Nkomazi Local Municipality

CONTRACT NO: NKO:42/2026
CONSTRUCTION OF WATER RETICULATION ELEVATED TOWER AND BULK AT GRETANE

CIDB GRADING: 7CE OR HIGHER

NAME OF TENDERER	
CIDB NUMBER	**OR**
TENDER AMOUNT (FIGURES)	**R……**
TENDER AMOUNT (WORDS)	

EXPANDED PUBLIC WORKS PROGRAMME

MIG Municipal Infrastructure Grant

Prepared for:
Nkomazi Local Municipality

Private Bag x X101
Malelane
1320

Tel.: (013) 790 0245
Fax.: (013) 790 0886

Prepared by:
JTMI Consulting Engineers (Pty) Ltd

18 Hospital Street
Arbor Park
Tzaneen
0850
Tel.: (087) 093 2039
Fax.: (086) 608 4989

Closing Date & Time……05 October 2026 @ 12:00

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

NKOMAZI LOCAL MUNICIPALITY

CONSTRUCTION OF WATER RETICULATION ELEVATED TOWER AND BULK AT GRETANE

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Nkomazi Local Municipality

9 Park Street - Malalane
Private Bag X101
Malalane,
1320
Tel: (013) 790 0245
Fax: (013) 790 0886
Customer Care No. (013) 790 0990

www.nkomazi.gov.za

TENDER NO: NKO: 42/2026 CONSTRUCTION OF WATER RETICULATION ELEVATED TOWER AND BULK AT GRETANE FOR NKOMAZI LOCAL MUNICIPALITY

The Nkomazi Local Municipality invites interested parties who are registered as CIDB 7CE or higher for the construction of water reticulation elevated tower and bulk at Gretane. Tender documentation with complete details is available upon the payment of a non-refundable amount of R1 851.38 on each tender document or can be downloaded for free on the e-Tender portal. Tender document(s) will be available as from 31/08/2026 and to be obtained at Nkomazi Local Municipality: Budget and Treasury office (Old Malalane Taxi Rank), 22 Impala Street from the Cashiers Desk from 07h45 to 15H30 (Monday-Friday).

A non-compulsory tenderer briefing session will be held on 04/09/2026 at 10h00 at the Municipal Town Hall (Kobwa Hall) at Fish Eagle. Bidders are advised not to commit fraudulent activities or forgery to document. All abusers of the SCM system, including or faking of returnable documents, may be reported to SAPS and restricted from doing business with any public institution for a period not exceeding 10 years is in line with section 28 and 29 of the prevention and combating of corrupt activities Act 12 of 2004.

A preferential system shall apply whereby this contract will be allocated to a bidder in accordance with the Preferential Procurement Policy Framework Act, no 5 of 2000 and as defined in the bid document, read in conjunction with the Preferential Procurement Regulation, 2022 where90 points will be allocated in respect of price and 10 points in respect of targeted goals.

Completed bid documentation must be deposited on/before 12h00 on 05/10/2026 in the Tender Box situated at the main entrance of the municipality (Civic Centre), 9 Park Street, Malalane.

Tenders/Bids must be submitted in a sealed envelope or container on which the tender/bid number and addressee is clearly marked. No bids transmitted by fax or e-mail will be accepted. It must be noted that the municipality is not bound to accept the lowest on any other tender. Tender/bid documentation which is incomplete or filled incorrectly, not filled in the official bid documentation or which is received after the closing of the bids, will be ignored. It must also be noted the tender submitted in a wrong tender box will not be considered.

For Supply Chain enquiries contact Mr. B. Mabuza at 013 790 0386, and for technical enquiries contact Mr. Patrick Sithole at 013 790 0145, between 07H15 – 16H00 on working weekdays.

.....
MR. O N NKOSI
MUNICIPAL MANAGER

21/08/26
Date

1

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

PART A
INVITATION TO BID

YOU ARE HEREBY INVITED TO BID FOR REQUIREMENTS OF THE NKOMAZI LOCAL MUNICIPALITY					
BID NUMBER:	NKO42/2026	CLOSING DATE:	05/10/2026	CLOSING TIME:	12H00
DESCRIPTION	**CONSTRUCTION OF WATER RETICULATION ELEVATED TOWER AND BULK AT GRETANE**				
BID RESPONSE DOCUMENTS MAY BE DEPOSITED IN THE BID BOX SITUATED AT *(STREET ADDRESS)*					
NKOMAZI Local Municipality Offices, 9 Park Street, Malelane					
9 Park Street					
Malalane					
1320					

BIDDING PROCEDURE ENQUIRIES MAY BE DIRECTED TO		**TECHNICAL ENQUIRIES MAY BE DIRECTED TO:**	
CONTACT PERSON	**Mr M.R. Mabuza**	CONTACT PERSON	**Mr J Sifunda**
TELEPHONE NUMBER0	**013 790 0386**	TELEPHONE NUMBER	**013 790 0145**
FACSIMILE NUMBER	**013 790 0245**	FACSIMILE NUMBER	**013 790 0245**
E-MAIL ADDRESS	**Richard.mabuza@nkomazi.gov.za**	E-MAIL ADDRESS	**Jabulane.sifunda@nkomazi.gov.za**

SUPPLIER INFORMATION					
NAME OF BIDDER					
POSTAL ADDRESS					
STREET ADDRESS					
TELEPHONE NUMBER	CODE		NUMBER		
CELLPHONE NUMBER					
FACSIMILE NUMBER	CODE		NUMBER		
E-MAIL ADDRESS					
VAT REGISTRATION NUMBER					
SUPPLIER COMPLIANCE STATUS	TAX COMPLIANCE SYSTEM PIN:		**OR**	CENTRAL SUPPLIER DATABASE No:	MAAA
B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE	TICK APPLICABLE BOX] ☐ Yes ☐ No		B-BBEE STATUS LEVEL SWORN AFFIDAVIT		[TICK APPLICABLE BOX] ☐ Yes ☐ No

[A B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE/ SWORN AFFIDAVIT (FOR EMES & QSEs) MUST BE SUBMITTED IN ORDER TO QUALIFY FOR PREFERENCE POINTS FOR B-BBEE]

I. ARE YOU THE ACCREDITED REPRESENTATIVE IN SOUTH AFRICA FOR THE GOODS /SERVICES /WORKS OFFERED?	☐Yes ☐No [IF YES ENCLOSE PROOF]	**II.** ARE YOU A FOREIGN BASED SUPPLIER FOR **THE GOODS /SERVICES /WORKS OFFERED?**	☐Yes ☐No [IF YES, ANSWER PART B:3]

QUESTIONNAIRE TO BIDDING FOREIGN SUPPLIERS

IS THE ENTITY A RESIDENT OF THE REPUBLIC OF SOUTH AFRICA (RSA)?	☐ NO ☐ YES
DOES THE ENTITY HAVE A BRANCH IN THE RSA?	☐ NO ☐ YES
DOES THE ENTITY HAVE A PERMANENT ESTABLISHMENT IN THE RSA?	☐ YES ☐ NO
DOES THE ENTITY HAVE ANY SOURCE OF INCOME IN THE RSA?	☐ YES ☐ NO
IS THE ENTITY LIABLE IN THE RSA FOR ANY FORM OF TAXATION?	☐ YES ☐ NO

IF THE ANSWER IS "NO" TO ALL OF THE ABOVE, THEN IT IS NOT A REQUIREMENT TO REGISTER FOR A TAX COMPLIANCE STATUS SYSTEM PIN CODE FROM THE SOUTH AFRICAN REVENUE SERVICE (SARS) AND IF NOT REGISTER AS PER 2.3 BELOW.

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

PART B
TERMS AND CONDITIONS FOR BIDDING

1. BID SUBMISSION:

1.1. BIDS MUST BE DELIVERED BY THE STIPULATED TIME TO THE CORRECT ADDRESS. LATE BIDS WILL NOT BE ACCEPTED FOR CONSIDERATION.

1.2. **ALL BIDS MUST BE SUBMITTED IN THE MANNER PRESCRIBED IN THE BID DOCUMENT.**

1.3. THIS BID IS SUBJECT TO THE PREFERENTIAL PROCUREMENT POLICY FRAMEWORK ACT, 2000 AND THE PREFERENTIAL PROCUREMENT REGULATIONS, 2017, THE GENERAL CONDITIONS OF CONTRACT (GCC) AND, IF APPLICABLE, ANY OTHER SPECIAL CONDITIONS OF CONTRACT.

1.4. **THE SUCCESSFUL BIDDER WILL BE ENGAGED WITH NEGOTIATIONS BY THE CSIR THAT MIGHT RESULT IN THE ISSUING OF A PURCHASE ORDER.**

2. TAX COMPLIANCE REQUIREMENTS

2.1 BIDDERS MUST ENSURE COMPLIANCE WITH THEIR TAX OBLIGATIONS.

2.2 BIDDERS ARE REQUIRED TO SUBMIT THEIR UNIQUE PERSONAL IDENTIFICATION NUMBER (PIN) ISSUED BY SARS TO ENABLE THE CSIR TO VERIFY THE TAXPAYER'S PROFILE AND TAX STATUS.

2.3 APPLICATION FOR TAX COMPLIANCE STATUS (TCS) PIN MAY BE MADE VIA E-FILING THROUGH THE SARS WEBSITE WWW.SARS.GOV.ZA.

2.4 BIDDERS MAY ALSO SUBMIT A PRINTED TCS CERTIFICATE TOGETHER WITH THE BID.

2.5 IN BIDS WHERE CONSORTIA / JOINT VENTURES / SUB-CONTRACTORS ARE INVOLVED, EACH PARTY MUST SUBMIT A SEPARATE TCS CERTIFICATE / PIN / CSD NUMBER.

2.6 WHERE NO TCS IS AVAILABLE BUT THE BIDDER IS REGISTERED ON THE CENTRAL SUPPLIER DATABASE (CSD), A CSD NUMBER MUST BE PROVIDED.

2.7 NO BIDS WILL BE CONSIDERED FROM PERSONS IN THE SERVICE OF THE STATE, COMPANIES WITH DIRECTORS WHO ARE PERSONS IN THE SERVICE OF THE STATE, OR CLOSE CORPORATIONS WITH MEMBERS PERSONS IN THE SERVICE OF THE STATE

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

SIGNATURE OF BIDDER: ……

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

DATE : ……/……/2026.

T1.2 TENDER SUBMISSION, TERMS AND CONDITIONS

General

- Bids must be in South African rands, fixed price basis including VAT;
- The Nkomazi Local Municipality reserves the right to call interviews with short-listed bidder before final selection;
- The Nkomazi Local Municipality reserves the right to negotiate price with preferred bidder in terms of Clause F.1.6.2;
- Bidders must provide details of physical address and contact numbers to enable the Nkomazi Local Municipality to assess the ability of the bidder to deliver on the submission made;
- A bidder must submit a comprehensive tender and cannot tender for portions of the scope;
- The Nkomazi Local Municipality is not compelled to accept the lowest price offer or any other tender.

Bid Instructions

1. The tender document(s) have been drafted to ensure that essential information is furnished upon the correct completion of the document(s). Where there is insufficient space, or additional particulars are required to be furnished, such must be provided on a separate annexure, clearly indicated.
2. Tender document(s) may not be retyped or redrafted. Also, no photocopies of the original document(s) may be used.
3. Tender document(s) may be completed by mechanical devices such as typewriters; alternatively black ink must be used to fill in the document(s).
4. Tenderer must ensure that no pages are missing from the bid document(s), and that the pages of the bid are numbered consecutively. Nkomazi Local Municipality shall not be held liable with regard to claims arising from the fact that pages are missing or duplicated.
5. Firm tender prices (rates) and delivery periods are preferred, and tenders must clearly state whether prices and delivery periods will remain firm for the duration of the contract or not.
6. Tenderer must be strictly to specification. In cases where items are not to specification, deviations must be clearly indicated. It must also be noted that supplier/tenderer may quote for other items other than the one indicated on the schedule of quantity on a separate sheet, but it would not form part of items to be evaluated for.
7. Tender prices must be quoted in South African currency and in the specified units, unless the contrary is clearly indicated.
8. All the documents herewith form part of the bid and failure to comply with any part thereof may invalidate a bid.
9. Nkomazi Local Municipality may issue Briefing Notes during the briefing session which may contain amendments or information that may assist bidders in articulating their bids.
10. Nkomazi Local Municipality require as a condition of the bid that the compulsory explanatory meeting be attended by prospective bidders. This requirement will be clearly stated in the tender advertisement as well as in the documentation.
11. Nkomazi Local Municipality requires the furnishing of a non-refundable bid deposit together with the drawing of bid documentation (if applicable). Where such a non-refundable bid deposit is requested in the bid documentation, no bid will be accepted unless such a deposit (or cash) is submitted in the form of a bank cheque payable to Nkomazi Local Municipality before submission of the bid.
12. Tenders must be submitted to the addressee before the closing time. Bids submitted after the closing time shall be considered late, and will not be admitted for consideration.
13. The contractor/Service provider shall not abandon, transfer, assign or sublet a contract or part thereof without prior written consent of the council.

14. It is an irrefutable condition of this contract that the successful tenderer will have to negotiate and conclude a service level agreement with the council.

The following conditions must be complied with:

Failure to comply with the following will render the tenderer liable to rejection:

- All pages must be completed, and all pages form part of the tender document, therefore no page removal is allowed.
- Scratching out / painting over rates / use of correcting fluid is not allowed.
- Failure to attend compulsory site inspections / compulsory briefing sessions in case is required.
- Failure to submit documents required in this document
- Form of tender not filled and signed and all pages of bid documents not initiated.
- Enterprise particulars not provided.
- The bid has been submitted after the closing date and time.
- Failure to initial or sign all Pages of the Tender documents

Compulsory returnable Documents: failure to return documents below is an automatic disqualification with the exception of the BBBEE Status Certificate

- Attach Copy of SARS Tax Pin or tax clearance certificate
- Copy of Central Supplier Database Registration Report
- Certified copy of Company Registration (CK)
- Certified copy of ID's for all the company directors
- "Acceptable bid" means any bid which, in all respects, complies with the conditions of bid and specifications as set out in the bid documents, including conditions as specified in the Preferential Procurement Policy Framework Act (Act 5 of 2000) and related legislation as defined in this bid document, read in conjunction with the Preferential Procurement Regulation, 2022 where 80 points will be allocated in respect of price and 20 points in respect of targeted goals.
- JV agreements must be completely signed by both companies
- All declarations and authorisations must be duly signed.
- All returnable schedules must be completed
- Certified copy of proof of payment for Municipal rates and taxes or letter from the municipality that indicate that your business is situated in an area in which it does not bill. If the rates and taxes account are not in the names of the company, the attached municipal rates and taxes statement must be submitted together with an original affidavit from the property owner whose names are reflecting on the municipal rates and taxes statement to confirm that the company operates from their property.
- Copy of Authority for signatory (Must be in the company letter head)
- Certified Copy of CIDB grading
- Complete the form of offer
- Complete the MBD Forms 4 and 9

Any contract awarded on false information furnished by the bidder, may, without derogating from other remedies available to Nkomazi Local Municipality, be cancelled at the sole discretion of Nkomazi Local Municipality

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

T1.4 RETURNABLE DOCUMENTS

The Tenderer must complete the following returnable documents and submit with the complete tender document.

DOCUMENT REF.	DESCRIPTION	ACTION
RETURNABLE SCHEDULES AND CERTIFICATES		
A	Proof of Registration on the National Treasury Centralised Supplier Database (CSD)	Attach
B	Proof of tax compliance status and a valid SARS PIN	Complete/ Attach
C	Bank Rating Letter	Complete/ Attach
D	PREFERENCING SCHEDULE: BROAD BASED BLACK ECONOMIC EMPOWERMENT STATUS	Complete/ Attach
FAILURE TO SUBMIT/FULLY COMPLETE THE BELOW DOCUMENTS WILL RENDER THE TENDER SUBMISSION NON-RESPONSIVE (COMPULSORY RETURNABLES)		
E	Certificate of Attendance at a Tender Site Meeting	Complete
F	Record of Addenda to Tender Documents (If applicable)	Complete
G	Amendments, Qualifications and Alternatives (If applicable)	Attach
H	Certificate of Authority for Signature	Complete
I	Copy Workmen's Compensation Registration Certificate (or proof of payment of contributions in terms of the Compensation for Occupational Injuries and Disease Act No. 130 of 1993)	Attach
J	Fully Completed MBD Forms: MBD2, MBD3.2, MBD3.3, MBD4, MBD5, MBD6.1, MBD6.2, MBD7.1, MBD7.2, MBD7.3, MBD8, MBD9	Complete
K	Municipal Declaration	Complete
INFORMATION REQUIRED FOR EVALUATION PURPOSES		
L	Key Personnel	Attach
M	Qualifications and Relevant Experience of the Contracts Manager/ Site Agent (Curriculum Vitae Format)	Attach
N	Qualifications and Relevant Experience of the Foreman (Curriculum Vitae Format)	Attach
O	Relevant Experience of the Safety Officer (Curriculum Vitae Format)	Attach
p	Relevant Experience of the Plant Operator (Curriculum Vitae Format)	Attach
Q	Summary of Tendering Firms Experience (Similar Work and Environment)	Attach
R	Provisional Programme	Attach

DOCUMENT REF.	DESCRIPTION	ACTION
S	Schedule of Plant and Equipment/Letter of Intent to Hire	Attach
T	Occupational Health & Safety Plan	Attach
U	Certified CIDB Grading Certificate	Attach

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

T1.5 TENDER DATA

1.5.1 GENERAL

The Conditions of Tender reproduced are the Standard Conditions of Tender as contained in Annex F of SANS 294 – Construction Procurement Processes, Methods and Procedures which contain references to the Tender Data for details that apply specifically to this tender.

The Tender Data shall be read with the Standard Conditions of Tender in order to expand on the Tenderer's obligations and the Employer's undertakings in administering the tender process in respect of the project under consideration.

The Tender Data contained hereafter shall have precedence in the interpretation of any ambiguity or inconsistency between it and the Standard Conditions of Tender.

Each item of Tender Data given below is cross-referenced to the relevant clause in the standard Conditions of Tender.

1.5.2 TENDER DATA APPLICABLE TO THIS TENDER

F.1.1 The Employer for this Contract is: **NKOMAZI LOCAL MUNICIPALITY**

F.1.2 Tender Documents

(a) **The Tender Document** consists of the following:

TENDER

T1: Tendering Procedures
T1.1: Tender Notice and Invitation to Tender
T1.2: Tender Data

T2: Returnable Documents
T2.1: List of Returnable Documents
T2.2: Returnable schedules and forms

CONTRACT

Part 1: Agreements and Contract Data
C1.1: Form of Offer and Acceptance
C1.2: Contract Data

Part 2: Pricing Data
C2.1: Pricing Instructions
C2.2: Bill of Quantities

Part 3: Scope of Work
C3: Scope of Work

Part 4: Site Information
C4: Site information

The Tender Document shall be obtained from the Employer or his authorized representative at the physical addresses stated in the Tender Notice, upon payment of the deposit stated in the Tender Notice.

F.1.4 The Employer's Agent is:

Name : **JTMI Consulting Engineers (Pty) Ltd**
Address : 18 Hospital Street, Arbor Park, Tzaneen
Code : 0850
Telephone : 087 093 2039
Fax : 086 608 4989
E-Mail : innocent@jtmi.co.za

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

The Employer is not obliged to accept the lowest or any tender offer.

F.2.1 Eligibility

A Tenderer will not be eligible to submit a tender if:

(a) the contractor submitting the tender is under restrictions or has principals who are under restriction to participate in the Employer's procurement due to corrupt or fraudulent practices;

(b) the Tenderer does not have the legal capacity to enter into the contract;

(c) the contractor submitting the tender is 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 the foregoing;

(d) The Tenderer does not comply with the legal requirements stated in the Employer's procurement policy;

(e) The Tenderer who cannot demonstrate that he possesses the necessary technical qualifications and competencies, financial resources, equipment and other physical facilities, managerial capability, personnel, experience and reputation to perform the contract; or

TENDERERS TO TAKE PARTICULAR NOTICE OF THIS CLAUSE AS TENDERERS WHO DO NOT COMPLY HEREWITH WILL NOT BE CONSIDERED ELIGIBLE.

(f) The Tenderer who cannot provide proof that he is in good standing with respect to duties, taxes, levies and contributions required in terms of legislation applicable to the work in the contract.

F.2.7 Site visit and clarification meeting

The arrangements for the non-compulsory site inspection visit and clarification meeting are as follows:

Location: **Kobwa Hall, MALELANE Nkomazi Local Municipality**

Date : **04 September 2026**

Starting time: **10: 00AM**

F.2.12 Alternative tenders

If a Tenderer wishes to submit an alternative tender offer, the only criteria permitted for such an alternative tender offer are:

(a) Individual items

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

Individual items offered as alternatives to items in the Bill of Quantities will only be considered if listed and priced in Form G: *Amendments, Qualifications and Alternatives* in Part 2 of the Contract Document, accompanied by a detailed statement as necessary.

(b) Alternative designs

Where a Tenderer desires to submit an alternative tender involving modifications to the design or method of construction that would alter the character of the tender, the following procedure must be observed:

(i) The alternative offer must be accompanied by supporting information, drawings, calculations and a priced alternative Bill of Quantities to enable its technical acceptability, construction time and price to be fully assessed. Such information, drawings and Bill of Quantities must be sufficient for the proper evaluation of the tendered alternative, otherwise the offer will not be considered;

(ii) Any alternative tender involving modifications to the design will be assessed on its merits and may be accepted. An accepted alternative design will become the design for the purpose of the contract.

(iii) If an alternative design with its priced Bill of Quantities has been accepted, the sum thus tendered for the alternative will not be subject to re-measurement and will be the final amount payable to the Contractor, except only for variations arising from:

- Changes in design parameters ordered by the Engineer;
- Changes not arising from any failure or fault of the Contractor, but from modifications requested by the Engineer.

(iv) A decision whether or not to adopt a technically acceptable modified design will be governed by the amount of the overall saving and the advantages to the Employer which the modified design can be reliably expected to achieve. Matters to be considered in arriving at the overall saving will include the effect of any deferment in starting date arising from extra time needed for the preparation of an amended contract for signature.

(v) The priced alternative Bill of Quantities must include an amount equal to 5% of the amount tendered therein to cover the Employer's costs of checking the alternative design offered.

F.2.13 Submitting a Tender Offer

F.2.13.5 Tender offers shall be submitted as an original only.

Under no circumstances whatsoever may the tender forms be retyped or redrafted.
Photocopies of the original tender documentation may be used, but an original signature must appear on such photocopies.

F.2.13.6 A two-envelope procedure will not be followed.

F.2.15 Closing Time

The closing time for submission of Tender Offers is as per the Tender Bulletin.
Telephonic, telegraphic, facsimile, telex, electronic or e-mailed tenders will **not** be accepted.

F.2.16 Tender Validity

All tenders shall remain valid for a period of ninety (90) days after the time and date set for the opening of tenders, or until the Tenderer is relieved of this obligation by the Employer, in writing, at an earlier date. However, the Tenderer may be requested in writing, not later than fourteen (14) days before this validity period will lapse, to extend the validity of this tender for a specific period. The written approval of the Tenderer must then be received before the lapsing of the original validity period, in order to remain valid.

Should a Tenderer –

- Withdraw his tender during the period of its validity; or
- give notice of his inability to execute the contract or fail to execute the contract; or
- fail to sign the contract agreement or furnish the required security within the period fixed in the Contract Data or any extended time agreed to by the Employer;

then he shall be liable for and pay to the Employer –

- all expenses incurred in calling for fresh tenders, if it should be necessary;
- the difference between his tender and any less favourable tender accepted either by fresh tenders being called or by another tender being accepted from those already received;
- any escalation of the final contract price resulting from any delay caused in calling for fresh tenders:

Provided always that the Employer may exempt a Tenderer from the provisions hereof, if it is of the opinion that the circumstances justify such exemption.

F.2.19 Access

Access shall be provided for inspections and testing by personnel acting on behalf of the Employer.

F.2.22 Return of Tender Documents

Not applicable.

F.2.23 Certificates

The following certified certificates must be provided with the tender (Compulsory):

- Joint Venture Agreement and Power of Attorney in case of Joint Ventures;
- Workman's Compensation Registration Certificate (or proof of payment of contributions in terms of the Compensation for Occupational Injuries and Diseases Act No. 130 of 1993);
- Company/CC/Trust/Partnership registration certificates; and
- Certified Copies of Identity Document of company owner/directors.

F.3.5 The two-envelope system **<u>will not</u>** apply to this tender.

F.3.11 Evaluation of Tender Offers

The Mpumalanga Department of Public Works, Roads & Transport has adopted a policy in the legislation applicable to procurement of tenders and management of Construction Contracts. To achieve the Government's community empowerment policies, an environment conducive to emerging and SMME's Contractors has to be created. Therefor the procurement policy adopted by Mpumalanga Department of Public Works, Roads and Transport will be implemented in this contract to give effect to Section 217(2) of the Constitution and as published in Government Gazette no 16085, dated 23 November 1994.

F.3.11.2 Tenders will be evaluated in a single stage in accordance with the standard tender evaluation Method 2: Financial Offer and preference:

STAGE 1: TEST FOR RESPONSIVENESS/ELIGIBILITY

In order for a tender to be considered responsive, it must comply with **ALL** of the following criteria:

a) The tender documentation must be completed and signed in all respects;
b) The Contractor must have the required CIDB grading;
c) The tender documentation must include all necessary and applicable documentation as listed in F.2.23 above; and
d) The tender must comply with the eligibility criteria noted in F.2.1.

The responsiveness of a tender will be assessed by scoring the bid according to the criteria detailed in the table overleaf.

It is incumbent on the Tenderer to ensure that the returnable documents in T2 are completed in sufficient detail to enable the score to be properly assessed. If the information provided renders a specific criterion not being fully complied with, then the bid will be scored on the next criterion down.

Annex F: Standard Conditions of Tender

(As contained in Annexure F of Board Notice 12 of 2009: Standards for Uniformity in Construction Procurement)

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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.

Note: 1) A conflict of interest may arise due to a conflict of roles which might provide an incentive for improper acts in some circumstances. A conflict of interest can create an appearance of impropriety that can undermine confidence in the ability of that person to act properly in his or her position even if no improper acts result.
2) Conflicts of interest in respect of those engaged in the procurement process include direct, indirect or family interests in the tender or outcome of the procurement process and any personal bias, inclination, obligation, allegiance or loyalty which would in any way affect any decisions taken.

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 for the calling for expressions of interest, the following definitions apply:

a) **conflict of interest** means any situation in which:

i) someone in a position of trust has competing professional or personal interests which make it difficult to fulfil his or her duties impartially;
ii) an individual or organisation 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 organisation which employs that employee.

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

b) **comparative offer** means the tenderer's financial offer after all tendered parameters that will affect the value of the financial offer have been taken into consideration in order to enable comparisons to be made between offers on a comparative basis;

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 read, copied and recorded. Writing 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 submission 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 tenders 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 complies with 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 the 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

Insurance for this contract is to be supplied by contractor as per 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.

F2.10.2 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

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 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.

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 shall 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 with or without any conditions attached to such extension.

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 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 total of the prices 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.2.24 Contract Price Adjustment.

The tender price given is fixed and will not be adjusted for escalation, unless provided for in the contract data. Fluctuations in the foreign currency exchange rate, however, shall be dealt with in the following manner:

1. No change in the tendered rates shall be allowed if the foreign currency (Rand versus US dollar) exchange rate on the date of letter of acceptance, by the client, of this contract has fluctuated up or down by less than or equal to 5% of the base exchange rate. (Refer to note 3 below)

2. Should the foreign currency (Rand versus US Dollar) exchange rate on the date of letter of acceptance, by the client, of this contract have fluctuated up or down by more than 5% of the base exchange rate (See note 3 below), the tendered rates for Section 2 in the Schedule of Quantities shall be adjusted up or down by an amount equal to the difference between the exchange rate on the date of letter of acceptance and the base exchange rate plus or minus 5 %, whichever is applicable.

3. The base foreign currency (Rand versus US dollar) exchange rate shall be the exchange rate determined by the Johannesburg Stock Exchange (JSE) at **4h00 pm** on the Monday before the tender closing date.

F.3 The Employer's undertakings

F.3.1 Respond to requests from the tenderer

F.3.1.1 Unless otherwise stated in the tender data, 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 pre-qualify 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 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 pre-qualified 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 of the Tender Notice until three 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 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, if any, 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, significantly change the Employer's or the tenderer's risks and

b) 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 or discrepancies

F.3.9.1 Check responsive tenders for discrepancies between amounts in words and amounts in figures. Where there is 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 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.
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 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 the 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 (T_{EV}) in accordance with the following formula:

$$T_{EV} = N_{FO} + N_P$$

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

Where: N_{FO} is the number of tender evaluation points awarded for the financial offer made in accordance with F.3.11.7;
N_P 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 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 the 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 (T_{EV}) in accordance with the following formula:

$$T_{EV} = N_{FO} + N_Q$$

Where: N_{FO} is the number of tender evaluation points awarded for the financial offer made in accordance with F.3.11.7;
N_Q 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 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 the 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 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 (T_{EV}) in accordance with the following formula:

$$T_{EV} = N_{FO} + N_P + N_Q$$

Where: N_{FO} is the number of tender evaluation points awarded for the financial offer made in accordance with F.3.11.7;
N_P is the number of tender evaluation points awarded for preference claimed in accordance with F.3.11.8.
N_Q 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 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 the sub clause is repeated.

F.3.11.6 Decimal places

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:

$N_{FO} = W_1 \times A$

where: N_{FO} is the number of tender evaluation points awarded for the financial offer.
W_1 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.

Table F.1: Formulae 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.

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:
$N_Q = W_2 \times S_o / M_s$

where: S_O is the score for quality allocated to the submission under consideration;
M_s is the maximum possible score for quality in respect of a submission.
W_2 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

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

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.3.15 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 sated 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 Returnable Documents

T2.1 List of Returnable Documents

The Tenderer must complete the following returnable documents and submit with the complete tender document.

