of the claim may exceed the jurisdiction of the Magistrate's Court.

Signed at

Date

Guarantor's signatory (1)

Capacity

Guarantor's signatory (2)

Capacity

Witness signatory (1)

Witness signatory (2)

Bidder Initial:.....	Bidder	Witness:	DLM initial:	DLM Witness:
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2 PRICING DATA

C2.1 PRICING INSTRUCTIONS

1. The General Conditions of Contract, the Contract Data, and the Specifications (including the Project Specifications) shall be read in conjunction with the Schedule of Quantities.
2. The schedule comprises items covering the Contractor's profit and costs of general liabilities and of the supply of all items.

Although the Tenderer is at liberty to insert a rate of his own choosing for each item in the schedule, he should note the fact that the Contractor is entitled, under various circumstances, to payment for additional work carried out and that the Municipality is obliged to base its assessment of the rates to be paid for such additional work on the rates the Contractor inserted in the schedule.

Clause 8 of each Standardized Specification, and the measurement and payment clause of each Particular Specification, read together with the relevant clauses of the Project Specifications, all set out which ancillary or associated activities are included in the rates for the specified operations.

3. Descriptions in the Schedule of Quantities are abbreviated and may differ from those in the Standardized and Scope of Work. No consideration will be given to any claim by the Contractor submitted on such a basis. The schedule has been drawn up generally in accordance with the latest specifications from manufacturers.
4. The amounts and rates to be inserted in the Schedule of Quantities shall be the full inclusive amounts to the Employer for the work described under the several items. Such amounts shall cover all the costs and expenses that may be required in and for the supply and delivery of the work described, and shall cover the costs of all general risks, profits, taxes (but excluding value-added tax), liabilities and obligations set forth or implied in the documents on which the Tender is based.
5. A rate/amount is to be entered against all items in the schedule of fees/Bill of Quantities, an item against which no rate/amount is entered will lead to immediate disqualification due to unfair price advantage.

The tendered rates, prices and sums shall, subject only to the provisions of the Conditions of Contract, remain valid irrespective of any change in the quantities during the execution of the Contract.

Where Provisional sums or Prime Cost sums are provided for items in the Bill of Quantities, payment for the work done under such items will be made in accordance with Clause 6.6 of the General Conditions of Contract 2015. The Employer reserves the right, during the execution of the works, to adjust the stated amounts upwards or downwards according to the work actually done under the item, or the item may be omitted altogether, without affecting the validity of the Contract.

The tenderer shall not under any circumstances whatsoever delete or amend any of the sums inserted in the "Amount" column of the Bill of Quantities and in the Summary of the Bill of Quantities unless ordered or authorized in writing by the Employer before closure of tenders. Any unauthorized changes made by the Tenderer to provisional items in the schedule, or to the provisional percentages and sums in the Summary of the Bill of Quantities, will be treated as arithmetical errors.

Bidder Initial:.....	Bidder	Witness:	DLM initial:	DLM Witness:
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UPGRADING CLARENS WATER TREATMENT WORKS: CIVIL AND BUILDING WORKS: PART B

6. The quantities of work as measured and accepted and certified for payment in accordance with the Conditions of Contract, and not the quantities stated in the Schedule of Quantities, will be used to determine payments to the Contractor. The validity of the Contract shall in no way be affected by differences between the quantities in the Schedule of Quantities and the quantities certified for payment.

The quantities given in the Bill of Quantities are estimates only, and subject to re-measuring during the execution of the work. The Contractor shall obtain the Engineer's detailed instructions for all work before ordering any materials or executing work or making arrangements for it.

The works as finally completed in accordance with the General and Special Conditions of Contract, the Specifications and Project Specifications and the Drawings. Unless otherwise stated, items are measured net in accordance with the Drawings, and no allowance has been made for waste.

7. For the purposes of this Schedule of Quantities, the following words shall have the meanings hereby assigned to them:

Unit : The unit of measurement for each item of work as defined in the Standardized, Project or Particular Specifications

Quantity : The number of units of work for each item

Rate : The payment per unit of work at which the Tenderer tenders to do the work

Amount : The quantity of an item multiplied by the tendered rate of the (same) item

8. The units of measurement indicated in the Schedule of Quantities are metric units. The following abbreviations may appear in the Schedule of Quantities:

ml	=	milliliters
mm	=	millimeter
m	=	metre
L	=	Litres
kg	=	kilogram
t	=	ton (1 000 kg)
%	=	per cent

9. The Tenderer shall enter a rate or lump sum for each item in BLACK INK
10. Incorrect entries shall not be erased or obliterated with correction fluid but must be crossed out neatly. The correct figures must be entered above or adjacent to the deleted entry, and the alteration must be initialed by the Tenderer.
11. Arithmetical errors found in the Bill of Quantities as a result of faulty multiplication of addition, will be corrected by the Engineer at the tender evaluation stage, in accordance with the procedure set out in the Tender Data.
12. All prices and rates shall exclude value added tax (VAT). The Tenderer shall calculate value added tax and enter it at the end of the summary of the schedule of quantities.
13. Unless otherwise specified in the Specifications and Project Specifications, progress payments in Interim Certificates, referred to in Clause 6.10 of the General Conditions of Contract 2015, in respect of "sum" items in the Bill of Quantities shall be by means of interim progress installments assessed by the Engineer and based on the measure in which the work actually carried out relates to the extent of the work to be done by the Contractor.
14. All items for which terminology such as "inclusive" or "not applicable" have been added by

Bidder Initial:.....	Bidder	Witness:	DLM initial:	DLM Witness:
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UPGRADING CLARENS WATER TREATMENT WORKS: CIVIL AND BUILDING WORKS: PART B

the Tenderer will be regrade as having a nil rate which shall be valid irrespective of any changes in quantities during the execution of the Contract.

The tenderer shall fill in rates for all items where the words "rate only" appears in the "Total" column. "Rate Only" items have been included where:

- a. an alternative item or material is contemplated;
- b. variations of specified components in the make-up of a pay item may be expected; and
- c. no work under the item is foreseen at tender stage by the possibility that such work may be required is not excluded.

For "Rate Only" items no quantities are given in the "Quantity" column but the quoted rate shall apply in the event of work under this item being required. The Tenderer shall however note that in terms of the Tender Data the Tenderer may be asked to reconsider any such rates which the Employer may regard as unbalanced.

15. Wherever reference has been made to product names, it also includes all similar Dihlabeng Local Municipality approved product names. Should alternative products be included, all relevant information to be supplied for approval by the Dihlabeng Local Municipality.

Bidder Initial:.....	Bidder	Witness:	DLM initial:	DLM Witness:
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BILL : UPGRADING CLARENS WTW: CIVIL & BUILDING WORK - PART B (PIPELINE & GEN BUILDING)

SECTION 1 : PRELIMINARY AND GENERAL

ITEM	PAYMENT REFERS	DESCRIPTION	UNIT	QUANTITY	RATE R	AMOUNT R
	SABS 1200 A	PRELIMINARY AND GENERAL				
1.1	8.3	FIXED-CHARGE ITEMS				
1.2	8.3.1	Contractual Requirements	Sum	1		
	8.3.2	Establish Facilities on the Site : a) Facilities for Engineer (SABS 1200 AB)				
1.3	PSAB	Offices: as per specification.	Sum	1		
1.4	PSAB	Nameboards	Sum	1		
1.5	PSAB	Survey Facilities b) Facilities for Contractor	Sum	1		
1.6		Offices and storage sheds	Sum	1		
1.7		Workshops	Sum	1		
1.8		Laboratories	Sum	1		
1.9		Living accommodation	Sum	1		
1.10		Ablution and latrine facilities	Sum	1		
1.11		Tools and equipment	Sum	1		
1.12		Water supplies, electric power and communications	Sum	1		
1.13		Dealing with water (Subclause 5.5)	Sum	1		
1.14		Access (Subclause 5.8)	Sum	1		
1.15		Plant	Sum	1		
1.16		Allow for land surveyor to set out all structures, lines etc.	Sum	1		
1.17	8.3.3	Other fixed-charge obligations	Sum	1		
1.18		Survey & setting out of the entire works by a land surveyor	Sum	1		
1.19	8.3.4	Remove Engineer's and Contractor's Site establishment on completion	Sum	1		
1.20	PA	All work to ensure compliance with the provisions of the OSH Act 85 of 1993 and Regulations R1010 as published in Government Gazette on 18 July 2003. This item shall include all costs to provide a safety plan including the mentoring thereof, auditing thereof and reporting to the Engineer, on a regular basis.	Sum	1		
1.21	PB	All work to ensure compliance with the provisions of the Environmental management plan.	Sum	1		
1.22	8.4	TIME-RELATED ITEMS				
1.23	8.4.1	Contractual Requirements	Sum	1		
	8.4.2	Operate and maintain facilities on the Site:				
	8.4.2.1	a) Facilities for Engineer for duration of construction (SABS 1200 AB)				
1.24	PSAB	Offices: 1 rooms, etc., as for item 1.5	Sum	1		
1.25	PSAB	Nameboards	Sum	1		
CARRIED FORWARD						

BILL : UPGRADING CLARENS WTW: CIVIL & BUILDING WORK - PART B (PIPELINE & GEN BUILDING)

SECTION 1 : PRELIMINARY AND GENERAL

ITEM	PAYMENT REFERS	DESCRIPTION	UNIT	QUANTITY	RATE R	AMOUNT R
1.26	PSAB	BROUGHT FORWARD				
	8.4.2.2	Survey Facilities	Sum	1		
		b) Facilities for Contractor for duration of construction, except where otherwise stated				
1.27		Offices and storage sheds	Sum	1		
1.28		Workshops	Sum	1		
1.29		Laboratories	Sum	1		
1.30		Living accommodation	Sum	1		
1.31		Ablution and latrine facilities	Sum	1		
1.32		Tools and equipment	Sum	1		
1.33		Water supplies, electric power and communications	Sum	1		
1.34		Dealing with water (Subclause 5.5)	Sum	1		
1.35		Access (Subclause 5.8)	Sum	1		
1.36		Plant	Sum	1		
1.37	8.4.3	Supervision	Sum	1		
1.38	8.4.4	Company and head office overhead costs	Sum	1		
1.39	8.4.5	Other time-related obligations	Sum	1		
1.40	PA	All work to ensure compliance with the provisions of the OSH Act 85 of 1993 and Regulations R1010 as published in Government Gazette on 18 July 2003. This item shall include all costs to provide a safety plan including the mentoring thereof, auditing thereof and reporting to the Engineer, on a regular basis.	Sum	1		
1.41	PB	All work to ensure compliance with the provisions of the Environmental management plan.	Sum	1		
1.42		COVID-19 REGULATIONS COMPLIANCE				
1.42.1		Allowance for covering all Covid 19 requirements under the Level 4 restrictions in accordance with Government Regulations.	Sum	1		
1.43	8.5	SUMS STATED PROVISIONALLY BY ENGINEER				
	8.6	Prime cost items				
1.44		Provide fittings and equipment to be installed.	Sum	1	25 000.00	25 000.00
1.45		Attendance, charges, etc., on item 1.44	%	25000		
	8.7	Daywork				
1.46		Labour	Sum	1	25 000.00	25 000.00
1.47		Percentage adjustment to item 1.46 for labour	%	25000		
1.48		Materials	Sum	1	25 000.00	25 000.00
1.49		Percentage adjustment to item 1.48 for materials	%	25000		
CARRIED FORWARD						

BILL : UPGRADING CLARENS WTW: CIVIL & BUILDING WORK - PART B (PIPELINE & GEN BUILDING)**SECTION 1 : PRELIMINARY AND GENERAL**

ITEM	PAYMENT REFERS	DESCRIPTION	UNIT	QUANTITY	RATE R	AMOUNT R
1.50		BROUGHT FORWARD Plant	Sum	1	25 000.00	25 000.00
1.51		Percentage adjustment to item 1.50 for plant	%	25000		
1.52		COMMUNITY LIASION OFFICER Allowance for R50 000 for CLO reimbursement.	PC	1	50 000.00	50 000.00
1.53		Attendance, charges, etc., on item 1.52	%	50000		
1.54		"KEY-ALIKE" PAD LOCKS Allowance of R 2 500.00 for the purchase of master locks.	PC	1	2 500.00	2 500.00
1.55		Contractor's markup	%	2500		
1.56		EPWP CONSUMABLES & TRAINING Allowance of R 75 000 for the Extended Public Works compliance consumables and Accredited Training.	PC	1	75 000.00	75 000.00
1.57		Contractor's markup	%	75000		
1.58		RESIDENT ENGINEER / CLERK OF WORKS Allowance of R 150 000 for Resident Engineer	PC	1	150 000.00	150 000.00
1.59		Contractor's markup	%	150000		
1.60		ENVIRONMENTAL CONTROL OFFICER (For the Client) Allowance of R 50 000 for Client's Enviro Control Officer's (ECO) Audits	PC	1	50 000.00	50 000.00
1.61		Contractor's markup	%	50000		
1.62		QUALITY CONTROL TESTING				
1.63		Concrete Test Cubes Make, label, cure and test by independent laboratory, concrete test cubes for duration of contract. All test certificates to be presented to engineer. Only tests that have passed will be paid for.	Test	50		
1.64		Soil Density Testing Perform soil density tests by independent laboratory and make test results available to engineer. Only tests that have passed will be paid for.	Test	200		
TOTAL FOR SECTION 1 CARRIED FORWARD TO SUMMARY						

BILL : UPGRADING CLARENS WTW: CIVIL & BUILDING WORK - PART B (PIPELINE & GEN BUILDING)**SECTION 2 : SITE WORK**

ITEM	PAYMENT REFERS	DESCRIPTION	UNIT	QUANTITY	RATE R	AMOUNT R
2.1	SABS 1200 C PSC	CLEAR SITE				
CARRIED FORWARD						

BILL : UPGRADING CLARENS WTW: CIVIL & BUILDING WORK - PART B (PIPELINE & GEN BUILDING)

SECTION 2 : SITE WORK

ITEM	PAYMENT REFERS	DESCRIPTION	UNIT	QUANTITY	RATE R	AMOUNT R
2.1.1	8.2.1 PSC.1.1	BROUGHT FORWARD Clear and grub Site	ha	0.65		
2.1.2	8.2.2	Remove and grub large trees and tree stumps of girth Over and up to 1 m 2 m	No.	1		
2.1.3		2 m 3 m	No.	1		
2.1.4		3 m upwards in 1 m steps	No.	1		
2.2	SABS 1200 D PSD	EARTHWORKS				
2.2.1	8.3.2 8.3.1.2	EXCAVATION Remove topsoil to nominal depth 75mm, stockpile, and maintain	m ²	5200		
2.3	8.3.2(a) PSD.1.1 PSD.1.2	Excavate in all materials,including undercutting to take engineered fill and dispose within freehaul distance for :				
2.3.1		Sludge Drying Beds	m ³	127		
2.4	8.3.2(a) PSD.1.1	Excavate in all materials, including undercutting to take engineered fill, stockpile and backfill or use for embankments to:				
2.4.1		Sludge Drying Beds	m ³	85		
2.5	8.3.2(b) PSD.1.2	Extra-over items 2.3 & 2.4 for excavation in:				
2.5.1		Hard rock material	m ³	10		
2.5.2		Boulder material, Class A	m ³	50		
2.6	8.3.3(a) PSD.1.1	Excavate for foundations in all materials, stockpile and backfill or use for embankments to:				
2.6.1		Sludge Drying Beds	m ³	99		
2.6.2		Generator room.	m ³	14		
2.7	8.3.3(b) PSD.1.2	Extra-over items 2.6 for excavation in:				
2.7.1		Hard rock material	m ³	5		
2.7.2		Boulder material, Class A	m ³	5		
2.8	8.3.4	IMPORT MATERIAL				
2.8.1		Import (G5-G6 type material) backfill material from commercial sources and compaction to 95% Mod AASTHO density under all structures as directed.	m ³	24		
2.8.2	8.3.9	Extra-over 2.4 & 2.6 for backfill with selected fill material and compaction to 95% Mod AASTHO density under all structures and paving as directed.	m ³	10		
2.9		FINISHINGS				
2.9.1	8.3.10	Topsoiling 75mm	m ²	200		
2.9.2	8.3.11	Grassing, kikuyu runners.	m ²	200		
CARRIED FORWARD						

BILL : UPGRADING CLARENS WTW: CIVIL & BUILDING WORK - PART B (PIPELINE & GEN BUILDING)

SECTION 2 : SITE WORK

ITEM	PAYMENT REFERS	DESCRIPTION	UNIT	QUANTITY	RATE R	AMOUNT R
2.9.3	8.3.11	BROUGHT FORWARD Grassing, kikuyu instant lawn.	m ²	--		Rate Only
2.10	SABS 1200 MFL	BASE (LIGHT PAVEMENT STRUCTURES)				
	8.3.1	Construct base with material from commercial sources a) G4 Crushed Stone type material and compaction to 95% Mod AASTHO density.				
2.10.1		150 mm to roads and parking bays.	m ³	292		
2.11	8.3.3	Construct base with material from designated excavations				
2.11.1	1200DM 8.3.7	a) Excavate and stockpile for base	m ³	50		
	1200 MFL 8.3.3	b) Construct base with material from stockpile: 2) Natural gravel				
2.11.2		150 mm to roads and parking bays.	m ³	50		
2.12	SABS 1200 MJ	SEGMENTED PAVING				
		Bedding sand				
2.12.1		20mm Thick layer of bedding sand	m ³	39		
	8.2.2	Supply and construct precast concrete segmented paving complete:				
2.12.2		80mm Thick, Interlocking concrete paving blocks laid to herring-bone pattern and dry jointing sand brushed into joints followed by final compaction to parking bay and walkway.	m ²	1073		
2.12.3		60mm Thick, Interlocking concrete paving blocks laid to herring-bone pattern and dry jointing sand brushed into joints followed by final compaction to parking bay and walkway.	m ²	872		
2.13	SABS 1200 MK	KERBING AND CHANNELLING				
		CONCRETE KERBING AND CHANNELLING				
	8.2.1	Precast concrete Fig 8b kerbing including mortar bedding, concrete haunching and concrete bedding as detailed.				
2.13.1		a) Straight b) Laid on radius	m	270		
2.13.2		Over 1m and upto and including 4m.	m	6.3		
2.13.3		Over 4m and upto and including 20m.	m	71		
2.13.4		Over 20m.	m	--		Rate Only
2.14	8.2.1	Precast concrete Fig 4 kerbing including mortar bedding, concrete haunching and concrete bedding as detailed.				
CARRIED FORWARD						

BILL : UPGRADING CLARENS WTW: CIVIL & BUILDING WORK - PART B (PIPELINE & GEN BUILDING)

SECTION 2 : SITE WORK

ITEM	PAYMENT REFERS	DESCRIPTION	UNIT	QUANTITY	RATE R	AMOUNT R
2.14.1		BROUGHT FORWARD				
		a) Straight	m	135		
		b) Laid on radius				
2.14.2		Over 1m and upto and including 4m.	m	--		Rate Only
2.14.3		Over 4m and upto and including 20m.	m	--		Rate Only
2.14.4		Over 20m.	m	--		Rate Only
2.15	SABS 1200 DK	GABIONS AND PITCHING				
		GABIONS				
2.15.1	8.2.1	Surface preparation for bedding of gabions	m ²	20		
	8.2.2	Construct gabions using PVC Coated Galvanised wire mesh.				
2.15.2		a) Foundation mattresses of depth 0,3 m with diaphragms providing 2 m x 1 m cells	m ³	3		
2.15.3		c) Gabions of section 1,0 m x 1,0 m x 2,0m for walls	m ³	5		
2.15.4	8.2.3	Extra-over item 2.15.3 for selected stone on face between X and Y	m ²	5		
	8.2.4	Geotextile, type A4, supply and placed:				
2.15.5		a) below foundation mattresses	m ²	20		
2.15.6		b) on slope behind wall	m ²	10		
2.16		CONCRETE APRONS AND HARD STANDS				
	8.4.3	Reinforced Concrete: 20 MPa / 19 concrete to:				
2.16.1		1000mm wide aprons, 100mm thick, in 2m panels with wood float finish.	m ²	83		
2.16.2		Hard stands, 100mm thick, in max 2.5m x 2.5m panels with wood float finish.	m ²	79		
	8.1.1	Formwork				
2.16.3	8.2.5	Horizontal narrow widths up to 100 mm high to aprons and hard stands	m	124		
	8.3.2	High-tensile welded mesh reinforcement				
2.16.4		Type reference 395 with cover blocks.	m ²	162		
2.17		FENCING				
		PERIMETER FENCING: THE FOLLOWING FENCING IS TO BE ERECTED AS PERIMETER FENCE				
CARRIED FORWARD						

BILL : UPGRADING CLARENS WTW: CIVIL & BUILDING WORK - PART B (PIPELINE & GEN BUILDING)

SECTION 2 : SITE WORK

ITEM	PAYMENT REFERS	DESCRIPTION	UNIT	QUANTITY	RATE R	AMOUNT R
2.18		BROUGHT FORWARD "De-fence MID" or similar approved mesh panels fencing system: Panels - 2500mm wide x 2050mm high galvanised & powder coated • 4.5mm Horizontal / Vertical wires with aperture size (centres) at 100mm x 50mm panel formation. • Panel reinforced with 4 x 50mm deep 'V' formation horizontal recessed bands (rigidity) Interlocking tamperproof fixing system to posts Refer to drawing.	m	485		
2.19		E.O for Spike toppings (Shark Tooth) supplied and installed along fence top perimeter.	m	485		Rate Only
2.20		FENCE POSTS Supply and install: Posts - 2.4m long, 60mm x 60mm x 2mm Tube, galvanised & powder coated, complete with PVC post.	No	200		
2.21		CONCRETE 20Mpa Concrete to post bases: 400 x 400 x 600mm deep. Top of concrete base to be 50mm above natural ground level.	No	200		
2.22		20Mpa Concrete gate rail beam 300 x 300mm x deep. Top of concrete to be 50mm above natural ground level.	m	15		
2.23		GATES Pedestrian Gate Supply and install single pedestrian gate, manufactured from 60mm Sq Tubing, Mesh panelling. Complete with Gate posts and lockset. All galvanised and powder coated.	No	1		
2.24		Sliding Vehicle Gate Supply and install galvanised sliding gate max 4.5m long, 2.05m high. Complete with rail beam etc. Manufactured from Sq Tubing, Mesh panelling. Complete with Gate posts, Lockset and guide wheels. All galvanised and powder coated. Refer to Drawings.	No	1		
TOTAL FOR SECTION 2 CARRIED FORWARD TO SUMMARY						

BILL : UPGRADING CLARENS WTW: CIVIL & BUILDING WORK - PART B (PIPELINE & GEN BUILDING)

SECTION 3 : INLET & DOSING WORKS

ITEM	PAYMENT REFERS	DESCRIPTION	UNIT	QUANTITY	RATE R	AMOUNT R
	SABS 1200 G	INLET & DOSING WORKS CONCRETE (STRUCTURAL)				
CARRIED FORWARD						

BILL : UPGRADING CLARENS WTW: CIVIL & BUILDING WORK - PART B (PIPELINE & GEN BUILDING)

SECTION 3 : INLET & DOSING WORKS

ITEM	PAYMENT REFERS	DESCRIPTION	UNIT	QUANTITY	RATE R	AMOUNT R
3.1	8.1.3	BROUGHT FORWARD CONCRETE				
	8.4.2	Blinding layer in 15 MPa/13 mm concrete				
3.1.1		40 mm minimum thickness	m ²	50		
	8.4.3	Strength concrete: 15 MPa/19mm				
3.1.2		Benching / Topping 50mm thick sloping towards drain	m ³	6		
	8.4.3	Strength concrete: 25 MPa/19mm				
3.1.3		Mass concrete backfilling, to unformed surfaces for casting of pipework and / or specified on site.	m ³	1		
	8.4.3 PSG.6.2	Strength concrete: 35 MPa/19mm with 'Polyforce' synthetic fibres.				
3.1.4		Inlet chamber floor.	m ³	9.5		
3.1.5		Inlet chamber wall.	m ³	15.8		
3.2	8.1.1 PSG.2	FORMWORK				
	8.2.3 PSG.2.3	Smooth vertical plane (Class F2) to:				
3.2.1		Inlet chamber walls	m ²	133		
3.2.2	8.2.5	Vertical narrow widths up to 250 mm wide	m	4		
3.2.3	8.2.5	Horizontal narrow widths up to 300 mm wide for side of floor	m	40		
	8.1.1.2	Chamfers 25 mm x 25 mm				
3.2.4		Chamfer 25 mm x 25 mm	m	80		
3.2.5		Chamfer 100 mm x 100 mm	m	1.8		
	8.2.6	Box out holes/form voids				
		Large, circular, diam. 0,35 - 0,7 m : depths over and up to				
3.2.6		0 m 0,5 m	No.	3		
3.3	8.1.2	REINFORCEMENT				
	8.3.1	High-tensile steel bars				
3.3.1	8.1.2.1	Supply and fixing of all diameter reinforcing steel to all concrete volumes including cover blocks to shuttering.	t	8		
	8.3.2	High-tensile welded mesh reinforcement				
3.3.2		Type reference 395 in standard sheets	m ²	10		
3.3.3		Type reference 500 in standard sheets	m ²	10		
3.4	8.4.4 PSG.7	UNFORMED SURFACE FINISHES				
	PSG.7.3	Steel-floated finish (Class U3)				
3.4.1		Top of inlet chamber floor slabs.	m ²	46		
3.4.2		Top of inlet chamber walls.	m ²	5.2		
CARRIED FORWARD						

BILL : UPGRADING CLARENS WTW: CIVIL & BUILDING WORK - PART B (PIPELINE & GEN BUILDING)

SECTION 3 : INLET & DOSING WORKS

ITEM	PAYMENT REFERS	DESCRIPTION	UNIT	QUANTITY	RATE R	AMOUNT R
3.5	8.5	BROUGHT FORWARD JOINTS & JOINT SEALANTS (Movement & Construction) Vertical and Horizontal Joints - 220mm PVC waterstop Dumb-Bell type.				
3.5.1		In walls	m	32		
3.6		WATER PROOFING & DRAINAGE Drain scour pipes. Supply and install the following pipes and fittings.				
3.6.1		75mm HDPE PN10 pipes.	m	13		
3.6.2		75mm x 3" HDPE flange adaptors.	No	2		
3.7	1200 LD 8.2.3	Waste water (Scour) manhole with 1.5m Dia to Dwg No: 13-019-V-01-02-01 complete with earthworks, floor slab, benching, brickwork, concrete rings and cover, etc. for depths over and up to				
3.7.1		- 1.5 m	No.	1		
3.8		GENERAL				
3.8.1		Manufacture and keep in place meranti joint former for Handgate key as detailed.	No	2		
3.9		MASONRY				
3.9.1		Brick up future wier outlets with 230mm wall	m ²	0.6		
3.9.2		Plaster, 12mm thick 1:5 Cement plaster finished with steel trowel to above.	m ²	1.2		
3.10		FUSION BONDED EPOXY COATED METAL PIPEWORK PIPEWORK *(The DTI has designated and determined a stipulated minimum threshold for Valve products, manual actuators (gearboxes) pneumatic actuators for local production and content as specified to various categories of 70%) PIPING, FITTINGS & VALVES Supply, manufacture / procure, deliver & install the following pipes, pipe fittings & valves. All welds to comply with the API 1104 Standard. *Piping in accordance to SABS 62 Part 1-1989: Table 2 - medium class steel pipes. *All flanges to be as detailed *All metalwork must be cleaned, using a mechanical driven wire brush and Fusion Bonded Epoxy Coated to DFT 300 microns thick. Unless where specified as Stainless Steel. Refer to detailed drawing 13-019-V-01-02-05 for the following:				
3.10.1		Item 02-01: 300mm Ø VJ flange adaptor for uPVC, T10 flanged.	No	1		
CARRIED FORWARD						

BILL : UPGRADING CLARENS WTW: CIVIL & BUILDING WORK - PART B (PIPELINE & GEN BUILDING)

SECTION 3 : INLET & DOSING WORKS

ITEM	PAYMENT REFERS	DESCRIPTION	UNIT	QUANTITY	RATE R	AMOUNT R
3.10.2		BROUGHT FORWARD Item 02-02: 250mm Ø Straight, with 300mmØ-250mm Ø reducer and 1 x 200mmØ branch, T10 flanged.	No	1		
3.10.3		Item 02-03: 250mm Ø Cast iron flange adaptor for uPVC, T10 flanged.	No	2		
3.10.4		Item 02-04: 200mm Ø RSV isolating valve, T10 flanged.	No	1		
3.10.5		Item 02-05: 200mm Ø Cast iron flange adaptor for uPVC, T10 flanged.	No	1		
3.10.6		Item 02-06: 250mm Ø Straight, with 2 x 90° long radius bends, T10 flanged.	No	1		
3.10.7		Item 02-07: 250mm Ø straight, T10 flanged.	No	3		
3.10.8		Item 02-08: 250mm Ø Wafer type Butterfly isolating valve, gear operated.	No	1		
3.10.9		Item 02-09: 250mm Ø Dismantling joint, T10 flanged.	No	1		
3.10.10		Item 02-10: SUPPLIED by OTHERS - INSTALL ONLY: 250mm Dia. 'ROTOK ROM, 1/4 Turn, actuator complete with butterfly valve.	No	1		
3.10.11		Item 02-11: 250mm Ø straight with T10 flange one end.	No	1		
3.10.12		Item 02-12: 250mm Ø, Viking Johnson coupling, 10bar rated.	No	1		
3.10.13		Item 02-13: 250mm Ø Sainless steel Straight, with 1x T10 flange with 3 x 1" female threaded sockets (Dosing points).	No	1		
3.10.14		Item 02-14: 250mm Ø Sainless steel Static inline mixer, T10 flanged. (G value > 1 000 @ 75.2 l/s, Model INSTAMIX (IX/250/250/0). Supplied by MIXTEC or similar approved.	No	2		
3.10.15		Item 02-15: 250mm Ø Sainless steel Straight, T10 flanged with 2 x 1" female threaded sockets (Dosing points).	No	1		
3.10.16		Item 02-16: 250mm Ø Sainless steel Straight, with 1 x T10 flange, puddle flange & 400mm Ø Bell mouth.	No	3		
3.10.17		Item 02-17: 250mm dia. isolating joint between Galv. & S/Steel pipework.	No	1		
3.10.18		Item 02-18: 250mm Ø Straight, with 2 x 90° long radius bends, T10 flanged.	No	1		
3.10.19		Item 02-19: 250mm Ø T10 blank flange, Gr 304 S/Steel.	No	1		
3.10.20		Item 02-20: 80 Ø Straight, with 90° long radius bend, 1 x T10 flange & puddle flange.	No	1		
3.10.21		Item 02-21: 75mm Ø × 3" HDPE flange adapter T10.	No	2		
CARRIED FORWARD						

BILL : UPGRADING CLARENS WTW: CIVIL & BUILDING WORK - PART B (PIPELINE & GEN BUILDING)

SECTION 3 : INLET & DOSING WORKS

ITEM	PAYMENT REFERS	DESCRIPTION	UNIT	QUANTITY	RATE R	AMOUNT R
3.10.22		BROUGHT FORWARD Item 02-22: 80mm Ø Straight, T10 flanged with puddle flange.	No	1		
3.10.23		Item 02-23: 80mm Ø RSV Gate Valve to SANS 664, T10 flanged.	No	1		
3.11		Sundries				
3.11.1		Allow for galvanised bolts for pipe connections as measured above.	sum	1		
3.11.2		Allow for I-Rings, gaskets etc. for pipe connections measured above.	sum	1		
3.12		FIBERGLASS AND FUSION BONDED EPOXY COATED STEEL WORK Manufacture / procure and install the following Fiberglass grating and Fusion Bonded Epoxy Coated mild steel items:				
3.12.1		Supply and install 1180mm wide x 2680mm long 38 x 38 x 38mm fiberglass grating, complete with holddown brackets, 60x60x6mm angle iron (galv) support and anchor bolts to inlet chamber.	No	2		
3.12.2		3000mm Long, Gr 304 S/Steel, chamber internal access ladder as per plan incl. all anchor bolts, etc.	No	2		
3.12.3		3800mm Long 65deg, chamber external access ladder as per plan incl. handrails and all anchor bolts, etc. Refer to Dwg. number 13-019-V-01-02-05	No	1		
3.12.4		250mm Floor mounted pipe support brackets as per detail. Refer to Dwg. number 13-019-V-01-02-02	No	3		
3.13		ALUMINIUM WORK Manufacture / procure and install the following aluminium items:				
3.13.1		Manufacture supply and install by specialist a non-removable aluminium hand sluice with seals as per typical detail. Refer to Dwg. number 13-019-V-01-02-02. Gate to be 900mm wide x 450mm high with adjustable gate handle and frame to be 900mm wide x 1000mm high	No	1		
3.14		STAINLESS STEEL WORK Manufacture / procure and install the following stainless steel items:				
3.14.1		1250mm Long x 145mm High adjustable weir plate incl. all anchor bolts, etc. as per detail. Refer to Dwg. number 13-019-V-01-02-02.		1		
3.15		Scour valve chamber				
CARRIED FORWARD						

BILL : UPGRADING CLARENS WTW: CIVIL & BUILDING WORK - PART B (PIPELINE & GEN BUILDING)**SECTION 3 : INLET & DOSING WORKS**

ITEM	PAYMENT REFERS	DESCRIPTION	UNIT	QUANTITY	RATE R	AMOUNT R
3.15.1		BROUGHT FORWARD				
		Valve chamber including the following: • All earthworks - Excavations and backfilling • 1000mm diameter manhole ring, complete with concrete base and heavy duty precast MH cover and lid. • All supplied and installed.	No	1		
3.16	SABS 1200 HA	MILD STEEL GALVANISED STANCHION AND HANDRAILS TO BE MOUNTED ON CONCRETE WALL				
	8.3.7	Handrailing as shown on Drawing				
		Rails:				
3.16.1		Handrails	m	11		
3.16.2		Kneerails	m	11		
		Stanchions:				
3.16.3		Top mounted	No.	13		
		Bends and end closures:				
3.16.4		90° bends	No.	8		
3.16.5		90° end closure	No.	2		
		Accessories:				
3.16.6		Ferrules	No.	13		
3.16.7		Pins	No.	13		
3.16.8		HD bolts	Sets	13		
TOTAL FOR SECTION 3 CARRIED FORWARD TO SUMMARY						