DOCUMENT REF.	DESCRIPTION	ACTION
RETURNABLE SCHEDULES AND CERTIFICATES		
A	Proof of Registration on the National Treasury Centralised Supplier Database (CSD)	Attach
B	Proof of tax compliance status and a valid SARS PIN	Complete/ Attach
C	Bank Rating Letter	Complete/ Attach
D	BBBEE Verification Certificate. In case of Joint Venture (JV); B-BBEE must be SANAS approved	Attach
FAILURE TO SUBMIT/FULLY COMPLETE THE BELOW DOCUMENTS WILL RENDER THE TENDER SUBMISSION NON-RESPONSIVE (COMPULSORY RETURNABLES)		
E	Certificate of Attendance at a Tender Site Meeting	Complete
F	Record of Addenda to Tender Documents (If applicable)	Complete
G	Amendments, Qualifications and Alternatives (If applicable)	Attach
H	Certificate of Authority for Signature	Complete
I	Copy Workmen's Compensation Registration Certificate (or proof of payment of contributions in terms of the Compensation for Occupational Injuries and Disease Act No. 130 of 1993)	Attach
J	Fully Completed MBD Forms: MBD2, MBD3.2, MBD3.3, MBD4, MBD5, MBD6.1, MBD7.1, MBD7.2, MBD7.3, MBD8, MBD9	Complete
K	Municipal Declaration	Complete
INFORMATION REQUIRED FOR EVALUATION PURPOSES		
L	Key Personnel	Attach
M	Qualifications and Relevant Experience of the Site Agent/Contracts Manager (Curriculum Vitae Format)	Attach
N	Qualifications and Relevant Experience of the Foreman (Curriculum Vitae Format)	Attach
O	Relevant Experience of the Safety Officer (Curriculum Vitae Format)	Attach

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

DOCUMENT REF.	DESCRIPTION	ACTION
P	Relevant Experience of the Plant Operator (Curriculum Vitae Format)	Attach
Q	Summary of Tendering Firms Experience (Similar Work and Environment)	Attach
R	Provisional Programme	Attach
S	Schedule of Plant and Equipment/Letter of Intent to Hire	Attach
T	Occupational Health & Safety Plan	Attach
U	Certified CIDB Grading Certificate	Attach

A: CENTRAL SUPPLIER DATABASE REGISTRATION NUMBER

IMPORTANT NOTES:

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

Central Supplier Database Registration Number

VALID CSD REPORT:

[Valid CSD report to be attached to this page]

B: PROOF OF TAX COMPLIANCE STATUS AND A VALID SARS PIN

IMPORTANT NOTES:

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

   "**Valid Tax clearance certificate / Central Supplier Database Registration Number**

   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."

2. The ST 5.1 form, Application for Tax Clearance Certificate (in respect of tenders), must be **completed by the tenderer in every detail and submitted to the Receiver of Revenue** where the tenderer is registered for income tax purposes. The Receiver of Revenue will then furnish the tenderer with a Tax Clearance Certificate that will be valid for 6 months from date of issue.

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

TAX CLEARANCE CERTIFICATE / SARS PIN

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

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

C: BANK RATING AND CONFIRMATION OF 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 ACOUNT (Please tick)	CURRENT/CHEQUE		SAVINGS		TRANSMISSION		
BANK							
BRANCH NAME							
ACCOUNT NUMBER							
BRANCH CODE							
BANK RANKING 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: .....

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

D: REGISTRATION CERTIFICATES OF AN ENTITY

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 effected to the entity and distributed to the parties]

CIDB REGISTRATION:

Tenderer's 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**

BBBEE CERTIFICATION:

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).

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

E: CERTIFICATE OF ATTENDANCE AT CLARIFICATION MEETING

This is to certify that *(Tenderer)* ……..…

of (*address)*.....

.....……..... was represented by the person(s) named below at the compulsory meeting held for all tenderers on TBA

We acknowledge that the purpose of the meeting was to acquaint myself / ourselves with the site of the works and / or matters incidental to doing the work specified in the tender documents in order for me / us to take account of everything necessary when compiling our rates and prices included in the tender.

Particulars of person(s) attending the meeting:

Name: .....……..... Signature: .....….....

Capacity: .....

Name: ….....……..… Signature: .....….....

Capacity: .....

Attendance of the above person(s) at the meeting is confirmed by the Employer's representative, namely:

Name: ……. Signature: .....

Capacity: ……

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

F: RECORD OF ADDENDA TO TENDER DOCUMENTS

We confirm that the following communications received from the Employer before the date of submission of this tender offer, amending the tender documents, have been taken into account in this tender offer.

ADD. No.	DATE	TITLE OR DETAILS
1		
2		
3		
4		
5		

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

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

G: AMENDMENTS, QUALIFICATIONS AND ALTERNATIVES

(***This is not an invitation for amendments, deviations or alternatives*** *but should the Tenderer desire to make any departures from the provisions of this contract he shall set out his proposals clearly hereunder. The Employer will not consider any amendment, alternative offers or discounts unless forms (a), (b) and (c) have been completed to the satisfaction of the Employer*).

I / We herewith propose the amendments, alternatives and discounts as set out in the tables below:

(a) AMENDMENTS

PAGE, CLAUSE OR ITEM NO	PROPOSED AMENDMENT

Notes*: (1) Amendments to the General and Special Conditions of Contract are not acceptable;*

(2) The Tenderer must give full details of all the financial implications of the amendments and qualifications in a covering letter attached to his tender.

(b) ALTERNATIVES

PROPOSED ALTERNATIVE	DESCRIPTION OF ALTERNATIVE

Notes:

(1) Individual alternative items that do not justify an alternative tender, and an alternative offer for time for completion should be listed here.

(2) In the case of a major alternative to any part of the work, a separate Bill of Quantities, programme, etc, and a detailed statement setting out the salient features of the proposed alternatives must accompany the tender.

(3) Alternative tenders involving technical modifications to the design of the works and methods of

construction shall be treated separately from the main tender offer.

(c) DISCOUNTS

ITEM ON WHICH DISCOUNT IS OFFERED	DESCRIPTION OF DISCOUNT OFFERED

Note: The tenderer must give full details of the discounts offered in a covering letter attached to his tender, failing which, the offer will be prejudiced

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

H: CERTIFICATE OF AUTHORITY FOR SIGNATURE 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.

DECLARATION OF INTEREST

1. No bid will be accepted from persons in the service of the state:
2. Any person or having kinship with a person in the service of state, or persons who act on behalf of Nkomazi Local Municipality, including a blood relationship, may make an offer or offers in terms of this bid invitation. In view of possible allegations of favouritism or bias, should the resulting bid, or part thereof, be awarded to persons employed by State, or to persons who act on behalf of Nkomazi Local Municipality, or to persons connected with or related to them, it is required that the bidder or his authorised representative shall declare any interest of whatever nature and/or relationship (including blood relationship) to any employees, or persons who act on behalf of, or persons connected with or related to Nkomazi Local Municipality.

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 the bidder or his representative: …….

3.2. Identify Number: …….

3.3. Position occupied in the Company (director, trustee shareholder):

……

3.4. Company Reference 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: …….....

……....

❖ MSCM 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

❖ 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.

3.9. Have you been in the service of the state for the past twelve months? YES/NO

If yes, furnish particulars: …….

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

……

3.10. Do you, have any relationship (family, friend, other) with a person employed by state/Nkomazi Local municipality, who may be involved in the evaluation and adjudication of this bid?

*YES / NO

3.10.1 If yes, furnish particulars:

……

……

3.11. Are you, aware of any relationship (family, friend, other) between the bidder and any person employed by state/Nkomazi Local Municipality, who may be involved in the evaluation and 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 the service of state?

YES/NO

3.12.1 If yes, furnish particulars.

……

……

3.13. Are any spouses, child or parent of the company's directors trustees, managers, principle shareholders or stakeholders in service of state?

YES/NO

13.13.1 If yes, furnish particulars.

……

……

13.14 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.

13.14.1 If yes, furnish particulars.

…… YES/NO

……

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

Full Name	**Position filled in the "State"**	**ID number**	**State employee number**

…… ……

……

Signature Bid Number Date

…… ……..

Capacity Name of the Company

Contractor Witness 1 Witness 2 Employer Witness 1 Witness 2

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

MBD 5

DECLARATION FOR PROCUREMENT ABOVE R10 MILLION (VAT INCLUDED)

For all procurement expected to exceed R10 million (VAT 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 a municipality 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 a municipality 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

……..

……..

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**

…… **…….**
Position **Name of Bidder**

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

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

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

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

---

1. GENERAL CONDITIONS

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

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

1.2 The applicable preference point system for this tender is the 90/10 preference point system.

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

(a) Price; and

(b) Specific Goals.

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

	POINTS
PRICE	90
SPECIFIC GOALS	10
Total points for Price and SPECIFIC GOALS	**100**

1.5 Failure on the part of a tenderer to submit proof or documentation required in terms of this tender to claim points for specific goals with the tender, will be interpreted to mean that preference points for specific goals are not claimed.

1.6 Nkomazi Local Municipality reserves the right to require of a tenderer, either before a tender is adjudicated or at any time subsequently, to substantiate any claim in regard to preferences, in any manner required by Nkomazi Local Municipality.

2. DEFINITIONS

(a) **"tender"** means a written offer in the form determined by an organ of state in response to an invitation to provide goods or services through price quotations, competitive tendering process or any other method envisaged in legislation;

(b) **"price"** means an amount of money tendered for goods or services, and includes all applicable taxes less all unconditional discounts;

(c) **"rand value"** means the total estimated value of a contract in Rand, calculated at the time of bid invitation, and includes all applicable taxes;

(d) **"tender for income-generating contracts"** means a written offer in the form determined by an organ of state in response to an invitation for the origination of income-generating contracts through any method envisaged in legislation that will result in a legal agreement between the organ of state and a third party that produces revenue for the organ of state, and includes, but is not limited to, leasing and disposal of assets and concession contracts, excluding direct sales and disposal of assets through public auctions; and

(e) **"the Act"** means the Preferential Procurement Policy Framework Act, 2000 (Act No. 5 of 2000).

3. FORMULAE FOR PROCUREMENT OF GOODS AND SERVICES

3.1 POINTS AWARDED FOR PRICE

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

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

80/20 **or** **90/10**

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

Where

Ps = Points scored for price of tender under consideration

Pt = Price of tender under consideration

Pmin = Price of lowest acceptable tender

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

3.1.1. POINTS AWARDED FOR PRICE

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

80/20 **or** **90/10**

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

Where

Ps = Points scored for price of tender under consideration

Pt = Price of tender under consideration

Pmax = Price of highest acceptable tender

4. POINTS AWARDED FOR SPECIFIC GOALS

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

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

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

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

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

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

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

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

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

POINTS FOR CONTRACTING AN ENTERPRISE OWNED BY HISTORICALLY DISADVANTAGED PERSONS OR INDIVIDUALS		
A total of 4 preference points shall be allocated on a proportional or pro rata basis for contracting an enterprise owned by historically disadvantaged persons or individuals who meet the following requirements -		
HISTORICALLY DISADVANTAGED PERSONS OR INDIVIDUALS	**POINTS ALLOCATION**	**SOURCE DOCUMENTS REQUIRED TO CLAIM POINTS**
100% black person or people owned enterprise	**1**	A copy of a ***Full CSD report*** not older than 3 months
More than 30% woman or women shareholding or owned enterprise	**1**	
more than 30% youth shareholding or owned enterprise	**1**	
More than 30% people living with disability shareholding or owned enterprise	**1**	A copy of a Medical Certificate to confirm disability
POINTS FOR IMPLEMENTING OF RDP PROGRAMMES		
A total of 06 preference points shall be allocated on a proportional or pro rata basis for implementing of programmes for RDP -		
Enterprises regarded as ***EMEs located within** the Ehlanzeni District Municipality area of jurisdiction	**1**	A copy of a Full CSD report not older than 3 months **NB:** Points will only be awarded if the CSD physical address is the same as the address for the proof of residence required in 1.9 above.
Enterprise who will sub-contract minimum of 30% of the contract value to EMEs in the ward of local communities where the services to be rendered or works to be undertaken.	**1**	Joint venture requirements as per the tender document and all relevant legislations pertaining to joint ventures.

Points for Corporate Social Investment (CSI) or Social Labour Plan proposition	**3**	Comprehensive Methodology on how the tenderer is planning to invest back to the community of Nkomazi Local Municipality: • Community development grounded on the principles of empowerment, social justice, collective action to mention but a few. • These undertakings shall form part of the service level agreements SLA and be managed as such.
Points for valid B-BBEE level 1 contribution (SANAS accredited B-BBEE certificate for generic enterprise, and for EME and SME a sworn affidavit or CIPC issued certificate confirming annual turnover and level of Black Ownership).	**1**	➢ Certified Valid BBBEE certificate ➢ or Certified Valid EME and SME a sworn affidavit ➢ or Certified Valid CIPC issued certificate confirming annual turnover and level of Black Ownership
TOTAL PREFERENCE POINTS TO BE CLAIMED	**10**	

The points obtained on functionality must be at least 70 out of a maximum of 100 points. Prospective bidders/tenderers who obtained less than 70 points will not be considered in second round of the evaluation.

TENDERER'S MUST SCORE A MINIMUM OF 70 POINTS IN ORDER FOR THE BID TO BE ELIGIBLE IN TERMS OF F.2.1 (e).

TECHNICAL EVALUATION CRITERIA

Criterion	Assessment	Points Awarded	Max Score
Construction Team Key Personnel (Forms L, M, N, O) Certification of all credentials for critical personnel is mandatory. An uncertified copy of the qualifications will not be accepted, and a copy of the CV must be included. The personnel and project team presented in the tender submission shall be the personnel deployed on site for the execution of the works. Any proposed changes to the approved project team shall be subject to prior written approval by the Employer's Agent.	Contract manager has Certified BEng/B-Tech in Civil Engineering NQF 7 or higher (4); NQF 7 (Labour Intensive) Qualification (2); Minimum of Ten years' experience managed 6 bulk water and water reticulation projects (4).	10	30
	Site Agent has Certified BEng/B-Tech in Civil Engineering NQF 7 or higher (4); NQF 5 (Labour Intensive) Qualification (1); Minimum of 6 years' experience managed 4 bulk water and water reticulation projects (3)	08	
	General Foreman has Certified ND in Civil Engineering NQF 6 or higher (2); Minimum of 5 years' experience managed 3 bulk water and water reticulation projects (2).	04	
	Health and Safety Officer with a Certified relevant NQF 5 safety qualification (2); Registered with the SACPCMP as a construction health and safety officer (1) and Minimum of 3 years' experience managing projects (1)	04	
	Plant Operator with a Certified relevant trade certificate (2); Three years' experience (2).	04	
Experience of similar work and environment (Form P)	Company Experience of similar work in the past 7 years; (12.5 point for each similar successfully completed project with value of R30 million and above).	12.5	

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

	8.5 points for each similar completed project with value of R15 Million to R29 million) 4 points for each similar completed project with value of R7 to R14 million) 0 point for each similar completed project with value of R0 to R6.9 million) **Tenderers are required to attach certified appointment letters and their corresponding completion certificates. Failure to attach both appointment letter and completion certificate will result in zero points being awarded**	8.5 04 0	50
Company financial Capacity (Form C)	Bank Rating of: C or better - 5; D - 3; E or Lower - 0;		05
Plant and Equipment (Form R)	2X TLB (Own/Hired) – 3 2X Excavators - (Own/Hired) – 8 Water Tanker (Own/Hired) – 2 Plate Compactor - (Own/Hired) – 2		15
MAXIMUM SCORE:			**100**

DISCLAIMER: The key personnel proposed by the Contractor in the completed tender submission shall be deemed committed to the Contract. No substitution or replacement of such personnel shall be made without prior written notification to and approval by the Engineer. The Contractor shall provide full motivation for the proposed change together with the qualifications and experience of the proposed replacement. Replacement personnel shall have qualifications, experience and competency equal to or greater than those originally tendered.

5. DECLARATION WITH REGARD TO COMPANY/FIRM

5.1 Name of company/firm…….

5.2 Company registration number: ……...

5.3 TYPE OF COMPANY/ FIRM

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

[TICK APPLICABLE BOX]

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

i) The information furnished is true and correct;

ii) The preference points claimed are in accordance with the General Conditions as indicated in paragraph 1 of this form;

iii) In the event of a contract being awarded as a result of points claimed as shown in paragraphs 1.4 and 4.2, the contractor may be required to furnish documentary proof to the satisfaction of the organ of state that the claims are correct;

iv) If the specific goals have been claimed or obtained on a fraudulent basis or any of the conditions of contract have not been fulfilled, the organ of state may, in addition to any other remedy it may have –

(a) disqualify the person from the tendering process;

(b) recover costs, losses or damages it has incurred or suffered as a result of that person's conduct;

(c) cancel the contract and claim any damages which it has suffered as a result of having to make less favourable arrangements due to such cancellation;

(d) recommend that the tenderer or contractor, its shareholders and directors, or only the shareholders and directors who acted on a fraudulent basis, be restricted from obtaining business from any organ of state for a period not exceeding 10 years, after the *audi alteram partem* (hear the other side) rule has been applied; and

(e) forward the matter for criminal prosecution, if deemed necessary.

……
SIGNATURE(S) OF TENDERER(S)

SURNAME AND NAME: …….

DATE: …….

ADDRESS: …….

…….

…….

CONTRACT FORM - PURCHASE OF GOODS/WORKS

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

PART 1 (TO BE FILLED IN BY THE BIDDER)

1. I hereby undertake to supply all or any of the goods and/or works described in the attached bidding documents to (name of institution)……..……. in accordance with the requirements and specifications stipulated in bid number……..…….. at the price/s quoted. My offer/s remain binding upon me and open for acceptance by the purchaser during the validity period indicated and calculated from the closing time of bid.

2. The following documents shall be deemed to form and be read and construed as part of this agreement:

(i) Bidding documents, *viz*

- Invitation to bid;
- Tax clearance certificate;
- Pricing schedule(s);
- Technical Specification(s);
- Preference claims for Broad Based Black Economic Empowerment Status Level of Contribution in terms of the Preferential Procurement Regulations 2011;
- Declaration of interest;
- Declaration of bidder's past SCM practices;
- Certificate of Independent Bid Determination;
- Special Conditions of Contract;

(ii) General Conditions of Contract; and

(iii) Other (specify)

3. I confirm that I have satisfied myself as to the correctness and validity of my bid; that the price(s) and rate(s) quoted cover all the goods and/or works specified in the bidding documents; that the price(s) and rate(s) cover all my obligations and I accept that any mistakes regarding price(s) and rate(s) and calculations will be at my own risk.

4. I accept full responsibility for the proper execution and fulfilment of all obligations and conditions devolving on me under this agreement as the principal liable for the due fulfillment of this contract.

5. I declare that I have no participation in any collusive practices with any bidder or any other person regarding this or any other bid.

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

NAME (PRINT) ……

PACITY ……

SIGNATURE ……

NAME OF FIRM ……

DATE ……

WITNESSES

1 ……..……

2. ……

DATE: …….

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

CONTRACT FORM - PURCHASE OF GOODS/WORKS

PART 2 (TO BE FILLED IN BY THE PURCHASER)

1. I…… in my capacity as……..….. accept your bid under reference number ……dated……for the supply of goods/works indicated hereunder and/or further specified in the annexure(s).

2. An official order indicating delivery instructions is forthcoming.

3. I undertake to make payment for the goods/works delivered in accordance with the terms and conditions of the contract, within 30 (thirty) days after receipt of an invoice accompanied by the delivery note.

ITEM NO.	PRICE (ALL APPLICABLE TAXES INCLUDED)	BRAND	DELIVERY PERIOD	B-BBEE STATUS LEVEL OF CONTRIBUTION	MINIMUM THRESHOLD FOR LOCAL PRODUCTION AND CONTENT (if applicable)

4. I confirm that I am duly authorized to sign this contract.

SIGNED AT ……ON……..

NAME (PRINT) …….

SIGNATURE …….

OFFICIAL STAMP

WITNESSES

1. ……

2. ……

DATE: ……

CONTRACT FORM - RENDERING OF SERVICES

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

PART 1 (TO BE FILLED IN BY THE SERVICE PROVIDER)

1. I hereby undertake to render services described in the attached bidding documents to (name of the institution)……. in accordance with the requirements and task directives / proposals specifications stipulated in Bid Number…….. at the price/s quoted. My offer/s remain binding upon me and open for acceptance by the Purchaser during the validity period indicated and calculated from the closing date of the bid.

2. The following documents shall be deemed to form and be read and construed as part of this agreement:

(iv) Bidding documents, *viz*
- Invitation to bid;
- Tax clearance certificate;
- Pricing schedule(s);
- Filled in task directive/proposal;
- Preference claims for Broad Based Black Economic Empowerment Status Level of Contribution in terms of the Preferential Procurement Regulations 2011;
- Declaration of interest;
- Declaration of Bidder's past SCM practices;
- Certificate of Independent Bid Determination;
- Special Conditions of Contract;

(v) General Conditions of Contract; and
(vi) Other (specify)

3. I confirm that I have satisfied myself as to the correctness and validity of my bid; that the price(s) and rate(s) quoted cover all the services specified in the bidding documents; that the price(s) and rate(s) cover all my obligations and I accept that any mistakes regarding price(s) and rate(s) and calculations will be at my own risk.

4. I accept full responsibility for the proper execution and fulfilment of all obligations and conditions devolving on me under this agreement as the principal liable for the due fulfillment of this contract.

5. I declare that I have no participation in any collusive practices with any bidder or any other person regarding this or any other bid.

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

NAME (PRINT) …….

CAPACITY …….

SIGNATURE …….

NAME OF FIRM …….

DATE …….

WITNESSES

1 ……

2 ……

DATE: ……..

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

CONTRACT FORM - RENDERING OF SERVICES

PART 2 (TO BE FILLED IN BY THE PURCHASER)

1. I……. in my capacity as……..…… accept your bid under reference number ……dated……for the rendering of services indicated hereunder and/or further specified in the annexure(s).

2. An official order indicating service delivery instructions is forthcoming.

3. I undertake to make payment for the services rendered in accordance with the terms and conditions of the contract, within 30 (thirty) days after receipt of an invoice.

DESCRIPTION OF SERVICE	PRICE (ALL APPLICABLE TAXES INCLUDED)	COMPLETION DATE	B-BBEE STATUS LEVEL OF CONTRIBUTION	MINIMUM THRESHOLD FOR LOCAL PRODUCTION AND CONTENT (if applicable)

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

SIGNED AT …… ON ……..

NAME (PRINT) …….

SIGNATURE ……

OFFICIAL STAMP

WITNESSES

1 …..…….

2 …..…….

DATE: ……..

Contractor | Witness 1 | Witness 2 | Employer | Witness 1 | Witness 2

CONTRACT FORM - SALE OF GOODS/WORKS

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

PART 1 (TO BE FILLED IN BY THE BIDDER)

1. I hereby undertake to purchase all or any of the goods and/or works described in the attached bidding documents from (name of institution)…….…..…… in accordance with the requirements stipulated in (bid number)……..…….. at the price/s quoted. My offer/s remain binding upon me and open for acceptance by the seller during the validity period indicated and calculated from the closing time of bid.

2. The following documents shall be deemed to form and be read and construed as part of this agreement:

(vii) Bidding documents, *viz*
- Invitation to bid;
- Tax clearance certificate;
- Pricing schedule(s);
- Declaration of interest;
- Declaration of Bidder's past SCM practices;
- Special Conditions of Contract;

(viii) General Conditions of Contract; and
(ix) Other (specify)

3. I confirm that I have satisfied myself as to the correctness and validity of my bid; that the price(s) quoted cover all the goods and/or works specified in the bidding documents; that the price(s) cover all my obligations and I accept that any mistakes regarding price(s) and calculations will be at my own risk.

4. I accept full responsibility for the proper execution and fulfilment of all obligations and conditions devolving on me under this agreement as the principal liable for the due fulfillment of this contract.
5. I undertake to make payment for the goods/works as specified in the bidding documents.
6. I declare that I have no participation in any collusive practices with any bidder or any other person regarding this or any other bid.
7. I confirm that I am duly authorised to sign this contract.

NAME (PRINT) ……

CAPACITY ……

SIGNATURE ……

NAME OF FIRM ……

DATE ……

WITNESSES

1. ……..…….

2. ……..

DATE:……..

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

CONTRACT FORM - SALE OF GOODS/WORKS

PART 2 (TO BE FILLED IN BY THE SELLER)

4. I…… in my capacity as……..…..
accept your bid under reference number ……dated……for the purchase of goods/works indicated hereunder and/or further specified in the annexure(s).

5. I undertake to make the goods/works available in accordance with the terms and conditions of the contract.

ITEM NO.	DESCRIPTION	PRICE (ALL APPLICABLE TAXES INCLUDED)		

4. I confirm that I am duly authorized to sign this contract.

SIGNED AT ……ON……..

NAME (PRINT) …….

SIGNATURE …….

OFFICIAL STAMP

WITNESSES

3. …….

4. …….

DATE …….

DECLARATION OF BIDDER'S PAST SUPPLY CHAIN MANAGEMENT PRACTICES

1 This Nkomazi Local Municipality Bidding Document must form part of all bids invited.

2 It serves as a declaration to be used by the municipality 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 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. willfully 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 *audi alteram partem* rule was applied).**	Yes ☐	No ☐
4.1.1	If so, furnish particulars:		
4.2	Is the bidder or any of its directors listed on the Register for Tender Defaulters in terms of section 29 of the Prevention and Combating of Corrupt Activities Act (No 12 of 2004)? **(To access this Register enter the National Treasury's website, www.treasury.gov.za, click on the icon "Register for Tender Defaulters" or submit your written request for a hard copy of the Register to facsimile number (012) 3265445).**	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 ☐
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 ANDCORRECT.

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

……...	**……..**
Signature	**Date**
……..	**……..**
Position	**Name of Bidder**

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

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 (MBD 9) must be completed and submitted with the bid:

[1] Includes price quotations, advertised competitive bids, limited bids and proposals.

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

CERTIFICATE OF INDEPENDENT BID DETERMINATION

I, the undersigned, in submitting the accompanying bid:

_____
(Bid Number and Description)

in response to the invitation for the bid made by:

_____
(Name of 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 authorized by the bidder to sign this Certificate, and to submit the accompanying bid, on behalf of the bidder;
4. Each person whose signature appears on the accompanying bid has been authorized by the bidder to determine the terms of, and to sign, the bid, on behalf of the bidder;
5. For the purposes of this Certificate and the accompanying bid, I understand that the word "competitor" shall include any individual or organization, other than the bidder, whether or not affiliated with the bidder, who:
    a. has been requested to submit a bid in response to this bid invitation;
    b. could potentially submit a bid in response to this bid invitation, based on their qualifications, abilities or experience; and
    c. provides the same goods and services as the bidder and/or is in the same line of business as the bidder
6. The bidder has arrived at the accompanying bid independently from, and without consultation, communication, agreement or arrangement with any competitor. However communication between partners in a joint venture or consortium[3] will not be construed as collusive bidding.
7. In particular, without limiting the generality of paragraphs 6 above, there has been no consultation, communication, agreement or arrangement with any competitor regarding:
    a. prices;
    b. geographical area where product or service will be rendered (market allocation)
    c. methods, factors or formulas used to calculate prices;
    d. the intention or decision to submit or not to submit, a bid;
    e. the submission of a bid which does not meet the specifications and conditions of the bid; or
    f. bidding with the intention not to win the bid.

8. In addition, there have been no consultations, communications, agreements or arrangements with any competitor regarding the quality, quantity, specifications and conditions or delivery particulars of the products or services to which this bid invitation relates.

9. The terms of the accompanying bid have not been, and will not be, disclosed by the bidder, directly or indirectly, to any competitor, prior to the date and time of the official bid opening or of the awarding of the contract.

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

…… ……
Signature Date

…….. ……
Position Name of Bidder

[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.

K: MUNICIPAL DECLARATION AND RETURNABLE DOCUMENTS

The following particulars must be furnished in relation to tenders for municipalities and municipal entities where:

a) consultancy services are required; and

b) goods, services or a combination thereof where the estimated total of the prices exceeds R 10 million including VAT.

In the case of a joint venture, separate municipal declarations and returnable documents shall be submitted in respect of each partner.

Section 1: Enterprise Details

Name of enterprise:	
Contact person:	
Email:	
Telephone:	
Cell no	
Fax:	
Physical address	
Postal address	

Section 2: Declaration for consultancy services:

The enterprise has been awarded the following consultancy services by an organ of state during the last five years.

Name of organ of state	Estimated number of contracts	Nature of service, e,g, quantity surveying	Service similar to required service (yes / no) ?

Attach separate page as necessary

Section 3 Goods, services or a combination thereof where the estimated total of the prices exceeds R 10 million including VAT

I / we certify that

1) *(tick one of the boxes):*

□ the enterprise **is not** required by law to prepare annual financial statements for auditing

□ the enterprise **is** required by law to have audited annual financial statements and attached the audited financial statements for the past three financial years, or since the establishment as the enterprise was established within the past three years.

2) the enterprise and its directors has / have no undisputed commitments for municipal services towards a municipality or other service provider in respect of which payment is overdue for more than 30 days *(ie: all municipal accounts are paid up to date)*;

3) source of goods and / or services :

(tick one of the boxes and insert percentages if applicable):

□ goods and / or services are sourced only from within the Republic of South Africa

□ [ ] % of the total cost of goods and / or services will be sourced from outside the Republic of South Africa and the percentage of payment from the municipality or municipal entity which is expected to be transferred out of the Republic is [ ] %

I furthermore confirm that the following contracts were awarded to the enterprise by an organ of state during the last five years and attached particulars of any material non-compliance or dispute concerning the execution of such contracts:

Name of organ of state	**Estimated number of contracts**	**Nature of contracts**

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

Attach separate page as necessary
I, the undersigned who warrants that I am duly authorised on behalf of the tendering entity, hereby declare that the contents of this Declaration are within my personal knowledge, and save where stated otherwise are to the best of my belief both true and correct

Signed ..... Date .....