BILL : UPGRADING CLARENS WTW: CIVIL & BUILDING WORK - PART B (PIPELINE & GEN BUILDING)**SECTION 4 : CHEMICAL DOSING BUILDING**

ITEM	PAYMENT REFERS	DESCRIPTION	UNIT	QUANTITY	RATE R	AMOUNT R
4.1		CHEMICAL DOSING BUILDING				
		EARTHWORKS (Provisional)				
		Soil poisoning and protection against termites Chlordane or Aldrin type (or similar approved) termite soil insecticide applied by a registered Pest Control Company and guaranteed against termite infestation for ten years:				
4.1.1		Under solid floors etc. including forming and poisoning shallow furrows against walls, etc and filling in furrows and ramming.	m ²	56		
4.2	SABS 1200 GA	CONCRETE, FORMWORK AND REINFORCEMENT				
	8.4	CONCRETE				
		Concrete : 15MPa/13mm Blinding, 40mm thick concrete to bottom of foundation trenches:				
4.2.1	8.4.2	Control building.	m ²	107		
CARRIED FORWARD						

BILL : UPGRADING CLARENS WTW: CIVIL & BUILDING WORK - PART B (PIPELINE & GEN BUILDING)

SECTION 4 : CHEMICAL DOSING BUILDING

ITEM	PAYMENT REFERS	DESCRIPTION	UNIT	QUANTITY	RATE R	AMOUNT R
		BROUGHT FORWARD				
4.2.2	8.4.3	Reinforced Concrete: 20 MPa / 19 concrete in: 100mm Thick concrete floor slab with mesh ref. 193 (mesh measured elsewhere) with U2 (wood) finish to take tiles / carpets etc - no screeds.	m ²	41		Rate Only
4.2.3		1000mm wide apron slab / v-drain, 100-80mm thick, in sloping panels with wood float finish, around buildings.	m ²	--		
4.2.4		Ramp, to off-loading entrances, with wood float finish.	m ³	3		
	8.4.3	Concrete: 30 MPa / 19 concrete in Foundations cast as strip footings, including stepping and levelling etc.:				
4.2.5		Chemical Dosing Building	m ³	8.25		
	8.4.3 PSG.6.2	Strength concrete: 35 MPa/19mm with 600g/m3 Polypropylene Microfibers, cast and cure to the following:				
4.2.6		Reinforced concrete basins to take chemical storage tanks and tank slab in chemical dosing room.	m ³	6.3		
4.2.7		Reinforced concrete slab for dosing pumps.	m ³	0.15		
	8.1.1 PSG.6.2	FORMWORK				
	8.2.3	Smooth horizontal plane to:				
4.2.8		Soffit of R/C slab for dosing pumps.	m ²	1		
	8.2.3	Special Smooth vertical plane (Class F2) to:				
4.2.9	8.2.5	Verticle narrow widths up to 1m wide for side of beams, conc. dwarf walls etc.	m ²	24		
4.2.10	8.2.5	Verticle narrow widths up to 125 mm wide for side of floors, aprons, slabs etc.	m	23		
4.2.11	8.2.5	Verticle curved narrow widths up to 150 mm wide for side of tank stand slabs etc.	m	15		
4.2.12	8.2.5	Horizontal to dosing pump slab soffit	m ²	1		
	8.1.1.2	Chamfers - 25 mm x 25 mm to:				
4.2.13		R/C Slab, walls and beams.	m	55		
	8.1.2	REINFORCEMENT				
	8.3.1	High-tensile steel bars				
4.2.14	8.1.2.1	Supply and fixing of all diameter reinforcing steel to all concrete volumes including cover blocks to shuttering.	t	2.3		
	8.3.2	High-tensile welded mesh reinforcement				
4.2.15		Type reference 193 in standard sheets	m ²	41		
		JOINTS				
		Construction Joints - To be constructed as per details.				
CARRIED FORWARD						

BILL : UPGRADING CLARENS WTW: CIVIL & BUILDING WORK - PART B (PIPELINE & GEN BUILDING)

SECTION 4 : CHEMICAL DOSING BUILDING

ITEM	PAYMENT REFERS	DESCRIPTION	UNIT	QUANTITY	RATE R	AMOUNT R
4.2.16		BROUGHT FORWARD Keyed floor joint.	m	10		
4.2.17		Saw cut joint - 25mm Deep saw cut joints in floor slabs, cut with diamond disk cutter to ensure straight cut lines. (Provisional)	m	10		
		Movement Joints Expansion joint filled in with bitumen impregnated fibre board between vertical concrete and brick surfaces:				
4.2.18		10mm Vertical joints in masonry work.	m	10		
4.3		PRE-CAST CONCRETE Standard prestressed fabricated lintels including bedding bearing ends in 'Wallcrete' cement mortar and propping as necessary:				
4.3.1		102 x 70mm Lintels in lengths not exceeding 1500mm (Prov.)	m	4		
4.3.2		102 x 70mm Lintels in lengths not exceeding 4000mm (Prov.)	m	10		
4.4		MASONRY Masonry Brickwork to consist of SABS aproved burnt clay plaster bricks, on 85mm gauge, in stretcher bond, with equal horizontal and vertical joints.				
		Foundation Brickwork				
4.4.1		230mm Foundation walls. (NFX)	m ²	50		
4.4.2		460mm x 460mm Masonry columns. (NFX)	m	1		
		Welded mesh brick reinforcement built horizontally into walls and lintels on each course:				
4.4.3		150mm Wide reinforcement	m	620		
		Super structure brickwork :				
4.4.4		115mm Wall (NFP)	m ²	1		
4.4.5		230mm Wall (NFP)	m ²	200		
4.4.6		460mm x 460mm Masonry columns. (NFP)	m	14		
4.4.7		115mm Beam filling 200mm high extreme.	m	45		
		Extra Over brickwork:				
4.4.8		E.O For exterior brick skin in 'FBS' Quality Clay Face Brick - 'Nebraska Travertine' from Corobrick or similar approved by Project Manager.	m ²	155		
4.4.9		E.O For exterior roller coarse in 'FBS' Quality Clay Face Brick - 'Nebraska Travertine' from Corobrick or similar approved by Project Manager.	m	10		
CARRIED FORWARD						

BILL : UPGRADING CLARENS WTW: CIVIL & BUILDING WORK - PART B (PIPELINE & GEN BUILDING)

SECTION 4 : CHEMICAL DOSING BUILDING

ITEM	PAYMENT REFERS	DESCRIPTION	UNIT	QUANTITY	RATE R	AMOUNT R
4.4.10		BROUGHT FORWARD E.O For for building in two seperate skins and applying bag wash to inside skin to take 'Brixeal' by ABE or similar approved waterproofing emulsion. (Emulsion measured elsewhere). Sundries Welded mesh brick reinforcement built horizontally into walls and lintels on every 4th course.	m ²	155		
4.4.11		75mm Wide reinforcement	m	2		
4.4.12		150mm Wide reinforcement	m	588		
4.4.13		Galvanised hoop iron cramps, ties, etc: 30 x 1,6mm Roof tie 1500mm long with one end fixed to timber and other end built into brickwork, min. 6 courses or cast onto ring beam..	No	26		
4.5		WATERPROOFING Damp-proofing of walls and floors One layer of 375 micron Brickgrip or similar approved DPC embossed damp-proof course:				
4.5.1		In walls One layer of 250 micron Gunplas USB Green or similar approved waterproof sheeting sealed at laps with Gunplas Pressure Sensitive Tape:	m	46		
4.5.2		Under surface beds including turning over brickwork Joint sealants: Sikaflex 1A or similar approved polyurethane sealing compound including backing cord, bond breaker, primer, etc:	m ²	56		
4.5.3		10 x 10mm In expansion joints in floors. (Prov.)	m	--		Rate Only
4.5.4		10 x 10mm In expansion joints vertically between brickwork.	m	--		Rate Only
4.5.5		Waterproof emulsion between brick skins in exterior 230mm walls to lintel level of highest door. Brixeal' or similar approved waterproof emulsion, applied to bagwashed interior skin of brickwork.	m ²	155		
4.6		ROOF COVERINGS				
4.7	SABS 1200 HB	SIDE AND ROOF CLADDING Supply, deliver to Site, erect and fix chromadek sheeting/cladding, etc., including the supply of all necessary fasteners, etc., and cutting and notching.				
CARRIED FORWARD						

BILL : UPGRADING CLARENS WTW: CIVIL & BUILDING WORK - PART B (PIPELINE & GEN BUILDING)

SECTION 4 : CHEMICAL DOSING BUILDING

ITEM	PAYMENT REFERS	DESCRIPTION	UNIT	QUANTITY	RATE R	AMOUNT R
4.7.1	8.2.3	BROUGHT FORWARD Kliplok 700 / Kingclip 700 / Saflok 700: 0.53mm Thick 'Chromadek / Globalcoat' to one side, profiled steel sheeting to roof: Colour - Dark Dolphin	m ²	130		
4.8		FLASHINGS shall be manufactured from" 0,6mm galvanised Z275 spelter with a Globalcoat finish to one side and fixed by way of S10 brackets or, Sliding brackets (at end where roof sheets are in excess of 30m long) all in strict accordance with manufacturer's specification using the appropriate tools.				
4.8.1		Apex Flash 600mm girth 3 times bent fixed to B/F serrated closers with no direct perforations.	m	13.5		
4.8.2		Closure plate 450-600mm girth x 1mm - suitable for Kliplok 700 / Kingclip 700 / Saflok 700 profiled sheeting in matching Chromadec finish.	m	27		
4.8.3		Profiled "Sondor" polyclosers. Roofing Insulation - Supply, deliver to site, erect and fix insulation under sheeting, etc., including the supply of all necessary fasteners, etc.	m	27		
4.8.4		'Sisalation: Residential RPP' or similar approved aluminium foil insulation laid taut over purlins and fixed concurrent with roof covering, including laps over purlins .	m ²	130		
4.8.5		40mm chicken mesh or similar suspension pulled taught over purlins to take insulation as measured above.	m ²	130		
4.8.6		RAINWATER GOODS Continuously rolled aluminium gutters with chromadek finish and fixing brackets along roof line.	m	27		
4.8.7		4.5m Long downpipes to go with guttering.	No	4		
4.9		CARPENTRY AND JOINERY Roofs, Structural timber etc. All timber to be min. grade S5 Pre-fabricated roof construction, designed & manufactured by specialist. Plate nailed timber roof truss construction formed of sawn softwood with patent galvanised plate nailed connections fixed in position:				
4.9.1		Gangnail truss, to Chemical Dosing Building building as per detailed drawings including all permanent bracing, runners etc.. (wall plates & purlins elsewhere)	Roof	1		
4.9.2		Issue of TR1 & TR2 Certificate.	Item	1		
4.9.3		76 x 76mm planed tilter batten including fixing with hurricane clips.	m	26		
4.9.4		76 x 38mm Wall plate	m	26		
CARRIED FORWARD						

BILL : UPGRADING CLARENS WTW: CIVIL & BUILDING WORK - PART B (PIPELINE & GEN BUILDING)

SECTION 4 : CHEMICAL DOSING BUILDING

ITEM	PAYMENT REFERS	DESCRIPTION	UNIT	QUANTITY	RATE R	AMOUNT R
4.9.5		BROUGHT FORWARD 50 x 76mm Purlins including fixing to trusses using hurricane clips.	m	117		
4.9.6		38x50mm Planed fascia runner fixed to u/s of truss rafter.	m	26		
4.9.7		Sundries: Allowance for 'Teco' products, nails, bolts e.g Truss hangers, hurrican clips etc.	Sum	1		
4.9.8		Two coats carbolinium or similar approved on all exposed timber before fixing. (Prov.) Eaves, verges etc.	m ²	10		
4.9.9		'Everite' high density pressed 'Nutec' or similar cement fascia boards with aluminium H-profile jointing strips screwed to roof timbers with brass screws:	m	26		
4.9.10		10 x 225mm Tempered fascia board.	m	20		
4.9.11		80 x 200mm Barge Board Soilid Meranti Doors & Frames - Manufactured, supplied and installed:	No	2		
4.9.12		D1 - Meranti BB - Square Jointed or similar approved door, 813mm wide x 2032mm high hung to steel frame.	No	2		
4.9.13		D2 - Meranti BB - Square Jointed or similar approved double door with 20 x 20mm internal rebate, 1634mm wide x 2032mm high hung to steel frame.	No	--		Rate Only
4.9.14		D3 - '813 x 2032 x 40mm Hardboard faced solid core flush panel door, hung to steel frame.	No	--		Rate Only
4.9.15		D4 - 813mm wide x 1950mm high Hardboard faced, solid core flush panel door, hung to steel frame. Soilid Meranti Window frames - manufactured, supplied and installed:	No	1		
4.10		Purpose made view window: 1500mm Wide x 900mm high with 90mm x 70mm Hardwood (Meranti) frame, rebated to take double glazing pane. Plugged to walls and sealed - air tight. (Vacuum Room)				
4.10.1		CEILINGS, PARTITIONS AND ACCESS FLOORING Nailed up ceilings 4mm 'Nutec' or similar fibre cement board with H-profile cover strips over joints or similar approved:	m ²	93		
4.10.2		Ceilings including 38 x 50mm sawn softwood brandering at 400mm centres in one direction and all header joints and perimeter edges.	No	1		
		Extra over ceiling and brandering for 600 x 600mm trap door and frame and H-profile grid fitted flush in opening including any additional brandering				
CARRIED FORWARD						

BILL : UPGRADING CLARENS WTW: CIVIL & BUILDING WORK - PART B (PIPELINE & GEN BUILDING)

SECTION 4 : CHEMICAL DOSING BUILDING

ITEM	PAYMENT REFERS	DESCRIPTION	UNIT	QUANTITY	RATE R	AMOUNT R
4.10.3		BROUGHT FORWARD				
4.11		Board cornice: 75mm Gypsum plaster board coved cornice	m	79		
4.11.1		IRONMONGERY Door Ironmongery - Supply and install the following door hardware in stainless steel finish to the following: Door D1 & D3 - 'Union' - Radius lever CZ 692-24SC with Union 2 lever upright lock 2295 - 78SS.	No	2		
4.11.2		Door D2 - Union: Radius lever CZ692-24SC fitted with Union: 2-Lever upright lock 2295-78SS & 2 x Flush bolts to inner door, complete with rebate conversion set.	No	2		
4.11.3		Accessories Door stop	No	4		
4.11.4		Brass cabin hooks, mounted on meranti hardwood plugged to walls.	No	4		
4.11.5		Nameplates and symbols: 150 x 150mm White chromadec with red border fire fighting pictogram with red fire fighting arrow, symbol or escape sign.	No	1		
4.12		METALWORK Pressed steel galvanised door frames 1,2mm Double rebated steel frame suitable for half-brick wall including building in:				
4.12.1		Galvanised Frame for door 813mm wide x 2032mm high	No	2		
4.12.2		Galvanised Frame for door 1630mm wide x 2032mm high	No	2		
4.12.3		Standard aluminium window frames in 'Anolock bronze 543 finish. Supply and fit standard, pre-glazed, aluminium frames to manufacturer's specification.	No	3		
4.12.4		PT 129 with factory fitted clear glazing & square bar burglar proofing.	No	3		
4.12.5		E.O for 25mm Venetian Blinds to go with 1200 x 900mm window above. Security Gates G1 - Galvanised single security gate (950mm wide x 2100mm high) consisting of 38x38x1.6mm square tubing, with R12 bars @ 100mm c/c and bullet hinges. Purpose made 38x38x1.6mm square tubing frame rawl bolted to wall. Gate fitted with lockset as per schedule.	No	2		
CARRIED FORWARD						

BILL : UPGRADING CLARENS WTW: CIVIL & BUILDING WORK - PART B (PIPELINE & GEN BUILDING)

SECTION 4 : CHEMICAL DOSING BUILDING

ITEM	PAYMENT REFERS	DESCRIPTION	UNIT	QUANTITY	RATE R	AMOUNT R
4.12.6		BROUGHT FORWARD G2 - Double Security gate (1.8m wide x 2100mm high) consisting of 38x38x1.6mm square tubing, with R12 bars @ 100mm c/c and bullet hinges. Purpose made 38x38x1.6mm square tubing frame rawl bolted to wall at entrance. Gate fitted with lockset as per schedule.	No	2		
4.13		PLASTERING Cement screeds - Sand / cement finish (3:1) steel trowelled to a smooth polished surface in panels not exceeding 6 m2 on concrete:				
4.13.1		25mm Thick on floors and landings (Provisional) Plaster, 12mm thick 1:5 Cement plaster finished with steel trowel:	m ²	--		Rate Only
4.13.2		Internal Walls	m ²	170		
4.13.3		External Walls	m ²	20		
4.14		FLOOR FINISHES Wall & Floor Tiling Floor Tiling: Supply and Install floor tiles. Glazed ceramic in tiling cement and grout, to: (Make allowance of R125/m ² tile cost)				
4.14.1		To floors & Skirtings	m ²	--		Rate Only
4.14.2		To walls Tiling Sundries	m ²	--		Rate Only
4.14.3		PVC tile edging to all wall corners. (Provisional)	m	--		Rate Only
4.14.4		Metal tile edging to doors etc. (Provisional)	m	--		Rate Only
		Epoxy Floor Toppings 'Flowshield 1000' self smoothing epoxy compound to a minimum thickness of 1000 microns in accordance with the manufacturers Flowcrete SA's installation methodology. Colour to be Goosewing Grey 222 or equal and approved. Concrete floors to be clean, dry, sound and free of laitance with residual moisture content of less than 4%. Applied by Specialist Sub contractor.				
4.14.5		Internal floors - (Apply to floors as per finishing schedule)	m ²	56		
4.15		PLUMBING Allow a provisional amount of R5 000.00 for the client to select/buy sanitary ware & accessories:				
4.15.1		Sanitary ware from approved supplier e.g. taps, etc.	Sum	1	5 000.00	5 000.00
4.15.2		E.O. for above for delivery to site and contractor's profit mark-up.	%	5000		
CARRIED FORWARD						

BILL : UPGRADING CLARENS WTW: CIVIL & BUILDING WORK - PART B (PIPELINE & GEN BUILDING)

SECTION 4 : CHEMICAL DOSING BUILDING

ITEM	PAYMENT REFERS	DESCRIPTION	UNIT	QUANTITY	RATE R	AMOUNT R
		BROUGHT FORWARD				
		Extra over to above: Install as per supplier specifications, the following.				
4.15.3		Wash hand basins	No	1		
4.15.4		Taps	No	1		
		Supply, Deliver & Fit the following:				
		'Cobra' or similar approved Fittings				
		Valves, taps, etc:				
		*(The DTI has designated and determined a stipulated minimum threshold for Valve products, manual actuators (gearboxes) pneumatic actuators for local production and content as specified to various categories of 70 %)				
4.15.5		20mm - 1003/125 CB fullway gate valve	No	1		
4.15.6		108-20 Wall mounted rough brass hose bibtap.	No	3		
4.15.7		'Cobra' or similar PB 1.10 RB vacuum breaker	No	1		
4.15.8		'Cobra' or similar K 300 B pressure control valve with ballstop shut off valve.	No	1		
		Cold water plumbing, including all pipes, fittings, connections, testing etc.				
4.15.9		Cold water copper pipe plumbing complete to taps as detailed on drawings:	Item	1		
		WATER SUPPLY PIPING AND INSTALLATION:				
		Water Connection				
		*(The DTI has designated and determined a stipulated minimum threshold for Valve products, manual actuators (gearboxes) pneumatic actuators for local production and content as specified to various categories of 70%)				
4.15.10		20mm - 1003/125 CB fullway gate valve	No	1		
		Fire Fighting				
		Fire appliances:				
4.15.11		4,5 kg Dry chemical powder fire extinguisher mounted to wall with timber backing board.	No	1		
4.16		GLAZING				
		Glazing to timber frames. Clear float glass:				
4.16.1		1500 x 900mm double glazing, safty glass, to vacuum room view window, fixed and sealed to hardwood frame.	m ²	1.35		
4.17		PAINTWORK				
CARRIED FORWARD						

BILL : UPGRADING CLARENS WTW: CIVIL & BUILDING WORK - PART B (PIPELINE & GEN BUILDING)

SECTION 4 : CHEMICAL DOSING BUILDING

ITEM	PAYMENT REFERS	DESCRIPTION	UNIT	QUANTITY	RATE R	AMOUNT R
4.17.1		BROUGHT FORWARD On ceiling boards prepare, prime nail heads and paint one coat undercoat / sealer as required and two coats acrylic PVA paint. (Colour : White) on: Ceilings, cover strips and cornices On Timber Three coats "RYSTIX" EXTERIOR ARMADEK, or similar approved solvent sealer with stainer / colourant: Mahogany). Apply first two coats to timber members before fixing and applied to manufacturer's specifications, on:	m ²	90		
4.17.2		Timber doors and door frames. On Walls Prepare and paint 1 x Universal undercoat and 2 x coats 'Plascon' Double Velvet' or similar approved on:	m ²	14		
4.17.3		Internal Walls: Colour - VEL 17 Broken White. Prepare and paint 1 x Universal undercoat and 2 coats 'Plascon' Micatex or similar approved on:	m ²	170		
4.17.4		External walls: Colour - BBO307 Topaz)	m ²	20		
4.18		ELECTRICAL Electrical installation certified by a registered Electrician. All of the following items are to include for all supply, chasing, conduiting, draw wires, wiring, installation and testing. * (DTI's stipulated minimum threshold percentage for local production and content for different types of electrical and telecom cables is 90%)				
4.18.1		Supply & Install flush mounted, connect and test including all required wiring for Filter Building lights and plug points. Plugs etc.	Item	1		
4.18.2		Std 15A Double wall plug.	No	3		
4.18.3		Std 15A Single wall plug.	No	1		
4.18.4		15A Water proof wall plug.	No	1		
		Other connection points and switchgear				
4.18.5		Ceiling light point.	No	8		
4.18.6		Light switch - 1 lever	No	2		
4.18.7		Light switch - 2 lever	No	4		
4.18.8		Exterior light point in masonry.	No	4		
4.18.9		Photocell switch.	No	1		
4.18.10		Extractor Fan switch.	No	1		
4.18.11		3-Phase Welding Plug	No	1		
CARRIED FORWARD						

BILL : UPGRADING CLARENS WTW: CIVIL & BUILDING WORK - PART B (PIPELINE & GEN BUILDING)

SECTION 4 : CHEMICAL DOSING BUILDING

ITEM	PAYMENT REFERS	DESCRIPTION	UNIT	QUANTITY	RATE R	AMOUNT R
		BROUGHT FORWARD				
		Light fittings - Supply and fit:				
4.18.12		Exterior wall light - Min 20W LED Bulkhead with metal body and cover.	No	4		
4.18.13		Ceiling LED light - 1.5m Vapour proof, fitted with 2 x LED tubes and clear diffuser.	No	10		
4.18.14		'Lascon FM77-436-ss AR27600 x 1200mm' recessed fluorescent with prismatic diffuser (3 x 36W tubes or similar approved, fitted to suspended ceiling.	No	--		Rate Only
		Sleeves, bends etc.				
		Supply and install sleeves, bends etc. during the building process:				
4.18.15		50mm PVC sleeve pipe	m	6		
4.18.16		50mm PVC long radius bend	No	1		
4.18.17		75mm PVC sleeve pipe	m	6		
4.18.18		75mm PVC long radius bend	No	1		
4.18.19		110mm PVC sleeve pipe	m	30		
4.18.20		110mm PVC long radius bend	No	4		
4.19		Lightning Protection				
		Supply and install complete:				
4.19.1		20mm PVC conduit, surface mounted to brickwork, concrete, steel, wood etc.	m	12		
4.19.2		50mm ² Aluminium alloy conductor complete with conductor guides, expansion loops, etc installed in sleeve and fixed to roof sheeting.	m	12		
4.19.3		50mm PVS conductor jumpers 500mm long	No	1		
4.19.4		Steel core reinforced copper spike (rod) 1200 x 166mm diameter and brass couplings with driving cap driven into ground.	No	1		
4.19.5		Termination including lags, bolts, washers, and nuts.	No	1		
4.20		FURNITURE & AIR CONDITIONING				
		FURNITURE				
4.20.1		Allow the amount of R15 000 for general office furniture.	Item	1	15 000.00	15 000.00
4.20.2		Profit and attendance on the above 4.20.1, if required.	%	15000		
TOTAL FOR SECTION 4 CARRIED FORWARD TO SUMMARY						

BILL : UPGRADING CLARENS WTW: CIVIL & BUILDING WORK - PART B (PIPELINE & GEN BUILDING)

SECTION 5 : SLUDGE DRYING BEDS

ITEM	PAYMENT REFERS	DESCRIPTION	UNIT	QUANTITY	RATE R	AMOUNT R
		SLUDGE DRYING BEDS				
CARRIED FORWARD						

BILL : UPGRADING CLARENS WTW: CIVIL & BUILDING WORK - PART B (PIPELINE & GEN BUILDING)

SECTION 5 : SLUDGE DRYING BEDS

ITEM	PAYMENT REFERS	DESCRIPTION	UNIT	QUANTITY	RATE R	AMOUNT R
		BROUGHT FORWARD				
	SABS 1200 G	CONCRETE (STRUCTURAL)				
5.1	8.1.3	CONCRETE				
	8.4.2	Blinding layer in 15 MPa/19 mm concrete				
5.1.1		40 mm minimum thickness	m ²	348		
	8.4.3	Strength concrete: 25 MPa/19mm with 600g/m3 Polypropylene Microfibers, cast and cure to the following				
5.1.2		Floor slabs and Channel base	m ³	24		
	8.4.3 PSG.6.2	Strength concrete: 15 MPa/19mm, cast and cure to the following:				
5.1.3		Brick wall base	m ³	25		
5.1.4		V-drain apron	m ³	6.7		
5.2	8.1.2	REINFORCEMENT				
	8.3.2	High-tensile welded mesh reinforcement				
5.2.1		Supply, cut, place, including cover block Type reference 395 in standard sheets	m ²	300		
5.3	8.4.4 PSG.7	UNFORMED SURFACE FINISHES				
	PSG.7.3	Steel-floated finish (Class U3) to:				
5.3.1		Surface Beds and Channels	m ²	300		
5.4		WATER PROOFING & DRAINAGE				
		Drain Supply place or lay. *(The DTI has designated and determined a stipulated minimum threshold for plastic pipe products (PVC, HDPE, PP & GRP) for local production as 100%)				
5.4.1		Sand filling	m ³	1		
5.4.2		110mm 'Marley-LANDRAIN' perforated pipe or similar approved.	m	28		
5.4.3		160mm 'Marley' uPVC pipe or similar approved.	m	84		
5.4.4		160mm 'Marley' uPVC pipe 90 deg bends	No	1		
5.4.5		160mm Cast-iron equal tee to take uPVC pipe.	No	3		
5.4.6		200mm - 160mm Cast-iron reducer to take uPVC pipe.	No	1		
		Supply, deliver and install the following filter media				
5.5		River sand sieved through a builders sieve freem from pebbles and small stones.	m ³	100		
5.6		E.O. for coarse river sand from commercial supplier	m ³	100		
5.7		Supply and install biddum under sand layer on top of concrete floor	m ²	250		
CARRIED FORWARD						

BILL : UPGRADING CLARENS WTW: CIVIL & BUILDING WORK - PART B (PIPELINE & GEN BUILDING)

SECTION 5 : SLUDGE DRYING BEDS

ITEM	PAYMENT REFERS	DESCRIPTION	UNIT	QUANTITY	RATE R	AMOUNT R
5.8		BROUGHT FORWARD Supply and place on top of filter sand common clay bricks in herring bone pattern.	m ²	220		
5.9		MASONRY				
5.9.1		250mm Brick wall.	m ²	245		
5.9.2		Plaster, 15mm thick 1:5 Cement plaster finished with steel trowel to above.	m ²	471		
5.9.3		Supply and install 500 x 320 x 32mm precast concrete coping to top of masonry wall complete with mortar and joints.	m	100		
CARRIED FORWARD						

BILL : UPGRADING CLARENS WTW: CIVIL & BUILDING WORK - PART B (PIPELINE & GEN BUILDING)

SECTION 5 : SLUDGE DRYING BEDS

ITEM	PAYMENT REFERS	DESCRIPTION	UNIT	QUANTITY	RATE R	AMOUNT R
5.10		BROUGHT FORWARD FUSION BONDED EPOXY COATED METAL PIPEWORK PIPEWORK *(The DTI has designated and determined a stipulated minimum threshold for Valve products, manual actuators (gearboxes) pneumatic actuators for local production and content as specified to various categories of 70 %) PIPING, FITTINGS & VALVES Supply, manufacture / procure, deliver & install the following pipes, pipe fittings & valves. All welds to comply with the API 1104 Standard. *Piping in accordance to SABS 62 Part 1-1989: Table 2 - medium class steel pipes. *All flanges to be as detailed *All metalwork must be cleaned, using a mechanical driven wire brush and Fusion Bonded Epoxy Coated to DFT 300 microns thick. Unless where specified as Stainless Steel. Refer to detailed drawing number 13-019-V-01-06-02. for the following:				
5.10.1		150mm Dia. Straight with 2 x T10 flanges and 1 x puddle flange manufactured from Gr.304 Stainless Steel.	No	4		
5.10.2	PD2	150mm Dia wedge gate valve to SANS 664, T10 flanged.	No	4		
5.10.3		Supply and install 8.5m long x 3mm thick Stainless Steel Weir plate as per detailed drawing number 13-019-V-01-06-01	No	4		
5.11		Sundries				
5.11.1		Allow for galvanised bolts for pipe connections as measured above.	sum	1		
5.11.2		Allow for I-Rings, gaskets etc. for pipe connections measured above.	sum	1		
5.12		FIBERGLASS ITEMS				
5.12.1		Manufacture / procure and install the following Fiberglass grating items: Alternative to Metal Covers to MH: Supply and install 690mm wide x 910mm long 38 x 38 x 38mm fiberglass grating, complete with holddown brackets, Galvanised 60x60x6mm angle iron (Galv.) support and anchor bolts to drainage manhole. Refer to Dwg. number 13-019-V-01-06-02	No	2		
5.13		ALUMINIUM WORK Manufacture / procure and install the following aluminium items:				
CARRIED FORWARD						

BILL : UPGRADING CLARENS WTW: CIVIL & BUILDING WORK - PART B (PIPELINE & GEN BUILDING)**SECTION 5 : SLUDGE DRYING BEDS**

ITEM	PAYMENT REFERS	DESCRIPTION	UNIT	QUANTITY	RATE R	AMOUNT R
5.13.1		BROUGHT FORWARD Manufacture supply and install by specialist a removable aluminium handgate with seals as per typical drawing. Gate to be 300mm wide x 400mm high. Refer to Dwg. number 13-019-V-01-06-02	No	8		
TOTAL FOR SECTION 5 CARRIED FORWARD TO SUMMARY						

BILL : UPGRADING CLARENS WTW: CIVIL & BUILDING WORK - PART B (PIPELINE & GEN BUILDING)**SECTION 6 : AVR BUILDING**

ITEM	PAYMENT REFERS	DESCRIPTION	UNIT	QUANTITY	RATE R	AMOUNT R
6.1		AVR BUILDING EARTHWORKS (Provisional) Soil poisoning and protection against termites Chlordane or Aldrin type (or similar approved) termite soil insecticide applied by a registered Pest Control Company and guaranteed against termite infestation for ten years:				
6.1.1		Under solid floors etc. including forming and poisoning shallow furrows against walls, etc and filling in furrows and ramming to AVR building.	m ²	32		
6.2	SABS 1200 GA	CONCRETE, FORMWORK AND REINFORCEMENT				
	8.4	CONCRETE Concrete : 15MPa/13mm Blinding, 40mm thick concrete to bottom of foundation trenches:				
6.2.1	8.4.2	AVR Building.	m ²	17.3		
	8.4.3	Reinforced Concrete: 20 MPa / 19 concrete in:				
6.2.2		AVR Building:100mm Thick concrete floor slab with mesh ref. 245 (mesh measured elsewhere) with U2 (steel) finish - no screeds.	m ³	3		
6.2.3		Ramp to off-loading entrances.	m ²	1.7		
	8.4.3	Concrete: 30 MPa / 19 concrete in Foundations cast as strip footings, including stepping and levelling etc.:				
6.2.4		AVR building	m ³	6.9		
	8.4.3 PSG.6.2	Strength concrete: 35 MPa/19mm with 600g/m3 Polypropylene Microfibers, cast and cure to the following:				
6.2.5		AVR Building: Reinforced concrete roof slab.	m ³	7.4		
6.2.6		Reinforced concrete base slab for cable ducts in AVR Building.	m ³	1.1		
	8.1.1 PSG.6.2	FORMWORK				
	8.2.3	Smooth horizontal plane to:				
CARRIED FORWARD						

BILL : UPGRADING CLARENS WTW: CIVIL & BUILDING WORK - PART B (PIPELINE & GEN BUILDING)