Name ..... Position .....

Enterprise name .....

L: KEY PERSONNEL

In terms of the Project Specification, all unskilled workers are to be locally sourced.

The Tenderer shall list below the personnel which he intends to utilize on the Works, including key personnel which may have to be brought in from outside if not available locally.

Category of Employee	Number of Persons					
	Key Personnel, Part of the Contractor's Organisation		Key Personnel to be imported if not available locally		Unskilled Personnel to be recruited from local community	
	PDI	NON-PDI	PDI	NON-PDI	PDI	NON-PDI

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

M: CURRICULUM VITAE OF KEY PERSONNEL – CONTRACTS MANAGER

The success of this project will largely depend on the ability of the **Key Personnel** to manage local resources that are largely unskilled. The Tenderer must indicate who they intend using for this function and must list the incumbent's experience.

Failure to provide proof of a suitable candidate to manage the work on a permanent basis on site during the currency of the contract will result in dis-qualification in terms of Clause F.2.1.

Contracts Manager:	**Years with firm:**
Qualifications:	
Employment Record:	
Experience Record Pertinent to Required Service:	
(Indicate no of years' experience)	

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

N: CURRICULUM VITAE OF KEY PERSONNEL – SITE AGENT

The success of this project will largely depend on the ability of the **Key Personnel** to manage local resources that are largely unskilled. The Tenderer must indicate who they intend using for this function and must list the incumbent's experience.

Failure to provide proof of a suitable candidate to manage the work on a permanent basis on site during the currency of the contract will result in dis-qualification in terms of Clause F.2.1.

Site Agent:	**Years with firm:**
Qualifications:	
Employment Record:	
Experience Record Pertinent to Required Service: **(Indicate no of years' experience)**	

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

O: CURRICULUM VITAE OF KEY PERSONNEL – FOREMAN

The success of this project will largely depend on the ability of the **Key Personnel** to manage local resources that are largely unskilled. The Tenderer must indicate who they intend using for this function and must list the incumbent's experience.

Failure to provide proof of a suitable candidate to manage the work on a permanent basis on site during the currency of the contract will result in dis-qualification in terms of Clause F.2.1.

Foreman:	**Years with firm:**
Qualifications:	
Employment Record:	
Experience Record Pertinent to Required Service: **(Indicate no of years' experience)**	

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

P: CURRICULUM VITAE OF KEY PERSONNEL – SAFETY OCFFICER

The success of this project will largely depend on the ability of the **Key Personnel** to manage local resources that are largely unskilled. The Tenderer must indicate who they intend using for this function and must list the incumbent's experience.

Failure to provide proof of a suitable candidate to manage the work on a permanent basis on site during the currency of the contract will result in dis-qualification in terms of Clause F.2.1.

Safety Officer:	**Years with firm:**
Qualifications:	
Employment Record:	
Experience Record Pertinent to Required Service: **(Indicate no of years' experience)**	

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

Q: CURRICULUM VITAE OF KEY PERSONNEL – PLANT OPERATOR

The success of this project will largely depend on the ability of the **Key Personnel** to manage local resources that are largely unskilled. The Tenderer must indicate who they intend using for this function and must list the incumbent's experience.

Failure to provide proof of a suitable candidate to manage the work on a permanent basis on site during the currency of the contract will result in dis-qualification in terms of Clause F.2.1.

Plant Operator:	**Years with firm:**
Qualifications:	
Employment Record:	
Experience Record Pertinent to Required Service:	
(Indicate no of years' experience)	

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

R: SCHEDULE OF TENDERING FIRM'S EXPERIENCE (SIMILAR WORK AND ENVIRONMENT)

[REFER TO THE TENDER DATA FOR THE SCOPE OF WORK)

PROJECT NAME	DESCRIPTION	VALUE	REFERENCE

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

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

S: PROVISIONAL 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.

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.

PROGRAMME

WEEKS / MONTHS

ACTIVITY

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

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

T: SCHEDULE OF PLANT AND EQUIPMENT

It is important that the Tenderer be able to demonstrate that he/she has adequate plant and equipment to efficiently execute the proposed scope of works.

The Tenderer's response to this section will be used in assessing the eligibility of the tender offer.

(a) Details of important equipment that is owned by **and is immediately available for this contract.**

Quantity	Description	Size	Capacity

Attach additional pages if more space is required.

(b) Details of important equipment that will be hired, or acquired for this contract if my/our tender is acceptable.

Quantity	Description	Size	Capacity

Attach additional pages if more space is required.

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

U: CONTRACTOR/SERVICE PROVIDER'S HEALTH AND SAFETY DECLARATION

In terms of the Occupational Health and Safety Act No 85 of 1993 a Contractor may only be appointed to perform key services if the *Purchaser* is satisfied that the Contractor has the necessary competencies and resources to carry out the work safely in accordance with the provisions of the Act.

To that effect a person duly authorised by the tenderer must complete and sign the declaration hereafter in detail.

Declaration by Tenderer

1. I the undersigned hereby declare and confirm that I am fully conversant with the Occupational Health and Safety Act No 85 of 1993 (as amended by the Occupational Health and Safety Amendment Act No 181 of 1993) herein after referred to as the "Act"

2. I hereby declare that my company has the competence and the necessary resources to safely carry out the services specified under this contract in compliance with the Employer's Health and Safety Specifications.

3. I propose to achieve compliance with the Regulations by one of the following:

(a)	From my own competent resources	***Yes / No**
(b)	From my own resources still to be appointed or trained until competency is achieved	***Yes / No**
(c)	From outside sources by appointment of competent specialist subcontractors	***Yes / No**

(* = *delete whatever is not applicable*)

4. I confirm that copies of my company's approved Health and Safety Plan, will at all times be available for inspection by the *Purchaser*'s personnel, Nkomazi Local Municipality officials and inspectors of the Department of Labour.

5. I hereby confirm that adequate provision has been made in my tendered rates and prices in the schedule of quantities to cover the cost of all resources, actions, training and all health and safety measures envisaged in the Act and that I will be liable for any penalties that may be applied for failure to comply with the provisions of the Act.

6. I agree that my failure to complete and execute this declaration to the satisfaction of the *Purchaser* will mean that I am unable to comply with the requirements of the Act and accept that my tender will be prejudiced and may as a result be rejected at the discretion of the *Purchaser*.

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

V: CERTIFIED CIDB GRADING CERTIFICATE

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

X: BANK RATING LETTER

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

CONTRACT

PART C1: AGREEMENTS AND CONTRACT DATA

PART C2: PRICING DATA

PART C3: SCOPE OF WORK

PART C4: SITE INFORMATION

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

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C1.2: CONTRACT DATA

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C1.3: FORM OF GUARANTEE

C1.4: AGREEMENT WITH ADJUDICATOR

C1.5: AGREEMENT IN TERMS OF SECTION 37(2) OF THE OCCUPATIONAL HEALTH AND SAFETY ACT No 85 OF 1993

PART C2: PRICING DATA (YELLOW COLOUR)

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C4.1: LOCALITY PLAN

C4.2: CONSTRUCTION NOTICE BOARD

C4.3: TENDER DRAWINGS

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:

CONTRACT No. SCM BID NO. NKO:42/2026, CONSTRUCTION OF WATER RETICULATION ELEVATED TOWER AND BULK AT GRETANE

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 authorized, signing this part of this form of offer and acceptance, the tenderer offers to perform all of the obligations and liabilities of the contractor under the contract including compliance with all its terms and conditions according to their true intent and meaning for an amount to be determined in accordance with the conditions of contract identified in the contract data.

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

. . . . . .

Rand (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 . . . . . Date . . . . . .

Name . . . . . .

Capacity . . . . . .

for the tenderer
(Name and address of organization) . . . . . .

Name and Signature of witness . . . . .

The terms of the contract, are contained in:

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

and drawings and documents or parts thereof, which may be incorporated by reference into Parts 1 to 4 above.

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.

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 bonds, guarantees, proof of insurance and any other documentation to be provided in terms of the conditions of contract identified in the contract data. 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.

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

Name . . . . . .

Capacity . . . . . .

Employer Nkomazi Local Municipality
9 Park Street, Malelane, 1320

Name and signature of witness . . . . . .

Date . . . .

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

Schedule of Deviations

Notes:

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

1 Subject . . . . . .

Details . . . . . .

. . . . . .

. . . . . .

. . . . . .

2 Subject . . . . . .

Details . . . . . .

. . . . . .

. . . . . .

. . . . . .

3 Subject . . . . . .

Details . . . . . .

. . . . . .

. . . . . .

. . . . . .

4 Subject . . . . . .

Details . . . . . .

. . . . . .

. . . . . .

. . . . . .

By the duly authorized representatives signing this agreement, the employer and the tenderer agree to and accept the foregoing schedule of deviations as the only deviations from and amendments to the documents listed in the tender data and addenda thereto as listed in the 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

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

between the parties arising from this agreement.

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

. . . . . .

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

Name

CONSTRUCTION OF WATER RETICULATION ELEVATED TOWER AND BULK AT GRETANE

C1.2 Contract Data

Section 1.01 The General Conditions of Contract for Construction Works (2015) published by the South African Institution of Civil Engineering, is 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).

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 to which it mainly applies.

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

CONSTRUCTION OF WATER RETICULATION ELEVATED TOWER AND BULK AT GRETANE

BID NO: NKO: 42/2026

C1.2.1: CONDITIONS OF CONTRACT

GENERAL CONDITIONS OF CONTRACT

SPECIAL CONDITIONS OF CONTRACT

GENERAL

2. APPENDIX A: TRANSFER OF RIGHTS

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

C1.2.1 CONDITIONS OF CONTRACT

GENERAL CONDITIONS OF CONTRACT

This Contract will be based on the “General Conditions of Contract for Construction Works - Third Edition, 2015”, issued by the South African Institution of Civil Engineering (Short title: “General Conditions of Contract 2015") and can be obtained from:

SAICE
Waterfall Park
Howick Gardens
Vorna Valley Halfway House
Becker Street
MIDRAND
1685
Gauteng Province
Tel: (011) 805-5947/8
Fax: (011) 805-5971.

It is agreed that the only variations from the General Conditions of Contract 2015 are those set out hereafter under “Special Conditions of Contract”.

SPECIAL CONDITIONS OF CONTRACT

GENERAL

These Special Conditions of Contract (SCC) form an integral part of the Contract. The Special Conditions shall amplify, modify or supersede, as the case may be, the General Conditions of Contract 2015 to the extent specified below, and shall take precedence and shall govern.

The clauses of the Special Conditions hereafter are numbered “SCC” followed in each case by the number of the applicable clause or sub clause in the General Conditions of Conditions 2015, and the applicable heading, or (where a new special condition that has no relation to the existing clauses is introduced) by a number that follows after the last clause number in the General Conditions, and an appropriate heading.

Clause no.	Description
SCC 6.11 SCC 6.11.1.3	Replace the Heading with “VARIATIONS EXCEEDING 20 PERCENT” Replace the wording: ”greater than 15 percent” with “greater than 20 percent”.

APPENDIX A: TRANSFER OF RIGHTS

TRANSFER OF RIGHTS AND INDEMNITY (To be completed during construction by successful Tenderer only)

Claim for materials on site, Payment Certificate No. …… Date: ……..

Contract No: ……. for (contract title) ……..……

……..……

I, the undersigned (name of signatory) ……..…. in my capacity as

…….. of (name of Contractor) ……

duly authorized hereto on behalf of the Contractor hereby transfer, cede and assign all the Contractor's rights, title and interest in and to the materials and goods, for which evidence of bona fide ownership is attached hereto, unto and in favour of (name of Employer) . . . . . insofar as the Contractor retains actual control of the materials and goods, the right of ownership thereof passes to the Employer by constitutum possessorium.

I herewith indemnify the Employer against any claim to and in respect of said materials by reason of the Contractor's sequestration or liquidation or of any defect in the Contractor's title to the materials and agree that no payment for materials on site will be made by the Employer until such time as I have submitted documentary proof of bona fide ownership of the said materials and goods.

This transfer shall become effective upon conclusion of the Contractor receiving payment from the Employer or from any other person on behalf of the Employer for the materials and goods as materials on site, payment of retention money thereon excluded.

I further confirm that I am fully responsible for all materials and goods listed under this Transfer of Rights and that they have been insured adequately against all risks and will remain insured until they are built into or used in the Permanent Works and taken over by the Employer.

This certificate of Transfer of Rights applies only to the materials and goods as listed in the following table:

Description of Item	Unit	Quantity	Rate	Amount	Supplier

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

Total Value of Materials and goods					

Signed by: ……Date: ……..……..……
for and on behalf of the Contractor.

Witnessed by: ……. Date: ……

NOTE: This form, together with the documentary proof of ownership or proof of payment by the Contractor to the supplier, shall accompany the Contractor's claim for payment for materials on site in terms of Clause 6.10.1.5 of the General Conditions of Contract 2010.

C1.2.2 PART A: CONTRACT DATA PROVIDED BY THE EMPLOYER

The following Contract specific data are applicable to this Contract.

REFERENCE CONTRACT SPECIFIC DATA BY THE EMPLOYER

Clause

1.1.1.13 The Defects Liability Period is 12 months (measured from the date of the Certificate of Completion).

The time for achieving Practical Completion will be 15 months
(measured from the Commencement Date).

1.1.1.15 The name of the Employer is: Nkomazi Local Municipality

1.1.1.16 The Employers Agent is: JTMI Consulting Engineers (Pty) Ltd represented by a Director duly authorized thereto in writing.

1.1.1.26 The Pricing Strategy is: Re-measurement Contract

1.2.1.2 The Employer's address for receipt of communications is:

Physical address:
Telephone: 013 790 0245
Facsimile: 013 790 0886
Address (physical): 9 Park Street, Malelane, 1320
Address (postal): Private Bag X101, Malelane, 1320

1.2.1.2 The Employers Agent address for receipt of communications is:

18 Hospital Street
Arbor Park

Tzaneen
0850

Telephone: 087 093 2039

5.3.1 The documentation required before commencement with Works execution are:

Health and Safety Plan (Refer to Clause 4.3)
Initial programme (Refer to Clause 5.6)
Security (Refer to Clause 6.2)
Insurance (Refer to Clause 8.6)

3.1.3 The Engineer is required to obtain the specific approval of the Employer before executing any of the following: The Engineer requires the Clients approval in order to authorize any expenditure in excess of the tender sum excluding contingencies as per Clause 6.4.

5.3.2 The time to submit the documentation required before commencement with Works execution is fourteen (14) days after appointment.

5.4.2 The access and possession of site shall not be exclusive to the Contractor but as set out in the Site Information.

5.8.1 The non-working days are Sundays.
The special non-working days are:
1 Public holidays and voting days if published prior to the tender closing date.
2 The year end break commencing and ending on dates as specified by SAFCEC.

5.13.1 The penalty for failing to complete the Works within the abovementioned time limit, plus approved extensions of time or condonation thereof is R5000 per calendar day.

5.14.1: Practical Completion will be considered when:
The pipelines are successfully pressure tested and all earthworks are complete.

5.16.3 The latent defect period is ten (10) years for civil engineering works

6.5.1.2.3 The percentage allowance to cover overhead charges is 10%.

6.8.2 Contract Price Adjustment: The Contract shall be subject to Contract Price Adjustment.

The value of the certificates issued shall be adjusted in accordance with the Contract Price Adjustment Schedule included in the General Conditions of Contract.

The value of "x" is 0.15

The values of the coefficients are:

a = 0.2 Labour
b = 0.35 Contractor's equipment
c = 0.35 Material
d = 0.1 Fuel

Clause:
The Province wherein the larger part of the site is located is: Mpumalanga.

The applicable industry for the Producer Price Index for material is Diesel

The area for the Producer Price Index for fuel is: Belfast, Mpumalanga. (or closest listed location)

The base month is: the month prior to the closing of the tender.

6.8.3 Price adjustments for variations in the cost of special materials are allowed.

6.10.1.5 The percentage advance on materials not yet built into the Permanent Work is 80%.

6.10.3 The limit of retention money is 10% of the Contract Sum.

8.2.2 The safekeeping of all material paid as material on site not yet built into the works remains the responsibility of the contractor, although ownership rest with the client as per clause 6.10.1.5.

8.6.1.1.2 The value of Plant and materials supplied by the Employer to be included in the insurance sum is R Nil.

8.6.1.1.3 The amount to cover professional fees for repairing damage and loss to be included in the insurance sum is R 5,000,000.

8.6.1.3 The limit of indemnity for liability insurance is R 10 000 000 for any single claim, the number of claims to be unlimited during construction and Defects Liability Period.

8.6.1.5 No additional insurance is required

10.5.2 Dispute resolution is to be by means of ad-hoc adjudication

The number of Adjudication Board Members to be appointed is three.

10.7.1 Disputes to be referred for final settlement to arbitration

PART B: DATA PROVIDED BY THE CONTRACTOR

Clause

1.1.1.9 Name of Contractor: ……..

1.2.1.2 The Contractor's address for receipt of communications is:

Physical address: Postal address:

…… .....

…… .....

…… .....

…… .....

Telephone: .....

Fax: .....

E-mail: ……..……

The security to be provided by the Contractor shall be:

Performance guarantee of 10% of the Contract Sum plus retention of 10% of the value of the Works

NKOMAZI LOCAL MUNICIPALITY

CONSTRUCTION OF WATER RETICULATION ELEVATED TOWER AND BULK AT GRETANE

C1.3 Form of Guarantee

Contract No.: NKO. 42/2026

Appendix C:

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

PRO FORMA
PERFORMANCE GUARANTEE

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

GUARANTOR DETAILS AND DEFINITIONS
"Guarantor" means: ……
Physical address: ……
"Employer" means: ……
"Contractor" means: ……
"Employer's Agent" means:
……
"Works" means: ……
"Site" means: ……
"Contract" means: The Agreement made in terms of the Form of Offer and Acceptance and such amendments or additions to the Contract as may be agreed in writing between the parties.
"Contract Sum" means: The accepted amount inclusive of tax of R ……
Amount in words: ……
"Guaranteed Sum" means: The maximum aggregate amount of R ……
Amount in words: ……

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

Type of Performance Guarantee: …….. (Insert Variable or Fixed)
“Expiry Date” means: …… (Give date) or any other later date set by the Contractor and/or Employer provided such instruction is received prior to the Expiry Date as indicated here.

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

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

VARIABLE PERFORMANCE GUARANTEE
Where a Variable Performance Guarantee has been selected, the Guarantor's liability shall be limited during the following periods to diminishing amounts of the Guaranteed Sum as follows:
From and including the date of signing the Performance Guarantee up to and including the date of the interim payment certificate certifying, for the first time, more than 50% of the Contract Sum:
R……..
(Amount in words ……..……..)

From the day following the date of the said interim payment certificate up to and including the Expiry Date, or the date of issue by the Employer's Agent of the Certificate of Completion of the Works, whichever occurs first:
R……
(Amount in words ……..……)

The Employer's Agent and/or the Employer shall advise the Guarantor in writing of the date on which the interim payment certificate certifying, for the first time, more than 50% of the Contract Sum, has been issued and the date on which the Certificate of Completion of the Works has been issued.

FIXED PERFORMANCE GUARANTEE

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

CONDITIONS APPLICABLE TO VARIABLE AND FIXED PERFORMANCE GUARANTEES
The Guarantor hereby acknowledges that:
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.

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

Subject to the Guarantor's maximum liability referred to in 1.1 or 2.1, the Guarantor hereby undertakes to pay the Employer the sum certified upon receipt of the documents identified in 3.2.1 to 3.2.3:
A copy of a first written demand issued by the Employer to the Contractor stating that payment of a sum certified by the Employer's Agent in an Interim or Final Payment Certificate has not been made in terms of the Contract and failing such payment within seven (7) calendar days, the Employer intends to call upon the Guarantor to make payment in terms of 3.2.2;

A first written demand issued by the Employer to the Guarantor at the Guarantor's physical address with a copy to the Contractor stating that a period of seven (7) Days has elapsed since the first written demand in terms of 3.2.1 and the sum certified has still not been paid;

A copy of the aforesaid payment certificate which entitles the Employer to receive payment in terms of the Contract of the sum certified in 3.2.
Subject to the Guarantor's maximum liability referred to in 1.1 or 2.1, the Guarantor undertakes to pay to the Employer the Guaranteed Sum or the full outstanding balance upon receipt of a first written demand from the

Employer to the Guarantor at the Guarantor's physical address calling up this Performance Guarantee, such demand stating that:
the Contract has been terminated due to the Contractor's default and that this Performance Guarantee is called up in terms of 3.3; or
a provisional or final sequestration or liquidation court order has been granted against the Contractor and that the Performance Guarantee is called up in terms of 3.3; and
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.

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

It is recorded that the aggregate amount of payments required to be made by the Guarantor in terms of 3.2 and 3.3 shall not exceed the Guarantor's maximum liability in terms of 1.1 or 2.1.

Where the Guarantor has made payment in terms of 3.3, the Employer shall upon the date of issue of the Final Payment Certificate submit an expense account to the Guarantor showing how all monies received in terms of this Performance Guarantee have been expended and shall refund to the Guarantor any resulting surplus. All monies refunded to the Guarantor in terms of this Performance Guarantee shall bear interest at the prime overdraft rate of the Employer's bank compounded monthly and calculated from the date payment was made by the Guarantor to the Employer until the date of refund.

Payment by the Guarantor in terms of 3.2 or 3.3 shall be made within seven (7) calendar days upon receipt of the first written demand to the Guarantor.
Payment by the Guarantor in terms of 3.3 will only be made against the return of the original Performance Guarantee by the Employer.

The Employer shall have the absolute right to arrange his affairs with the Contractor in any manner which the Employer may consider fit and the Guarantor shall not have the right to claim his release from this Performance Guarantee on account of any conduct alleged to be prejudicial to the Guarantor.
The Guarantor chooses the physical address as stated above for the service of all notices for all purposes in connection herewith.

This Performance Guarantee is neither negotiable nor transferable and shall expire in terms of 1.1.2 or 2.2, where after no claims will be considered by the Guarantor. The original of this Guarantee shall be returned to the Guarantor after it has expired.

This Performance Guarantee, with the required demand notices in terms of 3.2 or 3.3, shall be regarded as a liquid document for the purposes of obtaining a court order.
Where this Performance Guarantee is issued in the Republic of South Africa the Guarantor hereby consents in terms of Section 45 of the Magistrates' Courts Act No 32 of 1944, as amended, to the jurisdiction of the Magistrate's Court of any district having jurisdiction in terms of Section 28 of the said Act, notwithstanding that the amount of the claim may exceed the jurisdiction of the Magistrate's Court.
Signed at ……
Date ……..
Guarantor's signatory (1) ……
Capacity……
Guarantor's signatory (2) ……..
Capacity ……..
Witness signatory (1) ……
Witness signatory (2) ……

C1.4: Agreement with Adjudicator:

This agreement is made on the.....day of ..... 20.....between: the Employer
(name of company / organisation).....
of (address).....
.....and the Contractor
(name of company / organisation) .....
of (address).....
..... (hereinafter called the Parties)

and
(name).....
of (address) .....
..... (hereinafter called the Adjudicator)

Disputes or differences may arise/have arisen* between the Parties under a Contract dated.....
and known as ..... (Insert Contract number)
(Contract title).....

and these disputes or differences shall be/have been* referred to adjudication in accordance with the CIDB Adjudication Procedure, (hereinafter called "the Procedure") and the Adjudicator may be or has been requested to act.
(* Delete as necessary)

IT IS NOW AGREED as follows:

The rights and obligations of the Adjudicator and the Parties shall be as set out in the Procedure.

The Adjudicator hereby accepts the appointment and agrees to conduct the adjudication in accordance with the Procedure.

The Parties bind themselves jointly and severally to pay the Adjudicator's fees and expenses in accordance with the Procedure as set out in the Contract Data.

The Parties and the Adjudicator shall at all times maintain the confidentiality of the adjudication and shall endeavour to ensure that anyone acting on their behalf or through them will do likewise, save with the consent of the other Parties which consent shall not be unreasonably refused.

The Adjudicator shall inform the Parties if he intends to destroy the documents which have been sent to him in relation to the adjudication and he shall retain documents for a further period at the request of either Party.

SIGNED by:

(Signature):	(Signature):	(Signature): .....
Name:	Name:	Name: .....
who warrants that he/ she is duly authorised to sign for and on behalf of the First Party in the presence of	who warrants that he/ she is duly authorised to sign for and on behalf of the Second Party in the presence of	the Adjudicator in the presence of
Witness:	Witness:	Witness:
(Signature).....	(Signature).....	(Signature).....
Name:	Name:	Name:

Address: ..... Address: ..... Address: .....
....
....

Date: ..... Date: ..... Date: .....

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

C1.5: Agreement in terms of Section 37(2) of the Occupational Health and Safety Act No 85 of 1993

THIS AGREEMENT is made between the Nkomazi Local Municipality

(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 authorised to sign on behalf of the Contractor.

WHEREAS:

The Municipality and the mandatory entered into a written, alternatively oral agreement on the……...Day of ……20…….. in terms of which the Mandatory undertook to carry out the following work for the Municipality, viz. (give a short description of the type of contract work to be done as well as the address where work will be done)

_____

_____

_____

(The said contract work is hereinafter referred to as the Work)

The Occupational Health and Safety Act, Act 85 of 1993 as amended (hereinafter referred to as the Act) contains amongst others certain provisions with regard to the health and safety of people at work and in connection with the usage of plant and machinery, as well as the protection of other persons than persons at work against hazards to health and safety that originates from or in connection with the activities of persons at work.

Section 37(2) of the Act makes provision for the exclusion by the parties, by way of a written agreement, of supposition and accompanying liability of the Municipality as stipulated in section 37(1) of the Act.

The parties have reached consensus with regard to the terms and conditions to which they agree in terms of the provisions of section 37(2) of the Act.

THE PARTIES AGREE AS FOLLOWS

WRITTEN AGREEMENT

The parties herewith agree in terms of section 37(2) of the Act on the arrangements and procedures that must be followed to ensure compliance with the provisions of the Act by the Mandatory.

ACKNOWLEDGEMENT BY THE MANDATORY

The mandatory acknowledge herewith that he is fully acquainted with the contents of the Act, as well as with all regulations and SABS codes of practice that have been made in terms of section 43 of the Act.

UNDERTAKING BY MANDATORY

The Mandatory hereby undertakes and binds himself to the Municipality to ensure prompt and strict compliance with the provisions of the Act and the said regulations as well as with the provisions included in this Safety Agreement at all times during the execution of the Works

It is hereby recorded that the provisions of this Safety Agreement as set out hereinafter are in no way intended to restrict the duties of the Mandatory, nor to exempt the Mandatory from his obligation in accordance with the Act and the said regulations

PERSONAL PROTECTIVE EQUIPMENT

It is compulsory to wear equipment for eye protection when working in an eye protection zone or where the Work requires eye protection.

It is compulsory to wear safety helmets when working in a safety helmet zone or where the Work requires safety helmets.

It is compulsory to wear hearing protection when working in a noise zone or where the Work requires hearing protection.

The wearing of other protective clothing and equipment as prescribed by the Occupational Health and Safety Officer of Nkomazi Municipality is compulsory.

The Mandatory shall ensure that the statutory requirements are complied with at all times.

FENCING AND GENERAL MACHINERY PROTECTION

No shield or fencing may be removed from or be moved at any machinery or installation without written permission.

SCAFFOLDING, LADDERS, TOOLS, ET CETERA

The Mandatory without the written permission of the Municipality may use no equipment or tools that belong to the Municipality.

Except where agreed beforehand the Mandatory shall provide enough tools and equipment to enable him to complete the Works and the Mandatory shall provide all storerooms, offices and eating halls that he may need. The Mandatory will be responsible for all his material on site.

In special case where the Municipality may lend equipment, tools, or materials to the Mandatory, the Mandatory will use such equipment, tools and/or materials at his own risk and the Mandatory herewith indemnifies the Municipality against any liability of whichever nature or from any cause whatsoever, whether direct or indirect, that may arise from such usage.

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

SERVICES AND WORKING METHODS

The written permission of the Chief Executive/Town Clerk of the Municipality shall be obtained where any work which must be undertaken by the Mandatory is connected with a working process or machinery or any other service in connection therewith, or may possibly affect it, before he commences with such work.

Approval shall be obtained from the City Electrical Engineer of the Municipality before any equipment is connected to the electrical supply of the Municipality All equipment shall be isolated before any equipment is connected to the electrical supply of the Municipality. It shall be isolated and be provided with earth leakage protection. Electrical machinery, portable electrical tools, and portable lights must comply with the requirements of the applicable regulations.

Work permits must be issued in terms of the Occupational Health and Safety Act and Regulations when the nature of the work requires it. Permits must be issued by the relevant departmental head where necessary.

EXCAVATIONS

Written permission for excavations shall be obtained from the City Engineer of the Municipality and the Mandatory shall make sure of the existence and position of electrical cables, discharge pipes, gas lines, water conduits, et cetera before he commences with any excavation work.

All excavations and obstructions and/or any openings in platforms or floors shall be enclosed in a safe way and warning notices shall be erected to ensure absolute safety. An adequate number of red or orange caution lights shall be provided when it is dark or should bad light prevail.

The area surrounding excavations shall be kept in a safe, orderly, and tidy condition. No loose material of whatever nature may be left in walkways or workplaces or be allowed to block walkways or workplaces.

Nobody may enter into any restricted area in which hazardous fumes or a shortage of oxygen exists without a permit giving permission to do so, issued by the head of the relevant department of the Municipality and until it has been certified safe for entrance by the Occupational Health and Safety Officer and the Health Inspector of the Municipality.

RESTRICTION TO WORKPLACE

Employees of the Mandatory shall be restricted to their workplaces except when they have to leave their area for work purposes or when they visit toilets.

SUBCONTRACTORS

The Mandatory shall ensure that all subcontractors receive a copy of this safety agreement and must ensure they comply with it.

OCCUPATIONAL HEALTH AND SAFETY OFFICER AND THE REPORTING OF ALL ACCIDENTS

The Occupational Health and Safety Officer of the Municipality is available for consultation and he will make periodical visits to the workplace of the Mandatory. Any hazardous occurrence or incident to the employees of the Mandatory that results in absence from work for a period longer than three days shall be reported in writing to the Occupational Health and Safety Officer of the Municipality within forty eight hours as well as to the Department of Labour as specified by the Act. Every user, employer, occupier, builder, or excavator must, under this Act, keep record of all accidents that occur.

In the case of an accident that results in loss of life, nobody may disturb the scene of the accident or any articles involved in the accident prior to the arrival of the Occupational Health and Safety Officer and the Inspector, unless it is to prevent another accident from happening or the prevention of loss of life or to remove corpses.

The Occupational Health and Safety Officer will issue contravention notices to the Mandatory or a sub-contractor when there is a non-compliance and will specify the time in which it must be rectified.

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

The Occupational Health and Safety Officer will issue work stop notices to the Mandatory or sub-contractor whenever he is of the opinion that the health and safety of any person at work is threatened or that the contravention notices are not adhered to.

FIRST AID

Where five or more persons are employed at a workplace, the Mandatory shall provide and maintain an adequately equipped first-aid box that meets the following requirements.

Every first-aid box shall contain the minimum contents as prescribed by the Occupational Health and Safety Act.

Nothing except articles and equipment required for first-aid purposes may be kept in the first-aid box.

Each first-aid box shall be kept in a place readily accessible in case of an accident.

All first-aid boxes shall be placed under control of a responsible person except where five or less persons are at work. The responsible person must be in the possession of a valid first-aid certificate issued by one of the following organisations:

A South-African Red Cross Society
B St. John's Ambulance Foundation
C South-African First-Aid League

A notice indicating where the first-aid box is kept as well as the name of the person in charge, shall be affixed in a conspicuous place. The first-aid facilities of the Municipality may be used during emergencies.

FIRE PREVENTION MEASURES AND STORAGE OF FLAMMABLE MATERIAL

The Fire department of the Municipality shall be notified before any welding, oxyacetylene welding, cutting, burning of paint or tar from floors or roofs is undertaken so that the necessary fire prevention measures can be arranged. All "NO SMOKING AND OPEN SURFACE FIRES/LIGHTS PROHIBITED" notices shall be adhered to. The Mandatory and his senior employee shall acquaint themselves and their fellow workers with the fire prevention measures of the Municipality, which will also include fire alarm notices and exits in case of fire, and they shall ensure that these rules are strictly complied with.

COMPLETION OF WORK

Before the mandatory or his sub-contractors leaves the site they shall inform the Head of the relevant Department of the Municipality and obtain his/her written approval that the work has been completed satisfactory and that the site of the work is left in a good condition.

SALVAGED MATERIAL AND EQUIPMENT

Any building demolished or equipment or materials that are salvaged whilst carrying out the work shall remain the property of the Municipality, unless the contract specifically provides otherwise.

BREAKING OF THESE RULES AND POOR CONDUCT

The Mandatory is warned that no behaviour that causes danger to their own employees, to the employees of the Municipality or general public will be tolerated. The Occupational Health and Safety Officer of the Municipality reserves the right of the withdrawal of any employees of the Mandatory or Municipality from the premises in the case of any default or breach of the agreement and to order that the completion of the work be stayed, pending compliance with this agreement; alternatively to cancel the agreement referred to in par.2 in which event the Municipality will be entitled to appoint an alternative contractor to complete the work and recover the costs thereof from the mandatory, without prejudice to any alternative or additional right or action or remedy to the Municipality, to recover from the mandatory damages for the default or breach and the cancellation.

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

The senior employees of the Mandatory shall sign a note of acknowledgement of this safety agreement to certify that they have received the regulations as included herein and that they understand the regulations

INTOXICATION

Nobody that is in a state of intoxication or that is in any other condition that causes or may cause his/her incapability to control him/herself or persons under his control may and shall not be permitted on the premises of the Municipality. The Occupational Health and Safety Officer of the Municipality reserves the right to the withdrawal of any employees of the Mandatory or Municipality from the premises in the case of any transgression of this nature.

CONFIDENTIALLY

The Mandatory shall at all times treat data and information that have been made known to him or that he requires in connection with his work from the Municipality as confidential and he may not make unauthorized use thereof. He must also ensure that such data and information are not communicated to anybody else that is not an employee of the Mandatory without obtaining prior written approval from the Municipality and he must further ensure that such persons do in fact know that the said information is confidential and that they are obliged to treat it as such.

The Mandatory shall provide for adequate physical protection for any confidential documents, sketches, et cetera that he receives from the Municipality in connection with the work as well as for any copies thereof that he makes. He shall hand back all documents sketches and copies thereof to the Municipality upon completion of the work, or earlier, if so requested by the Municipality. The Mandatory shall inform the Municipality immediately should any such documents or sketches become lost.

INDEMNIFICATION BY THE MANDATORY

The following conditions will be applicable to the Mandatory:

The Mandatory is liable and herewith indemnifies the Municipality irrevocably and in full against any claim for loss or damage to property or arising from death or injury of any person and any associated loss or damage suffered, and against all lawsuits, claims, demands, costs, expenses, and charges that may arise when the said occurrences are caused on purpose or through the negligence, violation of legal obligations or failure by the Mandatory or its employees.

Whenever any of the employees of the Municipality is busy with work to, or with the supply of material that will be used during the execution of the work by the Mandatory, or otherwise busy with work under the instruction and supervision of the Mandatory, in as far as they may be negligent or fail to do their duty, they will be regarded as employees of the mandatory

All installations, equipment, hoisting-apparatus and other implements, scaffolding, ladders, material, et cetera that are borrowed from the Municipality by the Mandatory for usage during the execution of the work, will be used entirely at the risk of the Mandatory or employees of the Mandatory and the Mandatory herewith indemnifies the Municipality irrevocably and in full against any liability that may arise from such usage.

AMENDMENTS MUST BE IN WRITING

The parties agree herewith that this safety agreement is the only safety agreement between them and that no amendment thereof will be valid unless it is in writing and signed by both parties.

JURISDICTION AND LEGAL COSTS

In the event of any legal action being instituted pertaining to this agreement the party in default or breach will be liable for the other party’s legal costs on the scale as between attorney and own client and the parties consent to the jurisdiction of the magistrate’s court for purpose of any legal action being instituted.

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

PARTICULARS OF THE MANDATORY

Name (Mandatory) _____

C.E.O. (Section 16(1)) _____

ID NO _____

Designation _____

Name of Business _____

Address of Business _____

_____

_____

_____

Tel number (h) _____ (w) _____ e-mail _____

Number of employees employed _____

Registration number as allocated to the Mandatory by the Workman's Compensation Commissioner

_____

Date allocated _____

Thus done and signed on this _____ day of _____ 20 _____

As witnesses:

_____ (Signature) _____ (Name in print)

_____ (Signature) _____ (Name in print)

_____(Signature) _____ (Name in print)

THE MANDATORY

Thus done and signed on this day of 20

As witnesses

_____ (Signature) _____ (Name in print)

_____ (Signature) _____ (Name in print)

_____ (Signature)_____ (Name in print)

THE MUNICIPALITY

Acknowledgement of receipt of the agreement:

_____

THE MANDATORY

C2 PRICING DATA

C2.1 Pricing Instructions

1. Measurement and payment shall be in accordance with the relevant provisions of the SANS1200 Specification as amended in the Scope of Works. subject to the variations and amendments contained in the Section C3.5 Project Specifications.

Descriptions in the Bill of Quantities are abbreviated and comply generally with those in the Standardised Specifications. Clause 8 of each Standardised Specification, read together with the relevant clauses of Part C3: Scope of Work, set out what ancillary or associated activities are included in the rates for the operations specified.

Should any requirements of the measurement and payment clause of the applicable Standardised Specification, or the Scope of Work, conflict with the terms of the Bill of Quantities, the Employer's Agent shall direct the applicable requirements.

The clauses in a specification in which further information regarding the listed items in the Bill of Quantities can be obtained appear under "Payment Reference" column.

The reference clauses indicated are not necessarily the only sources of information in respect of billed items. Further information and set specifications may be found in Section C3.5 Project Specifications. Standardised Specifications are identified by the letter or letters which follow "SANS" in the SANS 1200 series of specifications, e.g. G for SABS 1200 G.

Unless otherwise stated, items are measured net in accordance with the drawings and no allowance is made for waste. The quantities set out in the Bill of Quantities are approximate and do not necessarily represent the actual amount of work to be done. The quantities of work accepted and certified for payment will be used for determining payments due only.

The prices and rates to be inserted in the Bill of Quantities are to be the full inclusive prices for the work described under the various items. The prices and rates shall cover all costs and expenses that may be required in and for the execution of the work described, and shall cover the cost of all general risks, liabilities, and obligations set forth or implied in the documents on which the tender is based, as well as overhead charges and profit. The prices will be used as a basis for assessment of payment for additional work that may have to be carried out.

It will be assumed that prices included in these Bill of Quantities are based on Acts, Ordinances, Regulations, By-laws, International Standards and National Standards that were published 28 days before the closing date for tenders. (Refer to www.stanza.org or www.iso.org for information on standards).

Where the Scope of Work requires detailed drawings and designs or other information to be provided, all costs associated therewith are deemed to have been provided for and included in the unit rates and sum amount tendered such items

A price or rate is to be entered against each item in the Bill of Quantities, whether the quantities are stated or not. An item against which no price is entered will be considered to be covered by the other prices or rates in the Bill of Quantities and recorded as zero. A single lump sum will apply should a number of items be grouped together for pricing purposes.

Except where rates only are required, the Tenderer shall insert all amounts to be included in his total tendered price in the "Amount" column and show the corresponding total tendered price.

2. The units of measurement described in these Bills of Quantities are metric units. Abbreviations used in the Bills of Quantities are as follows:

Ha	=	hectare
h	=	hour
kℓ	=	kilolitre
kg	=	kilogram
km	=	kilometre
kW	=	kilowatt
km-pass	=	kilometre pass
MN	=	Mega Newton
kPa	=	kilopascal
MN.m	=	Mega Newton- metre
ℓ	=	litre
%	=	percentage
m	=	metre
PC Sum	=	Prime Cost Sum
mm	=	millimetre
P Sum	=	Provisional Sum
PS/m	=	Provisional Sum per month
PS/d	=	Provisional Sum per day
Sum/wd	=	Sum per working day
m2	=	square metre
No.	=	number
m2.pass	=	square metre-pass
R/Only	=	Rate Only
m3	=	cubic metre
Sum	=	lump sum
m3.km	=	cubic metre-kilometre
t	=	ton (1 000 kg)
MPa	=	Mega Pascal
W/day	=	Work day
%	=	percentage
mth	=	month

NOTE: The schedule of quantities shall be completed in BLACK INK.

3. For the purpose of these Bills 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 SANS 1200 Standard Specification.
Quantity:	The number of units of work for each item.
Rate:	The agreed payment per unit of measurement.
Amount:	The product of the quantity and the agreed rate for an item.
Lump sum:	An agreed amount for an item, the extent of which is described in the Bills of Quantities but the quantity of work of which is not measured in any units.

4. Unless otherwise stated, items are measured net in accordance with the drawings, and no allowance is made for waste.

C2.2 Bill of Quantities

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

ITEM NO	PAYMENT REFERS TO	DISCRIPTION	UNIT	TENDER QTY	RATE	TENDER AMOUNT
	SABS 1200A 1200AB PSA PSAB	**SCHEDULE 1 : PRELIMINARY AND GENERAL**				
1,1	8.2.1 PSA8.2.1	**FIXED CHARGE AND VALUE RELATED ITEMS**				
1.1.1	8.3.1	Contractual Requirements	Sum	1,0		
1.1.2	8.3.2	**Establish Facilities on the Site :**				
1.1.2.1	8.3.2.1	Facilities for Engineer (SABS 1200 AB) (Provisional)				
		a) Office for CLO and Engineer's use	Sum	1,0		
		b) Nameboard(s)	No	1,0		
1.1.2.2	PSAB8.2.4	Survey Equipment and Assistant(s)	Sum	1,0		
1.1.2.3	8.3.2.2 PSA8.3.2.1	Facilities for Contractor				
		a) Offices and storage sheds	Sum	1,0		
		b) Workshops	Sum	1,0		
	PSA8.3.2.2c)	c) Laboratories	Sum	1,0		
		d) Living accommodation	Sum	1,0		
		e) Ablution and latrine facilities	Sum	1,0		
		f) Tools and equipment	Sum	1,0		
		g) Water supplies, electric power and communications	Sum	1,0		
		h) Dealing with water	Sum	1,0		
	PSA8.3.2.2 i)	i) Access	Sum	1,0		
		j) Dealing with water	Sum	1,0		
		k) Plant	Sum	1,0		
1.1.3		**Occupational Health and Safety**				
		a) General safety equipment	Sum	1,0		
		b) Preparation of a Health and Safety Plan	Sum	1,0		
1.1.4	8.3.3	Other fixed-charge obligations	Sum	1,0		
1.1.5	8.3.4	Remove Engineer's and Contractor's Site establishment on completion	Sum	1,0		
1,2	8,4	**TIME-RELATED ITEMS**				
1.2.1	8.4.1	Contractual Requirements	Sum	1,0		
1.2.2	8.4.2	**Operate and maintain facilities on the Site**				
1.2.2.1	8.4.2.1	Facilities for Engineer for duration of construction (SABS 1200 AB) (Provisional)				
		a) Office for CLO and Engineer's use	Sum	1,0		
		c) Nameboard(s)	No	1,0		
	PSAB8.2.4	d) Survey assistant and equipment	Sum	1,0		
1.2.2.2	8.4.2.2	Facilities for Contractor for duration of construction, except where otherwise stated				
		a) Offices and storage sheds	Sum	1,0		
		b) Workshops	Sum	1,0		
		c) Laboratories	Sum	1,0		
		d) Living accommodation	Sum	1,0		
		e) Ablution and latrine facilities	Sum	1,0		
		f) Tools and equipment	Sum	1,0		
		g) Water supplies, electric power and communications	Sum	1,0		
		h) Dealing with water	Sum	1,0		
		i) Access	Sum	1,0		
		i) Dealing with water	Sum	1,0		
CARRIED FORWARD						

		BROUGHT FORWARD						
		j) Plant	Sum	1,0				
1.2.3		**Occupational Health and Safety**						
1.2.3.1		Allow for complience with all aspects of the OH&S Act No 85, 1993 including: risk assessment; provision of safety plan; appointment of safety officer; safety training (induction) of workforce and notification(s) to the Department of Labour	Sum	1,0				
1.2.4	8.4.3	Supervision for duration of the construction	Sum	1,0				
1.2.5	8.4.4	Company and head office overhead costs for the duration of the contract	Sum	1,0				
1.2.6	8.4.5	Other time related obligations	Sum	1,0				
1.3	**8.5**	**SUMS STATED PROVISIONALLY BY THE ENGINEER**						
1.3.1		Employment of a Community Liaison Officer for the duration of the contract @ R6500 / month	Prov Sum	15,0	R	6 500,00	R	97 500,00
1.3.2		Allowance for the appointment of an Occupational Health and safety Consultant. The entity appointed is to be approved by the Client	Prov Sum	P/M	R	30 000,00	R	600 000,00
1.3.3		Laboratory tests as required by Engineer	Prov Sum				R	200 000,00
1.3.4		Extra over item 1.3.2 for the administration of payment	%					
1.3.5		Accredited Training for labourers	Prov Sum				R	300 000,00
1.3.6		Allowance for social facilitator	Prov Sum				R	450 000,00
1.3.7		Allowance for 2x inservice training students to be nomimated by client	Prov Sum				R	195 000,00
1.3.8		Extra over item 1.3.5 to 1.3.8 for the administration of payment	%	1,0				
1.4	8,8	**TEMPORARY WORKS**						
1.4.1	8.8.2 PSA8.8.2a)	Dealing with traffic in general	Sum	1,0				
1.4.2	PSA8.8.7	Protection of Survey Pegs	Sum	1,0				
1.4.3	PSA 8.9	Management of labour intensive work	Sum	1,0				
1.4.4	PSA8.12	Workmans's Compensation Act (Application)	Sum	1,0				
1.4.5	PSA8.13	Setting out of works and tasks	Sum	1,0				
TOTAL SCHEDULE 1 CARRIED FORWARD TO SUMMARY: SCHEDULE 1								

2		**SCHEDULE 2 : PIPELINE CONSTRUCTION**				
2.1	SABS 1200C 1200DB PSC PSDB	**SITE CLEARANCE:**				
2.1.1	8.2.1a) PSC8.2.1a)	Clear vegetation and trees of girth up to 0,25m (2m wide)	m	58756		
2.1.2	8.2.1b) PSC8.2.1b)	Clear trees of girth over 0,25m and designated objects	No	10		
2.1.3	SABS 1200C 8.2.5	Remove and re-erect fences	m	2000		
2.2	SABS 1200DB	**EARTHWORKS (PIPE TRENCHES)**				
	8.3.2 PSDB8.3.2(a)	Excavation in all materials for trenches,backfill and compact to 93% mod AASHTO density by labour intensive methods and dispose of Surplus Material, all within the freehaul distance				
2.2.1		Exceeding 0m but not exceeding 1,5m	m	58756		
2.2.2		Exceeding 1,5m but not exceeding 2,0m (Provisional)	m	100		Rate only
	8.3.2b) 8.3.2b1)	**Extra-over item 2.2.1 to 2.2.2 for intermediate excavation (Provisional)**				
2.2.3		Exceeding 0m but not exceeding 1,5m	m³	4000		
	8.3.2b2)	**Hard rock excavation (Provisional)**				
2.2.4		Exceeding 0m but not exceeding 1,5m	m³	2000		
2.2.5	8.3.2.c)	Excavate and dispose of unsuitable material from trench bottom (Provisional)	m³	600		
	8.3.3.1	**Make up dificiency in backfill material**				
2.2.6	8.3.3.1b)	Import backfill material from designated borrow pits (Provisional)	m³	4150		
2.2.7	8.3.3.3	Compaction of trenches across road reserves	m³	100		
	8.3.3.4 PSDB8.3.3.4	**Overhaul**				
2.2.8		a) Long overhaul over 0,5 km (Provisional)	m³.km	35000		
		Exisisting Services that Intersect or Adjoin a Pipe Trench				
2.2.9	8.3.5a)	Services that intersect a trench	No	150		
2.2.10	8.3.5b)	Services that adjoin a trench	m	7400		
2.2.11		Excavation by hand to expose existing services	m³	120		
2.3	SABS 1200LB PSLB	**BEDDING PIPES**				
2.3.1	8.2.1 PSLB8.2.1	Provision of selected granular Bedding material and fill blanket from Trench Excavations (flexible pipes):	m³	8011		
	8.2.2	**Provision of selected granular Bedding material by Importation**				
2.3.2	8.2.2.2	From borrow pits (Provisional)	m³	2000		
2.3.3	8.2.2.3	From commercial sources (Provisional)	m³	2000		
2.3.4	8.2.5 PSLB8.2.5	**Overhaul of Material for Bedding Cradle and Selected Fill Blanket**				
		a) Wheelbarrow haul	m³.km			Rate only
		b) Tractor and trailer haul	m³.km			Rate only
		c) Truck haul	m³.km	35000		
2.4	SABS 1200L PSL	**MEDIUM PRESSURE PIPELINES**				
2.4.1		**uPVC Pipes**				
	PSL8.2.1	**Supply, Lay, Bed, Test, Disinfect Pipes Complete with Couplings**				
	PSL8.2.1	**Class 9**				
2.4.1.1		75mm Ø uPVC	m	37782		
2.4.1.2		90mm Ø uPVC	m	0		Rate only
2.4.1.3		110mm Ø uPVC	m	9805		
2.4.1.4		160mm Ø uPVC	m	7000		
2.4.1.5		200mm Ø uPVC	m	1935		
2.4.1.6		250mm Ø uPVC	m	2235		
		CARRIED FORWARD				**R -**

Contractor | Witness 1 | Witness 2 | Employer | Witness 1 | Witness 2

		BROUGHT FORWARD				
	PSL8.2.1	**Class 12**				
2.4.1.7		75mm Ø uPVC	m	100		Rate only
2.4.2		**Extra over item 2.4.1 for Fittings for uPVC Pipes**				
		Bends (Socketed - PN 16)				
	PSL8.2.1	**uPVC 90° Bends**				
2.4.2.1		75mm Ø uPVC	No	100		
2.4.2.2		110mm Ø uPVC	No	15		
2.4.2.3		160mm Ø uPVC	No	25		
2.4.2.4		200mm Ø uPVC	No	2		
2.4.2.4		250mm Ø uPVC	No	6		
	PSL8.2.1	**uPVC 45° Bends**				
2.4.2.4		75mm Ø uPVC	No	85		
2.4.2.5		200mm Ø uPVC	No	16		
	PSL8.2.1	**uPVC 22½° Bends**				
2.4.2.6		75mm Ø uPVC	No	150		
2.4.2.7		110mm Ø uPVC	No	10		
2.4.2.8		160mm Ø uPVC	No	30		
2.4.2.8		200mm Ø uPVC	No	5		
2.4.2.8		250mm Ø uPVC	No	10		
	PSL8.2.1	**uPVC 11¼° Bends**				
2.4.2.9		75mm Ø uPVC	No	100		
2.4.2.10		90mm Ø uPVC	No	1		
2.4.2.11		110mm Ø uPVC	No	10		
2.4.2.12		160mm Ø uPVC	No	30		
2.4.2.13		200mm Ø uPVC	No	3		
2.4.2.14		250mm Ø uPVC	No	8		
		Tees (Cast iron)				
	PSL8.2.1	**Equal Tees for uPVC pipes (socketed PN 16):**				
2.4.2.15		75mm	No	85		
2.4.2.16		90mm	No	1		
2.4.2.17		160mm	No	2		
2.4.2.18		200mm	No	5		
	PSL8.2.1	**Reducing Tees (Cast iron) for uPVC pipes (socketed PN 16):**				
2.4.2.19		110 x 75mm	No	15		
2.4.2.20		160 x 75mm	No	45		
2.4.2.20		160 x 110mm	No	15		
2.4.2.20		200 x 160mm	No	10		
2.4.2.20		250 x 200mm	No	2		
		Cross (Cast iron)				
	PSL8.2.1	**Equal Cross for uPVC pipes (socketed PN 16):**				
2.4.2.21		75mm	No	50		
2.4.2.22		110mm	No	1		
2.4.2.23		160mm	No	4		
	PSL8.2.1	**Reducing Cross (Cast iron) for uPVC pipes (socketed PN 16):**				
2.4.2.24		110 x 75mm	No	11		
2.4.2.25		160 x 75mm	No	25		
2.4.2.26		160 x 110mm	No	25		
2.4.2.27		200 x 160mm	No	8		
2.4.2.28		250 x 200mm	No	1		
		CARRIED FORWARD				

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

		BROUGHT FORWARD				
	PSL8.2.1	**Reducers (Cast iron for uPVC pipes PN 16)**				
2.4.2.29		90 x 75mm Ø	No	1		
2.4.2.30		110 x 75mm Ø	No	110		
2.4.2.31		110 x 90mm Ø	No	1		
2.4.2.32		160 x 75mm Ø	No	32		
2.4.2.33		160 x 110mm Ø	No	20		
2.4.2.34		200 x 110mm Ø	No	3		
2.4.2.35		200 x 160mm Ø	No	8		
2.4.2.36		250 x 160mm Ø	No	1		
2.4.2.37		250 x 200mm Ø	No	1		
	PSL8.2.1	**End caps (Cast iron for uPVC pipes PN 16)**				
2.4.2.38		75mm Ø	No	26		
	PSL8.2.1	**Repair couplings (Cast iron for uPVC pipes PN 16)**				
2.4.2.39		75mm Ø	No	2		
2.4.2.40		110mm Ø	No	2		
2.4.2.41		160mm Ø	No	2		
2.4.3		**Route markers**				
2.4.3.1		Route markers complete as per Drawing	No	20		
2.4.4		**Extra over 2.4.1 for the Supplying, Fixing and bedding of Valves**				
	8.2.3	**Gate valves (Right hand closing - socketed) RSV or similar approved class 16**				
2.4.4.1		80mm Ø	No	20		
2.4.4.2		100mm Ø	No	5		
2.4.4.3		150mm Ø	No	10		
2.4.4.4		200mm Ø	No	3		
2.4.4.5		250mm Ø	No	5		
2.4.4.6		300mm Ø	No	1		Rate only
	8.2.3	**Gate valves (Right hand closing - flanged - drilled in accordance with SABS 1123 Table 16) RSV or similar approved - class 16 (Provisional)**				
2.4.4.7		80mm Ø	No	1		Rate only
2.4.4.8		100mm Ø	No	1		Rate only
2.4.4.9		150mm Ø	No	1		Rate only
	8.2.3	**Scour valves (Right hand closing - class 16 -flanged - drilled SABS 1123 Table 16 - complete with scour-tee, couplings,fittings, valve box as per drawing GS-M103-01)**				
2.4.4.10		250mm Ø	No	5		
	8.2.3	**Air valves (Double acting - complete with fittings, couplings, valve box as per drawing GS-M103-01) "Ventomat" or similar approved PN 16**				
2.4.4.11		50mm Ø	No	1		Rate Only!
2.4.4.12		80mm Ø	No	1		Rate only
2.4.5		**Fire Hydrants PN 16:**				
2.4.5.1	8.2.3 PSL8.2.3	80mm dia Pretoria type complete as per Drawing GS-M101-01	No	8		
2.4.6	8.2.13 LI	**Valve box for isolating valves:** (Complete as per drawing GS-M101-01 installed in concrete with uPVC extension)	No	20		
2.4.7	8.2.13 LI	**Line Valve chamber with pipes specials and isolating valve as per drawing GS-M102-01 complete**	No	2		
2.4.8	8.2.11 LI	**Thrust / Anchor Blocks:**				
2.4.8.1		Concrete volume < 0,8m³ as per Drawing	No	450		
		CARRIED FORWARD				

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

		BROUGHT FORWARD						
2.5	SABS 1200LF PSLF	**ERF CONNECTIONS (WATER)**						
2.5.1		**Provision and installation of stand connections complete with excavations, pipes, backfilling, reinforced saddle, fittings and couplings and HDPE Class 12 connection pipes as per drawing (excluding water meter and standpipe)**						
		(a)Short Single Erf Connection (see dwg MS-M106-01) - water meter and standpipe measured seperately	No	750				
		(b) Short Double Erf Connection (see dwg GS-M106-01) - water meter and standpipe measured seperately	No					Rate only
		(c) Long single Erf Connection including road crossing (see dwg GS-M106-01) - water meter and standpipe measured seperately	No	750				
		(d) Long Double Erf Connection including road crossing (see dwg GS-M106-01) - water meter and standpipe measured seperately	No					Rate only
2.5.2		**Supply and install a 15mm Sensus water meter, complete with econobox, flow restrictor and consumer valve (or similar approved)**	No	1500				
2.5.3		**Supply and install a 20mm galvanised stand tap complete with 20mm colour tap and concrete apron soakaway - see dwg GS-M106-01**	No	1500				
2.6		**Miscellaneous**						
2.6.1		Hand Excavation to confirm size and position of existing pipelines	m^3	100				
2.6.2		Repairing of pipelines and connecting existing lines to new lines at reservoir complex	Prov Sum		R	150 000,00	R	150 000,00
2.6.3		Remove of all informal house connections including: excavate 1.8m^3 by hand, remove exisitng connection, allowance for supply and install of (75mm to 110mm) saddle with a 25mm nipple, connect new saddle to existing standpipe.	No	50				
2.6.4		Locating existing services (electrical supply lines, stormwater, telecom lines)- additional to item 2.2.11 for hiring of specialised equipment for detection	Prov Sum		R	25 000,00	R	25 000,00
2.6.5		Allowance for 15m long horizontal drilling (600mm) in intermediate material, HDPE RHO Struct Sleeve, 500mm stainless steel clamps, inclusive of site establishment and installation.	Prov Sum	1	R	135 000,00	R	135 000,00
TOTAL SCHEDULE 2 CARRIED FORWARD TO SUMMARY: SCHEDULE 2								