SECTION 6 : AVR BUILDING

ITEM	PAYMENT REFERS	DESCRIPTION	UNIT	QUANTITY	RATE R	AMOUNT R
6.2.7		BROUGHT FORWARD AVR Building: Soffit of R/C slab.	m ²	42		
	8.2.3	Special Smooth vertical plane (Class F2) to:				
6.2.8	8.2.5	Horizontal narrow widths up to 125mm wide for side of floors, etc.	m	30		
6.2.9	8.2.5	Horizontal narrow widths up to 150mm wide for side of roof slab.	m	25.9		
	8.1.1.2	Chamfers - 25 mm x 25 mm to:				
6.2.10		R/C Slab and beams.	m	30		
	8.1.1.2	Drip Groove				
6.2.10		U/S of concrete roof overhang, to detail	m	26		
6.3	8.4.4 PSG.7	FINISHES (Unformed Finishes)				
	PSG.7.2	Class U2 Wood float finish to:				
6.3.1		Roof slabs.	m ²	41		
6.3.2		Access ramps	m ²	6.5		
	PSG.7.3	Class U3 Steel trowel finish to:				
6.3.3		Floor slab and cable ducts	m ²	32		
	8.1.2	REINFORCEMENT				
	8.3.1	High-tensile steel bars				
6.3.4	8.1.2.1	Supply and fixing of all diameter reinforcing steel to all concrete volumes including cover blocks to shuttering.	t	3.36		
	8.3.2	High-tensile welded mesh reinforcement				
6.3.5		Type reference 245 in standard sheets	m ²	30		
6.4		PRE-CAST CONCRETE				
		Standard prestressed fabricated lintels including bedding bearing ends in 'Wallcrete' cement mortar and propping as necessary:				
6.4.1		102 x 70mm Lintels in lengths not exceeding 1500mm (Prov.)	m	2		
6.4.2		102 x 70mm Lintels in lengths not exceeding 3500mm (Prov.)	m	4		
6.5		MASONRY				
		Masonry Brickwork to consist of SABS aproved burnt clay plaster bricks, on 85mm gauge, in stretcher bond, with equal horizontal and vertical joints.				
		Foundation Brickwork				
6.5.1		AVR Building: 230mm Foundation walls incl cable ducts. (NFX)	m ²	50.5		
		Welded mesh brick reinforcement built horizontally into walls and lintels on each course:				
CARRIED FORWARD						

BILL : UPGRADING CLARENS WTW: CIVIL & BUILDING WORK - PART B (PIPELINE & GEN BUILDING)

SECTION 6 : AVR BUILDING

ITEM	PAYMENT REFERS	DESCRIPTION	UNIT	QUANTITY	RATE R	AMOUNT R
6.5.2		BROUGHT FORWARD 150mm Wide reinforcement	m	600		
6.5.3		Super structure brickwork : AVR Building: 230mm Wall (NFP)	m ²	100		
6.5.4		Extra Over brickwork: E.O For exterior brick skin in 'FBS' Quality Clay Face Brick - 'Nebraska Travertine' from Corobrick or similar approved by Project Manager.	m ²	100		
6.5.5		E.O For exterior roller coarse in 'FBS' Quality Clay Face Brick - 'Nebraska Travertine' from Corobrick or similar approved by Project Manager.	m	2		
6.5.6		E.O For 230mm brickwork for building in two separate skins and applying bag wash to inside skin to take 'Brixeal' by ABE or similar approved waterproofing emulsion. (Emulsion measured elsewhere). Sundries Welded mesh brick reinforcement built horizontally into walls and lintels on every 4th course.	m ²	100		
6.5.7		75mm Wide reinforcement	m	--		Rate Only
6.5.8		150mm Wide reinforcement	m	300		
6.6		Galvanised hoop iron cramps, ties, etc: WATERPROOFING Damp-proofing of walls and floors One layer of 375 micron Brickgrip or similar approved DPC embossed damp-proof course:				
6.6.1		AVR Building: In walls One layer of 250 micron Gunplas USB Green or similar approved waterproof sheeting sealed at laps with Gunplas Pressure Sensitive Tape:	m	35		
6.6.2		Under surface beds including turning over brickwork Waterproof emulsion between brick skins in exterior 230mm walls to lintel level of highest door.	m ²	32		
6.6.3		Brixeal' or similar approved waterproof emulsion, applied to bagwashed interior skin of brickwork.	m ²	100		
6.7		FUSION BONDED EPOXY COATED STEEL WORK Manufacture / procure and install the following Fusion Bonded Epoxy Coated mild steel items:				
6.7.1		1980 x 2450mm, purpose made, double door complete with frame & vents. Refer to Dwg. number 13-019-V-01-07-03	No	2		
CARRIED FORWARD						

BILL : UPGRADING CLARENS WTW: CIVIL & BUILDING WORK - PART B (PIPELINE & GEN BUILDING)

SECTION 6 : AVR BUILDING

ITEM	PAYMENT REFERS	DESCRIPTION	UNIT	QUANTITY	RATE R	AMOUNT R
6.7.2		BROUGHT FORWARD 1600 x 750mm purpose made vents. Refer to Dwg. number 13-019-V-01-07-03	No	6		
6.7.3		D5 - 813mm wide x 2012mm high Transformer room door with louvred vent panel including steel frame and lockset.	No	1		
6.7.4		400mm Wide cable duct cover complete with frame with lugs cast to concrete floor and cover plate. Refer to Dwg. number 13-019-V-01-07-02	m	13.3		
6.8		IRONMONGERY Door Ironmongery - Supply and install the following door hardware in stainless steel finish to the following: Nameplates and symbols:				
6.8.1		150 x 150mm White chromadec with red border fire fighting pictogram with red fire fighting arrow, symbol or escape sign.	No	1		
6.9		PLASTERING Plaster, 12mm thick 1:5 Cement plaster finished with steel trowel:				
6.9.1		Internal Walls	m ²	105		
6.9.2		External Walls	m ²	--		Rate Only
6.10		FLOOR FINISHES Expoxy Floor Toppings 'Flowshield 1000' self smoothing epoxy compound to a minimum thickness of 1000 microns in accordance with the manufacturers Flowcrete SA's installation methodology. Colour to be Goosewing Grey 222 or equal and approved. Concrete floors to be clean, dry, sound and free of laitance with residual moisture content of less than 4%. Applied by Specialist Sub contractor.				
6.10.1		Internal floors - (Apply to floors as per finishing schedule)	m ²	30		
6.11		PAINTWORK On Walls Prepare and paint 1 x Universal undercoat and 2 x coats 'Plascon' Double Velvet' or similar approved on:				
6.11.1		Internal Walls: Colour - VEL 17 Broken White.	m ²	105		
6.11.2		Prepare and paint 1 x Universal undercoat and 2 coats 'Plascon' Micatex or similar approved on: External walls: Colour - BBO307 Topaz)	m ²	--		Rate Only
6.12		ELECTRICAL				
CARRIED FORWARD						

BILL : UPGRADING CLARENS WTW: CIVIL & BUILDING WORK - PART B (PIPELINE & GEN BUILDING)

SECTION 6 : AVR BUILDING

ITEM	PAYMENT REFERS	DESCRIPTION	UNIT	QUANTITY	RATE R	AMOUNT R
6.12.1		BROUGHT FORWARD Electrical installation certified by a registered Electrician. All of the following items are to include for all supply, chasing, conduiting, draw wires, wiring, installation and testing. * (DTI's stipulated minimum threshold percentage for local production and content for different types of electrical and telecom cables is 90%) Supply & Install flush mounted, connect and test including all required wiring for AVR Building lights and plug points.	Item	1		
6.12.2		Plugs etc. Std 15A Double wall plug.	No	2		
6.12.3		Std 15A Single wall plug.	No	1		
6.12.4		15A Water proof wall plug.	No	1		
		Other connection points and switchgear				
6.12.5		Ceiling light point.	No	4		
6.12.6		Light switch - 1 lever	No	2		
6.12.7		Light switch - 2 lever	No	--		Rate Only
6.12.8		Exterior light point in masonry.	No	2		
6.12.9		Photocell switch.	No	1		
6.12.10		Extractor Fan switch.	No	1		
6.12.11		3-Phase Welding Plug	No	1		
		Light fittings - Supply and fit:				
6.12.12		Exterior wall light - Min 20W LED Bulkhead with metal body and cover.	No	2		
6.12.13		Ceiling LED light - 1.5m Vapour proof, fitted with 2 x LED tubes and clear diffuser.	No	4		
6.12.14		'Lascon FM77-436-ss AR27600 x 1200mm' recessed fluorescent with prismatic diffuser (3 x 36W tubes or similar approved, fitted to suspended ceiling.	No	4		Rate Only
6.13		Lightning Protection				
		Supply and install complete:				
6.13.1		20mm PVC conduit, surface mounted to brickwork, concrete, steel, wood etc.	m	10		
6.13.2		50mm ² Aluminium alloy conductor complete with conductor guides, expansion loops, etc installed in sleeve and fixed to roof sheeting.	m	10		
6.13.3		50mm PVS conductor jumpers 500mm long	No	1		
6.13.4		Steel core reinforced copper spike (rod) 1200 x 166mm diameter and brass couplings with driving cap driven into ground.	No	1		
6.13.5		Termination including lags, bolts, washers, and nuts.	No	1		
TOTAL FOR SECTION 6 CARRIED FORWARD TO SUMMARY						

BILL : UPGRADING CLARENS WTW: CIVIL & BUILDING WORK - PART B (PIPELINE & GEN BUILDING)

SECTION 7 : ADMIN AND LABORATORIUM OFFICE BUILDING

ITEM	PAYMENT REFERS	DESCRIPTION	UNIT	QUANTITY	RATE R	AMOUNT R
7.1		ADMIN AND LABORATORIUM OFFICE BUILDING				
		EARTHWORKS (Provisional)				
		SITE CLEARANCE				
7.2		CLEAR SITE				
7.2.1		Clear and grub building site.	m ²	75		
7.2.2		Cart materials and debris to unspecified sites and dump (provisional)	t.km	1		
		BULK EARTHWORKS SABS 1200D				
7.3		EXCAVATION				
7.3.1		Remove topsoil to nominal depth 150mm, stockpile, and maintain	m ³	1		
		Cut to fill excavations in all materials and place within 0.5 km for:				
7.3.2		Levelling site - building platform	m ³	2.5		
7.4		Extra-over items 2.2 for excavation in:				
7.4.1		Intermediate material	m ³	1		Rate Only
7.5		IMPORT MATERIAL - Earth filling, supplied from local borrow pit (Type G6/G7), compacted to 93% Mod. AASHTO density unless otherwise described:				
7.5.1		Under solid floors, steps, etc.	m ³	6		
7.5.2		Overhaul	m ³ .km	60		
		Course river sand filling supplied by the contractor and compacted to 100% Mod AASHTO density:				
7.6		In a layer to receive damp-proofing under solid floors, etc.	m ³	2		
		Prescribed testing of representative samples of compacted fill material (only successful tests will be paid for):				
7.7		"Modified AASHTO density" test	No	4		
		Soil poisoning and protection against termites Chlordane or Aldrin type (or similar approved) termite soil insecticide applied by a registered Pest Control Company and guaranteed against termite infestation for ten years:				
7.7.1		Under solid floors etc. including forming and poisoning shallow furrows against walls, etc and filling in furrows and ramming.	m ²	40		
7.8	SABS 1200 GA	CONCRETE, FORMWORK AND REINFORCEMENT				
	8.4	CONCRETE				
		Concrete : 15MPa/13mm Blinding, 40mm thick concrete to bottom of foundation trenches:				
7.8.1	8.4.2	Admin & Laboratory Building.	m ²	8		
CARRIED FORWARD						

BILL : UPGRADING CLARENS WTW: CIVIL & BUILDING WORK - PART B (PIPELINE & GEN BUILDING)

SECTION 7 : ADMIN AND LABORATORIUM OFFICE BUILDING

ITEM	PAYMENT REFERS	DESCRIPTION	UNIT	QUANTITY	RATE R	AMOUNT R
		BROUGHT FORWARD				
7.8.2	8.4.3	Reinforced Concrete: 20 MPa / 19 concrete in: 600mm wide apron slab / v-drain, 100-80mm thick, in sloping panels with wood float finish, around buildings.	m ²	17		
7.8.3		Ramp, entrances, with wood float finish.	m ³	1		
7.8.4	8.4.3	Concrete: 25 MPa / 19 concrete in raft foundation Admin & Laboratory Building	m ³	7.5		
	8.1.1 PSG.6.2	FORMWORK				
	8.2.3	Special Smooth vertical plane (Class F2) to:				
7.8.5	8.2.5	Verticle narrow widths up to 125 mm wide for side of raft, aprons, slabs etc.	m	25		
	8.1.1.2	Chamfers - 25 mm x 25 mm to:				
7.8.6		R/C Slab, walls and beams.	m	--		Rate Only
	8.1.2	REINFORCEMENT				
	8.3.1	High-tensile steel bars				
7.8.7	8.1.2.1	Supply and fixing of all diameter reinforcing steel to all concrete volumes including cover blocks to shuttering.	t	0.145		
	8.3.2	High-tensile welded mesh reinforcement				
7.8.8		Type reference 245 in standard sheets	m ²	40		
7.9		PRE-CAST CONCRETE Standard prestressed fabricated lintels including bedding bearing ends in 'Wallcrete' cement mortar and propping as necessary:				
7.9.1		102 x 70mm Lintels in lengths not exceeding 1500mm (Prov.)	m	9		
7.9.2		102 x 70mm Lintels in lengths not exceeding 4000mm (Prov.)	m	3.6		
7.10		MASONRY Masonry Brickwork to consist of SABS aproved burnt clay plaster bricks, on 85mm gauge, in stretcher bond, with equal horizontal and vertical joints. Super structure brickwork :				
7.10.1		115mm Wall (NFP)	m ²	35		
7.10.2		230mm Wall (NFP)	m ²	73		
7.10.3		115mm Beam filling 200mm high extreme.	m	25.5		
		Extra Over brickwork:				
7.10.4		E.O For exterior brick skin in 'FBS' Quality Clay Face Brick - 'Nebraska Travertine' from Corobrick or similar approved by Project Manager.	m ²	73		
CARRIED FORWARD						

BILL : UPGRADING CLARENS WTW: CIVIL & BUILDING WORK - PART B (PIPELINE & GEN BUILDING)

SECTION 7 : ADMIN AND LABORATORIUM OFFICE BUILDING

ITEM	PAYMENT REFERS	DESCRIPTION	UNIT	QUANTITY	RATE R	AMOUNT R
7.10.5		BROUGHT FORWARD E.O For exterior roller coarse in 'FBS' Quality Clay Face Brick - 'Nebraska Travertine' from Corobrick or similar approved by Project Manager.	m	6.5		
7.10.6		E.O For for building in two seperate skins and applying bag wash to inside skin to take 'Brixeal' by ABE or similar approved waterproofing emulsion. (Emulsion measured elsewhere). Sundries Welded mesh brick reinforcement built horizontally into walls and lintels on every 4th course.	m ²	73		
7.10.7		75mm Wide reinforcement	m	169		
7.10.8		150mm Wide reinforcement	m	171		
7.10.9		Galvanised hoop iron cramps, ties, etc: 30 x 1,6mm Roof tie 1500mm long with one end fixed to timber and other end built into brickwork, min. 6 courses or cast onto ring beam..	No	16		
7.11		WATERPROOFING Damp-proofing of walls and floors One layer of 375 micron Brickgrip or similar approved DPC embossed damp-proof course:				
7.11.1		In walls One layer of 250 micron Gunplas USB Green or similar approved waterproof sheeting sealed at laps with Gunplas Pressure Sensitive Tape:	m	26		
7.11.2		Under surface beds including turning over brickwork Joint sealants: Sikaflex 1A or similar approved polyurethane sealing compound including backing cord, bond breaker, primer, etc:	m ²	40		
7.11.3		10 x 10mm In expansion joints in floors. (Prov.)	m	--		Rate Only
7.11.4		10 x 10mm In expansion joints vertically between brickwork.	m	--		Rate Only
7.11.5		Waterproof emulsion between brick skins in exterior 230mm walls to lintel level of highest door. Brixeal' or similar approved waterproof emulsion, applied to bagwashed interior skin of brickwork.	m ²	73		
7.12		ROOF COVERINGS				
CARRIED FORWARD						

BILL : UPGRADING CLARENS WTW: CIVIL & BUILDING WORK - PART B (PIPELINE & GEN BUILDING)

SECTION 7 : ADMIN AND LABORATORIUM OFFICE BUILDING

ITEM	PAYMENT REFERS	DESCRIPTION	UNIT	QUANTITY	RATE R	AMOUNT R
7.13	SABS 1200 HB	BROUGHT FORWARD SIDE AND ROOF CLADDING Supply, deliver to Site, erect and fix chromadek sheeting/cladding, etc., including the supply of all necessary fasteners, etc., and cutting and notching.				
7.13.1		Kliplok 700 / Kingclip 700 / Saflok 700: 0.53mm Thick 'Chromadek / Globalcoat' to one side, profiled steel sheeting to roof: Colour - Dark Dolphin	m ²	60		
7.14	8.2.3	FLASHINGS shall be manufactured from" 0,6mm galvanised Z275 spelter with a Globalcoat finish to one side and fixed by way of S10 brackets or, Sliding brackets (at end where roof sheets are in excess of 30m long) all in strict accordance with manufacturer's specification using the appropriate tools.				
7.14.1		Apex Flash 600mm girth 3 times bent fixed to B/F serrated closers with no direct perforations.	m	7.5		
7.14.2		Closure plate 450-600mm girth x 1mm - suitable for Kliplok 700 / Kingclip 700 / Saflok 700 profiled sheeting in matching Chromadec finish.	m	15		
7.14.3		Profiled "Sondor" polyclosers.	m	15		
7.14.4		Roofing Insulation - Supply, deliver to site, erect and fix insulation under sheeting, etc., including the supply of all necessary fasteners, etc.				
7.14.4		'Sisalation: Residential RPP' or similar approved aluminium foil insulation laid taut over purlins and fixed concurrent with roof covering, including laps over purlins .	m ²	60		
7.14.5		40mm chicken mesh or similar suspension pulled taught over purlins to take insulation as measured above.	m ²	60		
7.14.6		RAINWATER GOODS Continuously rolled aluminium gutters with chromadek finish and fixing brackets along roof line.	m	14		
7.14.7		4.5m Long downpipes to go with guttering.	No	2		
7.15		CARPENTRY AND JOINERY Roofs, Structural timber etc. All timber to be min. grade S5 Pre-fabricated roof construction, designed & manufactured by specialist. Plate nailed timber roof truss construction formed of sawn softwood with patent galvanised plate nailed connections fixed in position:				
7.15.1		Gangnail truss, to admin and laboratorium office building as per detailed drawings including all permanent bracing, runners etc.. (wall plates & purlins elsewhere)	Roof	1		
CARRIED FORWARD						

BILL : UPGRADING CLARENS WTW: CIVIL & BUILDING WORK - PART B (PIPELINE & GEN BUILDING)

SECTION 7 : ADMIN AND LABORATORIUM OFFICE BUILDING

ITEM	PAYMENT REFERS	DESCRIPTION	UNIT	QUANTITY	RATE R	AMOUNT R
		BROUGHT FORWARD				
7.15.2		Issue of TR1 & TR2 Certificate.	Item	1		
7.15.3		76 x 76mm planed tilter batten including fixing with hurricane clips.	m	15		
7.15.4		76 x 38mm Wall plate	m	15		
7.15.5		50 x 76mm Purlins including fixing to trusses using hurricane clips.	m	44		
7.15.6		38x50mm Planed fascia runner fixed to u/s of truss rafter.	m	15		
		Sundries:				
7.15.7		Allowance for 'Teco' products, nails, bolts e.g Truss hangers, hurrican clips etc.	Sum	1		
7.15.8		Two coats carbolinium or similar approved on all exposed timber before fixing. (Prov.) Eaves, verges etc. 'Everite' high density pressed 'Nutec' or similar cement fascia boards with aluminium H-profile jointing strips screwed to roof timbers with brass screws:	m ²	6		
7.15.9		10 x 225mm Tempered fascia board.	m	15		
7.15.10		80 x 200mm Barge Board	m	14		
		Soilid Meranti Doors & Frames - Manufactured, supplied and installed:				
7.15.11		D1 - Meranti BB - Square Jointed or similar approved door, 813mm wide x 2032mm high hung to steel frame.	No	2		
7.15.12		D2 - '813 x 2032 x 40mm Hardboard faced hollow core flush panel door, hung to steel frame.	No	3		
		KITCHEN				
		Allow a provisional amount R6500.00 for the client to buy cupboards for a kitchenette - complete				
7.15.13		Kitchenette items	Item	1	6 500.00	6 500.00
7.15.14		Extra Over for above for delivery to site and contractor's profit mark-up	%	6500	7.5%	487.50
7.16		CEILINGS, PARTITIONS AND ACCESS FLOORING				
		Nailed up ceilings 4mm 'Nutec' or similar fibre cement board with H-profile cover strips over joints or similar approved:				
7.16.1		Ceilings including 38 x 50mm sawn softwood brandering at 400mm centres in one direction and all header joints and perimeter edges.	m ²	37		
7.16.2		Extra over ceiling and brandering for 600 x 600mm trap door and frame and H-profile grid fitted flush in opening including any additional brandering	No	1		
		Board cornice:				
CARRIED FORWARD						

BILL : UPGRADING CLARENS WTW: CIVIL & BUILDING WORK - PART B (PIPELINE & GEN BUILDING)

SECTION 7 : ADMIN AND LABORATORIUM OFFICE BUILDING

ITEM	PAYMENT REFERS	DESCRIPTION	UNIT	QUANTITY	RATE R	AMOUNT R
7.16.3		BROUGHT FORWARD				
7.17		75mm Gypsum plaster board coved cornice	m	55		
		IRONMONGERY				
		Door Ironmongery - Supply and install the following door hardware in stainless steel finish to the following:				
7.17.1		Door D1 - 'Union' - Radius lever with Union 3 lever upright lock.	No	2		
7.17.2		Door D2 - Union: Radius lever fitted with Union: 2-Lever upright lock to inner door, complete with rebate conversion set.	No	3		
		Accessories				
7.17.3		Door stop	No	5		
7.17.4		Brass cabin hooks, mounted on meranti hardwood plugged to walls.	No	5		
		Nameplates and symbols:				
7.17.5		150 x 150mm White chromadec with red border fire fighting pictogram with red fire fighting arrow, symbol or escape sign.	No	1		
7.18		METALWORK				
		Pressed steel galvanised door frames				
		1,2mm Double rebated steel frame suitable for half-brick wall including building in:				
7.18.1		Galvanised Frame for door 813mm wide x 2032mm high	No	5		
		Standard aluminium window frames in 'Anolock bronze 543 finish. Supply and fit standard, pre-glazed, aluminium frames to manufacturer's specification.				
7.18.2		PT912 with factory fitted clear glazing & square bar burglar proofing.		1		
7.18.3		PT1512 with factory fitted clear glazing & square bar burglar proofing.		2		
7.18.4		PT99 with factory fitted clear glazing & square bar burglar proofing.		1		
7.18.5		PT69 with factory fitted frosted glazing & square bar burglar proofing.		1		
7.18.6		E.O for 25mm Venetian Blinds to go with various window above.	No	4		
		Security Gates				
7.18.7		G1 - Galvanised single security gate (950mm wide x 2100mm high) consisting of 38x38x1.6mm square tubing, with R12 bars @ 100mm c/c and bullet hinges. Purpose made 38x38x1.6mm square tubing frame rawl bolted to wall. Gate fitted with lockset as per schedule.	No	2		
7.19		PLASTERING				
CARRIED FORWARD						

BILL : UPGRADING CLARENS WTW: CIVIL & BUILDING WORK - PART B (PIPELINE & GEN BUILDING)

SECTION 7 : ADMIN AND LABORATORIUM OFFICE BUILDING

ITEM	PAYMENT REFERS	DESCRIPTION	UNIT	QUANTITY	RATE R	AMOUNT R
7.19.1		BROUGHT FORWARD Cement screeds - Sand / cement finish (3:1) steel trowelled to a smooth polished surface in panels not exceeding 6 m2 on concrete: 25mm Thick on floors and landings (Provisional)	m ²	--		Rate Only
7.19.2		Plaster, 12mm thick 1:5 Cement plaster finished with steel trowel:				
7.20		Internal Walls	m ²	70		
		FLOOR FINISHES				
		Wall & Floor Tiling				
		Floor Tiling: Supply and Install floor tiles. Glazed ceramic in tiling cement and grout, to: (Make allowance of R125/m ² tile cost)				
7.20.1		To floors & Skirtings	m ²	40		
7.20.2		To walls (Bathroom)	m ²	20		
7.20.3		To walls (Kitchen)	m ²	1		
		Tiling Sundries				
7.20.4		PVC tile edging to all wall corners. (Provisional)	m	--		Rate Only
7.20.5		Metal tile edging to doors etc. (Provisional)	m	41		
7.21		PLUMBING				
		Allow a provisional amount of R5 000.00 for the client to select/buy sanitary ware & accessories:				
7.21.1		Sanitary ware from approved supplier e.g. taps, etc.	Sum	1	5 000.00	5 000.00
7.21.2		E.O. for above for delivery to site and contractor's profit mark-up.	%	5000		
		Extra over to above: Install as per supplier specifications, the following.				
7.21.3		Wash hand basins	No	1		
7.21.4		Kitchen Sink	No	1		
7.21.5		Taps mixer taps	No	2		
7.21.6		WC & Cistern	No	1		
7.21.7		Towel rails	No	2		
7.21.8		Soap Dispenser	No	1		
7.21.9		Toilet roll holder	No	1		
7.21.10		Shower door	No	1		
		Supply, Deliver & Fit the following:				
CARRIED FORWARD						

BILL : UPGRADING CLARENS WTW: CIVIL & BUILDING WORK - PART B (PIPELINE & GEN BUILDING)

SECTION 7 : ADMIN AND LABORATORIUM OFFICE BUILDING

ITEM	PAYMENT REFERS	DESCRIPTION	UNIT	QUANTITY	RATE R	AMOUNT R
		BROUGHT FORWARD				
		'Cobra' or similar approved Fittings Valves, taps, etc: *(The DTI has designated and determined a stipulated minimum threshold for Valve products, manual actuators (gearboxes) pneumatic actuators for local production and content as specified to various categories of 70 %)				
7.21.11		20mm - 1003/125 CB fullway gate valve	No	1		
7.21.12		108-20 Wall mounted rough brass hose bibtap.	No	2		
7.21.13		'Cobra' or similar PB 1.10 RB vacuum breaker	No	1		
7.21.14		'Cobra' or similar K 300 B pressure control valve with ballostop shut off valve.	No	1		
		Hot & Cold water plumbing, including all pipes, fittings, connections, testing etc.				
7.21.15		Hot & Cold water copper pipe plumbing complete to taps as detailed on drawings:	Item	1		
		Geyser * (DTI's stipulated minimum threshold percentage for local production and content for SWH is 70%)				
7.22		200l vertical mounted Geyser, including pressure regulating valve and all required fittings. All installed on external wall	No	1		
		SEWER PIPEWORK AND INSTALLATIONS				
7.22.1		Kitchen sink outlet complete	Item	1		
7.22.2		Bathroom sewer outlet works complete	Item	1		
7.22.3		110mm sewer pipe to sewer disposal	m	50		
		WATER SUPPLY PIPING AND INSTALLATION:				
		Water Connection *(The DTI has designated and determined a stipulated minimum threshold for Valve products, manual actuators (gearboxes) pneumatic actuators for local production and content as specified to various categories of 70 %)				
7.22.4		20mm - 1003/125 CB fullway gate valve	No	1		
		Fire Fighting				
		Fire appliances:				
7.22.5		4,5 kg Dry chemical powder fire extinguisher mounted to wall with timber backing board.	No	1		
7.23		GLAZING & MIRROR				
		Mirror				
CARRIED FORWARD						

BILL : UPGRADING CLARENS WTW: CIVIL & BUILDING WORK - PART B (PIPELINE & GEN BUILDING)

SECTION 7 : ADMIN AND LABORATORIUM OFFICE BUILDING

ITEM	PAYMENT REFERS	DESCRIPTION	UNIT	QUANTITY	RATE R	AMOUNT R
7.23.1		BROUGHT FORWARD 6 mm Silvered float glass copper backed mirrors with polished edges and bevelled edges, holed for and fixed with chromium plated dome capped mirror screws with rubber buffers to plugs in brickwork for: 450 x 600mm Mirror to Block C walls	No	1		
7.24		PAINTWORK On ceiling boards prepare, prime nail heads and paint one coat undercoat / sealer as required and two coats acrylic PVA paint. (Colour : White) on:				
7.24.1		Ceilings, cover strips and cornices	m ²	45		
		On Timber Three coats "RYSTIX" EXTERIOR ARMADEK, or similar approved solvent sealer with stainer / colourant: Mahogany). Apply first two coats to timber members before fixing and applied to manufacturer's specifications, on:				
7.24.2		Timber doors D01	m ²	7		
		On Walls Prepare and paint 1 x Universal undercoat and 2 x coats 'Plascon' Double Velvet' or similar approved on:				
7.24.3		Internal Walls: Colour - VEL 17 Broken White.	m ²	70		
		On Metal Prepare and paint one coat undercoat and 2 x coats 'Plascon' or similar approved Velvaglo Enamel. (Colour: TBC) on:				
7.24.4		Door & Door Frames	m ²	15		
		Prepare and paint one coat undercoat and 2 x coats 'Plascon' or similar approved Velvaglo Enamel. (Colour: Grey) on:				
7.24.5		Internal Doors - D02	m ²	10		
7.25		ELECTRICAL Electrical installation certified by a registered Electrician. All of the following items are to include for all supply, chasing, conduiting, draw wires, wiring, installation and testing. * (DTI's stipulated minimum threshold percentage for local production and content for different types of electrical and telecom cables is 90%)				
7.25.1		Install flush mounted, connect and test including all required wiring for Admin Building lights and plug points.	Item	1		
		Plugs etc.				
7.25.2		Std 15A Double wall plug.	No	2		
CARRIED FORWARD						

BILL : UPGRADING CLARENS WTW: CIVIL & BUILDING WORK - PART B (PIPELINE & GEN BUILDING)

SECTION 7 : ADMIN AND LABORATORIUM OFFICE BUILDING

ITEM	PAYMENT REFERS	DESCRIPTION	UNIT	QUANTITY	RATE R	AMOUNT R
7.25.3		BROUGHT FORWARD Std 15A Single wall plug.	No	4		
		Other connection points and switchgear				
7.25.4		Ceiling light point.	No	5		
7.25.5		Light switch - 1 lever	No	7		
7.25.6		Light switch - 2 lever	No	--		Rate Only
7.25.7		Exterior light point in masonry.	No	2		
		Light fittings - Supply and fit:				
7.25.8		Exterior wall light - Min 20W LED Bulkhead with metal body and cover.	No	3		
7.25.9		Ceiling LED light - 1.5m Vapour proof, fitted with 2 x LED tubes and clear diffuser.	No	4		
7.25.10		'Lascon FM77-436-ss AR27600 x 1200mm' recessed flourescent with prismatic diffuser (3 x 36W tubes or similar approved, fitted to suspended ceiling.	No	--		Rate Only
		Sleeves, bends etc.				
		Supply and install sleeves, bends etc. during the building process:				
7.25.11		50mm PVC sleeve pipe	m	6		
7.25.12		50mm PVC long radius bend	No	1		
7.26		Lightning Protection				
		Supply and install complete:				
7.26.1		20mm PVC conduit, surface mounted to brickwork, concrete, steel, wood etc.	m	12		
7.26.2		50mm ² Aluminium alloy conductor complete with conductor guides, expansion loops, etc installed in sleeve and fixed to roof sheeting.	m	12		
7.26.3		50mm PVS conductor jumpers 500mm long	No	1		
7.26.4		Steel core reinforced copper spike (rod) 1200 x 166mm diameter and brass couplings with driving cap driven into ground.	No	1		
7.26.5		Termination including lags, bolts, washers, and nuts.	No	1		
7.27		FURNITURE				
7.27.1		Allow the amount of R15 000 for general office furniture.	Item	1	15 000.00	15 000.00
7.27.2		Profit and attendance on the above 7.27.1, if required.	%	15000		
TOTAL FOR SECTION 7 CARRIED FORWARD TO SUMMARY						

BILL : UPGRADING CLARENS WTW: CIVIL & BUILDING WORK - PART B (PIPELINE & GEN BUILDING)

SECTION 8 : RAW WATER SUPPLY PIPELINE

ITEM	PAYMENT REFERS	DESCRIPTION	UNIT	QUANTITY	RATE R	AMOUNT R
8.1	SABS 1200 DB & PSDB	RAW WATER SUPPLY PIPELINE SITE CLEARANCE (PIPE TRENCHES)				
8.1.1	8.3.1(a)	Clear and grub site	m	340		
8.1.2	8.3.1(c)	Carefully excavate topsoil up to 150mm deep from trench, stockpile separately and away from subsoil, for re-use later.	m ²	340		
8.2	SABS 1200 DB & PSDB PS 3.15	EXCAVATION (PIPE TRENCHES)				
8.2.1		Allow for surveying / pegging / setting out of pipeline route and invert levels.	m	340		
	8.3.2 a	Min. 900mm wide trench - Hand excavate, with local labourers in pickable material for pipeline trench, backfill, compact and dispose of surplus material for the following depths as per plan: (LI)				
8.2.2		Excavations of 0.0m - 1.0m	m	30		
8.2.3		Excavations of 1.0m - 1.5m	m	120		
	8.3.2 (a)	Min. 900mm wide trench - Machine excavate in all materials for pipeline trenches, backfill (by hand - LI), compact and dispose of surplus material for the following depths as per plan.				
8.2.4		Excavations of 0.0m - 1.0m	m	10		
8.2.5		Excavations of 1.0m - 1.5m	m	10		
8.2.6		Excavations of 1.5m - 2.0m	m	100		
8.2.7		Excavations of 2.0m - 3.0m	m	40		
8.2.8		Allow to level trench floor to a level / even surface to take bedding material or pipe. (LI)	m	310		
8.2.9	8.3.2(b) PSDB.1.1 PS 3.8	Extra over 8.2.2 to 8.2.7 for hard rock excavation (Special reference is made to clause 8.3.2 (b) in SABS 1200 DB)	m ³	20		
8.2.10	PSDB.1.1	Extra over 8.2.2 to 8.2.7 boulder excavation.	m ³	20		
8.2.11	8.3.2 (c)	Excavate and dispose of unsuitable material from trench bottom (Provisional)	m ³	50		
8.3	PSDB 2.3	EXCAVATION. ANCILLARIES Make up deficiency in backfill material (Provisional)				
8.3.1	8.3.3.1(a)	from other necessary excavations on site	m ³	20		
8.3.2	8.3.3.1(b)	by importation from designated borrow pits	m ³	20		
8.3.3	8.3.3.1(c)	by importation from commercial or off-site sources selected by the Contractor	m ³	20		
8.3.4	8.3.3.2	Open up and close down borrow pit.	Sum	1		
8.3.5	8.3.3.3	Compaction in road reserves	m ³	10		
	8.3.3.4 (b)	Overhaul				
CARRIED FORWARD						