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

SCHEDULE 3 : BOOSTER PUMP STATION

ITEM NO	PAYM. REF.	DESCRIPTION	UNIT	QUANT.	RATE	AMOUNT
3,1	**SANS 1200C**	**SITE CLEARENCE**				
3.1.1		**Clear and grub site for newbooster pump station**				
		(a) Clear vegetation and trees of girth up to 1m	m^2	45		
		(b) Clear trees of girth over 1m	No	2		Rate Only
3,2	**SANS 1200DA**	**EARTHWORKS**				
3.2.1		**EXCAVATIONS FOR STRUCTURES**				
3.2.1.1	8.3.2	**Excavation in all material and use for backfill, compacted to 90% Mod AASHTO density, or embarkment or dispose of surplus material**	m^3	15		
3.2.1.2	8.3.2	**Extra over item 3.2.1.1 for**				
		(a) Intermediate excavation	m^3	5		
		(b) Hard rock excavation	m^3	1		
3,3	**SANS 1200G**	**BACKFILLING AND BEDDING**				
3.3.1	8.3.4	**Imported backfill material from designated borrow-pit, compact to 90% AASHTO density (unless otherwise indicated) and finishing off of area, for:**				
		(a) Backfilling around structures	m^3	6		
		(b) Backfilling (150mm layer) under structures and compacted to 98% Mod AASHTO max density	m^3	8		
3,4	**SANS 1200G**	**CONCRETE**				
3.4.1	8.4.3	**Grade 15/20 mss concrete for pipe support blocks and / or as instructed by the Engineer**	m^3	1		
3.4.2	8.4.2	**Grade 15/20 blinding, 50mm thick**	m^2	22		
3.4.3		Grade 25/20 strength reinforced concrete in:				
		(a) Floorslabs and foundations	m^3	6,5		
		(b) Pump foundations	m^3	1,6		
		(c) Roofslab	m^3	5,5		
		(d) Ramps and apron slabs	m^3	1,5		
		(e) Screed to fall on floor slabs	m^2	18		
3,5	**SANS 1200G 8.1.1**	**FORMWORK**				
3.5.1	8.2.2	**Smooth vertical formwork to pump foundations and roof**	m^2	5		
3.5.1		**Smooth horizontal formwork to roof slab**	m^2	25		
3,6	**SANS 1200G**	**UNFORMED SURFACE FINISHES**				
3.6.1	8.4.4a)	**Wood float finish**				
		(a) Surface beds, ramps and apron slabs	m^2	45		
		(b) Roof slab	m^2	25		
3.6.2	8.4.4.b)	**Steel float finish**				
		(a) Pump foundations	m^2	2,5		
		(b) Pipe supports	m^2	1		
3,7	**SANS 1200G 8.1.2**	**REINFORCEMENTS**				
3.7.1	8.3.1	**Mild steel bars**				
		(a) 8mm	t	0,05		
		(b) 10mm	t	0,5		
3.7.2	8.3.1	**High tensile steel bars**				
		(a) 10mm	t	0,5		
		(b) 12mm	t	1,5		
		(c) 16mm	t	1		
		SUB-TOTAL CARRIED FORWARD				

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

		SUB-TOTAL BROUGHT FORWARD				
3.7.3	8.3.2	**High tensile steel mesh** (a) Ref no.395 (b) Ref no.888	 m^2 m^2	 18,00		 Rate Only
3,8	**PA**	**BRICKWORK AND MASONARY**				
3.8.1		**230mm brickwork with general purpose bricks on the inside and semi face brick on the outside as approved by the engineer**	m^2	85		
3.8.2		**12mm thick smooth finish plaster**	m^2	55		
3.8.3		**Air ventilation brick**	No	4		
3.8.4		**Brick on edge window-sills**	m	2		
3.8.5		**Concrete lintel, 2400 x 105 x 75mm over window frame**	No	2		
3,9		**METAL, TIMBER AND ANCILLARY WORKS**				
3.9.1		**Steel window types:** (a) NE88 fitted with louvres (b) Pressed steel transformer type DV door with frame and vents, 1829m x 3.230m high	 No No	 1 1		
3.9.2		**Painting to inside walls with undercoat and two coats washable paint**	m^2	55		
3.9.3		**Painting of all steelwork including door, window and crawl beam with undercoat and two coats washable paint**	m^2	15		
3,10		**MISCELLANEUOS ITEMS**				
3.10.1		**9KG Fire extinguisher**	No	1		
3.10.2		**203x203x46kg/m H beam (6.0m long) including anchor bolts for hoist beam crawl trolley mechanism**	Sum	1		
3,11	**PC,PD,PE**	**PUMP AND CONTROL EQUIPMENT**				
3.11.1	PD8.1	**KSB ETA type pump units, delivering 50l/s @ 50m, complete with suitable electrical motors and pump base or similar approved**	No	2		
3.11.2	PC20	**Pump control panel, including a no-flow switch, pressure switch and level control ball switches (x5) to control the pumps (Allen Bradley switch gear or similar approved) Level control ball switches to be in supply reservoir**	Prov Sum	1	R 250 000,00	R 250 000,00
3.11.3	PC11, to PC19	**Wiring, lighting and plugs including 2 external LED flood lights, 2 internal fluorescent lights, 1 plug, surface mount steel conduits and light switches**	Sum	1		
3.11.4		**Light protection**	Sum	1		
3.11.5		**Miri telemetry system relying reservoir levels and pump status**	Prov Sum	1	R 250 000,00	R 250 000,00
3,12		**PIPE WORKS** All pipework, fittings, flanges to table 1600/3 of SANS 1123, supports, jointing etc for the complete pumpstation excluding valves, airvalves and non-return valves for:				
3.1.2.1		**200mm suction pipe works as per drawings** (a) Item 1 (b) Item 3	 No No	 2 2		
		SUB-TOTAL CARRIED FORWARD				

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

		SUB-TOTAL BROUGHT FORWARD				
		(c) Item 4	No	1		
		(d) Item 5	No	1		
		(e) Item 6	No	1		
		(f) Item 7	No	2		
		(g) Item 8	No	1		
3.12.2		**200mm delivery pipe works as per drawings**				
		(a) Item 11	No	2		
		(b) Item 14	No	2		
		(c) Item 16	No	3		
		(d) Item 17	No	1		
		(e) Item 18	No	1		
		(f) Item 19	No	1		
		(g) Item 21	No	1		
		(h) Item 24	No	1		
		(i) Item 25	No	1		
		(j) Item 26	No	2		
3,13		**VALVES AND OTHER MISCELLANEUOS**				
3.13.1		**Supply and install complete with all fittings, bolts, nuts etc the following:**				
3.13.2		**200mm dia class 16 flanged RSV Gate Valve complelte with hand wheel (Hawle, AVK or similar approved)**	No	4		
3.14.3		**150mm Angle pattern Bermad Pump Control valve complete**	No	2		
3.14.4		**50mm dia class 10 H.C ball valve**	No	1		
3.14.5		**50mm dia class 10 Vent-O-Mat Series RBX double ofifice air valve**	No	1		
3.14.6		**Glycerine filled vacuum / pressure gauges with faceplate diameters of at least 100mm, fitted to the inlet of each pump**	No	2		
3,14		**GENERAL ALLOWANCES**				
3.14.1		**Allow for power supply and connection to the booster pump station**	Prov Sum	1	R 250 000,00	R 250 000,00
		TOTAL SCHEDULE 3 CARRIED FORWARD TO SUMMARY				

ITEM NO	PAYM. REF.	DESCRIPTION	UNIT	QUANT.	RATE	AMOUNT
		SECTIONAL STEEL TANK				
4,1	**SABS 1200 C**	**SITE CLEARENCE:**				
4.1.1	8.2.1	Clear and grub site for steel water tank	m^2	420		
4,2	**SANS 1200DA**	**EARTHWORKS**				
4.2.1		**EXCAVATIONS FOR STRUCTURES:**				
4.3.1.1	8.3.2	Excavation in all materials for tank foundations and use for backfill, compacted to 95% AASHTO density, or embankment or dispose of surplus materials as instructed	m^3	420		
	8.3.2	Extra-over item 2.2.1 for				
4.2.1.2		a) Intermediate excavation	m^3	1		
4.2.1.3		b) Hard rock excavation	m^3	15		
4.2.2	**SANS 1200D**	**BACKFILLING AND BEDDING**				
4.2.2.1	8.3.4	a) Imported backfill material from designated borrow pit, compact to95% AASHTO density (unless otherwise indicated) and finishing off of area, for:	m^3	30		
4.2.2.2		b) Backfilling (150mm layer) under structures and compacted to 98% mod.AASHTO max. density	m^3	130		
4,3	**SABS 1200G**	**CONCRETE**				
4.3.1	**8.1.3** 8.4.3	Grade 15/20 mass concrete for pipe support blocks and / or as instructed by the Engineer	m^3	35		
		Grade 25/20 strength reinforced concrete in:				
4.3.2		a) Foundations and stub columns	m^3	208		
4.3.3		Grouting under base palte ABE Duragrout or similar approved	m^3	30		
4,4	**SANS 1200G**	**FORMWORK:**				
4.4.1	8.2.2	Smooth vertical formwork to tank foundations	m^2	480		
4,5	**SANS 1200G**	**UNFORMED SURFACE FINISHES:**				
	8.4.4a	Wood float finish				
4.5.1	**SANS 1200G**	a) Top of foundation walls	m^2	64	R 45,00	
4,6	**SANS 1200G**	**REINFORCEMENT**				
		Mild /steel bars				
4.6.1	8.3.1	a) 8mm	t	1,01		
	8.3.1	High tensile steel bars				
4.6.2		a) 12mm	t	2,79		
4.6.3		b) 16mm	t	21,52		
	8.3.2	High tensile steel mesh				
4.6.4		a) Ref no 395	m^2	200		Rate Only
4.6.5		b) Ref no 888	m^2	400		Rate Only
		CARRIED FORWARD				

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

		BROUGHT FORWARD				
4,7	**SABS 1200L**	**PIPE WORKS**				
4.7.1		a) 150mm steel for inlet pipe complete	Sum	1		
4.7.2		b) 150mm steel for scour pipe complete	Sum	1		
4.7.3		c) 150mm steel for outlet pipe complete	Sum	1		
4.7.3		d) 150mm steel for overflow pipe complete	Sum	1		
4.7.4		e) 150mm y-strainer	no	1		
4.7.5	**8.2.13**	**Valve Chamber:** Complete as per Drawings	no	2		
4,8		**MISCELLANEOUS**				
4.8.1		Supply , deliver to site and install 20m Elevated 1000Kl sectional steel tank complete with all pipes and access ladder	Sum	1		
		TOTAL SCHEDULE 4 CARRIED FORWARD TO SUMMARY				

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

ITEM NO	PAYM. REF.	LI	DESCRIPTION	UNIT	QUANT.	RATE	AMOUNT
			5 ML GRETANE RESERVOIR				
5,1	SABS 1200C		**SITE CLEARANCE**				
5.1.1	8.2.1	LI	Clear and grub reservoir site	ha	0,11		
5.1.2		LI	Remove and grub large trees and tree stumps of girth a) over 1m and up to and including 2m	No	2		
5,2	SABS 1200D		**EARTHWORKS**				
5.2.1	8.3.1.2	LI	Remove topsoil to nominal depth 150 mm, stockpile on site and maintain	m²	1100		
5.2.2	8.3.2a)	LI	Bulk excavation and use for embankment or backfill, compacted to 90% MOD AASHTO density, or dispose of as ordered, within 1,5km free haul distance	m³	2200		
5.2.3	8.3.2b)		Extra over items 5.2.2 for a) Intermediate material	m³	440		
			b) Hard rock excavation	m³	330		
5.2.4	8.3.4		Importation of G5 material from an open borrow pit within 1,5km freehaul distance, place in backfill and compact to 95% MOD AASHTO density	m³	1320		
5.2.5		LI	Trimming of excavated surfaces for concreting or blinding	m²	380		
5.2.6	8.3.10	LI	Top soiling on embankments	m²	500		
5,3	SANS 1200G 8.4		**CONCRETE**				
5.3.1		LI	Grade 25/20 mass concrete underneath floor joints / for pipe encasement and/or as instructed by the Engineer	m³	10		
5.3.2	**PSG8.4.7**	LI	1:8 (cement : 20 mm aggregate) by mass no fines concrete in subsoil drainage under floorslabs (100mm thick):	m²	685		
5.3.3	8.4.3		Grade 30/19 strength reinforced concrete in:				
		LI	(a) Foundations	m³	230		
			(b) Floor slab	m³	135		
			(c) Walls and columns	m³	465		
			(d) Roof and roof beam	m³	240		
5,4	SABS 1200G 8.2		**FORMWORK:**				
5.4.1	8.2.2		**Rough / Smooth off shutter :**				
			(a) Rough, vertical for wall and column foundations	m²	5		Rate only
			(b) Smooth, vertical for wall and column foundations	m²	1105		
			CARRIED FORWARD				

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

			BROUGHT FORWARD				
			(c) Smooth, vertical for reservoir walls	m²	13460		
			(d) Smooth, vertical for sides of roof slab and roof beam	m²	75		
			(e) Smooth, vertical for column, head included	m²	90		
			(f) Smooth, vertical for joints in floor slab	m²	16		
			(g) Smooth, horizontal for roof soffit	m²	940		
			(h) Chamfered edges (30mm x 30mm) to roof slab parapet	m	550		
			(i) Drip Groove to soffit at roof slab edge (40mm x 20mm) as per detail drawing	m	110		
5.4.2	8.2.6		**Box out holes/form voids**				
			(a) Small, circular with diam. up to and including 350 mm in reservoir wall for pipe work	No.			
			(b) Small, circular with diam. up to and including 350 mm in reservoir roof for ventilators	No.	8		
			(c) Manhole in roof, 600 x 900 mm complete with cover, frame and locking mechanism	No	2		
			UNFORMED SURFACE FINISHES :				
5,5	SANS						
5.5.1	1200G 8.4.4		Wood float finish				
		LI	a) Top of outlet pipe chamber roof slab	m²	10		
5.5.2			Steel float finish				
		LI	a) Top of reservoir roof slab	m²	920		
		LI	b) Top of reservoir floor slab	m²	685		
		LI	c) Top of chambers / floor slab	m²	6		
5,6	8.3		**REINFORCEMENT**				
5.6.1	8.3.1		Mild/steel bars				
		LI	a) 10mm	t			Rate only
		LI	b) 12mm	t			Rate only
5.6.2	8.3.1		High tensile steel bars				
		LI	a) 10mm	t	4,2		
		LI	b) 12mm	t	1,0		
		LI	c) 16mm	t	9		
		LI	d) 20mm	t	57		
		LI	e) 25mm	t	60		
5.6.3	8.3.2		High tensile steel bars				
		LI	a) Ref. no. 617	m²	1365		
			CARRIED FORWARD				

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

			BROUGHT FORWARD				
5,7	8,5		**JOINTS**				
			Supply all materials (waterstops, sealants, etc.) according to details and form joints between:				
			(a) Wall foundations and floor slabs - 200mm centre bulb	m	95		
			(b) Column foundations and floor slab- 200mm centre bulb	m			
			(c) Floor slab panels - Rearguard 200mm	m	60		
			(d) Roof slab and wall	m²	51		
			(e) Construction joints in wall - penebar	m	390		
			(f) Walls and wall footings- 200mm centre bulb	m	110		
	SABS						
5,8	1200 HA		**STRUCTURAL STEELWORK**				
5.8.1	8.3.2		Galvanized handrails				
			a) Rails only to suit radius of reservoir roof	m	110		
			b) Stanchions top mounted Incl HD bolts	No	220		
			c) Bends and end closures	No	4		
5.8.2	8.3.3		Ladders with safety rings, complete as per drawing, including fasteners and chemical anchor bolts into concrete				
			a) External , Grade 340 W structural steel, hot dipped galvanised	No	1		
			b) Internal , Grade 340 W structural steel, hot dipped galvanized	No	1		
5.8.3		LI	Supply and install hot dipped galvanised pipe brackets for inlet and overflow-pipe	No	6		
5.8.4		LI	Supply and install hot dip galvanised roof-vents on reservoir roof, complete	No	8		
			Supply and install 100 mm diam. PVC rain water down pipes with full bores.	No.	8		
5.8.5		LI	Supply and install a hot dip galvanised 5mm Vastrap plate covers and				
			a) 900x600mm as per details	No			
5.8.6			Allow for the complete disinfection of the reservoir and all pipework	Sum	1		
5.8.7			Water tightness testing of reservoir and all pipework	Sum	1		
5.8.8			Casting, curing, and testing of concrete test cubes on 7, 14 & 28 days	No	211		
			CARRIED FORWARD				

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

			BROUGHT FORWARD				
5,9	SABS 1200 L PSL		**MEDIUM-PRESSURE PIPELINE** **NOTE:** All steel pipes and fittings shall be treated inside and outside				
5.9.1			Supply and install the subsoil-drainage pipe, 110mm dia DuroCor single wall slotted pipe or similar approved in the subsoil drainage system, including all fittings, joints, bends, etc	m	170		
			Supply, install, commission and test the following pipework and fittings:				
5.9.2			**300mm Inlet Pipeworks as per dwg**				
		LI	Inlet pipe: Supply all materials and install 300 mm diam. flanged galvanised steel inlet pipe to inlet valve chamber as per drawing (pipe pieces I1 to I8 on pipe schedule) - Excavation, backfill and connection to inlet valve chamber included.	Sum	1		
5.9.3			**350mm Outlet Pipeworks as per dwg**				
		LI	Outlet pipe: Supply all material and install 350 mm diam. flanged galvanised steel outlet pipe to outlet chamber as per Drawing (pipe pieces D1 to D5 on pipe schedule) - Excavation, backfill and connection to outlet valve chamber included.	Sum	1		
5.9.4			**200mm Scour Pipeworks as per dwg**				
		LI	Scour Pipe: Supply all material and install 200 mm diam. flanged galvanised steel scour pipe as per drawing (pipe pieces SC1 to SC5 on pipe schedule) - Excavation, backfill and connection toscour valve chamber included.	Sum	1		
5.9.5			**350mm Overflow Pipeworks as per dwg**				
		LI	Overflow pipe: Supply all material and install 350 mm diam. flanged galvanised steel overflow pipe as per Drawing (pipe pieces O1 to O10 on pipe schedule) - Excavation, backfill and connection included.	Sum	1		
5.10			**VALVES AND OTHER MISCELLANEOUS EQUIPMENT** Supply and install complete with all fittings, bolts, nuts, etc the				
5.10.1		LI	Supply all material and build new inlet valve chamber complete with manhole cover as per drawing.	Sum	1		
5.10.2		LI	Supply all material and build new outlet valve chamber complete with manhole cover as per drawing.	Sum	1		
			CARRIED FORWARD				

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

			BROUGHT FORWARD				
5.10.3		LI	Supply all material and build new scour valve chamber complete with manhole cover as per drawing.	Sum	1		
5.10.4		LI	Supply all material and build new water meter chamber complete with cover (include meter, valves, strainer, 250mm Sensus meter and pipe pieces as per detail drawing).	Sum	1		
5.11			**CONCRETE ANCILLARIES**				
5.11.1			Waterproof roof with 4mm bituthene torchon waterproofing	m²	940		
5.11.2			Supply 19 mm washed concrete stone and place 150 mm thick layer	m³	160		
5.11.3			Allowance for level controll valve at existing reservoir	Prov sum			R50 000,00
5.12			**MISCELLANEOUS**				
5.12.1			Allowance for additional interconnections at reservoir as required by client as well as rerouting of pipeline	Prov sum			R150 000,00
			TOTAL SCHEDULE 5 CARRIED FORWARD TO SUMMARY				

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

ITEM NO	PAYM. REF.	DESCRIPTION	UNIT	QUANT.	RATE	AMOUNT
6,1		**DAYWORKS LABOUR**				
		(a) Contractor's representative	hr	40		Rate Only
		(b) Surveyor	hr	40		Rate Only
		(c) Qualified artisan	hr	80		Rate Only
		(d) Foreman, leader-hand (9 hr/workday)	workday	10		Rate Only
		(e) Semi-skilled labourer (9 hr/workday)	workday	20		Rate Only
		(f) Labourer (9 hr/workday)	workday	100		Rate Only
6,2		**PLANT HIRE: WORK RATES ON SITE**				
6.2.1		**Tipper truck**				
		(a) $5m^3$ (small) (specify capacity ……)	hr	30		Rate Only
		(b) $10m^3$ (small) (specify capacity ……	hr	30		Rate Only
6.2.2		**Flat bed truck**				
		(a) 5 ton (small) (specify capacity ……	km	1000		Rate Only
6.2.3		**LDV**	km	250		Rate Only
6.2.4		**Wheel Loader**				
		... ……..…..m^3 bucket (specify type (a) ……..……)	km	45		Rate Only
6.2.5		**Bull dozer**				
		(a) ……m^3 (small)	hr	45		Rate Only
6.2.6		**TLB (Tractor, Loader, Backhoe)**				
		(a) …… m^3 bucket (specify type	hr	45		Rate Only
6.2.7		**Compactor**				
		(a) ……(specify applied force) ……	hr	90		Rate Only
6,2,8		**Concrete mixer**				
		(a) ……(small towable) (specify: dry or wet capaci	hr	45		Rate Only
6.2.9		**Miscellaneuous**				
		(a) Compressor with capacity of ±$10m^3$/min	hr	45		Rate Only
		(b) Water pump with 80mm outlet - diesel driven	hr	45		Rate Only
		TOTAL SCHEDULE 6 CARRIED FORWARD TO SUMMARY				**Rate Only**

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

NKOMAZI LOCAL MUNICIPALITY

CONSTRUCTION OF WATER RETICULATION AND ELEVATED TOWER AT GRETANE

SUMMARY OF BILL OF QUANTITIES

SCHEDULE	DESCRIPTION	TOTAL OFFER AMOUNT
1	Preliminary & General	
2	Water Reticulation	
3	Pump Station	
4	1000 KL Elevated Steel Tank	
5	5ML Concrete reservoir	
6	Dayworks	
SUB TOTAL A		
Allow 10% of Sub Total A for Contingencies to be used at the discretion of the Employer and deducted in whole or in part if not required		
SUB TOTAL B		
Value-Added Tax (VAT) at 15% of Sub Total B		
TOTAL OFFER AMOUNT		

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

C3 SCOPE OF WORK

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

C3.1 Engineering

C3.2 Procurement

C3.3 Standard specifications

C3.4 Project Specifications

Part A: Civil: Part A1 – General
Part A2 – Variations to Standard Specifications
Part A3 – Particular Specifications

C3.5 Management

C3.6 Annexes

Annex 1: Environmental Management Plan
Annex 2: Occupational Health and Safety Specification

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

C3.1 ENGINEERING

DRAWINGS ISSUED WITH THIS DOCUMENT

The reduced drawings bound with this document are issued as indicated for “Tender Purposes only” and shall not be used for construction purposes. Drawings will be appropriately amended before being issued for construction purposes. Additional and detailed drawings will be furnished by the Engineer as the works proceeds.

The following drawings are applicable to the contract:

Stage	Drawing No.	Division							
P = Preliminary, B = Bid, C = Construction		C = Civil, W = Water, S = Structural							
Drawing Description		Stage	Division	Section & Drawing No.				Rev No.	
Locality plan - GRETANE	JTMI-101	B	C	0	0	0	1	A	0
Gretane Water Reticulation	JTMI-102	B	C	0	0	0	2	A	0
Elevated steel tank Drawing	JTMI-103	B	C	0	1	0	3	A	0
5ML Reservoir Floor Layout	JTMI-104	B	C	0	1	0	4	A	0
5ML Reservoir RoofLayout Pan & Details	JTMI-105	B	C	0	1	0	5	A	0
Reservoir Ladder Details	JTMI-106	B	C	0	1	0	6	A	0
Reservoir Supply and Delivery Details	JTMI-107	B	C	0	1	0	7	A	0
Booster Pump Station Detail	JTMI-108	B	C	0	0	0	8	A	0
Isolation Valve Details	JTMI-109	B	C	0	0	0	9	A	0
Reservoir Inlet Details	JTMI-110	B	C	0	0	0	10	A	0
Reservoir Outlet Details	JTMI-111	B	C	0	0	0	11	A	0
Air Valve and Scour Details	JTMI-112	B	C	0	0	0	12	A	0
Pressure Reducing Valve Detail	JTMI-113	B	C	0	0	0	13	A	0
Yard Connection Type and Stand Pipe Detail	JTMI-114	B	C	0	0	0	14	A	0
Thrust Block and Trench Details	JTMI-115	B	C	0	0	0	15	A	0

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

C3.2 PROCUREMENT

C3.2.1 PREFERENTIAL PROCUREMENT PROCEDURES

The works shall be executed in accordance with the conditions attached to preferences granted in accordance with the Preferencing Schedules (MBD 6.1, Returnable Schedules)

C3.2.2 SUBCONTRACTING

Clause 4.4 of the General Conditions of Contract makes provision for subcontracting. Subcontract work provides opportunities for small or specialist businesses and can also be used to secure contract participation goal credits for HDI participation or other specific goals, where applicable. In the interests of all parties, the Contractor shall enter into a written subcontract agreement with each Subcontractor.

Contract participation goal credits may not be claimed for work undertaken in respect of provisional sums and prime cost items. The work subcontracted to contractors is subject to the following conditions:

- The main contractor must employ/appoint appropriately graded CIDB registered sub-contractors only.
- The value of the subcontracted work for any subcontractor does not exceed the maximum amount allowed for under his CIDB grading;
- The sub-contractors shall be registered on the Central Supplier Database (National Treasury)

The Contractor must provide documented proof to the Employer's satisfaction that any and all the work in this contract complies with these conditions throughout the course of the execution of the works, failure of which leads to the Contractor forfeiting 10% of the total value of the certified payment certificate for the works, for that month.

Where monetary allowances for provisional sums or prime costs items have been allowed, the Contractor shall invite three quotations from suitably qualified subcontractors, etc. for the required scope of works. The selection of the Subcontractors, etc. shall be approved by the Engineer.

C3.3 STANDARD SPECIFICATIONS

The standard specifications on which this contract is based are the South African Bureau of Standard Standardized Specifications for Civil Engineering Construction SANS 1200. (Note to complier “SABS” has been changed to “SANS”; the SABS 1200 specifications are due to be replaced in the foreseeable future by SANS 1200).

The Standard Specifications for all associated civil work applicable to this Contract shall be:

SANS 1200 A	:	General
SANS 1200 AB	:	Engineer’s Office
SANS 1200 C	:	Site Clearance
SANS 1200 DA	:	Earthworks (small works)
SANS 1200 DB	:	Earthworks (pipe trenches)
SANS 1200G	:	Concrete – Structural
SANS 1200H	:	Structural steelwork
SANS 1200HA	:	Structural Steelwork (Sundry Items)
SANS 1200LB	:	Bedding (Pipes)
SANS 1200L	:	Medium pressure pipelines
SANS 1200LF	:	Erf connections (water)

These Specifications are not issued with this volume but are available at the Contractor’s expense from Standards South Africa:

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C3.4 PROJECT SPECIFICATIONS

STATUS

The project specification, consists of three parts for the Civil works and forms an integral part of the contract and supplements the standard specifications.

Part A1 contains a general description of the civil works, the site and the requirements to be met and detailed specifications.

Part A2 contains variations, amendments and additions to the standard civil specifications.

Part A3 contains particular civil 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 A1 - GENERAL

PS1 PROJECT DESCRIPTION

1.1 Employer's objectives

The Employer's objective is to provide access to clean water to the residents of Gretane through a reticulation system that terminates at the yard connections within each property. The employer's objective is also to deliver public infrastructure using labour intensive methods and in so doing provide workplace training opportunities to local labour.

1.2 Overview of the works

The contract covers the installation of water reticulation in the settlement of Gretane. The project includes the installation of 68 756m of uPvC water reticulation pipes and internal bulk pipelines varying in size between 75mm dia. and 250mm dia. with 1500 yard connections with water meters and standpipes and installation of a 1ML Elevated(20m) steel tank, installation of pumps and motors, building a pump house and construction of 5Ml concrete reservoir. The expected construction period is fifteen (15) months.

1.3 Extent of the works

- Setting out
- Site clearing
- Pipeline excavation
- Preparation of bedding
- Laying and bedding of uPVC pipelines
- Installation of selected fill material
- Backfilling
- Installation of yard connections with water meters and standpipes
- Installation of isolating valves
- Installation of pressure control valves
- Installation of air valves on internal bulk lines
- Construction of valve chambers
- Pressure testing of all pipelines
- Neatly finishing off all works to the satisfaction of the local authority.
- Arranging for the successfully carrying out of all services to the satisfaction of the Local Authority.
- Installation of 1Ml elevated steel tank with all pipe works complete
- Installation of Pumps and Motors.
- Building of a pump house.
- Construction of 5Ml concrete reservoir.

PS2 DESCRIPTION OF THE SITE AND ACCESS

2.1 Location of the works and access

The project is located in Gretane village in the Nkomazi Local Municipality (NLM). Gretane is located in the Northern Nkomazi water supply area, East of Naas and approximately 48.6km South of Malelane. Gretane is supplied from the Naas Water Treatment works and falls within the Naas water supply scheme.

The settlement can be reached via the N4 -R570 road network.

Tenderer's must allow for all conditions on site in their tenders, since extra claims arising from difficult site conditions in respect to transport, handling, loading, off-loading, labor, housing, etc., will not be entertained.

Access routes to the site shall at all times be kept serviceable, or alternatives shall be provided. These include road entrances that may have to be kept closed overnight.

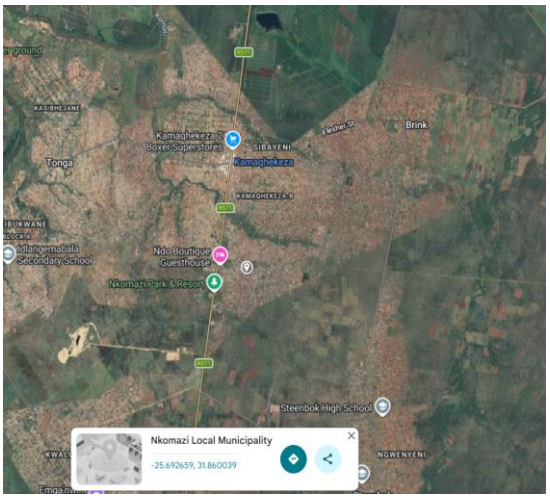

Figure 1: Locality Plan

The project is within the Nkomazi Local Municipality at the following coordinates.

AREA	LATITUDE	LONGITUDE
GRETANE	25°41'32.77"S	31°51'42.92"E

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

PS3 DETAILS OF THE WORKS

3.1 Brief description of works

1. Supply and installation of the following pipes:

Class 9	
75mm Ø uPVC	37 782 m
110mm Ø uPVC	9 805 m
160mm Ø uPVC	7 000 m
200mm Ø uPVC	1 935 m
250mm Ø uPVC	2 235 m

2. Installation of 1500 yard connections with water meters and standpipes
3. Installation of isolating valves
4. Installation of pressure control valves
5. Installation of air valves on internal bulk lines
6. Installation of 1000KL Elevated Sectional steel tank.
7. Installation of pumps and motors
8. Building a pump house.
9. Construction of tank footings.
10. Construction of 5Ml concrete reservoir.
11. Construction of valve chambers
12. Ancillary works

3.2 Nature of stratum on site

Soil tests were done on site and the information can be obtained from the Engineer. Contractor must price the SoQ as is and price for the intermediate material and rock allowed.

3.3 Construction in confined areas

The Tenderer shall take cognisance of the fact that the WORKS is not a green field site and work is constructed in a built-up area. A minimum disruption of the normal day to day activities of people must be allowed for in the planning and execution of the works.

3.4 Labour intensive and subcontracting

Activities to be performed by hand are as follows:

- Soft excavation
- Pipe laying

- Pipe bedding to required standards
- Pipe backfilling to required standards
- Formwork to valve chambers and thrust blocks
- Small concrete works
- Installation of pipe specials

The activities are identified in the Bill of Quantities using the prefix “LI”. Such works shall be constructed using local workers who are temporarily employed in terms of this Scope of Work.
Typical work that can be subcontracted (not limited to the items below) are;

- Excavations
- Bedding
- Pipelaying
- Formwork
- Concrete works
- Installation of pipe specials
- Reinforcement
- Building work

3.5 Environmental conditions of site

No specific severe environmental conditions were identified for the project site.

3.6 Attendance on other contractors

No other contractors will be on site except for the appointed contractor and the sub-contractors appointed by the contractor. No attendance on other contractors is therefore allowed for.

3.7 Temporary works

All the temporary works will be within the site and shall have minor negative effects on the environment. The contractor shall take full responsibility of the temporary works’ appropriateness, safety, erection and dismantling. Some of the temporary works will include:

- Dewatering of excavations
- Accommodation of traffic
- Site Offices and associated facilities
- Location and protection of existing services
- Formwork for concrete works
- Shoring of excavations where required

.

PS4 CONSTRUCTION PROGRAMME

4.1 General

The submission of a construction programme as stated per clause 15 of the general conditions of contract is compulsory.

Before any work is to be commenced on the site (within a period as stated in clause 15.2 of the general conditions of contract), the contractor must submit a detailed project programme for the construction of the works to the engineer for his approval.

The programme must consist of a detailed schedule or block diagram covering all aspects of the works and the planned time thereof must, with the contract period as time basis, be shown.

Rainfall conditions will be taken as abnormal when the average rainfall, as shown in the contract data, is exceeded and the contractor must then apply in writing for extension of the contract period using clause 5.12 of the special conditions of contract.

The contractor shall submit to the engineer a realistic, detailed programme not later than 14 days after receipt of the letter of acceptance. The programme shall be in bar-chart format showing in detail how the contractor proposes to complete the work covered by this contract by the due completion date.

The following details must be stated:

- The quantity of work applicable to each bar item as well as the rate at which the work will be completed.
- A budget of the value of completed work, month by month, for the full contract period.
- The contractor's plant commitment on the contract for every fortnight.
- The critical path.

The programme shall be kept up to date. If a contractor fails to maintain progress in terms of the programme, he shall produce a revised programme showing the modifications to the original programme necessary to ensure completion of the works before the due completion date.

The approval of any programme by the engineer shall have no contractual significance, other than satisfying the engineer that the work is carried out according to such programme and that the contractor undertakes to carry out the work in accordance with the programme. The engineer will have the right to instruct the contractor to revise the programme if necessitated by circumstances.

4.2 Time for completion

The maximum time allowed for the completion of the contract is 15 months (excluding special non- working days and the year-end break) from the date of letter of acceptance.

4.4 Deviation from construction programme

The programme of work as required in terms of the "General Conditions of Contract – 3rd Edition (2015)" shall be submitted to the engineer not later than fourteen days after the commencement date.

The contractor shall take into account the requirements of the Occupational Health and Safety Act, as well as the construction regulations in the drafting of the programme.

The format shall not be in the form of a bar chart only, but shall also clearly indicate the anticipated quantity of work to be executed each month. The construction programme shall also clearly indicate the labour to be utilised for the duration of the Contract.

If during the progress of the work, the quantities of the work performed per month fall below the expected indicated in the construction programme, or if the sequence of operation is altered, or if the programme is deviated from in any other way, the contractor shall, within one week after being notified by the engineer, submit a revised construction programme.

Such a revised construction programme shall be based on the tempo of work achieved by the contractor up to the date of revision. Any proposal to increase the tempo of work must be accompanied by positive steps to increase production by providing more labour and plant on site or by using the available labour and plant in a more efficient manner.

Failure on the part of the contractor to work according to the programme or revised programmes shall be sufficient reason for the Engineer to take steps as provided for in the "General Conditions of Contract –3rd Edition (2015)".

PS 5 SITE FACILITIES AVAILABLE

5.1 Water supply

The Contractor shall make his own arrangements with the Employer to obtain a potable water metered standpipe connection for which at least 14 days notice shall be given. The size of the connection provided will be as specified in the Water and Sanitation By-laws.

The Contractor may only draw water from fire hydrants through means of a legal, Employer owned, potable water metered standpipe/ connections. Failure to use such Employer owned potable water metered standpipes/ connections, or using illegal, non-Employer owned equipment for purposes of drawing water from fire hydrants, will result in the Contractor having to pay an account to Employer, for an amount determined by Employer

The potable water metered standpipe(s) must be made available to the Employer's water inspectors for purposes of reading and inspection, and failure to do so, will result in the immediate withdrawal of such potable water metered standpipe(s). The onus is on the Contractor to return such potable water metered standpipe(s) if they are found to be defective (not registering consumption). Failure to do so will result in an account being levied, payable to and determined by the Employer. Claims for delays caused where standpipe(s) are withdrawn and/or replaced will not be considered.

The current water tariffs applicable to the Contract are available from the Employer.

The availability of water cannot be guaranteed by the municipality and in the event of water no longer being freely available, the contractor must make his own arrangements to acquire it.

The rates tendered for the relevant items in the preliminary and general section of the schedule shall include all costs for the establishment and maintenance of water supply to the works and the contractor shall make his own arrangements for the possible conveyance and storage of water if necessary. The contractor will be held responsible for any wastage of water due to negligence.

The water as described above include all the water as required by the contractor for the successful execution of the works including the water required for testing of pipes.

5.2 Power supply

The Contractor shall make arrangements with the relevant authority for the supply and distribution of power for purposes of this Contract, the cost of which shall be deemed to be included in the rates inserted in the Schedule of Quantities.

Power used for carrying out of the works in accordance with these Specifications will be subject to measurement or payment.

Electrical power without failures cannot be guaranteed by the municipality. During power failures and shortages, the contractor must make his own arrangements for the provision of electricity.

The rates tendered for the relevant items in the preliminary and general section of the schedule shall include all costs for the establishment and maintenance of a power supply to the works.

5.3 Sewer supply

The Contractor shall provide, maintain, move to positions as required and finally remove proper sanitary accommodation at each work front. Sanitary accommodation shall be properly screened and its use strictly enforced. The Contractor shall comply with the Employer's Sanitation General By-Laws Section 19(1) and 19(3).

The situation of sanitary accommodation prescribed in terms of the Sanitary General By-Laws shall be approved by the Engineer as being convenient for the person for whose use it is intended. The sanitary accommodation provided must be adequately ventilated, properly disinfected and kept in a thoroughly clean condition at all times.

The Contractor shall bear all costs associated with the provision of sanitary accommodation. Compensation for these costs will be made under the relevant item in the Schedule of Quantities.

PS 6 FACILITIES REQUIRED ON SITE

6.1 Facilities for the engineer

A dedicated site office for the engineer is not required. An office must be made available for use by the engineer with a table and 6 chairs.

6.2 Facilities for the contractor

The following facilities are required on the site for the contractor in addition to the facilities required by the contractor for his own purposes:

Ablution and sanitary facilities:

The contractor shall erect and maintain on the site proper ablution facilities. The contractor shall service and maintain the facilities in a clean and hygienic state for the duration of the contract period and on completion of the works remove it from the site.

Contractor offices and sheds:

The Contractor shall provide offices for his own use and for the use of his representatives and all necessary shelter for workmen and sheds for the storage of tools, plant and materials. Sheds for the storage of cement and corrodible material must be waterproofed and weatherproofed with a raised floor of wood or concrete. Materials prone to UV degradation shall be stored under cover and in such a manner that they are not directly exposed to sunlight.

The Contractor will be required to obtain a separate telephone for his own use on the site and shall make all the necessary arrangements with Telkom, concerning this telephone.

Accommodation for contractors' employees.

No housing is available for the Contractor's employees and the Contractor shall make his own arrangements to house his employees and transport them to the Site.

6.3 Laboratory facilities (clause 7 SABS 1200A)

The contractor shall provide Laboratory facilities at an SABS accredited laboratory to conduct tests as required or as specified/measured in the bills of quantity.

6.4 Municipal name board

One official name board is required for this contract.

6.5 Housing for the engineer and/or his representative

No housing is required for the engineer or his representative.

6.6 Telephone Facilities

Additional telephone facilities are not needed on the site. The contractor's representative on site shall at all times be reachable by cell phone.

PS 7 FEATURES OF THE CONTRACT REQUIRING SPECIAL ATTENTION

7.1 Existing Services

The Contractor shall make himself acquainted with the site and inspect all areas for existing services before any clearing or excavation is commenced.

Although every effort has been made to ensure the accuracy of any underground services that may be shown on the drawings, the Council takes no responsibility for the accuracy thereof, or for any omissions that may have been made. Under no circumstances is the Contractor to alter or in any way interfere with existing works or underground services unless authorised by the Engineer.

Where there is uncertainty as to the existence of, or the exact position or depth of any underground service, the Contractor shall carry out exploratory excavations using hand tools, in order to obtain the required information without causing damage. Exploratory excavations shall be carried out, refilled and reinstated in an approved manner as expeditiously as possible. This work will be measured and paid for as specified in variations to Standard Specification SABS 1200 A.

Where existing works are of such a nature that the Engineer may require them to be moved by the Contractor, the cost of such work will be paid for at scheduled rates.

The Contractor shall take adequate measures approved by the Engineer to protect and prevent damage to existing works and services and all damage caused to existing works and services shall be made good at the Contractor's cost.

Where the Contractor is responsible for the cost of repairs carried out by the Employer or an outside Authority to services damaged by the Contractor's operations, and where the Contractor fails to make payment to the Authority concerned for the cost of such repairs, the Employer reserves the right to make such payment directly to the relevant Authority and to recover the costs thereof from the Contractor by means of a deduction from the Contractor's monthly Payment Certificate.

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

The Council reserves the right to prosecute under the terms of Local Government Ordinance No. 17 of 1939 and the Electricity Act No. 40 of 1958 where Council services have been wilfully or negligently damaged.

Except only for exploratory excavations, for the location of existing services and deviations of such services where ordered by the Engineer, no specific payment will be made for any other work of any description connected with such services; the costs thereof being deemed to be included in the tendered rates.

PS 7.1 Protection to Public and Property: Watching, Lighting and Barricading

The Contractor shall fence or otherwise protect all parts of the works dangerous to the safety of the public or property.

All excavations are to be barricaded. Barricades shall consist of at least three 19mm diameter hemp ropes or 2,5mm wires, or more if required, stretched tightly between poles, standards, etc. securely planted in solid ground, well clear of the excavation and enclosing the spoil from the excavations.

The poles, standards, etc. shall not be more than 15m apart, but if circumstances require it they shall be placed closer. The ropes or wires shall be stretched tight approximately 0,5m, 1,0m and 1,5m above the ground. Red flags shall be fixed to the barricades at distances not exceeding 15m along excavations for pipelines and structures, at the end of trenches, at manhole excavations, etc. All posts shall be painted white with bands 0,3m wide of red reflecting material painted around at 0,3m spacing.

All protection, lighting and barricading measures shall be carried out to the satisfaction of the Engineer.

No specific payment will be made for watching, lighting and protecting the costs of which will be deemed to be included in the rates tendered for excavation.

PS 8 RAINFALL FIGURES

See contract data clause 5.12.2.2.

PS 10 SAFETY

10.1 Safety of workmen

The safe conduct of the works shall be a primary consideration and the entire works shall be carried out in conformity with all applicable statutory regulations and requirements and tenderers must price their tenders accordingly.

The contractor shall provide and maintain in readiness on the site, all equipment, and materials necessary to render first aid in case of accidents or other emergencies. The contractor shall also assign to the works and designate for this purpose, trained employees who are able to render first aid.

10.2 Health and safety requirements

It is a requirement of this contract that the contractor shall provide a safe 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 conform to all the stipulations of the Occupational Health and Safety Act (Act 85 of 1993) and the regulations applicable at the time of tender, which inter alia provide for the designation of a health and safety representative (or representatives) when an employer has more than 20 employees in his employ.

PS 11 SUB-CONTRACTORS

The employer shall have the right to cede any sub-contract under this contract to a pre-approved subcontractor, in accordance with the provisions of clause 9 of the general conditions of contract.

PS 12 DELAY IN COMPLETION

The contractor shall organise the works in such a manner that no delays occur. Delay due to faulty organisation or lack or shortage of materials or labour or co-operation with other parties or to any other cause within the control of the contractor will not be countenanced and full power is reserved by the engineer to order the contractor to expedite the work should the work, in the opinion of the engineer, not progress in a satisfactory way.

PS 13 SUPPLY OF MATERIALS

All material to be used in the works is to be supplied by the contractor.

The contractor shall ensure that the work is not delayed due to the lack of materials on site, by placing orders for material required under this contract as soon as possible. No extension of time will be allowed for any delay due to the supply of materials.

Although the quantities have been carefully calculated, it must be considered as approximate only and the contractor, before ordering any materials, should check the quantities required. The bill of quantities is provisional.

PS 14 EXECUTIONS OF THE WORKS

14.1 Inspection by the engineer

No portion of the work shall be proceeded with until the engineer or his representative has examined and approved the previous stage. If any work is covered or hidden from view before the engineer or his representative has inspected the work, the contractor shall at his own cost expose the covered or hidden work for inspection. The contractor shall also be responsible for making good any work damaged during the uncovering.

15 INFORMATION THAT WILL BE PROVIDED BY THE MUNICIPALITY

To be made available on compulsory site briefing:

- Borrow Pits
- Water and electrical connections
- Position of known services

PS 16 PAYMENTS

Payment will be in accordance with the tendered pricing schedule. A valid tax invoice must be submitted by the 25 of each month with all mandatory information and reporting as indicated in the scope of work.

Payment will be made within 30 working days from receipt of invoice by the finance department.

PART A2 VARIATIONS TO THE STANDARD SPECIFICATIONS

This part of the project specifications deals with matters relating to the standard specifications. Where reference is made in the standard specifications to the project specifications this part shall also contain the relevant information e.g. the requirements where a choice of materials or construction methods are provided for the standard specifications.

In certain clauses the standard specifications allow 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 alternatives or additional requirements applicable to this contract are contained in this part of the project specifications. It also contains some additional specifications and amendments of the standard specifications required for this particular contract.

The number of each clause and each payment item in this part of the project specifications consists of the prefix PS followed by a number corresponding to the number of the relevant clause or payment item in the standard specifications. The number of a new clause or a new payment item, which does not form part of a clause or a payment item in the standard specifications and is included here, is also prefixed by PS followed by a new number. The new numbers follow on the last clause or item number used in the relevant section of the standard specifications.

Clauses and pay items referring to labour intensive methods are prefixed by L in the project specifications.

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

PSA GENERAL

PSA3 MATERIAL

PSA3.1Quality of Materials and Workmanship (Clause A3.1)

"Add to Clause 3.1"
Unless otherwise specified, directed or approved, all materials and workmanship on the Works shall comply with the appropriate SANS Specification or Code, or in absence thereof, the appropriate BS Specification or Code, and shall bear the official mark of the appropriate standard. The latest revisions of all specifications and codes shall apply.

All materials, shall, except where otherwise specified, be new and of the best quality and shall be suitable to withstand and to operate satisfactorily under all possible climatic and weather conditions which can reasonably be expected at the Site.

All storage, handling, transport, erection or installation of plant, equipment and materials shall be carried out in accordance with the supplier's or manufacturer's instructions, provided that the Engineer may vary such instructions should he deem such variations necessary. Where supplier's or manufacturer's instructions are in conflict with the Specifications, the requirements of the Specifications shall apply unless otherwise agreed to by the Engineer. Any such conflict shall be brought to the Engineer's notice by the Contractor.

PSA4 PLANT

PSA4.2Telephone

"Add new clause"
The Contractor shall make all necessary arrangements, within 7 days of the award of the Contract, and pay all costs in connection with the supply and maintenance of a telephone service for his representative on site. The service is to be maintained in proper working order for the duration of the Contract.

PSA5 CONSTRUCTION

PSA5.1.1Setting Out of the Works (Clause A5.1.1)

"Add to Clause 5.1.1"
The Contractor will be responsible for the setting out of the Works from existing reference marks. Before commencement of construction work the Contractor shall clearly mark all reference marks on Site.

The Engineer may vary the final exact location of any part of the Works taking the local conditions into consideration. The Contractor shall therefore notify the Engineer immediately after any preliminary setting out of any portion of the Works has been done and before detailed setting out or construction work is started. Only after approval of that portion of the Works by the Engineer may the detailed setting out and construction be commenced.

PSA5.4 Services (Clause A5.4)

"Add to Clause 5.4"

Where services have to be deviated or re-routed temporarily or permanently, such work shall only be carried out with the prior approval of the Engineer and the appropriate Authority and in a manner as directed or approved by the Engineer and the appropriate Authority.

All necessary final arrangements with the appropriate Authority for such deviation or re-routing shall be made by the Contractor.

PSA8 MEASUREMENT AND PAYMENT

PSA8.2.1Fixed-Charge and Value - Related Items (Clause A8.2.1)

"Add to Clause 8.2.1"
The sums contracted in respect of fixed-charge and value-related items shall not be increased should extension of time be granted for the completion of the Works.

Initial payments in respect of fixed-charge and value-related items, excluding the item for removal of site establishment, will be limited to a combined maximum of 7,5% of the Contract Sum for the Works and the balance, if any, will be paid after 50% of the Contract Sum for the Works has been certified for payment.

All fixed-charged costs relating to watching, barricading, lighting, traffic crossings and access routes required shall be included in the amounts for the relevant "Other Obligations".

All costs relating to the telephone calls and telephone rental shall be included in the relevant amounts in the Schedule of Quantities for the telephone.

Health and Safety: Payment for compliance with the requirements of this Section of the Specification shall be from the sum price under fixed-charged, value-related items in terms of requirement of clause PSA4.1 and PSA4.3 respectively.

PSA8.2.2 Time-Related Items (Clause A8.2.2)

"Add to Clause 8.2.2"
The sum Contracted in respect of a time-related item will be increased should extension of time be granted for the completion of the Works, provided that the activity for which the relevant sum was contracted has to be maintained during the extended period. The relationship between the increased sum for a time-related item to the Contracted sum for such item, shall be the same as the relationship of the extended time for completion of the Works to the original time allowed for completion of the Works. Payment for such increased amounts will be considered as full compensation for all time related, provisional and general costs which arise as a result of the extension of time.

Payment for time-related items will take place in equal monthly amounts, calculated on the tendered amount for the item, divided by the contract period in months, with the understanding that the total of the monthly payments which was paid for this specific item does not exceed the proportion that the progress of the works to date bears in relation to the works as a whole.

All costs relating to the telephone calls and telephone rental shall be included in the relevant amounts in the Schedule of Quantities for the telephone.

Health and Safety: Payment for compliance with the requirements of this Section of the Specification shall be from the sum price under fixed-charged, value-related items and time related items in terms of requirement of clause PSA4.1 and PSA4.3 respectively.

PSA 8.3 Scheduled fixed-charged and value-related items

PSA 8.3.2.1 Facilities for Engineer (Clause A8.3.2.1)

"Change the following"

a) Engineers' office and parking ..... Unit: Sum
b) Telephone and Facsimile ..... Unit: PV Sum

"Add the following"

d) Survey equipment ..... Unit: PV Sum
e) Laptop and facilities complete with printer, modem, consumable and call costs ... Unit: Sum

PSA 8.3.2.2 Facilities for the Contractor (Clause A8.3.2.2)

"Add the following"

k) Facilities for the NLMProject Engineers……Unit: Sum

PSA8.3.3 Setting Out of Works (Clause A8.3.3)

"Add to Clause 8.3.3"

Cost in connection with setting out of the Works shall not be paid separately and shall be included under other fixed charge obligations.

PSA 8.3.5 Health, Safety and Environmental

"Add the following clause"

a) Safety, Health and Environmental (SHE) Plan ..... Unit: Sum
b) SHE File ..... Unit: Sum
c) Provision of Personal Protective Equipment ..... Unit: Sum
d) Other Health, Safety and Environmental matters ..... Unit: Sum

The tendered rates shall include full compensation for the Contractor's obligation regarding the compilation of the SHE plan, the SHE file and provision of resources to ensure compliance with occupational Health and Safety Act, and Environmental Management Act, as amended

PSA 8.3.6 SMMEs Fixed and Time Related Costs

"Add the following"

Fixed Charged Items

a) Storage facilities ..... Unit: Month
b) Tools and Equipment ..... Unit: Month

PSA8.4.5 Testing (Clause A8.4.5)

"Add to Clause 8.4.5"

The cost of all sampling and testing to be carried out by the Contractor or by approved laboratories shall be included in the sum for "Other Time-Related Obligations" and no separate payments will be made in connection therewith. This also applies to the casting, curing and testing of concrete test cubes.

Control testing by the Engineer will be paid for from the Provisional Amount in the Bill of Quantities.

PSA 8.4.6 Health, Safety and Environmental

"Add the following"

a) SHE Compliance ..... Unit: Month
b) SHE Specialist Consultant ..... Unit: Month
c) Handling fees (a & b) ..... Unit: %

The Contractor is liable and responsible for the execution of the contract within the parameters set out by the Occupational Health and Safety Act, Act 85 of 1993 and so doing will be duly expected to conform to at least minimum requirements for ensuring the health and safety of the personnel, community (3rd parties) and all other project stakeholders. It is also the responsibility of the Contractor to comply with the Environmental Management Act.

The tendered rates for SHE compliance shall include full compensation for the Contractor's compliance with the abovementioned acts, including the maintenance and general upkeep of the SHE File which shall be kept safe on site and accessible by the parties as and when required.

The tendered rates for the SHE Specialist Consultant shall include a full audit and approval of the SHE File at the start of the project, followed monthly audits to ensure continuous compliance. The SHE Specialist will also conduct monthly audits of the entire site and associated works and present a report with all findings at the monthly progress meetings.

PSA 8.4.7 SMMEs Fixed and Time Related Costs

"Add the following"

Time Related Items
a) Storage Facilities ..... Unit: Month
b) Tools and Equipment ..... Unit: Month

PSA 8.5 Sums stated provisionally by Engineer

"Add the following"

The contractor shall appoint a Community Liaison Officer (CLO) after consultation with the local councilor, beneficiary community, the Engineer and the Employer. The Contractor shall direct all his liaison efforts with the local communities through the appointed officer. The Duties of the Community Liaison Officer:

- To be available on site daily between the hours of 07:00 and 10:30 and at other times as the need arises. His normal working day will extend from 07:15 in the morning until 16:30 in the afternoon.
- To facilitate the recruitment and fulfillment of the contractor's need for temporary labour. This labour must be procured openly, fairly, responsibly and equitably from the benefiting local community or if not possible nearest advance community.
- He will be co-responsible with the PSC and Contractor for the identification of suitable trainees and will attend one of the training sessions.
- To communicate daily with the Contractor and the Engineer to determine the labour requirements with regard to numbers and skill, to detect possible labour disputes and community dissatisfaction and assist in avert them, where disputes arise assist in their resolution.
- To report to the PSC Meetings the progress of the works.
- To attend all meetings in which the community and/or labour are present or are required to be represented.
- To assist in the identification and screening of labourers from the community as per Contract requirements.
- To attend disciplinary proceedings to ensure that hearings are fair and reasonable.
- To keep daily written record of his interviews and community liaison.
- To attend monthly site meetings to report on labour and community matters
- To assist the contractor to approach and access specific areas of work for execution of the project.
- All such other duties are agreed upon between all parties concerned.
- To submit monthly returns regarding community liaison.

This contract includes provision of various training activities some to be finalized during the execution of the works. The Contractor will have the full responsibility of facilitating and ensuring the roll out of identified training activities through an accredited service provider.

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

There shall also be 24 hour on-site security for the duration of the works to safeguard the material on site, the works and all other items associated with the project.

a) CLO salary……Unit: Month
b) Handling fees (a)……..…Unit: %
c) Accredited training……Unit: P Sum
d) Handling fees (c)……..….Unit: %
e) On-site security……...Unit: Month
f) Handling fees (c)……..Unit: %

PSA8.7 Dayworks (Clause A8.7)

"Add to Clause 8.7"
No day work shall be undertaken unless such work is instructed and directed by the Engineer, where the Engineer considers no other appropriate rate is available in the schedule of quantities. Prior to the commencement of any work, the Contractor must obtain written consent from the Engineer regarding the classification of all labourers in terms of "unskilled", "semi-skilled" and "skilled" labourers, or type of plant and material.

All costs in connection with the location and deviation or rerouting of existing services will be paid under Dayworks.

PSA 8.8.4 Temporary works

Add to clause 8.8.4
The rate shall include the costs of confirming, protecting and reporting on, all existing services, in addition to the material types and all hand excavations required.

PSC SITE CLEARANCE

PSC5 CONSTRUCTION

PSC5.2.3.2 Individual Trees (Clause C5.2.3.2)

"Add to clause"
The penalty for damaging or removing trees not specifically instructed by the Engineer to be removed, shall be R5500-00 per tree.

PSC5.3 e Removal and Re-erection of Fences (Clause C5.3 e)

"Add to clause"
All existing fences on the Site through which the Works have to be executed, shall be temporarily removed. The removal shall be carried out in such a manner that all materials shall be re-usable for re-erection on completion of the Works. The fences shall be so re-erected in such a manner that they are in a similar condition to that prior to removal. Where required, the Contractor shall supply and install new materials, should the existing materials not be suitable for re-use.

PSC5.6 Topsoil (Clause C5.6)

"Add to clause"
Topsoil shall be stored in designated stockpile areas for later use as indicated by the Engineer.

PSC5.8 Demolition of Structures (Clause C5.8)

"Add to clause"
The existing building(s) that must be demolished will be indicated by the Engineer at the site(s). The building(s) is to be demolished and the rubble disposed of as indicated by the Engineer. Any material retrieved will be given to the current owner of the structure.

PSC8 MEASUREMENT AND PAYMENT

PSC8.1 Basic Principles (Clause C8.1)

"Add to clause"
The transport of cleared and grubbed materials and debris and the disposal thereof by the Contractor away from the Site shall not be measured separately and all costs in connection therewith shall be included in the rates for the relevant items.

PSC8.2.11 Removal and Re-erection of Fences

"Add new clause"
The removal and re-erection of existing fences shall be measured and paid per linear meter. The rate shall include the cost of removal of the fences, the temporary storage of the components, the re-erection of the components on completion of the Works and any costs relating to the loading and transportation of the components. The supply and installation of new materials, where required, will be paid for at daywork rates.

PSC8.2.8 Demolish And Remove Structures (Clause C8.2.8) Unit : Sum

"Add to clause"
The rate shall cover the cost of the removal of all structures on the site, the disposal thereof at the dumping site, the levelling and shaping of the site and the backfilling of any holes with material of at least the same quality as that of the in situ material. The rate shall also cover the cost of removing cleaning and handing over of all usable material to the Employer / Current Owner.

Payment for the removal of individual structures will be made pro rata in the relation of the area thereof to the total area of structures that has to be demolished and removed.

PSD EARTHWORKS

PSD1 SCOPE

"Add to clause"
The following work in this Section 1200 D shall be carried out using Labour Intensive Construction (LIC) Methods and for such work it shall be held that this specification covers earthworks carried out by hand tools and equipment or, where so permitted in the project specification, by restricted plant usage in accordance with PSD4 :-

a) Clear and strip site;
b) Restricted excavation and backfilling;
c) Remove, stockpile and spread excavated material;
d) Filling and compacting holes where trees and stumps have been cleared;
e) Selecting and removing unsuitable material;
f) Spreading and compacting surplus excavated material on Site;
g) Hauling of material under (a) to (f) above up to 100 m by wheelbarrow.

PSD2 INTERPRETATIONS

PSD 2.3 Definitions

"Add LIC methods"
For LIC Methods the definition for "restricted excavation" shall read:-
"an excavation required to be carried out using only hand tools and equipment or, where so permitted in the project specification carried out with restricted use of plant."

PSD3 MATERIALS

PSD3.1.1 Method of Classifying

For LIC Methods add at the beginning:-

"Subject to the restrictions on the use of plant ….."

PSD3.1.2 Classes of Excavation

"Add to clause for LIC methods"
For LIC Methods the excavation of material will be classified as follows:-

"Soft excavation": Soft excavation shall be excavation in material that can be efficiently removed or loaded by manual operations with a pick and shovel, without the use of handheld pneumatic (compressor driven) tools such as paving breakers or prior ripping, and boulders up to 25 kg in mass.

"Intermediate excavation" : Intermediate excavation shall be excavation (excluding soft excavation) in material that requires to be broken up by the use of handheld pneumatic tools before removal or loading by equipment equivalent to that specified for soft excavation and boulders of mass more than 25 kg up to 50 kg, or material that requires to be loosened and broken up by a back-acting excavator of flywheel power exceeding 0,10 kW per mm of tined-bucket width or material that requires ripping by a bulldozer of 35 t mass with a single-tine ripper and flywheel power of 220kW, for the material to be removed or loaded as soft material.

"Hard rock excavation": Hard rock excavation shall be excavation in material that requires to be broken up by drilling and blasting with explosives and/or wedging and splitting before removal or loading by equipment equivalent to that specified for soft excavation, and boulders of mass more than 50 kg.

In the event of the Engineer instructing that boulders in excess of 50 kg mass or isolated ridges of rock be broken up by sledgehammer or by heating and cooling (fire and water), such operations will be measured and paid for separately from other excavations.