BILL : UPGRADING CLARENS WTW: CIVIL & BUILDING WORK - PART B (PIPELINE & GEN BUILDING)

SECTION 8 : RAW WATER SUPPLY PIPELINE

ITEM	PAYMENT REFERS	DESCRIPTION	UNIT	QUANTITY	RATE R	AMOUNT R
8.3.6	PSDB 2.3	BROUGHT FORWARD Long Overhaul (provisional) in excess of freehaul distance of 1.0km	m³.km	200		
8.3.7	8.3.4(b) & PSDB 1.2	Temporary works : Control water inflow: Extra over 8.2.2 to 8.2.7 for keeping excavations free from water (including provision of equipment, operation and maintenance and removal of equipment.)	Sum	1		
8.4	8.3.5	EXISTING SERVICES Services across and in trenches Dealing with services				
8.4.1		Permanent protection of electrical services	No	1		
8.4.2		Temporary protection of electrical services	No	1		
8.4.3		Permanent protection of Telkom services	No	1		
8.4.4		Temporary protection of Telkom services	No	1		
8.4.5	8.3.5(a)	Services that intersect a trench Cables	No.	2		
8.4.6		Water mains up to 300 mm diam.	No.	2		
8.4.7		Stormwater pipes up to 600 mm	No.	1		
8.4.8	8.3.5(b)	Services that adjoin a trench Cables	m	1		
8.4.9		Water mains up to 300 mm diam.	m	1		
8.4.10		Services requiring special care 1) Telkom Cables	Sum	1		
8.4.11		2) Eskom Cables	Sum	1		
8.5	PSL 3 & 4	PIPE & FITTINGS - SUPPLY, DELIVERY, LAY AND BED IN TRENCH etc.				
8.5.1	8.2.1	uPVC pipes: Supply, handle, cut, lay, and bed Class A bedding for flexible pipes . Joint, test, and disinfect (potable water pipeline). *(The DTI has designated and determined a stipulated minimum threshold for plastic pipe products (PVC, HDPE, PP & GRP) for local production as 100%) Unplasticised Polyvinyl Chloride Piping (uPVC) Manufacture & Certified to SABS ISO 4427 and SABS 966-1:2010 for uPVC.				
8.5.1	SABS 1200 L	315mm diam. Class 9	m	310		
	8.2.2	SPECIALS AND FITTINGS Supply, lay, and bed Class A bedding joint, incl cut pipes to length where required, test and disinfect:				
CARRIED FORWARD						

BILL : UPGRADING CLARENS WTW: CIVIL & BUILDING WORK - PART B (PIPELINE & GEN BUILDING)

SECTION 8 : RAW WATER SUPPLY PIPELINE

ITEM	PAYMENT REFERS	DESCRIPTION	UNIT	QUANTITY	RATE R	AMOUNT R
8.6		BROUGHT FORWARD Bends Unplasticised polyvinyl chloride Piping (uPVC) Class 16 Manufacture & Certified to SABS ISO 4427 for uPVC.				
8.6.1		315mm diam. 45 deg.	No.	2		
8.6.2		315mm diam. 22.5 deg.	No.	10		
8.6.3		315mm diam. 11.25 deg.	No.	3		
	SABS 1200 LB	BEDDING & BLANKET				
8.7		PROVISION OF BEDDING Available from trench within 0,5 km (Subclause 3.4.1)(LI)				
8.7.1	8.2.1	a) Selected granular material	m ³	31		
8.7.2		b) Selected fill material	m ³	31		
8.7.3		Extra-over item no 3.1.1 & 3.1.2 to process (sieve) bedding material Imported from	m ³	62		
	8.2.2.1	a) Other necessary excavations within 0.5 km (Provisional)(LI)				
8.7.4		1) Selected granular material	m ³	10		
8.7.5		2) Selected fill blanket	m ³	10		
	8.2.2.2	b) Borrow pits (Provisional)				
8.7.6		1) Selected granular material	m ³	30		
8.7.7		2) Selected fill material	m ³	48		
	8.2.2.3	c) Commercial sources (Provisional)				
8.7.8		1) Selected granular material	m ³	30		
8.7.9		2) Selected fill material	m ³	48		
	8.2.5	Overhaul of material for bedding (Provisional) where ordered Extra-over items 8.7.1 to 8.7.7				
8.7.10		a) Selected granular material	m ³ .km	300		
8.7.11		b) Selected fill material	m ³ .km	480		
8.8		GENERAL				
8.8.1		Level disturbed soil and rehabilitate vegetation along route of pipe line in accordance with the environmental management plan. (LI)	m	340		
8.8.2		Supply and install water line markers as per detail and painted 'Nile Blue' acrylic paint.Refer to Dwg. number 13-019-V-01- 13-01	No	10		
8.8.3		15Mpa Mass concrete to thrustblocks along pipeline incl. formwork	m ³	3.75		
		EROSION PROTECTION				
CARRIED FORWARD						

BILL : UPGRADING CLARENS WTW: CIVIL & BUILDING WORK - PART B (PIPELINE & GEN BUILDING)

SECTION 8 : RAW WATER SUPPLY PIPELINE

ITEM	PAYMENT REFERS	DESCRIPTION	UNIT	QUANTITY	RATE R	AMOUNT R
8.8.4		BROUGHT FORWARD Allow for the construction and compaction of storm water berms to 93% Mod. AASHTO with, imported materials, across steep trenches, 2.5m long x 0.5m high x 1.5m wide. (LI)	No	6		
8.8.5		Extra over 8.8.4 for overhaul distance more than 1km.	m³km	10		
8.9		150mm thick stone pitching in 20MPa concrete inclusive of hand selected stone.	m²	10		
8.10		Grassing of berms using local vegetation including nominal use of superphosphate fertilizer. (LI)	No	6		
8.11		ABSTRACTION PIPING - FUSION BONDED EPOXY COATED METAL PIPEWORK PIPEWORK *(The DTI has designated and determined a stipulated minimum threshold for Valve products, manual actuators (gearboxes) pneumatic actuators for local production and content as specified to various categories of 70%) PIPING, FITTINGS & VALVES Supply, manufacture / procure, deliver & install the following pipes, pipe fittings & valves. All welds to comply with the API 1104 Standard. *Piping in accordance to SABS 62 Part 1-1989: Table 2 - medium class steel pipes. *All flanges to be as detailed *All metalwork must be cleaned, using a mechanical driven wire brush and Fusion Bonded Epoxy Coated to DFT 300 microns thick. Unless where specified as Stainless Steel. Refer to detailed drawing 13-019-V-01-09-03 for the following:				
8.11.1		Item 09-01: 250mm Ø Suction strainer, T10 flanged.	No	1		
8.11.2		Item 09-02: 250 - 700mm Ø x 5mm thick collar plate. Holes to be drilled to 250mm Ø T10 flange.	No	1		
8.11.3		Item 09-03: 250mm Ø Straight, with 79° long radius bend, T10 flanged.	No	1		
8.11.4		Item 09-04: 250mm Ø 6m long Straight, T10 flanged	No	6		
8.11.5		Item 09-05: 250mm Ø Straight with 1x 21° bend, 1x 11° bend and 2x 150mm Ø branches complete with 2 x 150 to 50mm Ø reducers, all T10 flanges.	No	1		
8.11.6		Item 09-06: 50mm Ø RSV Gate Valve to SANS 664, T10 flanged.	No	2		
CARRIED FORWARD						

BILL : UPGRADING CLARENS WTW: CIVIL & BUILDING WORK - PART B (PIPELINE & GEN BUILDING)

SECTION 8 : RAW WATER SUPPLY PIPELINE

ITEM	PAYMENT REFERS	DESCRIPTION	UNIT	QUANTITY	RATE R	AMOUNT R
8.11.7		BROUGHT FORWARD Item 09-07: 50mm Ø D-040-C x 2" cast iron body ARI air release valve. (valve should only release air from system and prevent air from entering	No	1		
8.11.8		Item 09-08: 80mm Ø T10 Blanked flange with 2" female threaded steam socket.	No	1		
8.11.9		Item 09-09: 250mm Ø Straight with bend and 250 to 300mm Ø reducer, T10 flanged.	No	1		
8.11.10		Item 09-10: 300mm Ø VJ Flange adaptor for uPVC, T10 flanged.	No	1		
8.11.11		Item 09-11: 300mm Straight with puddle flange and T10 flanged.	No	4		
8.12		Sundries for 8.11				
8.12.1		Allow for galvanised bolts for pipe connections as measured above.	sum	1		
8.12.2		Allow for I-Rings, gaskets etc. for pipe connections measured above.	sum	1		
8.13		STEEL PIPE SUPPORTS				
8.13.1		Allow for earthworks to pipe support base complete incl. excavation backfill and compact.	No	7		
8.14	SABS 1200 GA	CONCRETE BASSES, SLABS AND STUB COLUMNS				
	8.2	FORMWORK				
8.14.1	8.2.1	Smooth Vertical to basses stubs and slabs	m²	17.7		
		Chamfers				
8.14.2		Chamfer 20 mm x 20 mm	m	25		
	8.1.2	REINFORCEMENT				
		High-tensile steel bars				
8.14.3	8.1.2.1	Supply and fixing of all diameter reinforcing steel to all concrete volumes including cover blocks to shuttering.	t	1		
8.14.4	8.3.2	High-tensile welded mesh ref 245.	m²	3.25		
	8.4	CONCRETE				
	8.4.3	Strength concrete: 25 MPa/19mm				
8.14.5		Basses stubs and slabs	m³	4.2		
	8.4.4	UNFORMED SURFACE FINISHES				
8.14.6		Wood-floated	m²	12.75		
8.15		FUSION BONDED EPOXY COATED STEEL WORKS Manufacture / procure and install the following Fusion Bonded Epoxy Coated mild steel items: Refer to Dwg. number 13-019-V-01-09-02				
CARRIED FORWARD						

BILL : UPGRADING CLARENS WTW: CIVIL & BUILDING WORK - PART B (PIPELINE & GEN BUILDING)

SECTION 8 : RAW WATER SUPPLY PIPELINE

ITEM	PAYMENT REFERS	DESCRIPTION	UNIT	QUANTITY	RATE R	AMOUNT R
8.15.1		BROUGHT FORWARD 250mm dia pipe support bracket installed to concrete base complete with anchor bolts, baseplate, channel support column up to 0.65m long, adjustable pipe support base with conveyor belt padding and pipe saddle tie. Refer to Dwg. number 13-019-V-01-09-02	No	5		
8.15.2		E.O. 10.6.1) for channel support column over 1.5m long per m.	m	2.7		
8.15.3		Supply 250mm dia pipe saddles, manufactured from 40mm x 5mm FMS, and anchor pipe onto 10mm thick conveyor belt padding with 2 x M16 'HILTI' Stud anchor bolts, as detailed on drawing.	No	3		
8.16		VALVES AND VALVE CHAMBERS VALVES AND VALVE CHAMBERS *(The DTI has designated and determined a stipulated minimum threshold for Valve products, manual actuators (gearboxes) pneumatic actuators for local production and content as specified to various categories of 70%) Manufacture and/or procure, deliver and install the following pipes and pipe fittings, valves, flange adapters, galv. bolts & nuts, I-Rings etc. to the following chambers: Valves & Fittings - All fittings shall have Table 10 flanges and Fusion Bonded Epoxy Coated to DFT 300 microns thick. Air Release Valves:				
8.17		AIR RELEASE VALVE: Supply and install all piping, valves & fittings to uPVC pipe, including manhole chamber and lid as per detail. Refer to Dwg. number 13-019-V-01-09-04	No	1		
8.18		Scour Valves: SCOUR VALVE: Supply and install all piping, valves & fittings to uPVC pipe, including reinforced concrete manhole chamber and lid as per detail. Refer to Dwg. number 13-019-V-01-09-04	No	2		
8.18.1		Sundries Supply Valve key for opening & closing of valves.	No	1		
8.19	SABS 1200 GA	STREAM CROSSING CONCRETE BASSES, SLABS AND STUB COLUMNS				
8.19.1	8.2	FORMWORK				
8.19.1	8.2.1	Smooth Vertical to sides of concrete encased pipe	m ²	48		
	8.1.2	REINFORCEMENT				
CARRIED FORWARD						

BILL : UPGRADING CLARENS WTW: CIVIL & BUILDING WORK - PART B (PIPELINE & GEN BUILDING)

SECTION 8 : RAW WATER SUPPLY PIPELINE

ITEM	PAYMENT REFERS	DESCRIPTION	UNIT	QUANTITY	RATE R	AMOUNT R
8.19.2	8.1.2.1	BROUGHT FORWARD High-tensile steel bars Supply and fixing of all diameter reinforcing steel to all concrete volumes including cover blocks to shuttering.	t	1.8		
8.19.3	8.4 8.4.3	CONCRETE Strength concrete: 25 MPa/19mm Concrete encased pipe	m ³	12		
8.19.4	8.4.4	UNFORMED SURFACE FINISHES Wood-floated	m ²	28		
8.20		STREAM CROSSING - FUSION BONDED EPOXY COATED METAL PIPEWORK PIPEWORK *(The DTI has designated and determined a stipulated minimum threshold for Valve products, manual actuators (gearboxes) pneumatic actuators for local production and content as specified to various categories of 70%) PIPING, FITTINGS & VALVES Supply, manufacture / procure, deliver & install the following pipes, pipe fittings & valves. All welds to comply with the API 1104 Standard. *Piping in accordance to SABS 62 Part 1-1989: Table 2 - medium class steel pipes. *All flanges to be as detailed *All metalwork must be cleaned, using a mechanical driven wire brush and Fusion Bonded Epoxy Coated to DFT 300 microns thick. Unless where specified as Stainless Steel. Refer to detailed drawing 13-019-V-01-09-01 for the following:				
8.20.1		Item 09-10: 300mm Ø VJ Flange adaptor for uPVC, T10 flanged.	No	8		
8.20.2		Item 09-11: 300mm Ø Straight with puddle flange, T10 flanged.	No	4		
8.21		Sundries for 8.20				
8.21.1		Allow for galvanised bolts for pipe connections as measured above.	sum	1		
8.21.2		Allow for I-Rings, gaskets etc. for pipe connections measured above.	sum	1		
8.22		ROAD CROSSINGS				
8.22.1		Extra Over trenching and pipe installation to deal with road crossing up to 10m long including temporary traffic sign, accommodation of traffic etc. Extra Over trenching and pipe installation to reinstate road	No.	1		
CARRIED FORWARD						

BILL : UPGRADING CLARENS WTW: CIVIL & BUILDING WORK - PART B (PIPELINE & GEN BUILDING)

SECTION 8 : RAW WATER SUPPLY PIPELINE

ITEM	PAYMENT REFERS	DESCRIPTION	UNIT	QUANTITY	RATE R	AMOUNT R
8.22.2		BROUGHT FORWARD				
8.22.2		a) Complete with all courses except subbase base and surfacing, compacted to 95% mod. AASHTO maximum density	m ²	12		
8.22.3	1200 ME 8.3.3	Construct subbase with material from commercial sources to trench width				
8.22.4		a)150mm thick layer G4 quality natural gravel compacted to 95% mod. AASHTO maximum density	m ³	2		
8.22.5		Extra-over items 8.22.4 for compacted to 98% mod. AASHTO maximum density	m ³	2		
8.22.6		b)150mm thick layer C4 quality natural gravel compacted to 95% mod. AASHTO maximum density	m ³	2		
8.22.7	8.3.5	Process material by means of:				
8.22.8		Stabilizing	m ³	2		
8.22.9	8.3.8	Stabilizing agent				
8.22.10		Portland cement	t	0.072		
	SABS 1200 MF	BASE				
8.22.11	8.3.3	Construct G1 quality base with material from commercial sources to trench width				
8.22.12		a) Graded crushed stone				
8.22.12		Construct 150mm base with G1 quality material compacted to 87% apparent density.	m ³	2		
8.22.13	SABS 1200 MH	ASPHALT BASE AND SURFACING PRIME COAT				
8.22.14	8.5.1	Prime coat using:				
8.22.14		Type MC30 Cutback bitumen to trench width.	m ²	10		
8.22.15	8.5.3	Tack Coat to trench width	m ²	10		
8.22.16		ASPHALT SURFACING				
8.22.17		Saw cutting longitudinal section of existing asphalt up to 50mm deep.	m	20		
8.22.18	8.5.4	35mm Thick medium continuously graded asphalt surfacing using:				
8.22.18		a) 60/70 Penetration grade bitumen to trench width.	m ²	10		
8.22.19	SABS 1200 MK	KERBING				
8.22.20		Remove maintain or dispose of existing precast concrete kerbs as required.	m	2		
8.22.21	8.2.2	Return and reinstall existing precast concrete kerbing including mortar bedding, concrete haunching and concrete bedding complete.	m	2		
CARRIED FORWARD						

BILL : UPGRADING CLARENS WTW: CIVIL & BUILDING WORK - PART B (PIPELINE & GEN BUILDING)**SECTION 8 : RAW WATER SUPPLY PIPELINE**

ITEM	PAYMENT REFERS	DESCRIPTION	UNIT	QUANTITY	RATE R	AMOUNT R
8.22.22	8.2.2	BROUGHT FORWARD Procure supply and install new precast concrete kerbing to match existing including mortar bedding, concrete haunching and concrete bedding as detailed.	m	1		
TOTAL FOR SECTION 8 CARRIED FORWARD TO SUMMARY						

BILL : UPGRADING CLARENS WTW: CIVIL & BUILDING WORK - PART B (PIPELINE & GEN BUILDING)**SECTION 9 : ELECTRICAL PROVISIONAL SUMS**

ITEM	PAYMENT REFERS	DESCRIPTION	UNIT	QUANTITY	RATE R	AMOUNT R
9.1	.	ELECTRICAL SWITCHGEAR & CABLES All electrical installations must be done by a certified electrician in accordance with the latest issue of the South African Institute of Electrical Engineer's Standard Regulations. * (DTI's stipulated minimum threshold percentage for local production and content for different types of electrical and telecom cables is 90%)				
9.2		PROVISIONAL AMOUNTS				
9.2.1		Allow and provisional amount of R500 000.00 for payment to ESKOM for a new electrical supply and transformer.	Sum	1	500 000.00	500 000.00
9.2.2		Profit mark-up and attendance	%	500000		
TOTAL FOR SECTION 9 CARRIED FORWARD TO SUMMARY						

BILL : UPGRADING CLARENS WTW: CIVIL & BUILDING WORK - PART B (PIPELINE & GEN BUILDING)**SECTION 10 : COMMISSIONING OF WORKS**

ITEM	PAYMENT REFERS	DESCRIPTION	UNIT	QUANTITY	RATE R	AMOUNT R
10.1	PS.3.19	COMMISSIONING OF WOKS Allow for liason with Mechanical / Electrical contractors and Commission equipment and works as a whole.	Sum	1		
TOTAL FOR SECTION 10 CARRIED FORWARD TO SUMMARY						

C2.2 BILL OF QUANTITIES**SUMMARY OF BILL OF QUANTITIES**

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SECTION 3	INLET & DOSING CHAMBER	R
SECTION 4	CHEMICAL DOSING BUILDING	R
SECTION 5	SLUDGE DRYING BEDS	R
SECTION 6	AVR BUILDING.....	R
SECTION 7	ADMIN AND LABORATORY BUILDING	R
SECTION 8	RAW WATER SUPPLY PIPELINE	R
SECTION 9	ELECTRICAL PROVISIONAL SUMS.....	R
SECTION 10	COMMISSIONING OF WORKS	R

SUBTOTAL R

ADD CONTINGENCIES @ 10.0% R

SUBTOTAL R

ADD FOR CONTRACT PRICE ADJUSTMENT @ 5.0% R

SUBTOTAL R

ADD VAT @ 15 % R

TOTAL CARRIED TO THE FORM OF OFFER ON PAGE C.2 R

Time for Completion of the Contract(Months) (Max 10 Months)
(Carried to Pg C.10, Par.1.1.1.14)

SIGNED ON BEHALF OF TENDERER:

C3 SCOPE OF WORK

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C3.1 STANDARD SPECIFICATIONS

The standard specifications on which this contract is based are the **SABS 1200 Standardized Specifications**.

Although not bound in nor issued with this Document, the following Parts of the SABS 1200 Standardized Specifications shall apply:

SABS 1200 A:	General (1986)
SABS 1200 AB:	Engineers Office (1986)
SABS 1200 C:	Site Clearance (1980)
SABS 1200 DA:	Earthworks (Small Works) (1988)
SABS 1200 DB:	Earthworks (Pipe Trenches) (1989)
SABS 1200 DK:	Gabions and Pitching (1996)
SABS 1200 GA:	Concrete (Small Works) (1982)
SABS 1200 HB:	Cladding and Sheeting (1985)
SABS 1200 L:	Medium Pressure Pipelines (1983)
SABS 1200 LB:	Bedding (1983)
SABS 1200 LE:	Stormwater drainage (1982)

Variations and additions to the various SABS 1200 Standardised Specifications are given in Portion B of the Project Specifications

The following SANS specifications are also referred to in this document and the Contractor is advised to obtain them from Standards South Africa (a division of SABS) in Pretoria.

SANS 10396:2003:	Implementing Preferential Construction Procurement Policies using Targeted Procurement Procedures
SANS 1914-1 to 6 (2002):	Targeted Construction Procurement
SANS 1921-1 (2004):	Construction and Management Requirements for Works Contracts Part 1: General Engineering and Construction Works and where accommodation of traffic is involved:
SANS 1921-2 (2004):	Construction and Management Requirements for Works Contracts; Part 2: Accommodation of Traffic on Public Roads Occupied by the Contractor.

C3.2 PROJECT SPECIFICATIONS**STATUS**

The Project Specification, consisting of two parts, forms an integral part of the contract and supplements the Standard Specifications.

Part A contains a general description of the works, the site and the requirements to be met.

Part B contains variations, amendments and additions to the Standardized Specifications and, if applicable, the Particular Specifications.

In the event of any discrepancy between a part or parts of the Standardized or Particular Specifications and the Project Specification, the Project Specification shall take precedence. In the event of a discrepancy between the Specifications, (including the Project Specifications) and the drawings and / or the Bill of Quantities, the discrepancy shall be resolved by the Engineer before the execution of the work under the relevant item.

The standard specifications which form part of this contract have been written to cover all phases of work normally required for road contracts, and they may therefore cover items not applicable to this particular contract.

PART A: GENERAL**PS.1 PROJECT DESCRIPTION**

The project comprises the following:

The scope comprises the refurbishment and additions to the existing Clarens Water Treatment Works to increase water treatment capacity from 1Ml/day to 3.25Ml/day. The works include the construction of one new clarifiers, filter building with two rapid gravity sand filters, Clear water & Waste water backwash sumps and general site works.

PS.2 DESCRIPTION OF THE SITE AND ACCESS**PS.2.1 Location of Site**

The site is located in Clarens Town, Eastern Free State (Site co-ordinates: 28°31'28.25" S 28°25'45.93"E).

PS.2.2 Access to Site

Access to site is per normal vehicle.

PS.2.3 Nature of the Ground and Subsoil Conditions

The contractor will be expected to make his own assessment in this regard and price the rates accordingly.

PS.3 CONSTRUCTION AND MANAGEMENT REQUIREMENTS**PS.3.1 General**

The Contractor is referred to SANS 1921: 2004 parts 1, 2 and 3: Construction and Management Requirements for Works Contracts. These specifications shall be applicable to the contract under consideration and the Contractor shall comply with all requirements relevant to the project.

Certain aspects however require further attention as described hereafter.

PS.3.2 Employment of Labour

It is the intention that this Contract should make the maximum possible use of the labour force available from within the target community and which is at present underemployed.

To this end the Contractor is to employ and train labour on this Contract.

The Contractor shall fill in the forms relating to Key Personnel and state how many key personnel he intends to employ in the various categories. The numbers stated in the above-mentioned form will be strictly controlled during the contract period and any changes in numbers shall be subject to the approval of the Engineer.

It is a condition of contract that the data sheets detailing the employment of human resources, expenditure and employment of SMMES as detailed in the tables below be submitted together with the monthly certificate timorously to the Engineer by the 10th of each month.

The definition of youth being of an age up to and including 35 years.

The unit of measurement is person days being the total number of persons in that category multiplied by the number of days worked by each person respectively.

Labour Rates

- 1. The awarded contractors will be expected to remunerate unskilled labourers at a rate of R250.00 per day / task plus deductions i.e UIF, WC etc**
- 2. A Community Liaison Officer (CLO) will be appointed and will / must receive a monthly salary of R 4000 plus R 500 airtime. The cost for a CLO was allowed for separately in the Bills of Quantities.**

The EPWP reporting data sheets need to be used and these data sheets must be submitted monthly irrespective of whether or not a payment certificate is submitted in terms of the latest cash flow.

PS.3.3 Construction Programme**(a) Preliminary Programme**

The Contractor shall include with his tender a preliminary programme on the prescribed form. to be completed by all Tenderers. The programme shall be in the form of a simplified bar chart with sufficient details to show clearly how the works will be performed within the time for completion as stated in the Contract Data.

The Contractor shall be deemed to have allowed fully in his tendered rates and prices as well as in his programme for all possible delays due to normal adverse weather conditions and special non-working days as specified in the Special Conditions of Contract, in the Project Specifications and in the Contract Data.

(b) Programme in terms of Clause 12 of the General Conditions of Contract

It is essential that the construction programme, which shall conform in all respects to Clause 5.6 of the General Conditions of Contract, be furnished within the time stated in the Contract Data. The preliminary programme to be submitted with the tender shall be used as basis for this programme.

PS.3.4 Drawings (Read with SANS 1921 – 1: 2004 clauses 4.1.7; 4.1.11 and 4.1.12)

The following reduced drawings which form part of the tender documents shall be used for tendering purposes only.

The following reduced (A3) drawings are enclosed herewith:

Refer to C.5 at the end of the document

The contractor shall be supplied with three complete paper copies of the construction drawings free of charge. The Contractor shall at his own expense produce all further paper prints required for the construction of the work.

Any information which the Contractor has control over and which is required by the Engineer to complete the drawings of record shall be made available to the Engineer before the Completion Certificate is issued.

Only written dimensions may be used. Dimensions are not to be scaled from drawings unless ordered by the Engineer. The Engineer will supply all figures / dimensions which are not shown on the drawings. The levels or dimensions given on the drawings are subject to confirmation on site.

PS.3.5 Quality Assurance (QA) (Read with SANS 1921 – 1: 2004 clause 4.4)

The Contractor will be solely responsible for the production of work that complies with the Specifications to the satisfaction of the Engineer. To this end it will be the full responsibility of the Contractor to institute an appropriate Quality Assurance (QA) system on site. The Engineer will audit the Contractor's quality assurance (QA) system on a regular basis to verify that adequate independent checks and tests are being carried out and to ensure that the Contractor's own control is sufficient to identify any possible quality problems which could cause a delay or failure.

The Contractor shall ensure that efficient supervisory staff, the required transport, instruments, equipment and tools are available to control the quality of his own workmanship in accordance with his QA-system. His attention is drawn to the fact that it is not the duty of the Engineer or the Engineer's representative to act as foreman or surveyor.

PS.3.6 Site Establishment (Read with SANS 1921 - 1 : 2004 clause 4.14)

This contract is to be executed in an area surrounded rural settlements and as such safety will be paramount. Furthermore all due courtesy must be exercised in so far as local resources are concerned (labour and materials).

The Engineer will facilitate all communication with the target community.

(a) Water and Electricity

The Contractor is to make his own arrangements in this regard and should note that the Employer shall not be held responsible for any shortages of either water or power due to unforeseen circumstances.

All water required for construction purposes is to be sourced by the Contractor and is to be allowed for in his rates.

(b) Location of Site Office

Suitable sites at each location will be identified once work commences. The contractor will need to make all necessary allowances for his own security, fencing etc.

The contractor is to provide adequate sanitary and waste facilities for his staff and is to ensure that each site camp is kept clean and neat at all times. No littering is to take place at either the camp or on the site.

The site is to be left in a neat, landscaped condition without any improvements on completion of the contract and final retention will not be released until such time as this condition has been complied with.

PS.3.7 Health and Safety (Read with SANS 1921 - 1: 2004 clause 4.18)

The Works will be constructed in an area inhabited by people including many children.

It is a requirement of this contract that the Contractor shall provide a safe and healthy working environment and to direct all his activities in such a manner that his employees and any other persons, who may be directly affected by his activities, are not exposed to

hazards to their health and safety. To this end the Contractor shall assume full responsibility to conform to all the provisions of the Occupational Health and Safety Act No 85 and Amendment Act No 181 of 1993, and the OHS Act 1993 Construction Regulations 2003 issued on 18 July 2003 by the Department of Labour.

For the purpose of this contract the Contractor is required to confirm his status as mandatory and employer in his own right for the execution of the contract by entering into an agreement with the Employer in terms of the Occupational Health and Safety Act in the form as included in Section C1.2.2

The rates and prices tendered by the Contractor shall be deemed to include all costs for conforming to the requirements of the Act, the Construction Regulations and the Employer's Health and Safety Specification as applicable to this contract.

Should the Contractor fail to comply with the provisions of the Construction Regulations, he will be liable for penalties as provided in the Construction Regulations and in the Employer's Health and Safety Specification.

PS.3.8 Management of the Environment (Read with SANS 1921 - 1 : 2004 clause 4.19)

Respect for the environment is an important aspect of this contract and the Contractor shall pay special attention to the following:

(a) Natural Vegetation

Only those trees and shrubs directly affected by the works and such others as the Engineer may direct in writing shall be cut down and stumped. The natural vegetation, grassing and other plants shall not be disturbed other than in areas where it is essential for the execution of the work or where directed by the Engineer.

(b) Fires

The Contractor shall comply with the statutory and local fire regulations. He shall also take all necessary precautions to prevent any fires. In the event of fire the Contractor shall take active steps to limit and extinguish the fire and shall accept full responsibility for damages and claims resulting from such fires which may have been caused by him or his employees.

(c) Environmental Management Plan

In addition to the above, all requirements of the Environmental Management Plan (EMP) as detailed in C3.3, Particular Specifications, will be adhered to.

PS.3.9 Abnormal Climatic Conditions

No extension of time for completion shall be granted for normal rainfall but extension of time shall be determined for abnormal rainfall or wet conditions in accordance with the formula given below separately for each calendar month or part thereof. It shall be calculated for the full period for completion of the contract plus any granted extension thereof:

$$V = (N_w - N_n) R_w / R_n \text{if } (N_w - N_n) > 0$$

The symbols have the following meanings respectively:

- V = Extension of time in calendar days in respect of the calendar month under consideration.
- N_w = Actual number of days during the calendar month on which a rainfall of 10mm or more is recorded.
- N_n = Average number of days, as derived from existing rainfall records, on which a rainfall of 10mm or more has been recorded for the calendar month
- R_w = Actual rainfall recorded for the calendar month.
- R_n = Average rainfall for the calendar month under consideration as determined from existing rainfall records.

When calculating the extension of time for a part of a month pro rata values of R_n and N_n shall be used.

The factor R_w / R_n shall be deemed to be fair allowance for days on which wet conditions disrupted or prevented work but on which a rainfall of 10mm or more was not recorded. If the value of R_w / R_n exceeds 2,5 it shall be taken as 2,5.

If N_w for any month is smaller than N_n the formula to be used shall be:

$$V^1 = (N_n - N_w)$$

The total extension of time for completion shall be the sum of the values of

V minus the sum of the values of V^1 .

Total extension of time = $V - V^1$.

The following are the most reliable values of N_n and R_n available and shall be used unless other values are mutually agreed upon beforehand:

Month	N_n	R_n
January	3	121.7
February	2	103.7
March	2	92.0
April	1	49.4
May	0	24.6
June	0	14.0
July	0	16.8
August	0	18.9
September	1	47.3
October	3	88.4
November	3	112.0
December	3	117.4

Rainfall gauging will be taken and recorded by the Contractor at his Site Office and agreed with the Engineer on a daily basis.

b) Should an extension of time be granted by the Engineer the Contractor shall be reimbursed for his time related Preliminary and General items contained in the schedule of Quantities. The amount of reimbursement shall be calculated as follows:

No of days extension of time granted

Total number of working days in the Contract X Total for time related P&Gs

PS.3.10 Drawings of Record

Any information in the possession of the Contractor, which is necessary for the Engineer's Representative to complete his "drawings of record", must be submitted to the Engineer's Representative before a final payment certificate and a certificate of completion will be issued.

PART B : AMENDMENTS TO THE STANDARD SPECIFICATIONS AND OTHER ADDITIONAL SPECIFICATIONS**INTRODUCTION**

In certain clauses in the Standard Specifications, allowance is made for a choice to be specified in the project specifications between alternative materials or methods of construction, and for additional requirements to be specified to suit a particular contract.

Details of such alternative or additional requirements applicable to this contract are contained in Part B1 of the project specifications.

The number of each clause and each payment item in this part of the project specifications is prefixed "PS" and numbered sequentially followed by a number corresponding to the relevant clause or payment item in the standard specification in parentheses.

New clauses and payment items not covered by clauses or items in the Standard Specifications have also been included.

Additional particular specifications are also included in Part B2 and are prefixed "P" and numbered alphabetically.

PART B1 : AMENDMENTS TO THE STANDARD SPECIFICATIONS**PSA GENERAL****PSA.1 MATERIALS (3)****PSA 1.1 QUALITY (3.1)**

All materials used in this contract shall comply with the relevant SABS Specification (as amended) or particular specification as noted.

PSA.2 PLANT (4)**PSA.2.1 PLANT FOR CONSTRUCTION PURPOSES (No reference)**

The Contractor's plant for construction purposes shall be of modern design, adaptable for the purpose for which it is required, in sound condition, and ample in capacity for carrying out the Works expeditiously.