PSD3.2.1 Material suitable for embankments and terraces

"Add to clause for LIC methods"

For LIC Methods in paragraph (b) "300 mm" shall read "150 mm".

PSD4 PLANT

PSD4.1 General

"Add to clause"

There shall be no restriction on the use of mechanical plant and equipment for work identified in the Schedule of Quantities as "Bulk" or "Mass" earthworks.

Where it is required that the work be carried out using LIC Methods (Refer PSD1) the first two sentences of 4.1 shall read:

"Except where permitted in the project specification, the Contractor shall use only hand tools and equipment such as picks, shovels, sledgehammers and wheelbarrows. Although, for the purpose of classifying excavations, particular items of plant are specified in PSD3.1.2, the Contractor is not obliged to provide or use those specified items of plant for carrying out the work but he may use such plant for the excavation that is so classified as an exception to the restriction on plant."

PSD4.2 Compaction Plant

"Add to clause"
For LIC Methods the Contractor shall, save by arrangement with the Engineer, not use compaction plant larger than manually-operated self driven "pedestrian" compactors.

PSD4.3 Haul Vehicles

"Add to clause"
Although, for the purpose of classifying haulage, particular items of plant are identified in PSD5.2.5.2, the Contractor shall not be obliged to use wheelbarrows for the haul of materials over terrain where it may be impracticable to push a wheelbarrow manually.

PSD5 CONSTRUCTION

PSD5.1 Disposal of surplus and unsuitable material from excavation (Sub-clauses 5.1.4.3 and 5.2.2.3).
"Add to clauses"
Surplus material from excavations which is suitable to use in fills shall be placed and spread in fills or placed in embankments in areas on the Site designated by the Engineer and compacted to at least 90% Mod. AASHTO density (98% for cohesion less materials).

Unsuitable material from excavations shall be disposed of by spreading as uncompacted fill or by placing in embankments in areas designated by the Engineer during the Contract. When ordered by the Engineer, the material shall be compacted to at least 90% Modified AASHTO maximum density (98% for cohesion less materials), or to such greater density as directed by the Engineer.

PSD5.2.2.3 Disposal and spoil site(s) (Sub-clause 5.2.2.3)

"Add to clause"
Except when it is required and designated by the Engineer that surplus and unsuitable material from excavations shall be disposed of on the Site, such material shall be disposed of to Spoil Sites in accordance with the terms specified in Portion 1 of the Project Specification.

Haulage shall be payable on transport outside the freehaul distance in terms of PSD5.2.5.1.

PSD5.2.3.1 Embankments(Sub-clause 5.2.3.1)

For LIC Methods, the first sentence of the third last paragraph shall read:

"The material of each embankment shall, unless otherwise approved, be deposited in layers of thickness before compaction, not exceeding 150 mm."

PSD5.2.3.2 Backfilling against structures

"Add to clause"
For LIC Methods all trenches and excavations outside structures shall be carefully refilled with approved material in layers of thickness not exceeding 150 mm before compaction. During the placing of each layer, the filling shall be well stamped and compacted.

PSD5.2.5.1 Freehaul

"Add to clause"
For LIC Methods freehaul shall be 2,5 m or the average distance of a single throw with a standard shovel full of soil, whichever is the greater distance.

PSD5.2.5.2 Overhaul

"Add to clause"
For LIC Methods, transportation of all excavated material beyond the freehaul distance in terms of PSD5.2.5.1 will be regarded as overhaul. Overhaul will be classified as

Wheelbarrow haul or Tractor and trailer haul or Truck (long) haul, based on the following ranges, unless otherwise approved by the Engineer :-

Distance beyond the end of the freehaul in terms of PSD5.2.5.1 by the shortest practicable route

a) Wheelbarrow haul Up to 100 m
b) Tractor and trailer haul Over 100 m up to 0,5 km
c) Truck or long haul Over 0,5 km

The Contractor shall not incur overhaul expenses without prior approval/authorization by the Engineer.

PSD5.2.3.3 Compaction of Cut Areas

"Add new clause"
All cut areas in sandy soil shall be compacted to 100% Mod AASHTO to a depth of 300 mm after final finishing.

PSD6 TOLERANCES

PSD6.1 Position, Dimensions and Level for Bulk Earthworks

"Add to clause"
Except that finished levels shall comply with Sub-clause 6.1(b) (3) for Degree of Accuracy II, a degree of accuracy III shall be applicable to bulk earthworks.

PSD8 MEASUREMENT AND PAYMENT

PSD8.1 Basic Principles

PSD8.1.1 Overhaul

For LIC Methods, amend the last sentence to read:

"Where overhaul is payable, the additional distance will be measured as specified in the Schedule of Quantities and volumes will be computed as specified in Sub-clauses 8.2.1 and 8.2.2".

PSD8.2 Computation of Quantities

PSD8.3 Scheduled Items

PSD8.3 Disposal and Placing of Surplus Material (Sub-clauses 8.3.2 and 8.3.3)

The tendered rates for excavation and disposal of material shall include the costs for the placing of the material as uncompacted fill at a site within the free haul distance.

PSD8.3.2 Compaction of Cut Areas Unit: m³

The cut areas to be compacted shall be measured in m². The tendered rate shall include all costs for the compaction of sandy soil as specified in PSD5.2.7.

PSD8.3.3 Restricted Excavation

For LIC Methods, the sub-items of Sub-clause 8.3.3(b) shall read as follows:-

"(b) Extra-over for

Intermediate excavation Unit: m³

Hard rock excavation Unit: m³"

PSD8.3.4 Filling and compacting holes

The filling with soil and compaction of holes and depressions on Site as designated by the Engineer will be measured per cubic meter (m³), as compacted fill according to the volume of the holes.

The tendered rate shall cover the cost of placing the material, watering where required and compaction to 93% AASHTO density (100% for sand).

The cost of excavation and hauling of material will be measured under the relevant scheduled items.

PSD8.3.6 Overhaul

For LIC Methods, the item of Sub-clause 8.3.6 shall read as follows :-

"Overhaul (Provisional):-
Wheelbarrow haul Unit: m³.m
Tractor and trailer haul Unit: m³.km
Truck haul Unit: m³.km"

Volumes will be computed from the designate dimensions. No allowance will be made for bulking. Distances will be measured to the nearest 3 m for (a) above and to the nearest 0,1 km for (c) above, from the end of the free haul distance, in one direction only by the shortest practicable route. Material will only be measured under one of the above categories, i.e. under (a), (b) or (c).

PSDB - SANS 1200DB: EARTHWORKS (PIPE TRENCHES)

PSDB 3 MATERIALS

PSDB3.1 Classes of excavation (clause 3.1)

Add the following new sub-clauses:

Classification of material for various types of hand excavation will be based on the results of a dynamic cone pentronometer. The category of material shall be determined by testing the material at regular intervals and at various depths along the centre line of the trench. A minimum of 5 tests shall be done at each location and the average number of blows of the tests shall be used to determine the category of material.

The interval between test locations shall be determined by the variation of material type but shall not exceed 50m. The depth of testing shall be determined by the variation of material type and can increase or decrease in hardness with increasing depth of excavation. Table PSDB 3.8 indicates the categories:

TABLE PSDA: 3.4 CLASSIFICATIONS FOR HAND EXCAVATION

Category of Material	**Consistency**		**DCP Blows to Penetrate 100mm**	
	Granular	**Cohesive**	**Granular**	**Cohesive**
Soft Soft excavation shall be excavation in material that can be efficiently removed from the trench using a pick and shovel but not requiring prior breaking using mechanical equipment such as pavement breakers	Up to medium dense	Firm to stiff	0-6	1-5
Intermediate Intermediate excavation shall be excavation in material that require loosening with a hand spike (gwala) before being removed from the trench	Dense	Stiff to very stiff	7-15	6-8
Hard Hard excavation shall be excavation in material that requires prior breaking using mechanical equipment, such as pavement breakers with clay spades, before being removed from the trench.	Very dense		16-50	-15
Rock Rock excavation shall be excavation in material other than described above which by nature of the material requires prior breaking using mechanical equipment, such as pavement breakers with moil points, before being removed from the trench	-	-	>50	>15

PSDB3.6 Material for Reinstatement of Roads and Paved Areas (Clause DB3.6)

"Add to clause"
Road layers and the wearing surface must conform to the requirements of the relevant authorities and the materials used must be similar to the existing material.

PSDB3.7 Treatment of Excavated Material (Clause DB3.7)

"Add to clause"
Where excavated material can be rendered suitable for backfilling by screening, or other treatment and where no suitable material within a free haul distance of 0,5 km from the point of placing is available, the Engineer may require the Contractor to treat the excavated material to render the same suitable for backfilling provided that at least 60% by volume of the material is recovered after treatment. Where otherwise suitable excavated material from a trench is, in the opinion of the Engineer, contaminated due to the Contractor's methods of working, the above mentioned treatment shall be carried out at the Contractor's expense.

PSDB 4 PLANT

PSDB 4.1 Excavation equipment

Add the following at the beginning of the existing Clause:
"As far as is practical and reasonable, utilise labour-intensive methodologies for all Contract excavations but where not feasible,"

PSDB 5 CONSTRUCTION

PSDB 5.1.2 Water in Trenches (Clause DB5.1.2)

"Add to clause"

Water in pipe trenches may cause movement of the pipes due to flotation and backfilling must therefore be carried out as soon as possible. Should movement of pipes occur the Contractor shall, unless otherwise directed by the Engineer, remove the pipes from the trench and relay the same, in accordance with the Specification, all at his own expense.

Transverse berms of suitable gravel compacted to 95% of Mod AASHTO max. density, at 45° to the direction of and placed symmetrically across the top of the pipe trench and with a fall to the lower side of the pipe route, shall be placed on steep slopes to prevent scouring of the backfilled pipe trenches. The berms shall be 150 mm high, 600 mm wide and 3 m long and neatly trimmed. The Engineer shall determine distances between berms on Site and confirm that berms is required at the identified positions.

PSDB 5.2 Minimum base widths specified and pipe cover (Clause DB5.2)

Bedding is also required for pipes of external diameter less than 110 mm. The minimum trench base width for pipes smaller than 110 mm laid at a depth not exceeding 1,5 m shall be 600 mm. Minimum cover on top of any pipe is 1, 0 m. For pipe sizes larger than 110 mm diameter the minimum base width shall be as specified in SANS 1200DB.

The base width for erf connection pipes, up to 50 mm diameter, shall not be less than 400 mm.

The base width for yard connection pipes, up to 50 mm diameter, shall not be less than 300 mm.

PSDB 5.4 Over-Excavation of Trenches (Clause DB5.4)

Where pipe trenches are excavated by the Contractor to depths in excess of those specified, directed or indicated on the Drawings, such over-excavation shall be backfilled with suitable approved selected material in layers not exceeding 150 mm uncompacted thickness and compacted to the density of the adjacent undisturbed material or as directed by the Engineer.

Where the Engineer deems this method of backfilling inadequate, he may require the over-excavation, or parts thereof, to be filled with mass concrete of the grade as directed. All backfilling of over-excavation shall be at the Contractor's expense.

PSDB 5.6 Backfilling (Clause DB5.6)

The requirements of Clause PSDB1.2 shall also apply.

Where directed by the Engineer, surplus material shall be neatly heaped above the trench, over the actual trench width, to a height not exceeding 150 mm above the adjacent level. The Contractor shall, however, take the necessary precautions to prevent interference with the natural flow of stormwater or concentration thereof by heaping of surplus material.

PSDB 5.7 Compaction (Clause DB5.7)

Backfilling to pipe trenches shall be compacted to 93% of Mod AASHTO max. density, up to finished ground level, in areas not subjected to traffic loads.

In areas subjected to traffic loads, the backfilling shall be compacted to 95% of Mod AASHTO max. density to the underside of the road formation for a distance of at least 1,0 m past either extremity of the road formation.

PSDB 5.9.2 Reinstatement of surfaces – private property and commonage (Clause DB5.9.2)

Delete existing clause and replace with the following:

"Reinstatement shall be with the same type of surfacing (including supporting structures; example bedding layers, jointing sand, structural joints, etc) and to at least the same standard and conditions as existed before excavation took place.

Grass sods shall be neatly cut out from grassed areas to be excavated and shall be preserved and kept damp until they can be replaced during the reinstatement. All other material to be used for reinstatement shall be suitably stored for such purpose.

Any settlement below original ground level that occurs during the execution of the Contract or the Defects Liability Period shall be made good by and at the cost of the Contractor within a reasonable period as determined by the Engineer."

PSDB 5.9.4 Reinstatement of surfaces - Bitumen roads and surfaced footways: sub-base and base (Clause DB5.9.4)

In addition to the existing clause the following shall apply:
"No separate payment shall be made for the above procedure, which shall be deemed to be included in the rates and prices tendered.

The tendered rates shall allow for the substitution of reinstatement of sub-base and base course layers with a hydrofill layer. Additional reinstatements necessitated by cover excavation, slips or falls shall be to the account of the Contractor."

PSDB 5.9.5 Bitumen roads and surfaced footways – surfacing (Clause DB5.9.5)

Add to the existing clauses 5.9.5.1:

The Contractor shall inform the Engineer in writing when the road or surfaced verges are ready for reinstatement.

The scheduled item for reinstatement of surfacing allow for widths 0.30 m wider than the specified trench widths for road crossings. Extra reinstatements necessitated by over excavation, slips or falls shall be to the account of the Contractor.

The thickness of the bitumen premix layer shall be at least 25 mm after compaction.

PSDB 5.11 Re-instatement of concrete (new clause)

In addition to the existing Clause 5.9 the following shall apply: All existing concrete surface shall be reinstated to original level and final finish (wood floated or steel floated or other) with un-reinforced concrete of 15 mPa (minimum) strength. The reinstated concrete shall also not exceed 125 mm but shall not be less than 50 mm.)

PSDB 5.12 Interlocking blocks, paving slabs and bricks (new clause)

All the existing blocks, slabs or bricks shall be cleaned and re-used. The blocks, slabs or bricks, which have been taken up, shall be stacked in a safe manner without restriction to vehicular or pedestrian traffic. Blocks, slabs or bricks around manhole covers shall be finished level with the manhole cover top. The cost of additional interlocking blocks, paving slabs or bricks required for complete reinstatement, over and above those taken up and stacked, shall be included in the rates tendered for the reinstatement of surfaces.

PSDB 5.13 Grassed areas (new clause)

Refer to PSDA 5.9.2 for protection of grass sods prior to reinstatement.

PSDB 5.14 Kerbing (new clause)

All existing types of kerbing that has been removed shall be cleaned and stacked in a safe manner without restricting to vehicular or pedestrian traffic.

The Contractor shall replace all kerbing removed during trenching.

PSDB.5.15 Exposing of Existing Pipelines (new clause)

It shall be required from the Contractor to expose existing waterlines. Exposure could be over a length of the existing pipeline or at specific positions for the connecting in of pipelines, installation of valves and fittings, cutting off of existing pipelines or the exposing of informal connections.

The excavation shall be done in such a manner that no damage is done to existing pipelines and will be regarded as hand excavation. The method of excavation must be allowed for in the Contractor's construction programme.

PSDB 7 TESTING

PSDB 7.1 Density tests

Delete the existing clause and replace with the following:

"All compaction tests for his own construction quality control shall be at the expense of the Contractor.
The Engineer may carry out quality control testing of compaction densities on Works sections deemed to be completed by the Contractor.

No testing by the Engineer shall, however, relieve the Contractor of his responsibility to ensure adequate compaction throughout and the Contractor should therefore carry out his own regular compaction tests. If a hydrodensimeter is used, the Contractor shall furnish the Engineer with a certificate of calibration of the instrument together with copies of all test results. A minimum of 4 random compaction tests is required of compaction production. Testing shall be

to the full layer depth of material placed, or in stages not exceeding 300 mm equivalent layer depths whichever is the lesser.

If any test results show that the specified compaction requirements have not been met, the Contractor shall at his own expense and within 7 days of receipt of the Engineer instruction take the following action for backfilling on trench excavations (other than road crossings):

The backfill material shall be ripped (through labour-intensive methodologies) up to the depth of the failed layer for a distance of 5 m on either side of the point at which the test was taken. If the previous layers had not been tested, the untested layers shall also be ripped (through labour-intensive methodologies) up to a depth of 450mm.

If the backfill material is suitable, it shall be re-compacted in layers to the specified densities. Otherwise suitable material shall be imported and compacted in layers and the excess material removed.

Where adjacent test results show that the backfill densities are below specified requirements, the entire length of trench between the points at which the tests were taken plus 5 m outside each end of that length shall be re-excavated and re-compacted as required above.

New density testing, for the account of the Contractor, shall be conducted along the trench excavations at intervals, as directed by the Engineer.

PSDB 8 MEASUREMENT AND PAYMENT

PSDB8.2.2 Computation of Quantities (Clause DB8.2.2)

The length used for computation shall be the face to face distance between the outer faces of manholes, catch pits, etc. The excavation for manholes, catch pits and the like shall be measured separately as part of the applicable unit.

PDB 8.3.1 SITE CLEARANCE

Add the following to the existing Clause:

b) Remove and grub large trees, and tree stumps that are lying on the surface to be cleared or exposed during clearing operations
i) Over 1m and up to and including 2m ……..... Unit: No
ii) Over 2m and up to and including 3m ……..... Unit: No

c) Remove topsoil to depth of 150mm, stockpile and maintain ……..... Unit: m²
d) Saw cut, remove and dispose of unreinforced concrete of up to 150mm thickness ..... Unit: m²
e) Remove and temporarily store paving blocks …… ..... Unit: m²
f) Remove and temporarily store grass sods ……..... Unit: m²
g) Remove and temporarily store all types of kerbs ……. ..... Unit: m²

PSDB.4.8 Excavations for pipes (Clause DB8.3.2(a))

Payment for sections of pipelines, which are partially complete, will be as follows:
a) Completion of excavations and installation: 60% of scheduled rate.
b) Completion of backfilling and compaction: 95% of scheduled rate.
c) Completion of testing: 100% of scheduled rate.

Less the percentage of retention as per the Appendix.

PSDB 8.3.3.1 Supply of Backfill Material by Importation

The provision of backfill material by importation from a borrow pit shall be measured and paid for per m^3 in accordance with the specified theoretical dimensions, as an extra over on the excavation and backfill item for pipe trenches.

PSDB 8.3.3 Treatment of Excavated Material (Clause DB8.3.3)

A separate payment will be made where the Contractor is requested to treat excavated material to render the same suitable for backfilling per m^3 of treated material measured in accordance with specified theoretical dimensions.

PSDB 8.3.4 (c) Berms Across Pipe Trenches

Berms across backfilled pipe trenches shall be measured per berm and the price shall include all materials and work in connection therewith.

PSDB 8.3.4 (d) Exposing of Existing Pipelines

Exposing of existing lines will be measured per linear meter or per unit, as specified in the Schedule of Quantities. The rate must allow for the method of excavation necessary to avoid damage to the existing service and all protective measures and supports required.

PSDB 8.3.5 (a) Existing Services that Intersect a Pipe Trench (Clause DB8.3.5(a))

The rate for existing services that intersect a pipe trench shall include the method of excavation necessary to avoid damage to the existing service, all protective measures and supports required to avoid damage, any selected fill required around the existing service and any revisions, delays or disruptions of the programme of the Works, including any matters arising or related thereto. Services which are no longer in use shall not be measured. Only services which are exposed by the trench excavations shall be measured. Informal connections will not be regarded as an existing service.

Excavation around existing services, as determined by the Engineer on Site, shall be deemed to be restricted excavation.

PSDB8.3.5 (b) Existing Services that Adjoin a Pipe Trench (Clause DB8.3.5(b))

The rate for existing services that adjoin a pipe trench shall include the method of excavation required to avoid damage to the existing service, all protective measures and supports required to avoid damage, any selected fill required around the existing service and any revisions, delays or disruptions of the programme of the Works, including any matters arising or related thereto. Services which are no longer in use shall not be measured.

PSDB 8.3.6.1 Reinstate Road Surfaces Complete with all Courses (Clause DB8.3.6.1)

The reinstating of all courses and road surface shall be measured and paid together for the theoretical excavation width. The rate shall include the provision and construction of all materials for each course, the repair of adjacent damaged areas and all labour and costs related thereto during the construction and maintenance periods.

PDB 8.3.6 FINISHING

Add the following Sub-Clause:

e) Reinstatement of road crossings by Contractor, including the supply and installation of hydrofill for reinstatement of road crossings, 300mm thick……..... Unit: m²
f) Re-instate unreinforced concrete, complete……..... Unit: m²
g) Re-instate paving blocks units, complete……..... Unit: m²
h) Re-instate grass sods, complete……..... Unit: m²
i) Re-instate all types of kerbing, complete……..... Unit: m²
j) Top soiling including trimming, filling, topsoiling and levelling of verges, removal of debris, rocks, etc. using stockpiled material……..... Unit: m²

PSG - SANS 1200G: CONCRETE - STRUCTURAL

PSG 2 INTERPRETATIONS

PSG 2.3 Quality

This clause is amended to include:

Set (of concrete cubes). A set of cubes shall consist of 6 cubes of nominal side 150mm of which 3 will be crushed at 7 days after making and the remaining 3 at 28 days.

PSG 3 MATERIALS

PSG 3.2 Cement

Replace the entire clause with the following:

Only Ordinary Portland Cement (OPC) and Pulverised Fuel Ash (PFA) shall be used in all concrete for this contract. No other types of cement shall be permitted.

Pulverised Fuel Ash (PFA) shall comply with the following specifications:

a) PFA shall be obtained from only one power station, from which the PFA has been approved by SANS for used in concrete.
b) All PFA shall comply with requirements of SANS 1466 (1998)

PFA shall be used as partial replacement of the OPC in concrete. A maximum of 33% (by mass) of the total cementitious material in the concrete may be PFA and shall be mixed before delivery on site. The OPC/ PFA mix shall be stored in the same manner as OPC. When stored in silo's the PFA / OPC mix shall require increased silo capacity, more efficient filters and aeration compared to OPC only.

Cement shall not be older than 12 weeks at the time of being used.

PSG3.4 Aggregates (Clause G3.4)

The use of plums in concrete work will not be permitted.

PSG 3.5.1 Approval of Admixtures (Clause G3.4)

Admixtures may be used subject to the following conditions :

a) All information regarding the admixtures to be used shall be provided in terms of Sub-clause G3.5.1.
b) The beneficial results to be expected from the use of the admixture shall be clearly stated.
c) Proof is submitted that these results will be obtained with the particular concrete in the Works under the conditions expected on the Works.
d) The use of the admixture shall not adversely affect the durability or any other property of the concrete.
e) The admixture shall conform with the applicable A.S.T.M. or other relevant specification.
f) The admixture shall be used in strict conformity with the manufacturer's instructions.

PSG 3.5.2 Air-entraining agents

Replace with the following:

Air-entraining agents shall not be used

PSG3.2.2 Alternative types of Cement - Grout

All grouting must be carried out using a pre-packaged non shrink cement based product which is chloride-fee such as “Dura grout” manufactured by “ABE Construction Chemicals” or equal approved material.

PSG 3.6 Reinforcement

Add the following:

Cover blocks for reinforcement shall be concrete, of at least the same strength as specified for the structure in which it will be used.

PSG 4 PLANT

PSG 4.5.1 Formwork - design

Formwork shall be provided for all concrete surfaces sloping more than 30^{o} with the horizontal, unless otherwise approved or directed by the Engineer.

Wire connectors through concrete shall not be allowed. All ferrules or other fastening devices shall present a neat, uniform and tidy pattern.

All holes created by the removal of shutter fixing devices shall be thoroughly grouted with sand/cement grout of the same color as the surrounding concrete. The ratio of cement to sand in the grout shall be the same as that used in the concrete. The concrete surface at the holes shall be made flush and neat to the satisfaction of the Engineer. In underground or water retaining structures, the grouting operation shall render the structure watertight.

All exposed corners of concrete structures shall be splayed with 20 mm x 20 mm fillets unless otherwise indicated or directed by the Engineer. No sharp corners will be allowed.

The use of old, buckled, twisted or otherwise damaged steel or timber shutters on off-shutter concrete will not be permitted and all formwork shall be approved by the Engineer before concreting is commenced.

Should the soil conditions on Site not be suitable for the casting of footings and foundations against excavated faces, the Engineer shall instruct the Contractor to utilise rough vertical formwork.

If requested by the Engineer, the Contractor shall submit to the Engineer the design and details of the formwork for approval before any work is commenced.

PSG 4.5.2 Formwork – Finish

Unless otherwise noted formwork is to be in accordance with the following classification:

a) Rough – where in contact with backfill or surface is not exposed;
b) Smooth – where exposed and up to 150mm below paving or ground level

PSG 5 CONSTRUCTION

PSG5.1 Reinforcement (Clause G5.1)

Welding of reinforcement will not be permitted.

PSG5.1.3 Cover over Reinforcement (Clause G5.1.3)

The exposure condition for the Works shall be “severe” unless otherwise indicated on the Drawings.

PSG5.2 Formwork (Clause G5.2)

The finish to concrete where smooth formwork is specified shall be to Grade I Degree of Accuracy as defined in Clause 6 and shall be rubbed down with carborundum blocks at a time approved by the Engineer. No cement wash shall be allowed on exposed concrete surfaces.

PSG 5.5 Concrete (Clause G5.2)

Concrete used in the Works, shall be strength concrete of the following grades:

Grade	Specified 28 Day Compressive Strength (MPa)	Nominal Aggregate Size (mm)
40/20	40	20
30/20	30	20
25/20	25	20
20/20	20	20
15/20	15	20

The grades of concrete to be utilized in various parts of the Works shall be as indicated on the Drawings or as directed by the Engineer.

All mix proportions for strength concrete shall be subject to the approval of the Engineer, but such approval shall not relieve the Contractor of his responsibilities in terms of the Contract. The proposed mix designs shall be submitted to the Engineer prior to the commencement of concreting operations.

Changes in plant, aggregate or mix proportions shall only be made with the prior approval of the Engineer.

Unless otherwise specifically agreed to by the Engineer in writing, all concrete shall be produced at the site of construction. If the use of ready mixed concrete is allowed, such concrete shall be in accordance with the requirements of the Specifications.

Unless otherwise indicated or directed by the Engineer, all foundation surfaces, excluding surface beds and brick wall foundations, shall be covered with a blinding layer before reinforcement is placed, in accordance with the details shown on the Drawings or as indicated by the Engineer. All foundation surfaces shall be inspected and approved by the Engineer before blinding layers or other concrete is placed. All shuttering and fixed reinforcement must also be inspected and approved by the Engineer before concreting.

At least 48 hours notice is required by the Engineer in respect of all such inspections.

The use of curing compounds shall be subject to the prior approval of the Engineer.

Construction joints shall only be allowed at positions indicated on the Drawings or approved by the Engineer. Where construction joints are unavoidable, suspended slabs shall be stopped off at 45o adjacent to and past columns. Walls shall be stopped off at right angles.

The Contractor shall prepare two trial mixes for each grade of concrete specified in the Works no later than 1 month prior to the commencement of casting of concrete on the Works. The aggregates and plant, as erected and approved on the Site, shall be utilised for this purpose. The Contractor shall make and test six 150 mm concrete cubes for each of the trial mixes. Three cubes of each trial mix shall be tested at 7 days and the remaining three tested at 28 days.

PSG 5.5.1.7 Strength concrete

Add the following

Although the contractor is responsible for the mix design, the following specifications apply to the mix design:

a) Minimum cement: water ratio = 2
b) For class 35/19 concrete the minimum cement content shall be 325kg/m^3
c) Maximum absorption of aggregates is 3%

The permeability of test cylinders (if ordered by the Engineer) shall not be greater than 5 x 10^{-7} mm/second.

PSG 5.5.3 Mixing

PSG 5.5.3.2 Ready mixed concrete

Add the following

Concrete for liquid retaining structures shall be mixed by batching plant.

PSG 5.5.6 Compaction

Add the following:

If re-vibration is instructed by the Engineer, the time lapse between vibration and re-vibration shall be 90 minutes

PSG 5.5.7.4 Joints (new item)

Joint filler shall be closed cell polyethylene with a density of 200/m^3. Filled joints shall be accurately formed to the dimensions shown and with the filler material specified on the Drawings. The filler shall be fixed in position to ensure position during or after placing of concrete.

Unfilled joints shall be formed accurately as indicated on the drawings. The concrete face against which the fresh concrete is placed shall be treated in good time with an approved bond breaker.

Sealed joints shall be made watertight over the full length of the joints, with dimensions as indicated on the drawings.

Preparation of joints:

The reaming of joints by sawing or other means shall be undertaken at a stage when edge spalling or raveling can be avoided and shall be subject to the Engineer's approval.

After removal of the temporary filler material or the breaking-out of the excess concrete, the inside faces of the joint shall be wire-brushed or grit-blasted to remove all laitance and contaminants. Thereafter the joint shall be cleaned and blown out with compressed air to remove all traces of dust. Solvents shall not be used for removing contaminants from concrete and porous surfaces.

Care shall be taken to ensure that primers or adhesives are applied only to surfaces that are absolutely dry and in accordance to manufactures' specifications. The sealant shall be applied within the period during which the primer remains active.
Sealants shall be applied strictly in accordance with the manufacturer's instructions by a person skilled in the use of the particular type of sealant. The trapping of air and the formation of voids in the sealant shall be avoided. The sealant shall be finished to a neat appearance flush with the edges of the concrete or to the specified depth.

Waterstops shall be supplied in unjointed standard production lengths. Site jointing shall be limited to the absolute minimum.

At intersections, transitions and abrupt changes of direction, factory-moulded watertight junction pieces shall be used so that any site jointing can be restricted to simple joints.

When a waterstop with a centre bulb is intersected, the centre bulb shall be continuous throughout the intersection irrespective of the make-up of the intersection.

PVC waterstops shall be manufactured from high-quality virgin material and shall not contain any scrap or reclaimed material. The waterstops shall be light coloured so as to reduce heat absorption when exposed to sunlight.