Should the Engineer be of the opinion that the plant in use is in any way unsuitable for carrying out the Works in a manner or at a rate commensurate with the requirements of the Contract, they shall have the right to call on the Contractor at any time during the progress of the works to provide additional or improved plant and tools as may be necessary to meet these requirements.

PSA.2.2 CONTRACTOR'S CAMP (4.2)

No housing is available for the Contractor's employees, and the Contractor shall make his own arrangements with the Local Authority regarding the housing of his employees and transporting them to site.

The Contractor shall provide in locations approved by the Engineer, adequate sanitary facilities for the use of all persons engaged on the Works. Such conveniences, which shall comply with Local Authority regulations, shall be maintained in a clean and hygienic condition and shall be properly secluded from public view and their use shall be strictly enforced.

The Contractor shall make his own arrangements with the municipal authorities for any bucket removals and shall bear all the costs in connection with such service. On removal of such conveniences the sites thereof shall be left in a clean, sanitary and tidy condition.

PSA 8.2 PAYMENT**PSA 8.2.1 FIXED – CHARGE AND VALUE RELATED ITEMS**

Replace the contents of this sub-clause with the following: -

Payment for the sum tendered under item PSA 8.2.1 will be made in three separate installments as follows: -

- a. The first instalment which is 50% of the sum, will be paid when the Contractor has met all his obligations to date under this Specification, the General Conditions of Contract and the Special Conditions of Contract, and where the value of work certified for payment, excluding Materials on Site and any payments under preliminary and general items is equal to not less than 5% of the total value of the work listed in the Schedule of Quantities.
- b. The second instalment, which is 35% of the sum, will be made when the amount

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certified for payment, including retention monies but excluding the second installment referred to herein, exceeds 50% of the tender sum.

- c. The final payment, which is 15% of the sum, will be made when the Works have been certified as completed and the Contractor has fulfilled all his obligations to date under this Specification, the General Conditions of Contract and the Special Conditions of Contract.

No adjustment will apply to item 8.3.1 in respect of variations in the value of work done or the time for completion finally authorised.

Payment for the sum tendered under PSA 8.3.2 will be made in monthly installments in relation to the value of the work done (excluding the value of any price adjustments in terms of Clause 6.10 of the General Conditions of Contract).

Should the value of the measured work finally completed be more or less than the tender sum (excluding the value of any price adjustments in terms of Clause 6.8 of the General Conditions of Contract), then the sum tendered under Item PSA 8.3.2 will be adjusted pro-rata up or down and this adjustment shall be applied to the final instalment.

PSA 8.2.2 **TIME –RELATED ITEMS**

Replace the contents of this sub-clause with the following:

“Subject to the provisions of Item 8.2.3 and Item 8.2.4, payment under item PSA 8.4.1 (time- related item) will be made monthly, pro rata for parts of a month, from the Commencement Date, until the end of the period for completion of the works, plus any extension of time awarded provided always that the total of the monthly amounts so paid for the item is not more than in proportion to the progress of the work as a whole.

Should the Engineer Grant an extension of time for completion of the Works, the Contractor will be entitled to an increase in the sum tendered for the time-related item, which increase shall be in the same proportion to the original tendered sum as the extension of time is to the original time for completion of the Works.

Payment for such increased amounts will be taken to be in full compensation for all additional time-related preliminary and general costs that result from the circumstances pertaining to the extension of time Granted.”

PSA 8.3 **SCHEDULED FIXED-CHARGED AND VALUE RELATED ITEMS**

Replace the item with the following: -

“PSA 8.3.1: Fixed Preliminary and General Charges Unit: Sum

PSA 8.3.2: Value-Related Preliminary and General Charges..... Unit: Sum

The sums tendered shall include full compensation for all fixed and value-related preliminary and general charges as described in sub-clause PSA 8.1.2.2. Payment will be made as described in sub- clause PSA 8.2.1.”

PSA 8.4 **SCHEDULED TIME-RELATED ITEMS**

Replace the items with the following: -

“PSA 8.4.1: Time-Related Preliminary and General Charges

(a) General Obligations Unit: Sum

(b) Health and Safety Obligations..... Unit: Sum

The sum tendered for item PSA 8.4.1(a) shall include full compensation for all time-related preliminary and general charges as described in sub-clause PSA 8.1.2.2, excluding health and safety.

The sum tendered for item PSA 8.4.1 (b) shall include full compensation for any and all costs related to complying with the Occupational Health and Safety Act and in particular with its Construction Regulations 2014 and Part PG of the Project Specification.

Payment will be made as described in sub-clause PSA 8.2.2."

PSAB ENGINEER'S OFFICE**PSAB.1 NORMAL PROJECTS****PSAB.1.1 OFFICE BUILDINGS (Engineers Site Office) (1)**

One site office shall be provided of at least 20m² area, complete with a level, 85mm concrete floor over 250micron USB green water proofing , insulated roof / ceiling, lockable door and be supplied with a table of at least 3.0m x 1.8m and 12 chairs. Allowance shall be made for the proper display and storage of plans.

In addition this office shall be fitted with an air conditioning unit of at least 12000 BTU capacity and powered by the contractor's electrical provision / arrangement during meetings at least twice monthly. This office shall not be used for the contractor's storeroom.

This office will be paid for per week and only once it is erected and approved.

At least one pit latrine or chemical toilets, suitably enclosed, shall be maintained close to all the engineers office at all times. All possible measures shall be taken to control odours.

No telephone facilities are required by the Engineer

PSAB.1.2 NAMEBOARDS (3.2.1)

The Contractor shall supply one name board in accordance with the details indicated in this document. (2.4m x 1.2m on metal frame on timber posts)

The board shall be placed in a position designated by the Engineer.

This board shall remain the property of the Contractor who shall dismantle and remove the said board on completion of the contract.

PSAB.1.3 LABORATORY (3.2.3)

Provide a suitably sized concrete curing pit / bath, filled with water and maintained, to keep all concrete test cubes submerged prior to delivery to an independent test laboratory.

PSAB.1.4 SURVEY FACILITIES (3.2.4)

The Contractor shall make available on site and maintain for use by the Engineer and / or his representative the following:-

- a) Two survey assistants as and when required.
- b) Two automatic levels (new, with calibration certificates) each with tripod;
- c) Two level staffs, all graduated metrically;
- d) Two 5m and one 30m tape measure;
- e) four ranging rods;
- f) steel pegs – No: 50, 12 mm dia. x 400 mm long; and
- g) Two x 1.8kg hammer.

PSAB.1.5 HOUSING FOR THE ENGINEER'S STAFF (3.2.5)

No engineer's staff housing is required for this contract.

PSC SITE CLEARANCE

PSC.1 MATERIALS (3)**PSC .1.1 DISPOSAL OF MATERIAL (3.1)**

Suitable spoil sites will be located on site by the Engineer and confirmed by the issue of a site instruction. The Contractor may not make his own arrangements in this regard without the written approval of the Engineer.

PSC.2 CONSTRUCTION (5)**PSC.2.1 AREAS TO BE CLEARED AND GRUBBED (5.1)**

Areas to be cleared and grubbed shall be classified as follows:

a) General Clearing and Grubbing

Any areas requiring particular clearing and grubbing must be agreed with the Engineer prior to any such clearing taking place. Any area cleared without the consent of the Engineer will not be measured in terms of this Clause and may result in further action being taken against the Contractor in terms of any contravention with the environmental management plan. Where the Engineer has instructed that clearing must take place or is required, it shall be measured as a strip 3m wide.

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PSD EARTHWORKS**PSD.1 MATERIALS (3)****PSD .1.1 CLASSIFICATION FOR EXCAVATION PURPOSES (3.1)**

Classification of material other than "soft excavation" shall be agreed with the Engineer before excavation may be commenced.

The Contractor shall immediately inform the Engineer if and when the nature of the material being excavated changes to such an extent that a new classification for further excavation is warranted. Failure on the part of the Contractor to advise the Engineer thereof in good time shall entitle the Engineer to classify, at his discretion, such excavation as may have been executed in material of a different nature.

For the purpose of this contract all material will either be classed as soft, hard rock or Boulder Class A.

No differentiation shall be made between "soft", "Boulder Class B" and "Intermediate" excavation.

PSD.1.2 Classes of excavation (3.1.2)

(b) Intermediate excavation - Shall be classified as soft excavation

(e) Boulder excavation Class B - Shall be classified as soft excavation

PSD.2 CONSTRUCTION (5)**PSD.2.1 Disposal (5.2.2.3)**

All excess material shall be disposed of at the designated spoil sites leveled in layers not exceeding 300 mm and compacted to 90% MOD AASHTO density.

The free haul distance shall be:

1km for machines

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PSDB	<u>EARTHWORKS (PIPE TRENCHES)</u>
PSDB.1	MATERIALS (3)
PSDB.1.1	<u>CLASSES OF EXCAVATION</u> (3.1) The classification of excavated materials shall be as specified in Subclause 3.1 of SABS 1200 D and PSD.1.2.
PSDB.1.2	<u>CONTROL OF WATER</u> (4.2) The Contractor may encounter some seepage water in some of the trench excavation although the geotechnical investigation suggests that this is unlikely. No separate payment will be made for measures required to deal with this water.
PSDB.2	CONSTRUCTION (5)
PSDB.2.1	<u>MINIMUM BASE WIDTHS</u> (5.2) Base widths shall be as detailed on SABS 1200DB.
PSDB.2.3	<u>BACKFILLING</u> (5.6)
PSDB.2.3.1	General (5.6.1) ADD the following to the clause: No thrust block or pipe requiring special wrapping may be covered by either the fill blanket or the main backfill until inspected and passed by the Engineer.
PSDB.2.3.2	Disposal of unsuitable and make up of deficiency of backfill material (5.6.3 and 5.6.5) The freehaul distance shall be: - 1.0km for machines
PSDB.2.3.3	Completion of backfilling (Clause 5.6.6) Backfilling around the pipe shall not be allowed to fall more than 250m behind the laying of the pipe. After the pipes have been laid, no backfilling shall be undertaken until the pipes have been inspected and approved by the Engineer. The Contractor may use his discretion as to whether to backfill around joints before the pipeline is tested and should he decide to backfill the joints he shall be responsible for the locating of any leaks and no extra payment shall be made for any re-excavation and subsequent reinstatement.
PSDB.2.4	<u>COMPACTION</u> (5.7)
PSDB.2.4.1	Areas subject to traffic loads (5.7.2) Areas subject to traffic loads will be instructed by the Engineer in writing. No other areas will be considered for payment. The contractor will be expected to provide test results from an approved laboratory demonstrating that the additional compactive effort has been achieved. No additional payment will be made for these tests.
PSDB.2.5	<u>SHORING</u> (5.11)

In view of the fact that the excavation will take place in open areas, no additional payment will be made for shoring. The measurement width will also remain as specified herein although the Contractor may wish to batter the sides to avoid the need for shoring.

The provision for shoring shall be deemed to be included in the relevant rates for excavation. The Contractor's attention is drawn to the need to operate safely and to ensure that trenches are either shored or battered to a safe slope.

PSDB.3 MEASUREMENT AND PAYMENT (8)

PSDB.3.1 BASIC PRINCIPLES (8.1)

In addition to the activities listed in 8.1.1, excavation shall also include for the cost of piping and compacting the trench bottom to a minimum of 90% MOD AASHTO density in all materials irrespective of whether the base has been loosened or not during excavation.

PSG **STRUCTURAL CONCRETE****PSG 2** **FORM WORK (5.2)****PSG 2.2.1** **FORMED FINISHES**

Are those concrete surface finishes developed using formwork and whose standard of finish in each class shall be as described.

The Contractor shall inform the Engineer of any defect in terms of this Specification and the Contractor without the prior approval of the Engineer shall carry out no remedial work. Any defect shall be made good at the Contractor's expense by either removing and replacing the defective concrete, or, in certain instances only, by patching, all as approved by the Engineer and to the standard of finish required.

PSG 2.2.2 **CLASS F1 ORDINARY FINISH**

Formwork panels shall be of such quality that upon removal, the concrete is true and even, free from fins and recesses greater than 5mm size, honeycombing, large air holes and the like. Blowholes shall be filled if so required by the Engineer.

PSG 2.2.3 **CLASS F2 SMOOTH FINISH**

This class of finish requires a high standard concrete work, formwork and technique. Concrete placed in any one structure to give this finish shall be made from cement and aggregates from the same source, and similarly, the grading of the aggregate shall be kept constant.

Formwork shall be metal or wrot timber in a new condition designed and constructed to suit the particular job in hand and with shutter bolts and joints between panels in a regular pattern approved by the Engineer. Joints between panels shall be watertight. Construction joints shall be in the position and of the detail shown upon the working drawings.

Should the Contractor wish to incorporate further construction joints or amend the position of those shown to suit his own requirements or technique, this may be allowed provided that all design considerations are met, that the prior approval of the Engineer is obtained and that any extra costs are borne by the Contractor. In the case of horizontal construction joints, the top edge of the concrete on the Class F2 smooth finish is to be struck true and level with a trowel.

Special care shall be taken to ensure that forms are clean of all pieces of tying wire, nails and other debris at the time of concreting.

The standard of finish shall be such that, upon removal of the formwork, no further treatment, other than treatment of bolt holes if required, shall be found necessary to provide a straight, smooth and uniform finish of good quality and consistent colour and texture, free of all honeycombing and large air holes.

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PSG 6 **CONCRETE STRUCTURES (5.5.11)****PSG6.2** DESIGN OF CONCRETE MIX

The design of the concrete mix should be based on the following:

- A maximum water / cement ratio of "0.5" should be used and;
- The 28 day characteristic cube strength should not be less than 35 N/mm².
- 600g/m³ Polypropylene Microfibers should be added to the concrete mix.
- Oxygen Permeability & Water Sorptivity test of the concrete structure will be evaluated as per the following table: (Average of 4 x core samples)

Acceptance	Oxygen Permeability Index (log scale)	Water Sorptivity (mm ^{1/2} /h)
Full Acceptance	Greater than or equal to 9.15	Less than or equal to 8
Conditional Acceptance	From 9.0 to 9.15	From 8 to 12
Rejection	Less than 9.0	Greater than 13

PSG6.5 REQUIREMENTS AND TESTS FOR WATERTIGHTNESS OF CONCRETE STRUCTURES**PSG6.5.1** The completed structure shall be watertight, and the quality and finish of the work shall be such that no after-treatment of the work such as plastering or cement wash is necessary to ensure compliance with this requirement.

The works will not be certified complete until the structures have been proved by testing to be watertight.

PSG6.5.2 Upon completion of construction and when so agreed by the Engineer, the structure shall be filled by the gradual admission of water until the water level reaches the designed maximum level. The water level shall then be carefully noted and recorded by the Engineer in relation to a fixed bench mark, and the structure shall be allowed to remain filled for a period of two (2) weeks or such longer time as may be required to permit complete saturation of the concrete. During this period, readings will be taken by the Engineer and the results so obtained will be available for the information of the Contractor.

At the end of this period more water shall be added, if necessary, to bring the water level back to the designed maximum level and the water shall be left undisturbed for a period of ninety six (96) hours during which time the level shall again be recorded by the Engineer at regular intervals. The structure shall be considered to be watertight if the drop in water level does not exceed 6 mm in ninety six (96) hours in the case of a roofed structure and if no leakage is apparent.

The acceptable drop in level in the case of an unroofed structure shall be such that it allows for normal evaporation during the time of the test.

PSG6.5.3 If appreciable leakage is evident at any stage of the filling or testing or if, in the opinion of the Engineer, the degree of water tightness is unsatisfactory, the Contractor shall, when so ordered by the Engineer, discontinue the test immediately and at his own expense take approved steps to rectify the work. The work of rectification shall be continued assiduously until, on repetition of the test procedure, a satisfactory test result is obtained and the degree of water tightness is acceptable.**PSG6.5.5** The Engineer shall have the right to retest the structure before the expiry of the period of maintenance and the results of these tests will be made available to the Contractor. If these tests indicate to the Engineer that the degree of water tightness is unsatisfactory, the Engineer (before issuing the final certificate) will be entitled to order the Contractor to rectify the work at his own expense in such a manner as will cause least interruption to the running of the works and will ensure that the degree of watertightness of the structure is satisfactory.**PSG 7** **UNFORMED CONCRETE SURFACES (5.5.2)**

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PSG7.1 CLASS U1 ORDINARY FINISH

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

PSG7.2 CLASS U2 WOOD FLOAT FINISH

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

PSG7.3 CLASS U3 STEEL TROWEL FINISH

The concrete surface shall be brought to standard of Class U2 wood floating finish with floating being continued until a small amount of mortar without excess water is brought to the surface and then when the floated surface has hardened sufficient to prevent any more excess fine material from being drawn to the surface, trowelling with a steel trowel. Trowelling shall be performed with a firm pressure such as will flatten the sandy texture of the floated surface and produce a dense uniform surface free from blemishes and trowel marks. Gradual surface irregularities shall not exceed 5mm over any 3m. The sprinkling of sand and/or neat cement on the surface to absorb excess moisture shall not be permitted.

PSG7.4 CLASS U4 POWER FLOAT FINISH

The concrete surface shall be first be brought to the standard of Class U1 ordinary finish using wooden screeding boards or steel rollers. After evaporation or removal of all bleed water and immediately the concrete is stiff enough to support the machine the surface shall be closed with a mechanical power float and then finished with a mechanical power trowel. The texture of the finished surface shall be either non-slip or polished as shown on the drawings. Irregularities shall be of long wavelength not exceeding a curvature of 2mm in 600mm. Under no circumstances shall sand and/or neat cement be sprinkled over the surface either to absorb excess moisture or to fill surface blemishes of irregularities. Power floats and trowels shall be operated by skilled operators.

PSHA STRUCTURAL STEELWORK**PSHA.1 CONSTRUCTION (5)**

PSHA.1.1 Add the following sub-clause:

5.5.6 **Fasteners:**

Erection shall include the supply of fasteners.

PSHA.2 MEASUREMENT AND PAYMENT (8)**PSHA.1.2 Erection on site (8.3.3)**

Add the following:

The unit rate for erection shall cover the cost of fasteners.

PSL MEDIUM PRESSURE PIPELINES**PSL.1 MATERIALS (3)****PSL.1.1 STEEL PIPES FITTINGS AND SPECIALS (3.4)****PSL.1.1.1 Pipes of nominal bore up to 150mm (3.4.2)**

AMEND to read: -

Unless otherwise scheduled, steel pipes and fittings of nominal bore up to 150mm shall be of heavy duty, shall be screwed or plain ended for welded fittings or connecting with flexible couplings and shall comply with the applicable requirements of SANS 62.

PSL.1.1.2 Pipes of nominal bore over 150mm (3.4.3)

Unless otherwise scheduled, steel pipes and fittings of nominal bore over 150mm shall be manufactured to conform to SABS 719/1971 from grade 300WA steel and shall have a minimum wall thickness of 4.5mm.

PSL.1.1.3 Steel Pipe Specials and Fittings (3.4.4)

Steel specials shall be fabricated from straight steel pipe as specified in PSL.1.1.1 and PSL.1.1.2 and shall be manufactured and tested in accordance with BS 534 – Clause 4.

Where specified on the drawings or schedule of quantities, ANSI B16 curvature bends, tees and reducers shall be used.

PSL.1.2 OTHER TYPES OF PIPES (3.7)**PSL.1.2.1 uPVC Pipes**

Where uPVC bends are specified, they shall have a minimum pressure rating of 16 bar irrespective of the rating of the pipe to which they are attached.

PSL.1.2.2 Polyethylene Pipes (3.7.2)

ADD the following: -

All HDPE piping used on this contract shall be manufactured to the latest SABS ISO 4427 specification in an ISO 9002 listed factory belonging to a company which is a member of SAPPMA. Pipes from manufacturers who are non-SAPPMA members will not be accepted. Random samples will be taken to check the MFI and OIT index of the material.

All HDPE piping is to be SABS ISO 4427: 1996E PE80.

The contractor will be required to submit certified proof of the above prior to bringing any pipe material to site. The Engineer may also call for certificates of compliance to be submitted to substantiate the origin of raw material used in the manufacture of the pipes.

Pipe shall be supplied in rolls of lengths of either 100m or 50m.

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PS.L 2 JOINTING MATERIALS (3.8)**PSL.2.1 Flexible Couplings (3.8.2)**

HDPE compression fittings, including both the coupling and the thread, shall be rated as being suitable for operating pressures of 12.5 bar and shall be manufactured of the following materials:

- Body: Virgin polypropylene in master batch UV, high stability copolymer (PP-B) with UV Protection;
- Seal: Nitrile rubber (NBR);
- Bush Ring: Polypropylene, high stability copolymer (PP-B) with UV Protection;
- Clamping Ring: Acetalic resin (POM); and
- Body Nut: Polypropylene, high stability copolymer (PP-B) with UV Protection.

Clamp saddles must comply with the following minimum specification:

- They must have a pressure rating of minimum 16 Bar;
- The parallel thread may not exceed 2"BSP;
- They must be reinforced with a stainless-steel reinforcing ring; and
- They must have a minimum of 4 x galvanised steel bolts.

PSL.2.2 Flanges and accessories (3.8.3)

Unless otherwise indicated on the drawings or schedules of quantities, dimensions and drilling of flanges shall be in accordance with the requirements of SABS 1123 Table 1600/3 or 2500/3 as specified. All flanges shall be truly at right angles to the axis of the pipe fittings and shall be drilled with bolt holes off-centre.

Flanges for normal working pressures up to 2500 kPa shall be flat-faced with full-face gaskets. **All gaskets shall be of the "Klinker" type.**

Nuts and bolts for flanges shall comply with SABS 135 or SABS 136 as applicable.

All bolts, nuts and washers shall be mild steel, hot dip, galvanized in accordance with SABS ISO 1461.

The length of each bolt shall be such that after tightening at least one thread in addition to the thread run out and not more than the bolt diameter shall project. The threaded portion of bolts shall be clear of the shear plane.

All nuts and studs shall be fitted with two, steel, flat washers, under the bolt head and under the nut.

Any bolts not complying with this requirement shall be removed and replaced at the expense of the Contractor.

PSL.3 CORROSION PROTECTION (3.9)**PSL.3.1 Steel pipes (3.9.2.1)**

These pipes, fittings, specials etc shall all be internally and externally hot-dip galvanized. All galvanizing shall be done in accordance with SANS 121: 2000/ISO 1461 2000. The minimum amount of zinc deposited shall be 760 g/m². The Contractor shall submit certificates certifying that all galvanized pipes have been manufactured in a certified facility and meet the specifications noted above. Retention will not be released until such certificates are delivered to the Engineer.

All internal flanges and bolts shall be wrapped with a "Denso" mastic blanket applied in accordance with the manufacturer's instructions.

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PSLB **BEDDING (PIPES)****PSLB.1** **INTERPRETATIONS (2)**PSLB.1.1 **DEFINITIONS** (2.3)

Add the following new definition:

PSLB.1.1.1 **Stone mat**

Material that complies with the requirements of PSLB.2.3

PSLB.2 **MATERIALS (3)**PSLB.2.1 **SELECTED GRANULAR BEDDING** (3.1)

Add the following new subclause:

PSLB.2.1.1 **STONE MAT** (3.1.1)

Stone mat shall be 13,2mm nominal size stone for concrete complying with the requirements of SABS 1083 (Category 2).

PSLB.2.2 **BEDDING** (3.3)PSLB.2.2.1 **GRANULAR BEDDING** (3.3.1)

Add the following to the clause:

“All granular material must come from commercial sources. Should the Contractor require to obtain granular material from a suitable borrow pit, then this will be for his cost and the borrow is to be agreed on with the Engineer.

The rate for granular material sourced from borrow pits shall include for all work to select, remove oversize and/or unsuitable material by sieving etc.”

PSLB.2.2.2 **PLACING OF BEDDING** (3.5)

Add the following new clause:

“All bedding from commercial/borrow shall be hauled and placed along the trench at intervals not closer than 100m. The bedding material shall then be hauled with wheel barrow from the stockpile to the trench by Labour intensive methods (LI).”

PSLB.3 **CONSTRUCTION (5)**

PSLB.3.1 Details of Bedding (5.1.2)

Delete clause 5.1.2a and 5.1.2b and substitute:

“Pipes should be bedded and protected in accordance with the details shown on drawings.

PSLB.4 TOLERANCES (6)**PSLB.4.1 MOISTURE CONTENT AND PAYMENT (6.1)**

Add the following to the clause:

“Permissible deviations of moisture content and density shall conform to Class II degree of accuracy.”

PSLB.5 MEASUREMENT AND PAYMENT (8)**PSLB.5.1 Disposal of displaced material (8.1.5)**

Amend to read:

“Material displaced by importation of material in terms of 8.1.2 shall be spread leveled and shaped to conform with the natural contours adjacent the trench. In all cases the thickness of the material once spread shall not exceed 100mm. Overhaul will be paid on such material”.

PART B2 : PARTICULAR SPECIFICATIONS

PA: OHS 1993 HEALTH AND SAFETY SPECIFICATION

PA.1 SCOPE

This specification covers the health and safety requirements to be met by the Contractor to ensure a continued safe and healthy environment for all workers, employees and subcontractors under his control and for all other persons entering the site of works.

This specification shall be read with the Occupational Health and Safety Act (Act No 85 and amendment Act No 181) 1993, and the corresponding Regulations, and all other safety codes and specifications referred to in the said Regulations.

In terms of the OHS Agreement in Section C1.2.4 of the Contract document, the status of the Contractor as mandatory to the Employer (client) is that of an employer in his own right, responsible to comply with all provisions of OHS 1993 and Regulations 2014.

This safety specification and the Contractor's own Health & Safety Plan as well as the Occupational Health & Safety Act, 85 of 1993 & Construction Regulations 2014, shall be displayed on site or made available for inspection by all workers, employees, inspectors and any other persons entering the site of works.

The following are possible risks associated with this project:

- Working in elevated positions, most of the time in a restricted environment with limited landings (working platforms);
- Working above a continuously flowing river and in a flood plain environment subject to flooding;
- Lifting and lowering of materials and equipment from the ground to the bridge and vice versa, exposed to cross winds;
- Steep and restricted access to the lower flood plain below the bridge
- Potentially dangerous existing services, i.e. gas lines, water and sewerage mains, electrical high voltage cables, on the bridge, buried and overhead
- Deep excavations in soils requiring shoring or reducing of slopes
- Blasting of hard rock or demolition of concrete
- High pressure during testing of the new rising main, which could result in potentially dangerous situations in the event of the pipeline or fittings failing
- Potentially harmful gasses when tying into the existing sewer mains
- Movement of construction vehicles on site, taking into consideration steep slopes, other traffic and existing services
- Exposure to possible injuries due to mishandling or failure of power and hand tools
- Falling debris, tools and materials from bridge
- Non-conformance to specifications with regards to fasteners and materials
- Risks related to general safety and security on site

Additional risks may arise from specific methods of construction selected by the Contractor which are not necessary covered in the above.

PA.2 DEFINITIONS

For the purpose of this contract the following shall apply:

Employer where used in the contract documents and in this specification, means the Employer as defined in the General Conditions of Contract and it shall have the exact same meaning as **"client"** as defined in the Construction Regulations 2014. **"Employer"** and **"client"** is therefore interchangeable and shall be read in the context of the relevant document.

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(a) “**Contractor**” wherever used in the contract documents and in this specification, shall have the same meaning as “**Contractor**” as defined in the General Conditions of Contract. In this specification the terms “**principal contractor**” and “**contractor**” are replaced with “**Contractor**” and “**subcontractor**” respectively.

For the purpose of this contract the **Contractor** will, in terms of OHSA 1993, be the mandatory, without derogating from his status as an employer in his own right.

(b) “**Engineer**” where used in this specification, means the Engineer as defined in the General Conditions of Contract. In terms of the Construction Regulations the Engineer may act as agent on behalf of the Employer (the client as defined in the Construction Regulations).

PA.3 TENDERS

The Contractor shall submit the following with his tender:

- (a) a documented Health and Safety Plan as stipulated in Regulation 7 (1) (a) of the Construction Regulations 2014. The Safety Plan must be based on the Construction Regulations 2014 and will be subject to approval by the Employer;
- (b) a declaration to the effect that he has the competence and necessary resources to carry out the work safely in compliance with the Construction Regulations 2014;
- (c) a declaration to the effect that he made provision in this tender for the cost of the health and safety measures envisaged in the Construction Regulations; and
- (d) Failure to submit the foregoing with his tender, will lead to the conclusion that the Contractor will not be able to carry out the work under the contract safely in accordance with the Construction Regulations.

PA.4 CONSTRUCTION WORK PERMIT & NOTIFICATION OF COMMENCEMENT OF CONSTRUCTION WORK

PA.4.1 Construction Work Permit

Where the project value exceeds R 60 000 000-00 / CIDB grade 7 or the project duration exceeds 12 months / 365 days, the client will apply for a Construction Work Permit in accordance with Regulation 3 (1) of the Construction Regulations of 2014.

The contractor must provide the client / client's agent with the required documentation for the Application of the Construction Work Permit. Failure to provide the documentation timeously may cause undue delays on the contract. The contractor may not claim any time lost due to these delays.

The contractor may not commence any work until the Construction Work Permit is received from the Department of Employment & labour. The contractor must erect a sign board to display the Site-Specific Construction Work Permit. This board must contain the following information in at least 100 mm size alphanumerical:

- The Department of Employment & Labour Logo
- The Contractor's Company Name & Logo
- The Construction Health & Safety Agent's full name & Company Logo
- The Contract Name & Number
- The Site-Specific Construction Work Permit Number

PA.4.2 Notification of Construction Work

After award of the contract, but before commencement of construction work, the contractor who intends to carry out any construction work other than work contemplated in regulation 3(1) of the Construction Regulations 2014, must at least 7 days before that work is to be carried out notify the provincial director in writing in a form similar to Annexure 2 if the intended construction work will-

- (a) include excavation work;
- (b) include working at a height where there is risk of falling;
- (c) include the demolition of a structure; or
- (d) include the use of explosives to perform construction work.

The notification must be done in the form similar to Annexure 2 included on page T.53 (Forms to be Completed by Successful Tenderer) of the tender document.

A copy of the notification form must be kept on site, available for inspection by inspectors, Employer, Engineer, employees and persons on site.

PA.5 RISK ASSESSMENT

Before commencement of any construction work during the construction period, the Contractor must have a risk assessment performed and recorded in writing by a competent person. (Refer Regulation 9 of the Construction Regulations 2014).

The risk assessment must identify and evaluate the risks and hazards that may be expected during the execution of the work under the contract, and it must include a documented plan of safe work procedures to mitigate, reduce or control the risks and hazards identified and must include a monitoring and review plan.

The risk assessment must be available on site for inspection by inspectors, Employer, Engineer, subcontractors, employees, trade unions and health and safety committee members, and must be monitored and reviewed periodically by the Contractor.

PA.6 APPOINTMENT OF EMPLOYEES AND SUBCONTRACTORS**PA.6.1 Health and Safety plan**

The Contractor shall appoint his employees and any subcontractors to be employed on the contract, in writing, and he shall provide them with a copy of his documented Health and Safety Plan, or relevant sections thereof. The Contractor shall ensure that all subcontractors and employees are committed to the implementation of his Safety Plan.

PA.6.2 Health and safety induction training

The Contractor must ensure that all employees under his control, including subcontractors and their employees, undergo a health and safety induction training course by a competent person before commencement of construction work. No visitor or other person shall be allowed or permitted to enter the site of the works unless such person has undergone health and safety training pertaining to hazards prevalent on site.

The Contractor must ensure that every employee on site is in possession of proof of the health and safety induction training issued by a competent person prior to commencement of construction work.

PA.7APPOINTMENT OF SAFETY PERSONNEL**PA.7.1 Construction Managers and Supervisors****Construction Manager and Alternate Manager – CR 8 (1)**

The Principal Contractor must in writing appoint one full-time competent person as the construction manager with the duty of managing all the construction work on a single site, including the duty of ensuring occupational health and safety compliance, and in the absence of the construction manager an alternate must be appointed in terms of Regulation 8 (1). The construction manager cannot manage any other site other than the single site for which he has been appointed. The construction manager must have at least a national diploma in civil engineering with a post graduate experience of five years in the Civil Engineering field.

Assistant Construction Manager(s) – CR 8 (2)

The Principal Contractor must in writing appoint one or more assistant construction managers for different sections thereof in terms of Regulation 8 (2): Provided that the designation of any such person does not relieve the construction manager of any personal accountability for failing in his or her management duties. The assistant construction manager cannot manage any other site other than the single site for which he has been appointed. The construction manager must have at least a national diploma in civil engineering.

Construction Supervisor(s) – CR 8 (7)

The Principal Contractor must in writing appoint construction supervisors responsible for construction activities and ensuring occupational health and safety compliance on the construction site in terms of Regulation 8 (7). The construction supervisor cannot supervise any other site other than the single site for which he has been appointed. The construction supervisor must have at least five years' experience supervising construction activities on site.

Assistant Construction Supervisor(s) – CR 8 (8)

The Principal Contractor must in writing appoint one or more competent employees for different sections thereof to assist the construction supervisor contemplated in subregulation (7), and every such employee has, to the extent clearly defined by the contractor in the letter of appointment, the same duties as the construction supervisor in terms of Regulation 8 (8): Provided that the designation of any such employee does not relieve the construction supervisor of any personal accountability for failing in his or her supervisory duties. The assistant construction supervisor cannot supervise any other site other than the single site for which he has been appointed. The assistant construction supervisor must have at least two years' work experience in his specific task in order to supervise employees.

PA.7.2 Construction health & safety officer – CR 8 (5)

Due to the nature of the work, the degree of danger likely to be encountered and the accumulation of hazards or risk on the site, the Principal Contractor must in writing appoint one full (Where a Construction Work Permit is Required) or part time (Where the Notification of Construction Work Required) Construction Health & Safety Officer to assist in the control of all health and safety related aspects on the site, in terms of Regulation 8 (5). The Construction Health & Safety Officer must be registered and in good standing with the South African Council for the Project & Construction Management Professions (SACPCMP). Each contractor must appoint his / her Construction Health & Safety Officer who is registered and in good standing with the SACPCMP. The contractors' Construction Health & Safety Officer must conduct at least a weekly site visits and submit weekly reports on the findings on the construction site. The contractor may appoint a consultant to oversee the health and safety on site who must perform the same duties as a part time Construction Health & Safety Officer.

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Provision must be made by the Contractor in his rates, to cover the cost of this dedicated construction health & safety officer appointed after award of the contract.

PA.7.3 Health and safety representatives

In terms of **Section 17 and 18 of the Act (OHSA 1993)** the Contractor, being the employer in terms of the Act for the execution of the contract, must appoint a **health and safety representative** in his employment on the site of the works. The health and safety representative must be selected from employees who are employed in a full-time capacity at a specific workplace.

The number of health and safety representatives for a workplace shall be at least one for every 50 employees. Although the Act requires 1, SHE representative from 20 employees onwards, this contract requires 1:50 She representatives irrespective of the number on employees on site. The same applies to contractors and sub-contractors.

The function of health and safety representative(s) will be to review the effectiveness of health and safety measures, to identify potential hazards and major incidents, to examine causes of incidents (in collaboration with his employer, the Contractor), to investigate complaints by employees relating to health and safety at work, to make representations to the employer (Contractor) or inspector on general matters affecting the health and safety of employees, to inspect the workplace, plant, machinery etc. on a regular base, to participate in consultations with inspectors and to attend meetings of the health and safety committee.

PA.7.4 Health and safety committee

In terms of Sections 19 & 20 of the Act (OHSA 1993) the Contractor (as employer), shall establish one or more health and safety committee(s) where there are two or more health and safety representatives at a workplace. The persons selected by the Contractor to serve on the committee shall be designated in writing.

The function of the health and safety committee shall be to hold meetings at regular intervals, but at least once every three months, to review the health and safety measures on the contract, to discuss incidents related to health and safety with the Contractor and the inspector, and to make recommendations regarding health and safety to the Contractor and to keep record of recommendations and reports made by the committee.

PA.7.5 Competent persons

In accordance with the Construction Regulations the Contractor must appoint in writing **competent persons** responsible for each of the following work situations that may be expected on the site of the works.

- (a) Construction Manager, Supervisor and Health & Safety Officer as described in Regulation 8;
- (b) Risk assessments as described in Regulation 9;
- (c) Fall protection as described in Regulation 10;
- (d) Structures as described in Regulation 11;
- (e) Temporary Works as described in Regulation 12;
- (f) Excavation work as described in Regulation 13 & blasting for excavation work;
- (g) Demolition work as described in Regulation 14;
- (h) Tunneling as described in Regulation 15;
- (i) Scaffolding work as described in Regulation 16;
- (j) Suspended platform operations as described in Regulation 17;
- (k) Rope Access as described in Regulation 18;
- (l) Material hoists as described in Regulation 19;
- (m) Batch plant operations as described in Regulation 20;
- (n) Explosive powered tools as described in Regulation 21;

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-
- (o) Cranes as described in Regulation 22;
 - (p) Construction vehicle and mobile plant as described in Regulation 23;
 - (q) Temporary electrical installations and machinery on construction sites as described in Regulation 24;
 - (r) Use & temporary storage of flammable liquids on construction sites as described in Regulation 25;
 - (s) Water Environments as described in Regulation 26;
 - (t) Housekeeping & general safeguarding on construction sites described in Regulation 27;
 - (u) Stacking and storage on construction sites as described in Regulation 28;
 - (v) Fire precautions on construction sites as described in Regulation 29; and
 - (w) Construction employees' facilities as described in Regulation 30.

A competent person may be appointed for more than one part of the construction work with the understanding that the person must be suitably qualified and able to supervise at the same time the construction work on all the work situations for which he has been appointed.

The appointment of competent persons to supervise parts of the construction work does not relieve the Contractor from any of his responsibilities to comply with **all** requirements of the Construction Regulations.

PA.8RECORDS AND REGISTERS

In accordance with the Construction Regulations the Contractor is bound to keep records and registers related to health and safety on site for periodic inspection by inspectors, the Engineer, the Employer, trade union officials and subcontractors and employees. The following records and registers must be kept on site and shall be available for inspection at all times.

- (q) A copy of the OHS 1993 Construction Regulations 2014;
- (r) A copy of this Health and Safety Specification;
- (s) A copy of the Contractor's Health and Safety Plan (Regulation 7);
- (t) A copy of the Notification of Construction Work (Regulation 4);
- (u) A health and safety file in terms of Regulation 7(1) (b) with inputs by the Construction Health & Safety Officer - Regulation 8 (5&6);
- (v) A copy of the risk assessment described in Regulation 9;
- (w) A fall protection plan and the corresponding records of evaluation and training of employees working from elevated positions as described in Regulation 10 and Regulation 18 (2) (b);
- (x) Drawings pertaining to the design of structures (Regulation 11 (1) (c)) and Temporary works (Regulation 12 (3) (c)) must be kept on site;
- (y) Pronouncement of the safety of excavations must be recorded in a register to be kept on site (Regulation 13(2)(h));
- (z) A copy of the certificate of the system design for suspended platforms (Regulation 17(3));
- (aa) A notice must be affixed around the base towers of material hoists to indicate the maximum mass load, which may be carried at any one time by material hoists (Regulation 19 (5));
- (bb) Maintenance records of material hoists and inspection results must be kept in a record book to be kept on site (Regulation 19 (8));
- (cc) A record of any repairs to or maintenance of a batch plant must be kept on site (Regulations 20 (8));
- (dd) A warning notice must be displayed in a conspicuous manner when and wherever an explosive powered tool is used (Regulation 21 (2));
- (ee) A register for recording of findings by the competent person appointed to inspect construction vehicles and mobile plant (Regulation 23(1)(k)).

PA.9CONTRACTORS RESPONSIBILITIES

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For this contract the Contractor will be the mandatory of the Employer (Client), as defined in the Act (OHSA 1993), which means that the Contractor has the status of employer in his own right in respect of the contract. The Contractor is therefore responsible for all the duties and obligations of an employer as set out in the Act (OHSA 1993) and Regulations.

Before commencement of work under the contract, the Contractor shall enter into an agreement with the Employer (Client) to confirm his status as mandatory (employer) for the contract under consideration.

Site Establishment

The Principal Contractor must find a suitable position within the construction zone to set up the site camp and laydown areas for construction material. These positions must be approved by the client, local councillor and the engineer. These positions must be agreed between all parties before the site camp and laydown areas are established. The site camp must be fenced using a Bonnox type fence with a minimum of 1,8 metres high with shade cloth. The site camp must have separate pedestrian and vehicular access which must be lockable. Laydown areas must be adequately barricaded using barrier netting of at least 1 metre in height fixed onto timbers poles or 50mm droppers.

The Principal Contractor must erect, separate from the contract sign board, at least 3^{No} construction sign boards. These sign boards must be constructed from sheet metal fixed on metal frames and be at least 1200 x 600mm in size. The sign boards must be fixed using clamps on a minimum of 100-125mm x 3,6 metre CCA treated gum poles. The poles must be inserted at least 800mm into the ground and the sign board must have a clearance of at least 2,2 metres from the ground. The sign boards must be erected at least at the following points:

- One at the entrance to the site camp
- Two upon approaching the construction site (one from each side where construction work with high risk activities are actively taking place).
- The construction sign board must display the PPE required on site as well as the hazards to be encountered while on site. The sign board must also include "No Unauthorised Entry", Visitors Report to Site Office" & "Danger – Construction Work in Progress". The contractor must erect a sign board to display the Site-Specific Construction Work Permit. This board must contain the following information in at least 100 mm size alphanumerical:
 - The Department of Employment & Labour Logo
 - The Contractor's Company Name & Logo
 - The Construction Health & Safety Agent's full name & Company Logo
 - The Contract Name & Number
 - The Site-Specific Construction Work Permit Number

The Principal Contractor must make provisions for the set-up of an office container, stores container, portable drinking water, sufficient number of toilets for each gender as well as firefighting & first-aid equipment within the site camp.

Where a truck mounted crane is used to place the containers, the operator must be trained by an accredited training service provider on the SAQA Unit Standard 242978: Operate truck mounted cranes. The truck must be parked on level and stable ground and have suitable timber sole plates placed underneath the outriggers. All lifting gear / tackle must be inspected, used and maintained by a competent person who has been trained by an accredited training service provider on the SAQA Unit Standard 253575: Inspect, use and care for manual lifting equipment and tackle. No person must walk or stand under elevated loads. All lifting operations must be carried out under the control of a competent banksman.

Where the Principal Contractor requires electricity to the site camp, the electrical installation must be done by a registered electrical contractor who must issue a Certificate of Compliance (COC) in the form of Annexure 1 of the Electrical Installations Regulation of 2015, after the installation is completed. This installation must be inspected by a

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competent person at least weekly in terms of Regulation 24 (d) of the Construction Regulations of 2014 and the results of such inspections recorded in a register provided for that purpose. All electrical installations must comply with the Electrical Installations Regulation of 2015.

The site camp must be controlled by means of lockable gates as well as the placement of security personnel. The security must be trained on the use of the fire extinguisher and be provided with a list of emergency contact details, suitable shelter, welfare facilities and flashlight. The site camp is to be locked and remain secured after hours. No fuel, loose tools or equipment must be left unattended, these must be locked away in suitable storage facilities. All persons entering the site must undergo a site-specific induction.

All mobile plant which is parked at the site camp must have chock blocks and their blades, buckets and booms fully lowered when parked. Drip trays must be placed under the engine compartment of each mobile plant to contain any oil or fuel spills.

The Principal Contractor must ensure that sufficient bins are provided for the safe disposal of waste generated from the construction activities. All waste to be removed off site at least weekly and disposed of at a registered landfill site. Receipts must be obtained as proof of disposal.

The Principal Contractor must ensure that the site camp complies with the local bylaws.

Surveying

The surveying is to be done by a suitably qualified surveyor who has at least a National Diploma in Civil Engineering and specializing in Surveying. The survey team must be inducted & trained, by the appointed Construction Health & Safety Officer, on the company's plans, policies, procedures and risk assessments prior to commencing with work on site.

Traffic Accommodation

Due to the number of road crossings and work along public roads, the Principal Contractor must appoint a competent as a Traffic Safety Officer in terms of COLTO 1502 (i). The Principal Contractor must compile a site-specific Traffic Management Plan and submit it to the Client's Agent for approval. Once approved, the content of the Traffic Management Plan must be communicated to all site personnel.

Proving & Relocation of Existing Services

The Principal Contractor must obtain a copy of the updated services layout drawings from the local municipality which must be used as a guide for the proving of underground services. All identified services must be clearly identified and barricaded once located. Extreme care must be taken in order not to damage any of the existing services. The location and type of existing services must be communicated to all site personnel. The relocation of the services must be done by the local municipality or with instruction of the engineers by competent sub-contractor or persons appointed by the Principal Contractor.

Clearing & Grubbing

The Principal Contractor must ensure that the clearing and grubbing is done in accordance with the client's specification. All material to be spoiled at a suitable spoil site. Topsoil to be stored on site for future use and maintained during the construction phase. The Principal Contractor must ensure that dust is kept to a minimum during the construction phase. All construction vehicles must be operated in accordance with Regulation 23 of the Construction Regulations of 2014.

Excavation Work

The Principal Contractor must ensure that all excavation work is carried out under the supervision of a competent person who must be appointed in writing. All excavations must be suitably barricaded at the end of each shift or when not being worked on. All excavation work must be carried out in accordance with Regulation 13 of the Construction

Regulations of 2014.

Installation of Bulk & Reticulation Pipelines

The Principal Contractor must ensure that all pipes are laid in accordance with the client's specifications. All pipes to be stacked on level ground with suitable chocks to prevent them from rolling. Half-filled sandbags can be used as chocks. All pipe stacks must be suitably barricaded to prevent the public from accessing them.

Construction of Thrust & Anchor Blocks

The Principal Contractor must ensure that all Thrust & Anchor Blocks are constructed in accordance with the engineers' specifications. All concrete to be shuttered by means of timber shutters or similar means of containing the concrete. All excavations where Thrust & Anchor Blocks are constructed must comply with Regulation 13 of the Construction Regulations of 2014. All steel fixing, shuttering and concrete work must be carried out under the supervision of a competent Construction Supervisor appointed in terms of Regulation 8 (7) of the Construction Regulations of 2014. Employees must be issued with and instructed to wear rubber (Gum) boots and plastic-coated gloves when working with concrete.

Installation of Valves & Fittings

The Principal Contractor must ensure that valves & fittings are supplied and installed in accordance with the designer's specifications. Correct lifting equipment must be used for the installation of the valves and fittings. All lifting equipment must be load tested and have supporting load test certificates. All lifting equipment must be tagged with a Safe Working Load (SWL). All lifting equipment must be inspected by a competent person at least every three months. The Principal Contractor must take into account pinch points and working space when installing valves and fittings and take the necessary precautions to prevent injuries.

Bridge Crossings

The Principal Contractor must ensure that all bridge crossings are constructed in accordance with the designer's specifications. The Principal Contractor must ensure that Regulations 10, 12, 16 and 26 of the Construction Regulations are complied with regarding fall protection, temporary works, scaffolding and water environments.

Road Crossings

The Principal Contractor must ensure that all road crossings are constructed in accordance with the designer's specifications. The road crossings must be done in accordance with the Principal Contractor's approved Traffic Management Plan. The Principal Contractor must ensure that no excavation is left open overnight in the road. All excavations must be backfilled within the same day. Where road crossings cannot be backfilled, steel plates with a minimum of 12mm thickness must overlap on the excavations so that vehicles can drive over without being damaged. The steel plates must extend at a reasonable length as determined by the engineer so that the plate does not slide off and fall into the excavation.

River Crossings

The Principal Contractor must ensure that all river crossings is constructed in accordance with the designer's specifications. When excavating for the riverbed, the Principal Contractor must ensure that all excavation work is carried out in accordance with Regulation 13 of the Construction Regulations, 2014. When working near or over water, the Principal Contractor must ensure that all work is carried out in accordance with Regulation 26 of the Construction Regulations, 2014.

Construction of Pressure Reducing Valve (PRV) & Meter Chambers

The Principal Contractor must ensure that all building works are in accordance with the National Building

Regulations and the client's specifications. The Principal Contractor must ensure that steel piping and ladders are supplied and installed in accordance with the designer's

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specifications. All pipe fabrication to be done off site. Only minor adjustments to be done on site. The welders performing steel fabrication work must be trained by an accredited training institute on SAQA Unit Standard 119753: Perform basic welding/jointing of metals. All welding must comply with Regulation 9 of the General Safety Regulations, 2003. All bricks to be stacked on level ground and stacks must not be placed on top of each other. Mixing of mortar must take place on an impermeable surface to prevent ground contamination. All employees working with dry cement powder must be issued with & instructed to wear dust masks and be trained on the MSDS for cement. The Principal Contractor must ensure that housekeeping is always maintained on site and that all damaged bricks, used straps, empty cements bags and general construction waste is disposed of correctly.

Construction of Air Valve Chambers

The Principal Contractor must ensure that all pre-cast rings are supplied and installed in accordance with the designer's specifications to construct the Air Valve Chambers. Correct lifting equipment must be used for the installation of the pre-cast rings. All lifting equipment must be load tested and have supporting load test certificates. All lifting equipment must be tagged with a Safe Working Load (SWL). All lifting equipment must be inspected by a competent person at least every three months.

Construction of Isolating & Scour Valve Chambers

The Principal Contractor must take into account pinch points and working space when installing concrete spacers to construct the Isolating & Scour Valve Chambers and take the necessary precautions to prevent injuries. The Principal Contractor must ensure that Regulation 28 of the Construction Regulations of 2014 are considered when stacking and storing concrete spacers.

Installation of Pipe Markers

The Principal Contractor must take into account pinch points and correct lifting procedures when installing concrete pipe markers and take the necessary precautions to prevent injuries. The Principal Contractor must ensure that Regulation 28 of the Construction Regulations of 2014 are considered when stacking and storing pipe markers.

Pipe Testing & Commissioning of Works

The Principal Contractor must ensure that pipe testing is carried out in accordance with the designer's specifications. All plant and equipment used for the testing must be operated by trained and authorised personnel who must inspect such equipment prior to each use and the results of such inspections recorded in registers provided for that purpose. The Construction Supervisor must sign off daily on the registers and action any deviations noted by the operators prior to using the plant or equipment.

On completion of the project, the Principal Contractor must ensure that the commissioning of the pipeline is done in accordance with the designer's specifications. The entire installation or parts thereof must then be handed over to the client upon completion.

1. Occupational Health & Safety Act, 85 of 1993**(a) Section 7 – Health & Safety Policy**

The Principal Contractor must prepare a written policy concerning the protection of the Health & Safety of his employees at work, including the description of his organisation and the arrangements for carrying out and reviewing that policy. This policy must be signed by the Principal Contractor's CEO and prominently displayed at the site camp where it will be accessible to all employees. This policy must be communicated to all his employees during the start up of a project and whenever the policy is amended.

(b) Section 16 – CEO & Contracts Manager

The CEO will accept responsibility for health & safety in the organization in terms of Section 16 (1). The appointment of the CEO must be done in writing and may include a board resolution. Where the CEO cannot directly oversee the project, he / she may appoint a Contracts Manager to accept responsibility for health & safety on all sites allocated to him or her in terms of Section 16 (2).

(c) Section 17 – Health & Safety Representatives

The Principal Contractor must appoint in writing 1 SHE representative for every 50 employees or part thereof in terms of Section 17 (1). The SHE representative must attend formal training conducted by an accredited training service provider who is registered with the Department of Labour and the respective training authority. The SHE representative must be a full-time employee and must be familiar with the Principal Contractor's scope of work. The SHE representative must not be in a supervisory or management position. The SHE representative shall carry out regular inspections on site while performing normal duties at work. The SHE representative shall participate in incident investigations and will form part of the health & safety committee.

(d) Section 19 – Health & Safety Committees

The Principal Contractor must appoint a management representative in writing as a SHE committee member to attend health & safety committee meetings in terms of Section 19 (3). Where there are more than one SHE representatives, the Principal Contractor shall hold at least monthly SHE committee meetings. The number of management representatives shall not exceed that of the number of SHE representatives.

(e) Section 24 – Report to Inspector Regarding Certain Incidents

The Principal Contractor must report all incidents immediately, in relation to Section 24 of the Occupational Health & Safety Act, 85 of 1993, to the provisional director, Client and its agent:

(f) Section 37 – Acts or omissions by employees or mandataries

The client must engage in a mandatary agreement with the Principal Contractor to ensure that all aspects of health & safety are included within the Principal Contractor's scope of work and the agreement relieves the employer of any civil liability whenever an employee does or omits to do any act which it would be an offence in terms of this Act for the employer of such employee. This agreement shall be in writing and signed by both parties in terms of Section 37 (2). Where the Principal Contractor appointments sub-contractors, there needs to be an agreement as the sub-contractor is an employer in his own right.

2. **General Administrative Regulations, 2003**

a) Regulation 4 – Copy of the Act

The Principal Contractor must have a copy of the latest version of the Occupational Health & Safety Act, 85 of 1993 and Regulations, readily available at the site office for use by the Principal Contractor, employees, employer and inspectors.

In addition to the above, the Principal Contractor must prominently display size A1 laminated posters of the following Acts in the workplace:

- Occupational Health & Safety Act, 85 of 1993;
- Employment Equity Act, 55 of 1998, and
- Basic Conditions of Employment Act, 75 of 1997.

b) Regulation 9 – Recording & Investigation of Incidents

The Principal Contractor must appoint a competent person in writing as the accident and incident investigator to investigate all incidents on site. The reporting of incidents must be done in the form of WCL 1 (Diseases) / WCL 2 (Injuries) and investigated and recorded in the form of Annexure 1. The incidents must be investigated within 7 days by the appointed competent person with the assistance of the health & safety committee.

3. **General Safety Regulations, 2003**

a. Regulation 2 – Personal Safety Equipment & Facilities

The Principal Contractor must supply, free of charge, sufficient and suitable PPE to his employees for them to carry out their work safely. The Principal Contractor must demonstrate to the employee the safe use, care and limitations of such PPE. The employee must sign the PPE issue register for any PPE which was issued to him or her. The Principal Contractor must ensure that every reasonable effort has been taken to reduce if not eliminate the health & safety risk to his employees. PPE must and will always be the last resort.

b. Regulation 2 A – Intoxication

The Principal Contractor must ensure that no employee enters or remains in the workplace if he or she is under the influence of or in possession of intoxicating substances (Alcohol & Drugs). The Principal Contractor shall conduct random drug & alcohol tests to ensure that substance abuse is closely monitored in the workplace. Disciplinary action must be taken to employees who are found to guilty of misconduct.

c. Regulation 2 B – Substituted Notices & Signs

The Principal Contractor must display substituted notices and signs around the site which must be clearly visible and comply with the local bylaws. The Signage must include but not limited to the mandatory PPE requirements, First-Aid, Fire Equipment, Excavation Work, Hazardous Substances, Construction Activities and Public Notices.

d. Regulation 2 C – Admittance of Persons

The Principal Contractor must ensure that no unauthorized persons enter or remains in the work area. The Principal Contractor must strategically erect signage at the entrance to the site prohibiting entry. Where the site is on a public space, the Principal Contractor must ensure that adequate measures are in place to prevent unauthorized entry. The following information should also be included:

“No Unauthorized Entry”

“Visitors Report to Site Office”

“Construction Site” & indicate the specific hazards associated with the site.

“Induction to be Obtained Prior to Entry to the Site”

e. Regulation 3 – First Aid, Emergency Equipment and Procedures

The Principal Contractor must ensure that he / she has a fully stocked first aid kit on site. The first aid kit must contain the minimum contents as per the Annexure contained in this regulation. The Principal Contractor must appoint a trained & competent person as the first aider to attend to all injuries on site and to control the first-aid kit. The training of the first aider must be done by an accredited training provider who is registered with the department of labour and the respective training authority. The Principal Contractor must display the first aid signs at strategic points on the site to indicate the location as well as the name of the person in charge of the first aid kit.

f. Regulation 4 – Use & Storage of Flammable Liquids

The Principal Contractor must store all flammable liquids in a well-ventilated store which is designed for this purpose. The store must be bunded and be able to contain 110% of the volume of the flammable liquids stored. The flammable liquids must not be stored with combustible material. The store must be clearly marked as to the content and approximate quantity of flammable liquids that are stored. The following signage (290 x 290 mm) must also be displayed at the entrance to the store:

“No Smoking”

“No Open Flames”

“Hazardous Chemicals”

“Flammable Store”

g. Regulation 6 – Work in Elevated Positions

No work at heights must be carried out unless it is done safely from a safe platform or scaffold. Ladders should be used only to gain access and not as a work platform. Only platform ladders are designed to be used as a safe work platform. Persons working at heights must undergo a Working at Heights evaluation during the medicals which will form part of the hazards listed in the Annexure 3. All persons working above 2 metres must wear and attach a safety harness to a suitable lifeline. All persons working at heights must undergo Working at Heights Training by an accredited training service provider who is registered with the department of labour and the respective training authority.

h. Regulation 8 – Stacking of Articles

The Principal Contractor must appoint a competent person in writing in accordance with Regulation 8 (1) (a) and to supervise the stacking of articles on site. All stacking and storage must be done safely, and stacks must not exceed three times the base width. Stacks must be wider or at the same size at the bottom than at the top. All storage areas must be adequately cordoned off.

i. Regulation 13 A – Ladders

The Principal Contractor must appoint a suitable person in writing to inspect the ladders on a regular basis. The Principal Contractor must ensure that every ladder is constructed of sound material and is suitable for the purpose for which it is used. Ladders should be used only to gain access and not as a work platform. Only platform ladders are designed

to be used as a safe work platform. Ladders must not be painted as the paint may hide any cracks on the ladder. If the ladder is constructed from timber, the timber must be free from Knots and the rungs must be let into the styles.

The Contractor's duties and responsibilities are clearly set out in the Construction Regulations 2014, and are not repeated in detail but some important aspects are highlighted hereafter, without relieving the Contractor of any of his duties and responsibilities in terms of the Construction Regulations.

4. Construction Regulations, 2014

a) Regulation 3 – Application for the Construction Work Permit

If the project value is over R 40 000 000-00 or the duration of the project exceeds 12 months, then the client shall appoint an agent on its behalf to apply to the provincial director of the department of labour for a construction work permit. The permit application process takes up to 30 days and the Principal Contractor may only commence work once the construction work permit is received.

b) Regulation 4 – Notification of Construction Work

The Principal Contractor must, prior to commencing with any work, notify the provincial director of the department of labour, at least 7 days before, in the form of Annexure 2 of its intention to commence with construction work. If the client does an application for a construction work permit, the notification is not necessary.

c) Regulation 5 – Duties of Client

The Client will –

- (g) ensure that potential principal contractors submitting tenders have made adequate provision for the cost of health and safety measures;
- (h) ensure that the principal contractor to be appointed has the necessary competencies and resources to carry out the construction work safely;
- (i) take reasonable steps to ensure co-operation between all contractors appointed by the client to enable each of those contractors to comply with these Regulations;
- (j) ensure before any work commences on a site that every principal contractor is registered and in good standing with the compensation fund or with a licensed compensation insurer as contemplated in the Compensation for Occupational Injuries and Diseases Act, 1993 (Act No. 130 of 1993);
- (k) appoint every principal contractor in writing for the project or part thereof on the construction site;
- (l) discuss and negotiate with the principal contractor the contents of the principal contractor's health and safety plan contemplated in regulation 7(1), and must thereafter finally approve that plan for implementation;
- (m) ensure that a copy of the principal contractor's health and safety plan is available on request to an employee, inspector or contractor;
- (n) take reasonable steps to ensure that each contractor's health and safety plan contemplated in regulation 7(1)(a) is implemented and maintained;
- (o) ensure that periodic health and safety audits and document verification are conducted at intervals mutually agreed upon between the principal contractor and any contractor, but at least once every 30 days;
- (p) ensure that a copy of the health and safety audit report contemplated in paragraph (o) is provided to the principal contractor within seven days after the audit;

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- (q) stop any contractor from executing a construction activity which poses a threat to the health and safety of persons which is not in accordance with the client's health and safety specifications and the principal contractor's health and safety plan for the site;
- (r) where changes are brought about to the design or construction work, make sufficient health and safety information and appropriate resources available to the principal contractor to execute the work safely; and
- (s) ensure that the health and safety file contemplated in regulation 7(1)(b) is kept and maintained by the principal contractor.

In accordance with Regulations, the Contractor shall liaise closely with the Employer or the Engineer on behalf of the Employer, to ensure that all requirements of the Act and the Regulations are met and complied with.

d) Regulation 7 – Duties of the Principal Contractor & Contractor

The Principal Contractor must provide and demonstrate to the client a suitable, sufficiently documented and coherent site-specific health and safety plan, based on the client's documented health and safety specifications. The plan must be submitted to the client / client's agent for approval. The approved plan will be submitted together with the application for the Construction Work Permit. Work may only commence once the plan has been approved. This plan must be applied, reviewed and updated as the work progresses.

The Principal Contractor must provide a comprehensive health and safety file for review to the client / client agent. The health and safety file will be audited by the client / client agent prior to commencement with work on site. Once the file has been reviewed, the Principal contractor must address all outstanding items prior to commencement with work. The Principal contractor may only commence work if the outstanding items have been addressed. This health & safety file must be updated by the Principal contractor and must remain on site at all times. On completion of the project, the contractor must consolidate the health and safety file including that of the sub-contractors and submit it to the client / client agent.

The Principal Contractor must provide potential sub-contractors, who are tendering for any work to be performed on site (including that of the plant hire companies), with the relevant sections of the client's health & safety specifications.

The Principal Contractor must ensure that the sub-contractors have the necessary competencies, resources and made adequate provision to carry the work out safely.

The Principal Contractor and sub-contractor must enter into a health & safety agreement in terms of Section 37 (2) of the OHS Act and the Principal Contractor must appoint each contractor in writing for part of the project in terms of Regulation 7 (1) (c) (v) of the Construction Regulations, 2014. The Principal Contractor must have a comprehensive and updated list of all his contractors on site.

The Principal Contractor must ensure that the sub-contractors are in Good Standing with the Compensation Commissioner in terms Section 89 of the COID Act, 130 of 1993.

The Principal Contractor must audit the contractors at least monthly. The contractors must submit a close out report with supporting documents, within 7 days, for addressing outstanding items.

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The Principal Contractor must ensure that where changes are brought about, sufficient health & safety information, including the necessary resources to carry out the work safely, is provided to the contractor.

The Contractor must provide and demonstrate to the Principal Contractor a suitable, sufficiently documented and coherent site-specific health and safety plan, based on the client's documented health and safety specifications. The plan must be submitted to the Principal Contractor for approval. Work may only commence once the plan has been approved by the Principal Contractor. This plan must be applied, reviewed and updated as the work progresses.

The Contractor must provide a comprehensive health and safety file for review to the Principal Contractor. The file will be audited by the Principal Contractor prior to commencement with work on site. Once the file has been reviewed, the contractor must address all outstanding items prior to commencement with work. The contractor may only commence work if the outstanding items have been addressed. This health & safety file must be updated by the contractor and must remain on site at all times. On completion of the project, the contractor must consolidate the health and safety file including that of his or her sub-contractors and submit it to the Principal Contractor.

The Principal Contractor must ensure that all his employees, including that of his / her contractors, have a medical certificate of fitness, for the type of work to be performed, issued by an Occupational Health Practitioner in the form of Annexure 3 and must include a general examination with the following test results, Blood Pressure, Snellen's Vision (20/20 Test), Spirometry (Lung Function) and Audiometry (Hearing Test). If employees are working at heights, then a 'Working at Heights' evaluation must be done.

The Principal Contractor must ensure that all his employees, including that of his / her contractors, have undergone induction training pertaining to the hazards prevalent site at the time of entry. The induction must be conducted by the Principal Contractor's appointed Construction Health & Safety Officer prior to entering the site.

The Principal Contractor must ensure that all visitors undergo an induction pertaining to the hazards prevalent on the site and that such visitors have the necessary PPE prior to entering the site. The PPE must include but not limited to: Hard Hats, Reflective Vests and Steel Toe Capped or similar approved Safety Boots.

e) Regulation 8 – Management & Supervision of Construction Work

The Principal Contractor must in writing appoint one full-time competent person as the construction manager with the duty of managing all the construction work on a single site, including the duty of ensuring occupational health and safety compliance, and in the absence of the construction manager an alternate must be appointed in terms of Regulation 8 (1). The construction manager cannot manage any other site other than the single site for which he has been appointed. The construction manager must have at least a national diploma in civil engineering with a post graduate experience of five years.

The Principal Contractor must in writing appoint one or more assistant construction managers for different sections thereof in terms of Regulation 8 (2): Provided that the designation of any such person does not relieve the construction manager of any personal accountability for failing in his or her management duties. The assistant construction manager cannot manage any other site other than the single site for which he has been appointed. The construction manager must have at least a national diploma in civil engineering.

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Due to the nature of the work, the degree of danger likely to be encountered and the accumulation of hazards or risk on the site, the Principal Contractor must in writing appoint one full time Construction Health & Safety Officer to assist in the control of all health and safety related aspects on the site, in terms of Regulation 8 (5). The Construction Health & Safety Officer must be registered and in good standing with the South African Council for the Project & Construction Management Professions (SACPCMP). Each contractor must appoint his / her Construction Health & Safety Officer who is registered and in good standing with the SACPCMP. The contractors' Construction Health & Safety Officer must conduct at least a weekly site visit and submit weekly reports on the findings on the construction site. The contractor may appoint a consultant to oversee the health and safety on site who must perform the same duties as a part time Construction Health & Safety Officer.

The Principal Contractor must in writing appoint construction supervisors responsible for construction activities and ensuring occupational health and safety compliance on the construction site in terms of Regulation 8 (7). The construction supervisor cannot supervise any other site other than the single site for which he has been appointed. The construction supervisor must have at least five years' experience supervising construction activities on site.

The Principal Contractor must in writing appoint one or more competent employees for different sections thereof to assist the construction supervisor contemplated in subregulation (7), and every such employee has, to the extent clearly defined by the contractor in the letter of appointment, the same duties as the construction supervisor in terms of Regulation 8 (8): Provided that the designation of any such employee does not relieve the construction supervisor of any personal accountability for failing in his or her supervisory duties. The assistant construction supervisor cannot supervise any other site other than the single site for which he has been appointed. The assistant construction supervisor must have at least two years' work experience in his specific task in order to supervise employees.

f) Regulation 9 – Risk Assessment for Construction Work

The Principal Contractor must in writing appoint a competent person as a Risk Assessor to draw up risk assessments for the project in terms of Regulation 9 (1). The Risk Assessor must be trained on Hazard Identification & Risk Assessment (HIRA) by an accredited training service provider who is registered with the department of labour and the respective training authority on the Unit Standard 244383 – Conduct continuous hazard identification and risk assessment within a workplace.

The Risk Assessment must cover all activities performed by the Principal Contractor in site and must be based on the method statements. The Risk Assessments must contain a Risk Matrix, a Monitoring and Review Plan. The Risk Assessments must include control measures and safe work procedures to reduce if not eliminate the risk or hazard.

The Risk Assessments should be reviewed at least annually, when an incident has occurred, when there is a change in the scope of work or when there is a change in the design which may affect the health & safety of persons.

The Risk Assessments must be communicated to all site personnel involved with the activities for which the Risk Assessment has been done.

All Risk Assessments must be carried out in accordance with Regulation 9 of the Construction Regulations, 2014.

g) Regulation 10 – Fall Protection

The Principal Contractor must in writing appoint a competent person as the Fall Protection Plan Developer when work is to be carried out at an elevated position. The Fall Protection Plan Developer must be trained by an accredited training service provider who is registered with the department of labour and the respective training authority. The Training must cover both Unit Standards 229994 and 229998.

The Principal Contractor must in writing appoint a competent person as the safety harness inspector to inspect all safety harnesses.

The Principal Contractor must draw up, implement, maintain and amend where necessary, a Fall Protection Plan for all work to be carried out at an elevated position.

The Fall Protection plan must cover:

- A risk assessment for work at a fall risk position and the methods and procedures to address such risk;
- A process to evaluate the medical fitness of employees who work at a fall risk position;
- A programme for the training of employees working from a fall risk position and the records thereof;
- the procedure addressing the inspection, testing and maintenance of all fall protection equipment; and
- a rescue plan detailing the necessary procedure, personnel and suitable equipment required to affect a rescue of a person in the event of a fall incident to ensure that the rescue procedure is implemented immediately following the incident.

The Principal Contractor must ensure that the construction manager appointed under regulation 8(1) is in possession of the most recently updated version of the fall protection plan.

All work carried out at a fall risk position must comply with Regulation 10 of the Construction Regulations, 2014.

h) Regulation 11 – Structures

The Principal Contractor must ensure where there are new or existing structures within the work zone, Regulation 11 of the Construction Regulations of 2014, must be complied with.

i) Regulation 12 – Temporary Works

The Principal Contractor must appoint a temporary works designer in writing to design, inspect and approve the erected temporary works on site before use. The designer must have at least a National Diploma in Structural Engineering and be registered as a professional engineer with the Engineering Council of South Africa (ECSA). The designer & inspector must be trained on the following Unit Standards:

113974 – Understand and apply structural construction methods; and
263246 – Inspect falsework and formwork.

The Principal Contractor must ensure that all temporary works operations are carried out under the supervision of a competent person who has been appointed in writing for that purpose. The temporary works supervisor must be trained by the temporary works supplier / manufacturer on the safe installation of the temporary works as well as on the

Unit Standard 263027 - Supervise the erection and dismantling of falsework and formwork.

The temporary works erectors must be trained by the temporary works supplier / manufacturer on the safe installation of the temporary works as well as in the Unit Standard 263204 - Erect, use and dismantle falsework and formwork.

All temporary works must comply with Regulation 12 of the Construction Regulations, 2014

j) Regulation 13 – Excavation Work

The Principal Contractor must in writing appoint a competent person as the excavation work supervisor. The excavation work supervisor must be trained by an accredited training service provider who is registered with the department of labour and the respective training authority on the Unit Standard 365183 - Implement safety procedures for open hole or deep excavations.

All excavation work must be carried out under the constant supervision of the appointed excavation work supervisor. The excavation work supervisor must be able to evaluate the stability of the ground before excavation work begins. The excavation work supervisor must inspect the excavation prior to entry of any employees. All excavations deeper than 1,2 metres must be shaped to the maximum angle of repose relative to the horizontal plane. The Principal Contractor and his contractors must make provision in their tender rates for the shaping of the excavations.

All excavations up to 2 metres must be barricaded at least 1 metre away from the edge with barrier netting at a minimum height of 900mm. No danger tape to be used for barricading. All excavations deeper than 2 metres must be barricaded with a barrier in the form of hand and intermediate rails with barrier netting attached to it or Bonnox type fencing on posts with the barrier netting attached to it. Excavations along public roads that are deeper than 1,2 metres must be barricaded by means of a solid concrete barrier with delineators. Excavations along public roads that are less than 1,2 metres but deeper than 0,5 metres must be barricaded by means of a plastic new jersey barrier with delineators. Excavations along public roads that are less than 0,5 metres but above 100 millimetres must be barricaded by means of a barrier netting with delineators. Excavations along public roads that are less than 150 millimetres must be cordoned off by means of delineators.

All excavations deeper than 1,2 metres must be accessed by means of a ladder which is placed within 6 metres of the employees working inside and must extend at least 900mm above the top of the landing or natural ground level.

All excavated material must be placed at least 1 metre away from the edge of the excavation. No mobile plant must come within 1 metre from the top edge of the excavation or within 2 metres when employees are working inside.

All employees working in excavations deeper than 1,2 metres must wear hard hats.

All excavation work must comply with Regulation 13 of the Construction Regulations, 2014.

k) Regulation 14 – Demolition Work

The Principal Contractor must appoint a competent person in writing to supervise and

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control all demolition work on site. The demolition work supervisor must have at least five years' experience in demolition work and must be trained on Unit Standard 115457 – Conduct basic demolition tasks.

All demolition work must comply with Regulation 14 of the Construction Regulations, 2014.

l) Regulation 16 – Scaffolding

The Principal Contractor must appoint a competent person in writing as the scaffolding supervisor who must ensure that all scaffolding work operations are carried out under his or her constant supervision. The scaffolding work supervisor must be trained on the Unit Standard 263224 - Supervise the erection and dismantling of access scaffolding, by an accredited training service provider who is registered with the department of labour and the respective training authority.

The Principal Contractor must appoint competent persons in writing as scaffold erectors for erecting the scaffold. The scaffolding work erectors must be trained on the Unit Standard 263245 – Erect, use and dismantle access scaffolding, by an accredited training service provider who is registered with the department of labour and the respective training authority.

The Principal Contractor must appoint a competent person in writing as an inspector to inspect the scaffolding once erected. The scaffolding work inspector must be trained on the Unit Standard 263205 Inspect access scaffolding, by an accredited training service provider who is registered with the department of labour and the respective training authority.

All scaffold must comply with SANS 10085 with regards to the design, erection, use and inspection of access scaffolding.

m) Regulation 23 – Construction vehicles and mobile plant

The Principal Contractor must appoint a competent person in writing as a Construction Vehicles and Mobile Plant Supervisor to ensure that the said regulations are complied with.

The Principal Contractor must ensure that all construction vehicles and mobile plant-

- (a) are of an acceptable design and construction;
- (b) are maintained in a good working order;
- (c) are used in accordance with their design and the intention for which they were designed, having due regard to safety and health;
- (d) are operated by a person who-
 - (i) has received appropriate training, is certified competent and in possession of proof of competency and is authorized in writing to operate those construction vehicles and mobile plant;

The following Unit Standards must be considered with regards to training.

Rigid Body Dump Truck Operator	262731	Operate a rigid body dump truck
Articulated Dump Truck Operator	262745	Operate an articulated dump truck
Front End Loader Operator	262747	Operate front end loader.
Grader Operator	262735	Operate a grader.
Tracked Dozer Operator	262729	Operate a tracked dozer.

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Tractor Loader Backhoe Operator	257028	Operate a Tractor Loader Backhoe.
Skidsteer (Bobcat) Operator	262712	Operate a Skidsteer.
Tractor Operator	262804	Operate a tractor.
Excavator Operator	262744	Operate an excavator
Water Cart Operator	262764	Operate a water cart.
Roller Operator	262805	Operate a roller.
Tipper Truck Operator	262734	Operate a tip truck.
Truck Mounted Crane Operator (DMR Code C32)	242978	Operate truck mounted cranes.
Hydraulic Mobile Crane Operator (DMR Codes C33 – C36)	116254	Operate a mobile crane.

- (ii) has a medical certificate of fitness to operate those construction vehicles and mobile plant, issued by an occupational health practitioner in the form of Annexure 3;
- (k) are inspected by the authorized operator or driver on a daily basis using a relevant checklist prior to use and that the findings of such inspection are recorded in a register kept in the construction vehicle or mobile plant.

The Principal Contractor must provide drip trays to be placed under the engine compartment when the mobile plant is parked for more than 3 hours.

All plant hire companies must be appointed in writing, sign the Section 37 (2) agreement and provide a valid Letter of Good Standing with the Compensation Commissioner.

The Principal Contractor must comply with Regulation 23 of the Construction Regulations, 2014 when using construction vehicles and mobile plant.

n) Regulation 24 - Electrical Installations and Machinery on Construction Sites.

If the Principal Contractor intends on installing a temporary electrical supply, the installation must be done by a qualified registered electrician who must issue a Certificate of Compliance (COC). The electrician must be trained on at least the Unit Standard 113898 – Complete certificate of compliance for a single phased domestic installation. The Principal Contractor must appoint the electrician in writing in terms of Regulation 24 (c).

The Principal Contractor must appoint a competent temporary electrical installation inspector. The inspector must be trained at least on the Unit Standard 258966 - Inspect and test a single-phase domestic installation. The temporary electrical supply must be inspected by a competent person at least weekly.

The Principal Contractor must appoint a competent person in writing as the electrical machinery inspector in terms of Regulation 24 (e).

All portable electrical tools must be inspected daily by the authorized inspector. The authorized inspector of portable electrical tools must be trained on at least the Unit Standard 12878 – Use and maintain Power Hand Tools on a construction Site.

The Principal Contractor must ensure that all electrical installations and machinery on the construction site complies with Regulation 24 of the Construction Regulations, 2014.

o) Regulation 25 – Use and Temporary Storage of Flammable Liquids on Construction Sites

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The Principal Contractor must provide a lockable ventilated store for the storage of flammable liquids. The store must contain a bund which can contain up to 110% of the volume of the liquid stored therein. The Principal Contractor must provide adequate fire-fighting equipment and signage within the store.

A competent person must be trained and appointed to manage hazardous substances on the construction site. This person must be at least trained on the Unit Standard 264454 – Manage hazardous substances.

The Principal Contractor must, in addition to compliance with the provisions for the use and storage of flammable liquids in the General Safety Regulations, 2003, ensure that Regulation 25 is complied with when using and storing flammable liquids on site.

p) Regulation 26 – Water environments

The Principal Contractor must ensure that where construction work is done over or in close proximity to water, provision is made for-

- (a) preventing persons from falling into water by providing hand and intermediate rails or a similar barrier; and
- (b) the rescuing of persons in danger of drowning by providing a floatation device attached to a rope of suitable strength and length, a person who is able to swim with ease and rescue another person and a person trained in resuscitation, preferably a first-aider.

The Principal Contractor must ensure that where a person is exposed to the risk of drowning by falling into the water, the person is provided with and wears a lifejacket.

Regulation 27 – Housekeeping and General Safeguarding on Construction Sites

The Principal Contractor must appoint a competent person in writing as the housekeeping supervisor to ensure that good housekeeping is maintained at all times on site.

The Principal Contractor must provide adequate and suitable bins to separate and contain waste on site. This must be disposed off at a registered landfill at least weekly.

The Principal Contractor must ensure that Regulation 27 or the Construction Regulations is complied with regards to housekeeping and general safeguarding on construction sites.

q) Regulation 28 – Stacking and Storage on Construction Sites

The Principal Contractor must appoint a competent person as the stacking & storage supervisor on site who is at least trained on Unit Standard 254098 – Supervise the procurement, use and storage of equipment and materials for construction and maintenance.

All items that are stacked or stored on the construction site must be inspected by a competent person at least on a monthly basis.

The Principal Contractor must, in addition to compliance with the provisions for the stacking of articles

in the General Safety Regulations, 2003, ensure that Regulation 28 of the Construction Regulations, 2014 is complied with regards to stacking and storage on construction sites.

r) Regulation 29 – Fire Precautions on Construction Sites

The Principal Contractor must appoint a competent person in writing as the Emergency Co-ordinator / Controller in case of a fire.

The Principal Contractor must provide sufficient and suitable firefighting equipment near flammables within 5 metres of any generator or similar equipment, near portable electrical tools and in all construction vehicles and mobile plant.

The Principal Contractor must appoint a competent person in writing as the fire equipment inspector in terms of Regulation 29 (h). The fire equipment inspector must be at least trained on the Unit Standard 12484 – Perform basic firefighting, by an accredited training service provider who is registered with the department of Labour and the respective training authority.

A fire team must be trained on the PASS sequence on site.

The Principal Contractor must ensure that adequate precautions are taken to prevent the risks of a fire and comply with Regulation 29 of the Construction Regulation, 2014.

s) Regulation 30 - Construction Employees' Facilities

The Principal Contractor must appoint a competent person in writing as the facilities inspector to ensure that all the employees' facilities on site are maintained in a clean and hygienic condition.

The Principal Contractor must, in addition to the construction site provisions in the Facilities

Regulations, 2004, provide at or within reasonable access of the construction site, the following clean, hygienic and maintained facilities:

- (a) Shower facilities after consultation with the employees or employees' representatives, or at least one shower facility for every 15 persons;
- (b) at least one sanitary facility for each sex and for every 30 workers; (Toilets must be tied down to prevent it from toppling over in the wind and cordoned off to ensure privacy)
- (c) changing facilities for each sex; and
- (d) sheltered eating areas.

The Principal Contractor must ensure that in addition to Regulation 30 of the Construction Regulations, 2014 the Facilities Regulations, 2004 must be complied with.

t) Non-compliance with the Construction Regulations, 2014

The foregoing is a summary of parts of the Construction Regulations applicable to all construction projects.

The Contractor, as employer for the execution of the contract, shall ensure that all provisions of the Construction Regulations applicable to the contract under consideration are complied with to the letter.

Should the Contractor fail to comply with the provisions of the Regulations 3 to 30 as listed in Regulation 33, he will be guilty of an offence and will be liable, upon conviction, to the fines or imprisonment as set out in Regulation 33.

5. Environmental Regulations for Workplaces, 2003

The Principal Contractor must ensure that the following Regulations are complied with regards to the Environmental Regulations for Workplaces.

i. Regulation 2 – Thermal Requirements

The Principal Contractor must take into consideration the extreme heat during the summer months and the precautions to be taken during this period to avoid possible heat strokes. These may include but not limited to:

- Drinking of $\pm$ 600ml of clean water every hour;
- Regular breaks within reason but avoiding possible delays on the project; and
- Training on of employees Heat Stroke Awareness.

The Principal Contractor must take into consideration the extreme cold temperatures during the winter months and the precautions to be taken during this period to avoid possible hyperthermia, cold sores, etc. These may include but not limited to:

- Provision of winter jackets and gloves;
- Running hot water; and
- Training of employees on working in cold temperatures.

While every effort should be made by the employee to keep warm, it must be noted that fires will not be allowed on site.

ii. Regulation 3 – Lighting

While there may be sufficient natural lighting, where work is carried out inside a building or closed space, sufficient artificial lighting must be provided and the above Regulation must be used as a guide for the number of lumens that will be required per square metre.

iii. Regulation 4 – Windows

Window must provide for sufficient natural lighting and the panes must not be painted over.

iv. Regulation 5 – Ventilation

Adequate ventilation must be provided in store rooms and work areas to prevent the accumulation of fumes. Note that all hazardous chemicals must be stored separately from combustibles in a ventilated store.

v. Regulation 6 – Housekeeping

The Principal Contractor and other Contractors must ensure that good housekeeping is maintained on site at all times. A responsible person must be appointed as the housekeeping supervisor, however this should be the responsibility of all site personnel.

vi. Regulation 8 – Fire Precautions & Means of Egress

The Principal Contractor and other Contractors must make adequate provisions for the prevention of fires and escape routes should a fire occur. These may include but not limited to:

The provision of a ventilated store with sufficient signage to warn persons of the dangers likely to be encountered and the control measures to be taken. The signage may include but not limited to:

- “No Smoking”
- “No Open Flames”

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- “No Cell Phones”
 - “Flammable Liquids”

6. **Facilities Regulation, 2004**

The Principal Contractor must ensure that the Facilities Regulations are complied with. These may include but not limited to the provision of clean & hygienic:

- Shower facilities for each gender clearly marked with pictorial signs and cordoned off for privacy. (1 Shower per 15 employees)
- Toilet facilities for each gender clearly marked with pictorial signs and cordoned off for privacy. (1 toilet per 30 employees)
- Clean Drinking water. (± 5 Litres per employee per day)
- Eye wash facility. (A portable eyewash bottle can be used)
- Changerooms Facilities for each gender clearly marked with pictorial signs and cordoned off for privacy.
- Lockers to be provided for employees to store their personal belongings.
- Sheltered eating areas free from dust, rain, wind and other natural elements.

7. **Hazardous Chemical Substances Regulations, 2008**

The Principal Contractor must appoint a competent person in writing for the control of Hazardous Chemical Substances on site.

The Principal Contractor must ensure that there are MSDSs readily available for all Hazardous Chemical Substances on site and that employees are issued with and instructed to wear appropriate PPE when handling the Hazardous Chemical Substances.

The Principal Contractor must ensure that all employees handling the Hazardous Chemical Substances on site are training on the safety precautions and MSDSs.

All Hazardous Chemical Substances on site must be placed on a suitable drip tray or bunded area.

The Principal Contractor must ensure that the Hazardous Chemical Substances Regulations are complied with.

8. **Noise-Induced Hearing Loss Regulations, 2003**

The Principal Contractor must ensure that adequate provisions are made to reduce the noise on site and to protect the employees who are exposed to the noise on site by providing adequate PPE and training on the use, care and limitations of the prescribed PPE.

The Principal Contractor must monitor those employees who are continuously exposed to high noise levels by means of periodic hearing tests done by an occupational health practitioner.

9. **Driven Machinery Regulations, 2015**

I. **Regulation 18 – Lifting Machines, Hand-Powered Lifting Devices and Lifting Tackle**

The Principal Contractor must appoint a competent person in writing to inspect all lifting tackle used on site. This person must be at least trained on the Unit Standard 253575 – Inspect, use and care for manual lifting equipment and tackle.

The Principal Contractor must ensure that the Provisions of Regulation 18 of the Driven Machinery Regulations, 2015 are complied with.

10. General Machinery Regulations, 1988

i) Regulation 2 – Supervision of Machinery

The Principal Contractor must ensure that where electrical machinery is used, it is used under the supervision of a competent person who is familiar with such machinery and understands the hazards and risks associated with using the machinery.

ii) Regulation 3 – Safeguarding of Machinery

The Principal Contractor must ensure that the machinery is installed, operated and maintained in such a manner that it does not pose a hazard to persons installing, operating or maintaining such machinery.

The Principal Contractor must ensure that all moving parts of the machinery which is within the normal reach of a person is effectively safeguarded by means determined in this regulation.

The machinery must be maintained in a good working condition and is used properly.

The Principal Contractor must ensure that no safety devices are removed from the machinery.

11. Electrical Installations Regulations, 2009**a. Regulation 6 – Electrical Contractor**

The Principal Contractor must ensure that no person may do electrical installation work as an electrical contractor unless that person has been registered as an electrical contractor in terms of these regulations.

b. Regulation 7 – Certificate of Compliance

The Principal Contractor must ensure that the electrical installation done by the electrical contractor must have a Certificate of Compliance in the form of Annexure 1, which shall be accompanied by a test report approved by the chief inspector, in respect of every such electrical installation.

12. Electrical Machinery Regulations, 2011**a. Regulation 10 – Portable Electrical Tools**

The Principal Contractor must ensure that the Provisions of Regulation 10 of the Electrical Machinery Regulations, 2011 are complied with regarding Portable Electrical Tools.

The Contractor is advised in his own interest to make a careful study of these Specifications and as ignorance of the Act and the Regulations will not be accepted in any proceedings related to non-conformance.

The following penalties will be imposed on any organisation that does not comply with the OHS requirements. Project Personnel must all acquaint themselves with the penalties and work in the best interest of their respective organisations.

You will be notified in writing of the non-conformance and penalties owing will be deducted from payment owed to you.

Please use the below as a deterrent as Safety is everyone's responsibility.

MINOR PENALTY-R50.00/count	MEDIUM PENALTY- R500.00/count & non-conformance	SEVERE PENALTY- R5,000.00/count & non-conformance and/or activity stoppage
Non-use of PPE supplied	Failure to address OHS File Review timeously.	NO OHS File provided for review.
Poor use of facilities provided (i.e. eating area, toilet).	No PPE provided. Repetitive non-use of PPE.	Contractor working without Health & Safety Plan approval
	Working without induction, training or the appropriate, approved H&S method statement , SWPs and RA's.	Workers transported in contravention of OHS Plan or legal requirement
	Legal nonconformance identified during the previous audit and not addressed during the agreed time frame	Working with Invalid Letters of good standing
	No monthly OHS report at site meeting to report on	
	No certificate of fitness as required (per person)	
	Working without approved method statement	
	Failure to attend OHS Committee meetings.	Plant/ Plant Operators on site in contravention of CR 23.
	Non-completion of registers for equipment on site	
	Tools & equipment identified in poor condition during inspection	Any serious breach of legal requirement.

Note that the contributions towards these fines are paid towards a Community Upliftment fund. These funds will be utilized for projects within the community and administered by the Project Managers on behalf of the Client. No payments will be made in cash however the full fund value will be utilized for these projects.

Novel Coronavirus (COVID-19)

Health & Safety Specifications

1. Introduction

Coronavirus Disease 2019 (COVID-19) is a respiratory disease caused by the SARS-CoV-2 virus. The symptoms of the COVID-19 are similar in nature to that of the common flu but are much more extreme. To reduce the impact of COVID-19 outbreak conditions on the organization, employees, clients, and the public, it is important to set out a strategy / plan to address the specific exposure risks, sources of exposure, routes of transmission, and other unique characteristics of SARS-CoV-2 (i.e., compared to influenza virus outbreaks). Lack of continuity planning may result in a cascade of failures as the organization attempts to address challenges of COVID-19 with insufficient resources and employees who might not be adequately trained for jobs they may have to perform under pandemic conditions.

It is the duty of the Principal Contractor to compile a health a safety plan based on the client's specifications. The COVID-19 pandemic has introduced a new hazard to the workplace and therefore the current health & safety specifications are not adequately designed to prevent persons from contracting or spreading the Coronavirus. Planning must include administrative changes or development of new policies, procedures, plans and risk assessments.

2. Scope

The addendum to the health & safety specifications covers the procedures that must be implemented by the principal contractor and contractors during government's intervention with the COVID-19 risk adjusted strategy for economic activity. The procedures set out below must be incorporated into the scope of work which must form part of the normal activities performed by the contractor. Construction work is labour intensive and is therefore regarded as high-risk due to the close contact between employees.

3. Administrative

Employment contracts need to be reviewed to include, where necessary, revised working hours, remuneration and health & safety precautions to be taken into consideration due to the Covid-19 pandemic.

Based on the Covid-19 pandemic, a Risk Assessment must be developed to include the following:

- i. A List of Activities to be performed by the employees;
- ii. Identification of the Hazards Associated with each activity;
- iii. Analysing the Risk Associated with each Hazard;
- iv. Implementation of Control Measures to Mitigate or Reduce the Risks;
- v. Delegation of Responsible persons to address the Control Measures.

Risk Assessments must include, but not limited to:

- i. Transportation of Employees (Public Transport / Transport provided by the employer);
- ii. Access into the Workplace;
- iii. Placement of workers into their workstations / work areas;
- iv. Working Hours, Tea Breaks and Lunch Breaks;
- v. Employee Welfare Facilities (Toilets, Showers, Changerooms, Eating Areas, etc);
- vi. Emergency Procedures (Infected Employees, First-Aid, Evacuation, etc); and
- vii. Communication with employees.

UPGRADING CLARENS WATER TREATMENT WORKS: CIVIL AND BUILDING WORKS: PART B

The following hierarchy of controls must be considered when compiling the risk assessment:

- i. Engineering Controls (Isolating employees from work-related hazards by installing Physical Barriers / Shields, etc)
- ii. Administrative Controls (Changes in work policy or procedures to reduce or minimize exposure to a hazard)
- iii. Safe Work Practices / Procedures (Procedures used to reduce the duration, frequency, or intensity of exposure to a hazard, i.e. social distancing, etc.)
- iv. Personal Protective Equipment – PPE (Last Resort should other controls be inadequate)

The new risk assessments must be submitted to the Client's Health & Safety Agent for approval. Once approved, the risk assessments must be communicated to the employees prior to commencing work on site.

Policies must be reviewed to incorporate the prevention of contact with and the spread of Coronavirus or similar diseases / viruses.

The Health & Safety Plans must be revised to incorporate these specifications and include a plan to prevent contact with and or contain the spread of the Covid-19 pandemic.

Evacuations plans must be updated to incorporate the COVID-19 pandemic and employees must be required to maintain social distancing while evacuating and assembling at emergency assembly points.

Employees who do not comply with the rules or those who contribute to the spread of the Coronavirus must be disciplined which may lead to dismissal and possible prosecution by authorities.

4. Responsibilities

In terms of Section 8 (1) of the Occupational Health & Safety Act, 85 of 1993:

8. General duties of employers to their employees

(1) Every employer shall provide and maintain, as far as is reasonably practicable, a working environment that is safe and without risk to the health of his employees.

Client – Employer :

Compensate the contractor for any additional costs incurred due to the implementation of the prevention of contact with and spread of the COVID-19 pandemic. (This may include but not limited to the supply of additional PPE, Sanitizers, Physical Barriers, administrative costs, training, signage and loss of production due to new work practices and social distancing).

In light of the above, The Principal Contractor must delegate the responsibilities to the various competent appointed persons within the organization and should be as follows.

CEO – OHSA 16 (1):

Set out the policies & procedures for addressing the prevention of contact with or spreading of the Coronavirus.

Contracts Manager – OHSA 16 (2):

Ensure that policies and procedures are implemented at the various sites allocated to him / her.

NB: The persons listed below must be on site full-time.

SHE Representative – OHSA 17 (1):

Assists employees in complying with the policies and procedures and is the Liaison between the employees and the employer.

Construction Manager – CR 8 (1):

Enforces the implementation of the policies and procedures on his / her site. Also appointed as the COVID-19 Manager in terms of Section 16 (5) of Disaster

UPGRADING CLARENS WATER TREATMENT WORKS: CIVIL AND BUILDING WORKS: PART B

Assistant Construction Manager – CR 8 (2):	Management Act, 57 of 2002. Assists the CR 8 (1) in enforcing the implementation of the policies and procedures.
Construction Health & Safety Officer – CR 8 (5):	Develops the procedures and assists the employer and employees in complying with the policies and procedures. Also appointed as the COVID-19 Compliance officer to monitor the controls set out by the principal contractor and co-ordinate emergencies.
Construction Supervisor – CR 8 (7):	Enforces the implementation of the policies in his / her work area.
Assistant Construction Supervisor – CR 8 (8):	Assists the CR 8 (7) in enforcing the implementation of the policies in that work area.
Risk Assessor – CR 9 (1):	Compiles a COVID-19 Risk assessment with the assistance from management and employee representatives and ensure that it is communicated to the employees.

To prevent unnecessary appointment of new employees, the current employees on site must be appointed to monitor and maintain the implementation of policies, plans, procedures and risk assessments.

5. Procurement

The Principal Contractor must procure the following:

- Services of an Occupational Health & Safety Professional to compile the required documentation and conduct training of employees. The Principal Contractor can utilize his / her own resources provided that the appointed person is registered with the SACPCMP in the Health & Safety Profession and at least one other occupational health & safety statutory body established in terms of Section 2 of the Project and Construction Management Act, No. 48 of 2000 (SAIOSH, IOSH, IOSM, etc).
- 70 % Alcohol based hand sanitizers for all entrances, offices, workstations, plant and welfare facilities;
- Disinfectants for surfaces, tools, plant, etc;
- 3 Ply Washable cloth face masks (Minimum of 2 per employee);
- FFP2 type masks and additional latex gloves for first-aiders
- Safety glasses to prevent droplets making contact with the eyes;
- Face Shields where social distancing is inadequate;
- Infrared Thermometers (Non-contact) for temperature screening;
- COVID-19 Awareness Posters & Signage;
- Additional security, where justified, to secure site entrances;
- Provision of an area or room to isolate employees showing symptoms of COVID-19.
- Bio-Hazard waste bins and provisions for safely disposing of waste.

The Construction Manager must ensure that there is adequate additional PPE for the COVID-19 pandemic. First-aiders must be required to wear the FFP2 type masks in addition to the latex gloves when attending to patients.

A preventative team must be established to ensure that all tools and equipment used on site are disinfected accordingly (70% JIK with 30% water can be used) to prevent the potential spread of COVID-19 virus.

6. Who must report for duty?

UPGRADING CLARENS WATER TREATMENT WORKS: CIVIL AND BUILDING WORKS: PART B

- a) The Principal Contractor must ensure that employees who are most vulnerable to the Coronavirus must be the last to resume work on site and only when permitted by government. The return of employees to work must be staggered to prevent the sudden influx of staff. The essential employees must be first orientated into the workplace thereafter followed by support staff.

The following must be considered when selecting employees:

- The need / urgency for the employee to return to work;
- The age of the employee (employees 60 years and older must not be allowed to immediately resume work);
- The employee's current health condition based on their most recent Occupational Health Medicals (employees with respiratory problems or have chronic illnesses such as TB, Cancer, Diabetes, etc, must not be allowed to immediately resume work);
- Employees who have, or been in contact with a person who has, the symptoms of the Coronavirus (High Fever - 38°C or higher, persistent cough, sore throat, difficulty in breathing). Only employees who test negative for the COVID-19 must be allowed to resume work (Employees must need to first self-isolate then get tested).

7. Screening

Non-contact Thermometers must be used by security personnel at the site entrances to monitor employees body temperatures before entry and before exiting the construction site on a daily basis. A daily questionnaire regarding the person's movements and current health condition must be completed for each person entering the site. It must be compulsory for all employees and visitors to complete a health declaration form before access is granted onto site. Employees showing signs of the Coronavirus must be immediately sent to the site isolation room / designated area and the necessary authorities must be contacted for instructions and further medical attention. **An area must be designated on site for isolation of employees who have the symptoms of COVID-19.** If an employee develops a high temperature or a persistent cough while at work, they must be required to:

- Maintain a 2m distance from all other people and isolate until they are able to leave the workplace.
- Inform their manager and supervisor and get directive from them in terms of what to do.
- Not touch any surfaces (door handles, counter tops, tools, etc).
- Cough or sneeze into a tissue and put it in a bin, or if they do not have tissues, cough and sneeze into the crook of their elbow.

The Principal Contractor must keep on site all contact details (Cell Numbers, Physical Addresses, etc) of all employees or persons entering the site for the tracing by the Department of Health.

If a person has high fever and the symptoms of the COVID-19:

- The infected person must be safely escorted to and isolated or quarantined in a facility (room or area) provided on site for this purpose.
- This facility must be decontaminated on a regular basis or at least prior to the start of each shift.
- The facility must be well ventilated with adequate signage and controlled to prevent the unauthorized entrance of persons.
- Emergency contact details of the local health care facility and Department of Health to be on hand and must be contacted when a person displays symptoms of the Coronavirus.
- The person must be safely transported to the healthcare facility for further testing and treatment thereof.

The person may only return to work when he / she tests negative and is placed in quarantine for 14 days before returning to work. The Principal Contractor must continually

monitor this person for symptoms of the Coronavirus.

If a person passes the screening process, i.e. no symptoms of COVID-19 and temperature below 37.5°C must be required to sanitize their hands and enter the site while wearing a cloth face mask and maintaining social distancing.

8. Site access

Notices must be placed at the site entry indicating that there will be "No Unauthorised Entry" Access to the site must be controlled by gates and manned guards which must be limited to one entry and exit point. These must be site specific, the number of entry and exit points for each site may vary however they must be controlled. All persons entering the site must wear and continue wearing a cloth face mask throughout the day while at work or in public. No person must be permitted on site without the relevant / required PPE. Access to the site must be limited to site personnel and deliveries, i.e. no visitors must be allowed unless part of the professional team. Suppliers must be informed on the requirements for entry to the site and the rules to be complied with prior to any deliveries taking place. Delivery vehicle operators must be instructed to follow the same protocol as that of the contractor's employees. Employees must not be permitted to leave the site during the course of the day or during lunch & tea breaks and must limit contact with the general public. Employees must be encouraged to bring pre-prepared meals to work to avoid going to the local shops to buy food.

9. Washing Hands

Soap and water must be provided to employees and they must be encouraged to regularly wash their hands. Each person entering the site must be required to use hand sanitizers provided by the Principal Contractor at the entrances to the sites. The following process must be used when washing hands: arriving on site, before lunch, when leaving site; and when inadvertently touching another person or surface:

10. Sanitizing of the site

The Principal Contractor must ensure that all work surfaces, tools and machinery are sanitized using mist spray disinfectants. Where employees enter offices and enclosed workplaces, their shoes and hands must be sanitized. Hand sanitizers must be placed at strategic points around the site camp which must include the site office, storerooms, washing areas and eating areas. Soap must also be provided at all taps at the site camp. Hand sanitizers must also be placed inside all construction vehicles & mobile plant for use by the operators no other person must be permitted to enter the vehicle or plant unless carrying out services and repairs. The Principal Contractor must ensure that there is sufficient stock of 70 % Alcohol based hand sanitizers on site. Employees must be instructed to clean up their waste and eating areas immediately after they are done and not leave it for someone else to clear it which will reduce contact with contaminated surfaces. All cleaning material used to disinfect surfaces and used PPE must be disposed of into Bio-Hazard waste bins which must be clearly identifiable. These must be sent to a bio-hazard waste facility.

11. Social Distancing

All employees must be required to maintain a safe distance of at least 2 metres between each other. Tasks must be rearranged to incorporate social distancing in order to prevent the gathering of employees closer than two metres from each other and where gatherings are unavoidable, the period of contact must be reduced. Where social distancing is unavoidable, physical barriers must be put in place to prevent contact with other persons. The installation of physical barriers must first need to be discussed with the client as they must incur a major cost. The option of whether the task is necessary or not, must be determined by the practicality and cost of installing the barrier.

Delivery vehicle operators must be encouraged to remain in their vehicles and avoid contact with the contractor's employees except for receiving clerks who must sign off on the deliveries.

No unnecessary meetings must take place, either between managers or employees. Where meetings are unavoidable, only key participants must attend and attendees must maintain a safe distance of at least 2 metres between each other. Meetings must be held in open areas where possible.

Where possible, avoid professional meetings taking place at site offices. Conference calls or similar types of communication must be considered instead of holding site meetings.

12. Personal Protective Equipment (PPE)

- a) All PPE must be issued free of charge to employees. All employees must be trained on the use, care and limitations of the PPE issued to them. In addition to the basic PPE issued to employees for construction work, they must also be issued with at least 2 washable cloth face masks. Wearing of the masks must be demonstrated to the employees. Where additional face protection is required, employees may be issued with and required to wear face shields. All employees must be required to wear suitable gloves for all tasks. The gloves must remain on the employee's hands for the duration of each task and must only come off when the employee uses any welfare facilities and during tea & lunch breaks. Washing and sanitizing of hands must be required when gloves are removed and prior to putting them on again. The cloth/fabric face mask must comply with the recommended guidelines of fabric face masks for the Clothing and Textile Manufacturing Industry for General Public Use. (Refer to the attached)

The face mask does not substitute a dust mask which is used for the purpose of preventing contact with dust particles. SABS FFP 1 / FFP 2 type dust masks to be worn by employees when working in dusty conditions or must be worn by first aiders when attending to patients on site.

Employees must be required to sign acknowledgement on a register for each item of PPE issued to him or her.

- a) It is very important to note that in terms of Regulation 2 (2) of the General Safety Regulations of 1986, *"the employer or user of machinery, as the case may be, shall take steps to reduce the risk as much as is practicable, and shall provide free of charge and maintain in a good and clean condition such safety equipment and facilities as may be necessary to ensure that any person exposed to any such condition or situation at a workplace or in the course of his employment or on premises where machinery is used is rendered safe"*. This basically states that it is the employer's duty and not that of the employee to maintain the PPE, i.e. the cloth/fabric face masks must be washed regularly and ironed before use.
- b) Surgical masks are discouraged however it must be accepted only where cloth/fabric masks are unavailable. Where surgical masks are issued, they must be reissued when they become unhygienic.
- c) Employees need to care for the masks to prevent the unnecessary re-issue of these masks.

13. Employee Welfare Facilities

Employees must be required to use facilities provided by the Principal Contractor. Employees must practise safe hygiene (Washing of hands regularly and sanitizing). Social distancing must also be observed when employees utilise these facilities. The use of welfare facilities must be controlled to prevent the unnecessary gathering of employees. This may include the possible staggering of work start and finish times and tea & lunch breaks. Portable toilets must be serviced more frequently by the service providers (at least twice a week). Eating areas must be reorganized such that a 2-metre distance can be maintained between each employee.

14. Transportation of Employees

Where employees are transported to the site, the transportation of employees must be done from a designated area. The transportation of staff to site must be limited to only key personnel and the number of employees transported in a vehicle must be limited to 50% of the normal capacity. Note that the transportation of employees must be in accordance with Regulation 23 of the Construction Regulations of 2014 and the South African Roads Traffic Act.

Where staff use public transport to get to the site, employee awareness programs must be in place to inform employees of the precautions to be taken to avoid contact with and the spread of the Coronavirus while in public spaces.

15. Awareness

All employees must be contacted via cell-phone and requested to report for duty accordingly. They must be instructed to practice social distancing, sanitize and wear a cloth face mask when making their way to work. Staggered briefing sessions must be held regarding the resumption of work after or during the extended lockdown period. Employees must be trained on the COVID-19 Policies, Plans, Safe Work Procedures and Risk Assessment. Additional Toolbox talks must be held at least once a week to discuss ways to prevent contact with or the spread of the Coronavirus. Toolbox talks to be held in small groups while maintaining social distancing. Posters should be displayed on employee notice boards, wash areas and other employee facilities to create awareness about the prevention of contact with and the spread of the Coronavirus.

16. Reporting

The following reporting process must be followed.

- Employee reports to the immediate supervisor and Construction Health & Safety Officer;
- Supervisor reports to manager on site;
- Manager reports to the Department of Health

Note that the above are minimum requirements, and where the contractor intends on implementing stricter controls to contain / prevent the spread of the Coronavirus, it must be Risk Based and at the contractor's own discretion.

PA.10 MEASUREMENT AND PAYMENT**PA.10.1 Principles**

It is a condition of this contract that Contractors, who submit tenders for this contract, shall make provision in their tenders for the cost of all health and safety measures during the construction process. All associated activities and expenditure are deemed to be included in the Contractor's tendered rates and prices.

(a) Safety personnel

The Construction Supervisor, the Construction Safety Officer, Health and Safety Representatives, Health and Safety Committee and Competent Persons referred to in clauses 7.1 to 7.5 shall be members of the Contractor's personnel, and no additional payment will be made for the appointment of such safety personnel.

(b) Records and Registers

The keeping of health and safety-related records and registers as described in 8 is regarded as a normal duty of the Contractor for which no additional payment will be considered, and which is deemed to be included in the Contractor's tendered rates and prices.

PB : ENVIRONMENTAL MANAGEMENT PLAN

Dihlabeng Local Municipality

ENVIRONMENTAL MANAGEMENT PROGRAMME REPORT

Upgrading of Clarens Water Treatment Works

(EMB/11(x&xi), 18(i), 40(ii), 13(c)iii(dd)/14/25)

Draft

June 2014



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PREFACE

This EMPr has been prepared as a draft in anticipation of the conditions which may be contained within the Environmental Authorisation to be issued by the Free State Department of Economic Development, Tourism and Environmental Affairs.

This EMPr will need to be amended once the Environmental Authorisation is issued to include any specific items not already addressed.

name and expertise of person who prepared this empr

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E&D Consulting Services is a Closed Corporation established in 2005 which is owned and managed by Mr Paul Scherzer. Mr Scherzer has a BSc (Agriculture) and seventeen years experience in environmental management and impact assessments across a wide range of field and sectors and as well as having undertaken environmental work in six other Southern and Central African countries.

ACRONYMS AND ABBREVIATIONS

DETEA	Free State Department of Economic Development, Tourism and Environmental Affairs
EA	Environmental Authorisation
ECO	Environmental Control Officer
EIA	Environmental Impact Assessment
EMPr	Environmental Management Programme Report

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1. INTRODUCTION

1.1 Project background

The Dihlabeng Local Municipality is proposing to upgrade and expand the existing Clarens Water Treatment Works (WTW) to accommodate current and future water requirements. The capacity of the treatment plant is approximately 1.0 Mega litres/day whilst it is currently operating at an average rate of 1.8 Mega litres/day. Future demand calculations based on the number of current erf sites as well as those planned and still to be developed, indicate a future water requirement of 6.5 Mega litres/day.

1.2 Environmental authorisation

The upgrading of the WTW requires that additional land be developed outside the current footprint of the plant. Due to the location of the current site the proposed expansion will trigger the following activities found in Listing Notice 1 and 3 published under the Environmental Impact Assessment Regulations 2010:

- ❑ LN 1 (11x&xi) - The construction of buildings or infrastructure covering 50 square meters or more within a water course or within 32 metres of a watercourse.
- ❑ LN 1 (18i) - The infilling or depositing of any material of more than 5 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock from a watercourse.
- ❑ LN 1 (40iii) - The expansion of buildings by more than 50 square metres within a watercourse or within 32 metres of a watercourse, measured from the edge of a watercourse, but excluding where such expansion will occur behind the development setback line.
- ❑ LN 3 (13) - The clearance of an area of 1 hectare or more of vegetation where 75% or more of the vegetative cover constitutes indigenous vegetation in urban areas, on the watercourse side of the development setback line.

Therefore, the upgrade of the Water Treatment Works is required to follow the basic assessment process to obtain environmental authorisation from the Free State Department of Economic Development, Tourism and Environmental Affairs (DETEA) prior to construction.

E&D Consulting Services was appointed as the independent Environmental Assessment Practitioner to prepare the Basic Assessment and Environmental Management Programme Report (EMPr) required for environmental authorisation.

Figure 1: Overview of the proposed upgrade



1.3 The receiving environment

The proposed site is an open degraded area of grass adjacent to the current Water Treatment Works. There are no large trees or species of conservation importance.

The water course adjacent to the north-east and east of the project has been significantly modified and degraded. The original construction of the tar road and the filling material required has altered the natural banks of the watercourse, whilst the flat area and banks nearest to the Water Treatment Works are apparently as a result of construction rubble dumped during the construction of the Lesotho Highlands Water Project. There is evidence throughout the site and down the banks of concrete rubble and spoil material.

No heritage resources were identified on the proposed site. However, construction staff should be aware that such artefacts are usually under the surface.

1.3.1 Sensitive environments

There are no really sensitive areas but the lowest parts of the water course and the vegetation lining it should be disturbed or polluted as little as possible.

1.4 Impacts identified

No significant negative environmental or social impacts were identified in regard to the planning, construction and operation of the proposed project. A positive impact will be that the town of Clarens will have improved and more reliable access to treated water than is currently the case.

The only minor negative impacts are that construction waste and rubble will need to be cleaned up and ideally the site should be left in a better condition than it is currently. As Clarens is a registered conservancy area, the local community requested that, with their input, suitable trees be planted to screen the plant off from the road. The risk of potential polluted water from the sewage water treatment works entering the water treatment plant water pipelines was also raised for the engineers attention.

1.5 Environmental Management Programme Report

This EMPr covers environmental actions associated with the project which are considered pertinent to proper environmental management and control in terms of relevant legislation. It highlights activities required during planning, construction, operation and decommissioning. In order to ensure a systematic and robust approach to the management of environmental impacts during the planning, construction and operation of the proposed development and to prevent environmental degradation as a result thereof, this EMPr does the following:

- ☐ Assigns roles and responsibilities to the parties charged with its implementation.
- ☐ Sets out environmental specifications that are applicable to the project and its associated activities and provides guidance in order to achieve these environmental specifications.
- ☐ Defines corrective actions, which must be taken in the event of non-compliance with these environmental specifications of this EMPr.
- ☐ Specifies requirements and procedures for monitoring, auditing and reporting.
- ☐ Specifies requirements and procedures for record keeping.
- ☐ Fulfils certain conditions of environmental authorisation (as contained within the EA).
- ☐ Makes provision for the fulfilment of other relevant conditions of environmental authorisation (as contained within the EA).
- ☐ Acts as a Monitoring and Auditing Reference Tool for ensuring compliance with the provisions of the EMPr.

2 ADMINISTRATION AND REGULATION OF ENVIRONMENTAL OBLIGATIONS

2.1 Roles and responsibilities

The roles and responsibilities that are assigned to the various parties listed below are for all phases of the project.

2.1.1 Dihlabeng Local Municipality

The Dihlabeng Local Municipality (the Developer), as the applicant and holder of environmental authorisation for the project is responsible for ensuring that the conditions within the EA are met.

In terms of the EMPr, the Developer is responsible for the following:

- ☐ Implementation of the EMPr.
- ☐ Submission of any substantial changes, updates or amendments of the EMPr to the Environmental Authorities for approval.
- ☐ Ensuring that the provisions of the EMPr are binding on all Contractors operating on the site during the life of the project.
- ☐ Ensuring that environmental monitoring, as applicable, is conducted during implementation to ensure the Contractors are complying with conditions of authorisation and the EMPr.
- ☐ Ensuring that compliance/non-compliance records are kept in good order and are made available on request by the authorities.
- ☐ Ensuring that a copy of the EA and the approved EMPr is available at the construction site at all times and all staff, Contractors and Sub-contractors, are familiar with or are made aware of the contents of the environmental authorisation.
- ☐ Complying with all applicable environmental legislation, regulations and guidelines, and ensuring that Contractors undertake responsibility to do the same.
- ☐ Being committed to the principles contained within NEMA, including the prevention of pollution and sustainable development.

These responsibilities are likely to be delegated to the Project Manager or Engineer during the construction phase. However, as the applicant and holder of environmental authorisation the Local Municipality still retains the overall responsibility to ensure the implementation of the EMPr.

2.1.2 Environmental Control Officer (ECO)

It is recommended that due to the minor nature of impacts and the defined footprint that the appointment of an independent ECO will not add sufficient value during construction. It is recommended that the Engineer/Project Manager along with the DETEA and local Conservancy monitor the compliance of the contractor.

Nevertheless, the role of the ECO is still contained in this draft EMPr until the DETEA has approved this recommendation.

The appointed ECO be responsible during the construction phase for monitoring and recording on-site compliance or non-compliance with the conditions of the environmental authorisation, environmental legislation and the recommendations for mitigation contained in the EIR.

2.1.3 Contractor

The Contractor undertaking the construction is responsible for ensuring he is well versed in environmental aspects so that he may accurately and efficiently carry out the requirements of the EMPr.

The Contractor shall:

- ☐ Be responsible for the implementation of the applicable environmental specifications in accordance with the requirements and provisions of this EMPr.
- ☐ Ensure that a register of complaints and queries by members of the public is maintained at the site office and the actions taken in response to these complaints.
- ☐ Ensure that all third parties who carry out all or part of the Contractor's obligations comply with the requirements and provisions of this EMPr.
- ☐ Report any non-compliance to the Developer and ECO within 12 hours of the event occurring.
- ☐ Ensure that all employees and sub-contractors are made aware of the contents of the EA and this EMPr.

2.2 Reporting and record keeping**2.2.1 Environmental Control Officer (ECO)**

The Environmental Control Officer should conduct audits at the frequency required by the EA during the implementation of the project to ensure that the conditions, mitigation measures and recommendations stipulated in the EA are complied with.

2.2.2 Onsite records

The Contractor is responsible to ensure that a copy of the EA, the EMPr and Audit reports and site diary is available on site for view by the public or relevant authorities.

2.2.3 Non-compliance and remedial action

During implementation of the project, the ECO (or the Engineer in conjunction with the DETEA) must monitor the overall compliance of the conditions of authorisation by all parties concerned and bring to the Contractor and Developer's attention any matters of non-compliance.

The Contractor(s) and their Sub-contractors are deemed not to have complied with the EMPr if:

- ☐ There is evidence of contravention of the EMPr specifications within the boundaries of the construction site/area.
- ☐ There is contravention of the EMPr specifications that relate to activities outside the boundaries of the construction site/area.
- ☐ Environmental damage ensues due to negligence or intent.
- ☐ Failure to comply with corrective or other instructions issued by the Project Manager within a specific time period.

Records of non-compliance and corrective action or remedial work should be kept as part of record keeping.

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UPGRADING CLARENS WATER TREATMENT WORKS: CIVIL AND BUILDING WORKS: PART B

Issues of non-compliance must be discussed at the monthly contractors meeting or sooner if required. Depending on the contravention either work in this area should cease immediately or remedial actions continue to be undertaken whilst construction work continues.

Appendix 2 contains a list of penalties which will be issued for various incidences of non-compliance.

3. DESIGN AND PLANNING PHASE

During the design and preconstruction phase, the following environmental concerns shall be addressed.

3.1 Legislative requirements

All applicable legislative requirements will be adhered to and obtained, with the following raised for specific attention:

- ☐ All conditions specified in the EA.
- ☐ National Heritage Act No 25 of 1999.
- ☐ National Water Act 1988 (Act no. 36 of 1988).

3.2 Eco-friendly infrastructure options

During the detailed design, planning and operation of the project, the Developer must consider and include where possible eco-friendly infrastructure options and technologies.

4 AWARENESS TRAINING

Prior to construction commencing and during the site hand-over period the ECO (or Engineer as relevant) must discuss and inform the contractor and main foreman about: the contents of the EA and EMPr; the environmental standards required during construction; and the monitoring and auditing procedures to be undertaken.

This awareness training must also highlight the procedures for dealing with EA/EMPr contraventions and accidents resulting in pollution or environmental damage.

The contractor should be provided with a copy of the EMPr (although the EMPr will be included in the contract documents) and provided with the opportunity to discuss or clarify any aspects with the ECO prior to commencing.

5 CONSTRUCTION PHASE**5.1 Construction camp**

The contractor to liaise with the Local Municipality with regard to the establishment and location the contractor's camp site.

The camp should ideally on the proposed site or on a previously disturbed area but not within 100 m of a river or drainage line or within the flood line, whichever is the greater.

5.2 Demarcation of the site

- ☐ The extent of the construction working area must be demarcated and pegged out at the start of construction by the contractor and ECO. Thereafter the contractor and labour must remain within this demarcated area.

5.3 Protection of vegetation and sensitive habitats

- ☐ There are no protected tree species and other important indigenous vegetation to be conserved on the site.
- ☐ Vegetation outside of the demarcated areas must not be disturbed or destroyed.
- ☐ The any disturbance near or within the watercourse areas must be minimised.

5.4 Protection of Cultural Heritage Resources

- ☐ If a cultural heritage artefact or a grave is uncovered on site, work in the immediate vicinity must be stopped immediately. The Contractor must take reasonable precautions to prevent any person from removing or damaging any such article and must immediately inform the Project Manager and ECO of such discovery. The relevant cultural heritage authority must be contacted so that an archaeological/heritage resources consultant can be appointed to record the site and excavate if necessary. Work may only resume once clearance is given in writing by the relevant cultural heritage authority.
- ☐ All other infrastructure work must be undertaken at least 30 m from any potential heritage site or grave.

5.5 Water supply and ablution facilities

- ☐ The contractor must confirm with the Municipality which water source will provide the water required for construction purposes. If water needs to be abstracted from a local water resource then a water use permit must be obtained from the Department of Water Affairs if the quantities to be abstracted will be above that permitted under the General Authorisations.
- ☐ The contractor must arrange potable ablution facilities if required for the labour during construction.
- ☐ No ablution facility must be located within 100 m of a watercourse or within the flood lines whichever is the greatest.

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5.6 Solid waste

- ☐ The Contractor must provide waste disposal areas for regular collection and ensure that personnel make use of them and that the Work Sites are kept tidy and litter free at all times.
- ☐ All domestic waste must be collected in adequate numbers of litterbins located at the construction camp.
- ☐ No solid domestic waste may be burned or buried on site or disposed of by any other method.
- ☐ All excess waste rock and building rubble must be removed from site and disposed of at the nearest recognised Municipal waste disposal site.

5.7 Pollution control

- ☐ Oil, fuel spills, chemicals, paint or bitumen etc. must not be washed into the surrounding vegetation or environment.
- ☐ Any minor oil or fuel spills occurring on this surface must be cleaned up along with the contaminated soil at the end of construction, or at intervals as determined by the ECO, and disposed of appropriately.
- ☐ Small oil or fuel spills may also be cleaned up *in situ* with an approved absorbent material or aerated and mixed with LAN fertilizer.
- ☐ Oil or fuel spills in water must be contained using an approved oil absorbent fibre.
- ☐ Any on-site operations requiring the use of cement and concrete must be carefully controlled.
- ☐ Cement and concrete mixing must be limited to specific sites.
- ☐ All visible remains of excess cement and concrete must be gathered and disposed of after the completion of tasks.
- ☐ Any minor servicing of machinery on the site must be done on an impermeable surface with suitable drip trays or else should be done at a recognised garage or service area.
- ☐ Pollution spills and incidents must be reported to the Department of Water Affairs at (031) 336 2700.

5.8 Fire control

- ☐ No open fires must be started on the site unless required for a specific purpose.

5.9 Topsoil and soil conservation

- ☐ Soil erosion on site must be prevented at all times i.e. pre, during- and post-construction activities.
- ☐ All areas where construction is to occur should only be stripped and cleared when construction is set to commence in that area and must be progressively reinstated as development proceeds in order to minimise the amount of bare soil at all times.
- ☐ Minimise soil compaction by restricting vehicle and plant equipment to specific demarcated areas.
- ☐ Topsoil management must be undertaken with specific care when in steep areas. Topsoil must be stripped and stockpiled separately from the subsoil. The herbaceous vegetation, overlying grass and other fine organic matter must be stripped and included along with the topsoil.
- ☐ In the absence of a recognizable topsoil layer, strip the uppermost 300 mm of soil.

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UPGRADING CLARENS WATER TREATMENT WORKS: CIVIL AND BUILDING WORKS: PART B

- ❑ The need to establish temporary erosion control measures prior to stripping and at the commencement of construction must be considered.
- ❑ Reinstatement of topsoil around the infrastructure when complete. Any trenches must be reinstated in a convex shape with the herbaceous vegetation and overlying grass in the upper most part. This will reduce both the need for additional erosion control and rehabilitation costs later on.
- ❑ Stormwater drainage must be controlled to ensure that runoff from the site does not result in erosion.
- ❑ Areas prone to erosion or where erosion is starting to occur must be filled and the stormwater diversion measures implemented to ensure stormwater dissipates and infiltrates into the ground.
- ❑ Energy dissipaters (gabion baskets, mattresses etc.), if required, should be installed at the end of any drainage structures to reduce the velocity and erosive force of water exiting the site.
- ❑ Erosion control measures to be implemented in areas sensitive to erosion such as near water supply points, edges of slopes etc. These measures could include the use of sand bags, hessian sheets, retention or replacement of vegetation.

5.10 Site clearing and completion

- ❑ All stockpiles and surplus material must be transported to an approved location off site.
- ❑ After the stockpiled material has been removed, the site must be re-instated and rehabilitated.
- ❑ The site must be cleared of all inert waste and rubble, including surplus rock and foundations.
- ❑ Excess spoil and inert rubble must be transported to the recognised Municipal waste disposal site.
- ❑ All domestic waste must be removed and disposed at the recognised Municipal waste disposal site.

5.11 Landscaping and rehabilitation

- ❑ The site should be graded to ensure free flow of runoff and to prevent ponding of water.
- ❑ Drainage must be controlled to ensure that runoff from the site will not culminate in off-site pollution or cause water damage to properties further down from the site.
- ❑ If insufficient local grass has been saved with the topsoil, bare surfaces should be grassed with a suitable local indigenous species mix as soon as possible after construction to minimize the extent of bare soil and the potential for erosion.
- ❑ The best way of screening the plant from the road by planting suitable trees must be discussed with the local Conservancy committee and the most suitable screening plants should be planted.

6 Operation Phase**6.1 Landscaping, control of alien invasive plants and erosion**

- ❑ The Local Municipality must take responsibility for the control and removal of alien invasive plant species on the site.
- ❑ The Local Municipality must take responsibility for the control of any areas of erosion which develop post construction and maintain swales and other measures aimed at reduce erosion and runoff.

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7	Decommissioning
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If decommissioning is required the Developer or owner of the infrastructure at the time must, after consultation with the environmental authorities, comply with best practice and applicable South African legislation at the time.

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APPENDIX 1: COPY OF the Environmental Authorisation

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*APPENDIX 2: Penalty List***Environmental Management Plan – Penalty List**

The following penalties will be implemented for each incident of non-compliance during the contract:

Description of issue	Fine for non-compliance
Adequate working servitudes must be demarcated at the start – thereafter failure to remain within these servitudes will constitute an incidence of non-compliance.	R2000
Failure to strip topsoil intact with vegetation and store it separately from the subsoil.	R2500
Failure to plan sufficiently well enough so that topsoil has to be moved again prior to rehabilitation.	R3000
Failure to have adequate fuel dispensing areas or systems i.e. trays to prevent spillages after this has been highlighted once to the contractor.	R3000
Failure to control and manage minor oil and fuel spills as required or advised by the ECO.	R500
Failure to have adequate waste disposal areas, skips and/or bins appropriate for the various wastes after this has been highlighted once to the contractor.	R1500
Failure to demarcate specific cement mixing areas and maintain mixing within these areas.	R2000
Failure to spoil materials, including excess cement from mixing or ready- mix in designated areas.	R2000
POLLUTION OF WATER BODIES WHICH HAS OCCURRED AS A RESULT OF THE CONTRACTOR'S NON-COMPLIANCE OR ACTIVITIES	R5000
Failure to control stormwater runoff to prevent erosion after areas of concern have been highlighted to the contractor.	R3500
Failure to provide adequate sanitation for site staff.	R1000
Unauthorised removal of indigenous woody vegetation and or protected species.	R5000
Failure to notify the ECO and sufficiently demarcate an area should any graves or cultural heritage sites be identified during construction.	R5000
Failure to remove alien plant growth after areas of concern have been highlighted to the contractor.	R1000
Failure to rehabilitate working areas within the required timeframes as specified by the EMP or ECO	R3000
Any other contravention which has been reported upon but not addressed by the contractor within two weeks of it being reported.	R1000

In addition to a fine, the Contractor may be required to undertake the necessary rehabilitation/mitigation measures resulting from non-compliance. These will be as instructed by the Principal Agent/Engineer, on the advice of the ECO.

PC STERILISATION OF TANKS AND RESERVOIRS**PC.1 SCOPE**

The structures shall be sterilised before testing and before re-testing for water tightness. The walls, floors and soffits of roof slabs shall be hosed down and brushed until clean and free from loose material.

The structures shall then be filled with clean water containing 150 g/m³ of calcium hypochloride, to a water depth of 150 mm. The walls shall be thoroughly washed down after which all dirty water shall be flushed out.

Staff doing the washing down with the chlorine solution shall wear rubber boots, gloves and goggles.

PD PNEUMATIC ACTUATORS & VALVES**PD 1 Pneumatic actuators specification for Water Treatment Works****PD 1.1 Pneumatic actuators**

The pneumatic actuators shall be of the rack and pinion type with a linear output torque utilizing the same body and dimensions for double acting and spring return units.

The actuators shall have Namur VDI/VDE 3845 and ISO 5211 dimensions on all sizes. No special blocks or custom built brackets shall be required to mount solenoid valves, limit switch boxes or positioners.

The standard angle of rotation shall be 90°. It shall be possible to adjust the travel stop with $\pm 10^\circ$ in both open and close directions.

The actuator shall incorporate a bottom plate design, securing the pinion (anti blow-out system). The plate with dual ISO patterns, shall also house AISI 304 nuts or AISI 304 bolts for mounting the actuator to the valve. Actuators housings may not be machined with valve mounting holes.

The actuators shall have a female double square output drive.

The actuators shall incorporate shaft bearings to isolate the pinion gear from the housing to support the shaft for high cycle applications. The pinion teeth shall be engaged for the full length and stroke of the piston.

The actuator pistons shall incorporate double wear pads to separate the rack from the actuator wall and serve as both guide and wear bearings.

In the case of spring return actuators, the springs shall be pre-loaded, epoxy coated, with non-metallic materials. The stainless steel end cap fasteners shall be extra long to allow for spring relaxation. All parts to be corrosion resistant.

The actuator shall incorporate external an open/close indicator as well as a limit switch box (refer to 1.1.1)

The actuators shall be capable of operating with an air pressure from 2 to 10 Bar (40 – 150 PSI).

All external fasteners shall be corrosion resistant stainless steel.

All units shall be permanently lubricated at the factory with non-silicone grease.

The actuators shall be factory pressure leak tested.

The preferred actuator shall be Max-Air or similar approved.

PD 1.1.1 Limit switch box

All actuators shall be fitted with an IP67, compact design limit switch box.

The switch box housing and cover shall be epoxy coated aluminum with stainless steel captive cover screws.

2 x Mechanical switches SPDT shall be provided and shall be rated at 3A @ 250V

It shall be possible to adjust the cams manually, without the need for special tools, on high resolution splines. The cams shall be spring backed type which is not affected by normal vibration.

The switch box shall be equipped with two (2) conduit entries, M20x1.5 and an 8 point terminal strip to which the limit switches and solenoid valve (refer 1.1.2) is terminated.

The switch box shall incorporate a high visibility beacon offering a clear location of the valve position.

The switch box shall be mounted with a stainless steel bracket and screws to the actuators NAMUR mounting.

The preferred limit switch box shall be Max-Air or similar approved.

PD 1.1.2 Solenoid valves

Solenoid Valves shall be designed according to NAMUR VDI/VDE 3845 and made of anodized aluminium with stainless steel spring. Port size for pressure in and exhaust shall be 1/4" GAS.

The solenoid valves shall be rated for a working pressure of 2 – 8 Bar and have a 100% ED duty cycle. The protection class shall be at least IP65

The solenoid valves shall be fitted to the actuators and shall be wired to the terminals provided within the limit switch box.

The preferred solenoid valve shall be Max-Air or similar approved.

PD 2 Valve specification for Water Treatment Works

PD 2.1 Butterfly valves

The butterfly valves shall be semi-lug wafer type with cast iron body, EPDM liner and stainless steel disc and stem, suitable for clean and dirty water for use in water treatment works filter beds.

The valves shall be rated PN10 even though the pressure is unlikely to exceed 4 Bar. Where specified, some valves may be required to be rated PN16.

Face-face dimension shall be in accordance with ISO 5752

Actuator mounting flange shall be in accordance with ISO 5211

All butterfly valves, not fitted with pneumatic actuators, shall be fitted with a suitable worm gearbox and handwheel. (refer to 3.1)

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PD 2.1 Wedge gate valves

The wedge gate valves shall be in accordance with SANS 664 CLASS 16 Waterworks pattern. Body, bonnet, stuffing box yoke and gland in cast iron / SG iron. The spindle shall be non-rising, clockwise closing and of stainless steel. Seats and gate rings shall be of gunmetal.

The wedge gate valves shall be double flanged and drilled to pressure class SANS 1123 Table 1600. The wedge gate valves shall be epoxy coated internally and externally.

A handwheel, mounted to a suitable pedestal with extension spindle shall be provided.

SANS 664 FACE TO FACE DIMENSIONS:

150NB - 280mm

The preferred wedge gate valves shall be VOSA or similar approved

PD 3 Valve Gearboxes**PD 3.1 Worm gearboxes**

Where specified, butterfly valves which are not pneumatically operated shall be fitted with suitable worm gearboxes and handwheel.

The worm gearbox housing shall be of cast iron. The worm wheel shall be a complete worm and not of the quadrant type. The end stops shall be in the form of a traveling nut located on the worm shaft. Gearboxes with end stops located on the gear casing will not be permitted.

The gearbox valve mounting to be in accordance with ISO 5211. The valve shaft attachment shall be by means of a splined coupling to enable the gearbox to be rotated every 90° without the need to re-machine.

The design of the gearbox must be such that the input shaft can be installed from both ends in cases where there is a space restriction.

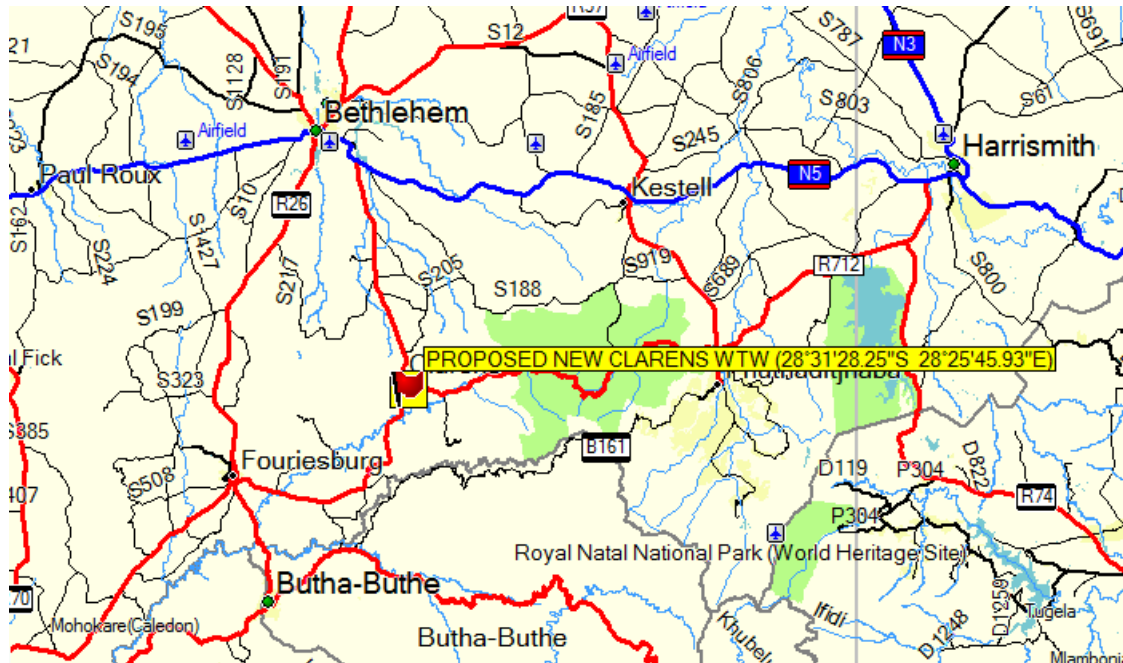
The hand wheels are to be sized for a one man operation.

The preferred worm gearboxes shall be AUMA or similar approved

C4 SITE INFORMATION

The following site information is enclosed herewith:

- Locality plan;
- Reduced A3 tender drawings as noted PS.3.4.



C.5 DRAWINGS

The following reduced drawings shall be used for tendering purposes only.

NUMBER	DRAWING DESCRIPTION
13-019-V-01-01-01	Water Treatment works Site Plan
13-019-V-01-02-01	Inlet & Dosing Chamber & Building Sections
13-019-V-01-02-02	Inlet & Dosing Chamber & Building Sections & Details
13-019-V-01-02-03	Inlet & Dosing Chamber & Building Elevations
13-019-V-01-02-04	Inlet & Dosing Chamber & Building- Building Work Layouts, Door & Window Schedule
13-019-V-01-02-05	Inlet & Dosing Chamber & Building Pipe Schedule & Details
13-019-V-01-06-01	Sludge Drying Beds Plan, Foundation Plan & Sections
13-019-V-01-06-02	Sludge Drying Beds Details
13-019-V-01-07-01	Generator & A.V.R.Room Building- Building Work & Plans
13-019-V-01-07-02	Generator & A.V.R.Room Building Section, Elevations & Details
13-019-V-01-07-03	Generator & A.V.R.Room Building Door & Louvre Details
13-019-V-01-08-01	Raw Water Supply Line Site Plan
13-019-V-01-09-01	Raw Water Supplyline Section & Details
13-019-V-01-09-02	Raw Water Supplyline Pipe Support Details
13-019-V-01-09-03	Raw Water Supplyline Pipe Schedule
13-019-V-01-09-04	Raw Water Supplyline Air & Scour Chamber Details
13-019-V-01-10-01	Admin & Lab Office Building Plans, Sect & Det Rev00
13-019-V-01-10-02	Admin & Lab Foundation Raft Concrete & Reinf Det Rev00
13-019-V-01-10-03	Admin & Lab Steel Roof Plan & Det Rev00
13-019-V-01-13-01	WTW Pipe Trench Stand Pipe & Water Marker Details Rev00
13-019-V-01-13-02	WTW Typical Manhole Details 01 of 02 Rev00
13-019-V-01-13-03	WTW Typical Manhole Details 02 of 02 Rev00
13-019-V-01-13-04	WTW Loffelstein & Layer Works Details Rev00
13-019-V-01-13-07	Fencingl Details Rev00

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