The waterstops shall be precision moulded or extruded to the required cross-sectional profile, they shall be free from porosity or other imperfections, and shall be provided with eyelets so that they can be securely fixed to prevent displacement during concreting.
All joints shall be butt-jointed hot-welded joints. Where joints cannot be factory made, Site joints shall be made in accordance with the manufacturer's instructions with equipment prescribed or supplied by the manufacturer and approved by the Engineer.

PSG 5.5.7.5 CONSTRUCTION JOINTS IN SLABS (NEW ITEM)

The reinforcement shall be continuous throughout the joint. After placing the first section of concrete, the joint face shall be green-cut within 24 hours after placing of concrete to expose 3mm coarse aggregate. Prior to placing the second section of concrete, the existing concrete shall be saturated with water (min 8 hours) without visible ponding. The fresh concrete shall then be placed directly onto this surface. No wet-to-dry epoxy will be allowed.

No vertical construction joints will be allowed in the walls.

Positions of additional joints required by the contractor must be approved by the Engineer.

All kickers shall be cast monolithic with the base, ensuring that it is properly compacted. The height shall be 75mm.

PSG 5.5 8 Curing and protection

Replace the clause with the following:

All concrete other than site concrete and porous concrete shall be cured by maintaining saturation for a minimum of 10 (ten) days after placement or after stripping formwork. No curing compound will be accepted. Curing methods other than the methods listed below, shall be approved in writing by the Engineer prior to placing of concrete.

i) Ponded water with a minimum depth of 50mm.

ii) Saturated sand with a minimum thickness of 60mm.

For floors, the sand shall be kept moist at all times using an irrigation system. Clean river sand shall be applied within 24 hours after completing the specified surface finishing and concrete has gained sufficient strength as not to damage the surface. In areas with high temperatures or wind, the surface shall be protected with plastic sheeting until it has reached sufficient strength to receive the sand.

iii) Covering the previously saturated surfaces with approved plastic sheet maintained in contact with the concrete surfaces and with all edges and joints sealed by methods approved by the Engineer. The sheets shall be partially removed on a regular basis and moisture added to ensure continuous saturation. Plastic sheets for curing shall not be dark coloured and all lapping joints shall be taped closed.

iv) Continuously saturated heavy duty sacking or geotextile or other approved absorbent material maintained in contact with the concrete surfaces by fasteners spaced at 1.5m c/c

v) Continuously irrigation or sprinkling of the entire concrete area with a mist spraying system

Sprayers shall be spaced at intervals such that the whole area of concrete is wetted and shall be fastened to the concrete at regular intervals. The system shall be designed with an automatic timing system to ensure continuous saturation during weekends and public holidays.

Periodical hosing or curing compound will not be accepted as a curing method.

For concrete walls, both sides shall be cured using irrigation as described above. Sprayers shall be spaced at such intervals to ensure that the whole concrete face is wetted. Curing shall commence the day after concrete has been cast. If formwork is to remain in position (e.g. to support subsequent lifts), it shall be loosened as soon as the concrete has gained sufficient strength (usually within a day) to allow curing water to thoroughly wet the surfaces of the concrete.

In addition, the Contractor shall also ensure that the concrete shall not be exposed to thermal shocks during the first 28 days after casting and he shall take the necessary, additional precautionary measures to shield the concrete with plastic sheets or hessian during extreme

PSG 5.5.10 Concrete Surfaces

PSG 5.5.10.2 This clause is amended to include:

Except where otherwise specified or indicated, all exposed unshuttered concrete surfaces shall, immediately after placing of the concrete, be levelled and shall be floated after the surface has set sufficiently. Floating shall be performed in one direction and float marks shall be parallel and of good appearance. Under no circumstances will exposed unshuttered concrete surfaces be allowed to be finished off with a separate cement-sand screed.

Where a wood floated concrete surface is shown on the Drawings or directed by the Engineer, hand floating of the surface shall first be completed and after the hand floated surface has hardened sufficiently, wood floating shall be performed to produce a dense, uniform surface free of any marks.

Where a steel floated concrete surface is shown on the Drawings or directed by the Engineer, hand floating of the surface shall first be completed and after the hand floated surface has hardened sufficiently, power floating shall be performed to produce a dense, uniform surface free of any marks.

'Unless otherwise noted on the drawings all exposed unformed surfaces and surfaces to receive grout are to be wood float finished."

"Wood float finish – Degree of Accuracy 11 – once the unformed surface has been brought to a plane surface it shall be uniformly floated using a wood float and shall be free from trowel marks."

"Steel float finish – Degree of Accuracy I – where this finish is specified or shown on the drawings the surface shall be treated as for wood float finish above except that when the moisture film has disappeared and the concrete hardened sufficiently to prevent laitance from being worked to the surface, the screeded surface shall be steel towelled under firm pressure to produce a dense smooth uniform surface free from trowel marks."

"Power float finish – Degree of Accuracy I – where this finish is specified or shown on the drawings the surface shall be treated as for steel float finish above except that the screeded surface shall be power floated to produce a high quality dense smooth uniform surface free from float marks."

"Bull nose edge to joints – Degree of Accuracy I – Where this finish is specified a nosing tool shall be applied during and after the finishing of the flat surface. The purpose is to thoroughly compact the edge of the concrete and render it watertight prior to application of the joint sealer."

All exposed concrete surfaces shall be rubbed down with carborundum blocks to a smooth appearance and a uniform colour. No cement wash will be allowed on exposed concrete surfaces.

PSG 5.5.16 No-fines concrete (new item)

No-fines concrete will be classified by the prefix NF followed by the size of aggregate to be used.

When the no-fines concrete will be receiving reinforcement, it will be sealed with a power floated 3:1 sand cement mortar.

Materials shall comply with SABS1200G section 3. The aggregate shall be a single sized aggregate, graded in accordance with SABS 1083.

The volume of aggregate per 50kg of cement for each class of no-fines shall be as follows:

Class	Aggregate per 50kg cement (m^3)
NF38	0.33
NF19	0.30
NF13	0.27

The mix will be such that the grout is smooth and adheres to and completely coats every particle of aggregate. The mix will not contain more than 20 litres of water per 50kg cement. The mix shall be weight batched.

Notwithstanding the preceding specifications, the mix design will be the responsibility of the Contractor.

The void ratio for no-fines concrete shall not be less than 27.5%.

The no-fines concrete shall be placed with a procedure as agreed with the Engineer and shall be placed in the final position within 30min after mixing. It shall be worked sufficiently to ensure that all aggregates adhere to each other, but vibrating and excessive tamping shall be avoided.

No-fines concrete shall be cured by sacking or plastic sheeting for at least 3 days after placing.

PSG6 TOLERANCES

PSG6.1.1 General (Clause G6.1.1)

The Contractor shall construct all exposed shutter finish concrete surfaces to Degree of Accuracy I. All other Concrete Works shall be constructed to Degree of Accuracy II.

The Contractor shall remedy or remove and replace at his own expense, all concrete work which does not satisfy the prescribed tolerances, as directed or approved by the Engineer.

PSG 7 TESTS

PSG 7.1 FACILITIES AND FREQUENCY OF SAMPLING

PSG 7.1.2 Frequency of Sampling

Clause 7.1.2.1 is amended to include:
"A test result shall be taken as the average of three sample cube strengths."

Clause 7.1.2.2 is amended to include:
"At least one set of samples shall after that be taken from each day's casting and from at least every 50 m³ of concrete of each grade placed or part thereof."

Clause 7.1.2.3 is amended to include:
"A frequency sampling guide is shown below though final testing frequencies will be at the discretion of the Engineer."

i) One set/batch/day or
ii) One set/element/day or
iii) One set/50 m³/day such that sufficient sets are obtained to enable them to be representative of the concrete placed."

PSG 7.1.2.4 This clause is deleted in its entirety.

PSG 7.2 Testing (Clause G7.2)

The Contractor shall be responsible for testing of cubes at approved laboratories for his own construction quality control, at his own expense, and he shall mould and cure the same.

Control tests by the Engineer shall be paid for separately from the Provisional Amount provided for this purpose.

The Engineer shall require six concrete test cubes for each individual concreting operation. Three of these cubes shall be tested at 7 days and three at 28 days.

Should 7 day strengths be obtained at any stage, which indicate, in the opinion of the Engineer, that the specified characteristic strength will not be achieved, the Engineer may stop concreting operations until 28 day strengths of such concrete are available, without compensation for losses or delays.

PSG 8 MEASUREMENT AND PAYMENT

PSG 8.1 Measurement and rates

PSG 8.1.1 Formwork

Add the following subclause PSG 8.1.1.7

The rubbing down of concrete with a smooth formwork finish, with carborundum blocks shall be measured separately per square meter.

The rate for rough vertical formwork where excavation surfaces are not suitable for casting of concrete shall include the necessary working space and support of the formwork.

Add the following subclause PSG 8.1.1.8

Forming Sloping Surfaces

Forming a sloping top surface of concrete will be scheduled for sloping top surfaces of unfinished concrete where the angle of inclination from the horizontal is over 0° and up to 20°, and shuttering will not be measured to such surfaces.

Beams

Unless otherwise stated casing to sides and soffits of beams shall be for all depths of beams. In case where differentiation for depths is made, items will be scheduled separately where beams exceed 1.00m overall depth.

Items will be scheduled for casing to soffits of beams.

Items will be scheduled separately where beams exceed 1.00m overall depth, sides scheduled separately from soffits as described above.

Slabs

Unless otherwise stated horizontal shuttering to soffit of slabs shall be for slabs of all thicknesses.

Columns

Separate items will not be scheduled for formwork to columns of different shapes, other than to circular columns as described below.

In the case of circular columns separate items will be scheduled in square meters stating diameters in the following stages:

Exceeding 0 and not exceeding 500mm diameter;

Exceeding 500 and not exceeding 1 000mm diameter;

Exceeding 1 000mm diameter

Column heads/bases

Special column heads formed using conical shutters will be measured as the number of conical shapes/shutters used

Curved/Radial Formwork

Separate items will be not be scheduled for curved formwork for each element.

Rates

Rates for formwork are to include for:

a) Chamfers or splayed edges not exceeding 20 x 20mm;

b) Straight cutting – raking and square (circular cutting and waste will be scheduled); Intersections;

c) Holing formwork for reinforcing, etc at joints;

d) Notchings;

e) Kickers;

f) Contractors construction joints.

PSG 8.1.2 Reinforcement

PSG 8.1.2.2 Replace subparagraph (a) with the following:

"The mass of steel bars will be measured as the total mass of steel, irrespective of diameters."

PSG 8.1.2.3 (a) Delete the words "nominal size 25 mm" in the first subparagraph

Delete subparagraph (b)

PSG 8.1.3 Concrete

Add the following:

Payment for concrete in water-retaining structures will be made as follows:

a) Full payment will be made for concrete placed and approved by the Engineer as per sub-clause 8.1.3.3 and other relevant clauses. Payment testing of water tightness will be done separately.

PSG 8.1.3 Casting in of pipes and specials (Additional clause)

No separate items will be scheduled for building in items supplied under this Contract except where specially measured in the Schedule of Quantities. The rate for supply and installation shall cover the cost of casting in the items regardless if they are positioned prior to construction or cast in boxed out holes.

PSG 8.1.3 Cleaning of construction joints (Additional clause)

The cleaning of construction joint surfaces shall not be measured separately and all costs in connection therewith shall be included in the concrete rates.

PSG 8.4 Scheduled concrete items

Add the following:

The tendered rate for concrete in water-retaining structures shall include storage of cement and aggregates in a cool, dry area and ensuring that these items are cool prior to mixing. Cost of curing is also included

PSG 8.4.4 Unformed Surface Finishes (Clause G8.4.4)

Wood and steel floated surface finishes shall be measured and paid separately per square metre of the completed and finished concrete surface.

PSG 8.4.7 No fines concrete (Additional payment item)

No-fines concrete or benching of uniform thickness will be measured per m^2. No-fines concrete or benching of varying thickness will be measured per m^3.

The rate shall include the supply of materials, cost of mixing, placing and compaction.

PSG 8.4.8 Sand-cement screed (Additional payment item)

Describe position ……Unit: m^3

PSG 8.5 Joints (Clause G8.5)

Contraction, isolation and sawcut joints shall be measured and paid per linear metre. The rate shall include the joint filling and sealing materials and the provision of an approved separator between the joint filling and sealing materials. Formwork to isolation joints shall be included in the relevant rate.

Joint filling material to expansion joints shall be measured and paid for per square metre.

PSG8.7 Grouting (Clause G8.8)

Grouting will be measured per litre.

PSG8.8 HD Bolts and Miscellaneous Metal Work (Clause G8.8)

HD Bolts and expandable anchor bolts shall be measured and paid per unit. The rate shall include the cost of the bolts, washers, nuts, all threading and drilling, shaping, anchor sleeves, casting in and all labour and finishing complete.

Trimmer angles and other miscellaneous steelwork cast into concrete shall be measured and paid per kilogram. The rate shall include the cost of the supply of the item, the casting in and all labour and finishing. The measured mass shall include the basic mass of the item and any plates or brackets attached thereto as indicated on the Drawings or directed by the Engineer.

PSG 8.9 Miscellaneous items (New payment item)

These items will be measured in metre, square metre, number or sum as per the schedule. Where a sum is measured, the rate shall cover supply, installation and casting in of the item as depicted on the relevant drawings.

PSHA STRUCTURAL STEEL WORK (SUNDRY ITEMS)

PSHA3 MATERIALS

PSHA 3.1 Structural Steel

All steel used for the fabrication of structural steel components shall comply with the requirements of SABS 1431 Grade 300WA steel, unless otherwise stated.

PSHA 3.2 Welding Consumables

Only low hydrogen electrodes or electrodes with a controlled hydrogen content shall be used for welding, unless otherwise agreed to by the Engineer in writing.

Add the following:

a). Steel tank

Minimum thickness of tank plates:

Depth of Tank	Position of Plates	Min. thick-ness of plate (mm)
1, 0-1, 22	Top, bottom and sides	3,0
2, 0-2, 44	Top, bottom and sides	3,0
3, 0-3, 66	Bottom and first module of sides Top and remaining layers	4,5 3,0
4, 0-4, 88	Bottom and first module of sides Second module of sides Top and remaining side modules	6,0 4,5 3,0

b). Stiffening of Tank Plates

Tank plates will be stiffened by means of by adequate embossing or welding ribs to the plates.

c). Tank Plates Flanges

Tank plates will be provided with the necessary flanges with a minimum width of 44 mm. The corners of the flanges must be welded. Flanges must have holes at 75 mm c/c for 14 mm bolts. Bolts must be in accordance with the Specifications of SABS 135.

d). Tank Roof

The roof construction must be the same as the construction of the tank. An opening (450 x 450 mm) with a lockable cover must be provided opposite the inside ladder. The positioning must be such that the control valve on the inlet pipe can be reached. The roof must be provided with a suitable ventilator.

e). Joint Sealant

The joint sealant must be non-toxic, not water soluble, tasteless and odourless. The joint sealant must seal effectively for the temperature conditions.

PSHA5 CONSTRUCTION

PSHA 5.2.3 Holes for Fasteners

The punching of holes is not acceptable and all holes shall be drilled.

PSHA 5.2.4 Welding

All welding shall be carried out in accordance with BS 5135 and SABS 044, Parts I, II and III (Chapter 1). Where the BS and SABS specifications are contradictory, the SABS Clause shall apply.

Field welding shall be carried out with a direct current welding machine and shall only be allowed for secondary structural elements.

Surfaces to be welded shall be free of filings, rust, grease, paint and other materials which may be detrimental to the quality of the weld. Mill scale which cannot be removed by brushing may remain on the metal.

Elements shall remain in alignment and be free of warps and bends on completion of the welding and all weld splash shall be removed.

PSHA 5.2.6 Handrails

Handrails shall be standard hot-dipped galvanised "Monoweld" rails or approved equal, securely fixed to the structure as prescribed by the manufacturer.

PSHA 5.2.7 Ladders

Steel ladders must be galvanised. Ladders must be installed or fixed in the position as indicated on the Drawings or directed by the Engineer.

PSHA 5.2.8 Open Grid Floors

Open grid floors shall be of approved make, type and pattern with dimensions and bearing capacities as shown on the Drawings or as directed by the Engineer. The plates shall be cut and framed by the Contractor to suit the layout in such a manner that each separate grid unit can be removed without having to dismantle any pipes, valves or other fittings.

The open grid floor shall be supported by suitable steel supports as shown on the Drawings.

The directions of the bearer and transverse bars of the grids shall be the same for all individual components of the floor and as shown on the Drawings or as directed by the Engineer.

Add the following:

Floor plate Floors

The requirements of Clause PSHA1.7 are also applicable to floor plate floors.
The pattern of adjacent plates must be in the same direction.

Steel covers, hatches, etc.

Steel covers, hatches, etc shall be manufactured in accordance with the details shown on the Drawings and shall be installed or fixed in the positions as shown or directed by the Engineer. All covers and similar items shall be manufactured from one single plate unless otherwise directed or approved.

Construction of steel tanks

Inlet and outlet connections must be welded to the tank at the positions indicated on the drawings or prescribed by the Engineer.
Tank plates will be assembled on site. Additional (5%) bolts, nuts, washers and joint sealant must be provided on site. Each plate must be marked carefully to indicate the exact position of the specific plate.

PSHA7 TESTING

PSHA 7.1 Test Certificates

Test certificates for commercial quality steel and any steel in accordance with SABS 1431, shall be submitted to the Engineer.

Add the following:

Testing and sterilizing of reservoirs

On completion of the reservoir it shall be thoroughly cleaned with clear water from a high velocity nozzle and the cleaning operation must be carried out in such a manner that all undesirable matter is removed through the scour outlet. No stones and the like shall be flushed into the scour outlet.

After cleaning of the reservoir it shall be filled with water. The Engineer will inspect the reservoir, in the presence of the Contractor, for any visible signs of leakage or other defects. The structure will be considered to be watertight if there is no head loss.

The Contractor shall be responsible 'for repairing any leaks or other defects to the satisfaction of the Engineer and all costs in connection therewith shall be borne by the Contractor.

During the scouring of pipes and the final filling of the reservoir, the Contractor shall add chlorine of the type as directed by the Engineer and at a concentration of 10 mg/l to sterilize the pipelines and reservoirs.

PSHA 8 MEASUREMENT AND PAYMENT

PSHA 8.3.4 Open Grid floors and Floorplate Floors

The rate per square meter for open grid and floor plate floors shall include the complete supporting system with fasteners to the applicable floors as indicated .on the Drawings. Corrosion protection shall not be measured separately, and the rate for the corrosion protection as specified must be included in the relevant rates.

Add the following:

a). Steel tank

The steel tank will be measured and paid for as a unit and the rate must allow for all material and construction of the tank as specified. The rate includes the plates, fastening material, ladders, ventilators, inlet pipe, outlet pipe, corrosion protection and all material and work that are needed to construct the tank in accordance with the Specifications.

b). Testing and sterilizing of reservoirs

The testing and sterilizing of reservoirs and related pipelines shall be paid under a sum in the Schedule of Quantities. The sum shall include the cleaning and flushing of the reservoirs and related pipelines, the testing of the reservoirs, the required chlorine and all requirements of the specification.

c). Steel covers, hatches, etc

Steel covers" hatches and similar shall be measured and paid for per unit and each different size and type shall be measure separately. The rate shall include the supply, fixing and installation, as well as fixing materials, frames and supports. Corrosion protection shall not be measured separately. This item will not

apply to valve chamber covers as these shall be measured in accordance with SABS 1200 G and SABS 1200 L.

d). Pipe clamps

Steel pipe clamps shall be measured and paid per unit for each type indicated on the Drawings. The rate shall include all materials, cutting welding, bolts and installation. Corrosion protection shall not be measured separately

PSL MEDIUM-PRESSURE PIPELINES

PSL1 SCOPE

This specification covers steel pipes and accessories with a working pressure up to 90m, and uPVC pipes for working pressures of 90m and 120m.

PSL2 INTERPRETATIONS

PSL 2.4 Abbreviations (Clause L2.4)

uPVC: Unplasticized polyvinyl chloride
HDPE: High density polyethylene

PSL3 MATERIALS

PSL3.1 General (Clause L3.1)

Materials for this Contract should preferably be obtained from manufacturers who operate an effective quality management system such as that described in SANS 0157 or ISO 9000.

The Contractor shall be fully responsible for transporting pipes, valves, specials and fittings to the point of installation, in good condition. Approved end-caps shall be provided for pipes. All materials such as rubber rings and the like must be protected against direct sunlight. Any material which, in the opinion of the Engineer, is damaged in any way shall be removed from Site without delay.

uPVC pipes shall be stored under cover and shall be suitably stacked and supported to prevent deflection or deformation.

PSL3.4 Steel Pipes, Fittings and Specials (Clause L3.4)

Unless otherwise indicated on the Drawings, all galvanised steel pipes shall be connected by threaded sockets or flanges. The sockets, flanges and fittings shall be of approved make and shall be suitable to sustain the specified test pressure.

Exposed threaded sections at pipe connections, where galvanising has been removed by threading, shall be treated with an approved cold galvanising preparation after installation on Site to suit existing elements on Site.

All steel specials shall comply with the requirements stipulated for corresponding steel pipes as set out below.

All steel pipes of diameter up to and including 150 mm diameter shall be of heavy duty steel in accordance with SABS 62. Steel pipes of diameter up to and including 150 mm used for irrigation or potable water shall be galvanized screwed and socketed. Steel pipes of diameter up to and including 150 mm used for sewerage effluent shall be flanged or coupled with flexible "Viking Johnson" couplings and coated in accordance with Clause L3.9.2.

Steel pipes used for gas or compressed air shall be flanged and provided with a warm epoxy coating as specified in Clause L3.9.2.

Steel pipes greater than 150 mm shall comply with the requirements of Grade C pipes with a minimum wall thickness of 4,5 mm in accordance with SABS 719.

Flexible couplings must be used with pipes without flanges. All flanges shall be drilled to BS4504 Table 10.

All pipes and fittings, casted into water retaining structures, shall be provided with puddle flanges with a minimum thickness of 10 mm for pipes greater than 150 mm diameter and 6 mm for pipes of 150 mm diameter and smaller.

The puddle flanges shall also act as an anchor flange. All flanges to pipe connections shall be continuously welded to transmit the full load and for water tightness. These flanges shall be at least 50 mm wide.

Bends will be as long radius bends.

Flexible couplings used in structures under water shall be Cast Iron with Stainless Steel 304 bolts.

PSL3.7.1 uPVC Pipes, Fittings and Specials (Clause L3.7.1)

All uPVC pipes shall comply with the requirements of SABS 966.

Fittings and specials for uPVC pipes shall be either of uPVC or cast iron construction with spigot and socket rubber ring joints and suitable to withstand the working pressure specified for the pipes or at least 1 600 kPa working pressure.

All bends shall be long radius bends, unless otherwise indicated on the Drawings.

uPVC Pipes for reticulation systems shall be suitable for a working pressure of 90m and 120m as indicated on the drawings. Unless otherwise specified by the engineer, fittings and specials shall be bitumen dipped. Fittings and specials shall comply with SABS 546. Socketed ends shall be to SABS 966.

PSL 3.7.2 Polyethylene pipes

Class 16 HDPE type IV pipes, plain ended for butt-welding, shall be used unless otherwise indicated. All HDPE pipes greater than or equal to 75 mm diameter are to be heat fusion welded (i.e. butt welded) in accordance with SABS specifications. The internal butt welds shall not protrude by more than 4 mm. Pipes smaller than 75 mm are to be jointed with compression type fittings.

PSL3.8.3 Flanges (clause 3.8.3)

Flanges shall comply with the requirements of SANS 1123 (as amended). Flanges designed for working pressures of less than 1 600 kPa shall have flat flange faces and those for working pressures equal or greater than 1 600 kPa shall have raised flange faces.

It shall be the responsibility of the Contractor to ensure that flanges on pumps, valves, fittings, specials and pipes to be fitted together, are fully compatible.
Machined surfaces shall be coated with a mixture of white lead and tallow or another approved protective composition before these are affected by rust.

PSL3.8.4 Loose Flanges (Clause L3.8.4)

Bolts and nuts shall be in accordance with SABS 136 unless otherwise approved by the Engineer.

PSL 3.8.8 Welding

Welding shall be Grade B spiral steel continuously welded pipe. The qualification of welders shall be in accordance with the relevant clauses of the above standards, and specifically SANS 044 Part III and shall be Grade 1 welders. Grade 2 welder shall be permitted only with the Engineer's approval.

The Contractor shall provide evidence, acceptable to the Engineer, that welding procedures and welders have been tested in accordance with the requirements of AWS D1.1.

PSL 3.8.9 Jointing of HDPE pipe

Jointing of HDPE pipe shall be by means of welding, welded flanges or approved external compression type fittings (Plasson or similar approved).

PSL3.9 Corrosion Protection (Clause L3.9)

Coatings shall comprise a coherent lining bonded to the inside surface of pipes and pipe specials in order to prevent corrosion of the inner pipe surface and to reduce friction and a coherent external coating bonded to the outside surface of each pipe in order to prevent corrosion.

Galvanized steel pipes and fittings shall be galvanized by the hot-dip process. Unless otherwise specified or indicated on the drawing or Schedule of Quantities, all bolts, nuts and washers shall be hot-dip galvanized to SANS 763 after threading. All bolts, nuts and washers within water retaining structures or exposed to rain water shall be fabricated from stainless steel, every bolt shall have at least one washer at the nut side.

The following corrosion protection specifications shall generally apply to pipework and specials:

Steel pipes and fittings above ground and in valve chambers	-	internal and external hot-dip heavy duty galvanized pipework
Buried steel pipes and fittings	-	Fusion bonded coating medium density polyethylene or similar approved combination of petrolatum impregnated cloth tape and a PVC outer wrap.

All cast-iron specials and couplings shall be painted with one coat of approved bituminous paint before delivery to Site and exposed parts shall receive a further coat of similar paint after installation of Site. The protection as mentioned above must suit the existing on site.

Bitumen shall be an approved bitumen pipe coating enamel of the quality and applied in accordance with SANS 1137 – 1977 and SANS 1178 – 1979.

Where steel pipes and fittings are treated against corrosion with an epoxy coating (Copon), it should be as specified in SABS 1200L to a minimum thickness of 250 micrometer, inside and outside with the exception of the smaller diameter pipes used for irrigation or potable water which must be treated as set out in PSL3.3.

Where the coating has been damaged, clean relevant areas thoroughly and repair with cold epoxy.

Cement mortar linings shall be applied in accordance with the American Water Works Association Specification C205-80 or as amended except where the Specification C205-80 is at variance with the requirements of this Contract.

PSL3.9.5 Protection of Bolts, Nuts and Washers (Clause L3.9.5)

Bolts, nuts and washers shall be zinc coated by the hot-dipped process. Bolts, nuts and washers in contact with treated water shall be of Stainless Steel 316.

PSL3.9.6 Corrosive Soil (Clause L3.9.6)

Delete the existing clause and replace with:
All steel or cast iron fittings and joints shall be treated with a compatible primer, packed with a bitumen-based or tar-based mastic, and wrapped with an approved plastics tape, or protected with scheduled or approved materials. Tape shall be Denso wrapping, 150mm wide.

PSL3.10 Valves

PSL3.10.1 Gate Valves (New Clause)

A All gate valves up to 200 mm shall be a resilient seal gate valve type and have a 1 000 kPa working pressure. All other gate valves shall be wedge gate valves up to 1 600 kPa working pressure. Both valves shall have flange adapters both sides.
Resilient seal gate valves (RSV) shall comply with SANS 664 (as amended). All RSV valves shall be Class 16. Plain-ended valves shall be suitable for the type of pipe specified, and, in the case of spigotted valves shall be complete with couplings for the type of pipe specified. The valves shall have a straight, unobstructed body passage without pockets. The valves shall allow back sealing to allow replacing of spindle seals under pressure.
The spindle seal shall consist of a double O-Ring arrangement with a wiper ring. RSV valves shall have non-rising stainless steel spindles. Gates shall be completely rubber covered and shall be supported by guides.

Wedge gate valves shall be of the class as specified, but not less than Class 16. Plain-ended valves shall be suitable for the type of pipe specified, and, in case of spigotted valves shall be complete with couplings for the type of pipe specified. All wedge gate valves shall be of Trim C: Stainless steel trim. Seat rings shall be pinned in position. The gland shall have a back sealing ring and at least 3 rings of acceptable packing material. The lugs on the gate and spindle are to be machined.

On all valves the design of the guides shall be such that the valve can be mounted in any position. All flanges, unless otherwise required, shall be to SANS 1123-1600. Flanges for valves larger than 200 mm and/or working pressure higher than 1 600kPa shall be spot-faced. All valves larger than 150 mm to be installed in pump stations shall have indicators. All valves shall, unless otherwise specified, be clockwise closing. Gearing shall be chosen to limit the effort on hand wheels or valve keys to 500N. Unless otherwise specified caps for key operations will be required for buried valves and hand wheels on valves situated in accessible chambers.

Valves must be suitable for closing and opening at unbalanced pressures equal to the specified working pressure and where specified or shown on the drawings valves should be equipped with approved 1:3 reduction gearboxes.

All valves shall be supplied complete with packings, bolts and nuts. Flanges must be in accordance with pipe flanges as specified.

Valves of diameter less than 75 mm diameter shall be approved, screwed, ball type isolating valves suitable for the working pressure as specified for adjacent pipes.

PSL3.10.2 Air Valves

The air release valves shall be suitable for a working pressure as indicated on Drawings and shall have flanged or screwed inlets as specified and shall incorporate an integral shut down valve and shall be of the following types, as specified:

(a) Type I : Conventional kinetic double orifice air valves:

These are required for the release of larger volumes of air during the filling of pipelines and the admission of air at low pressure during draining or scouring and for the admission of large quantities of air to prevent the formation of vacuum in flexible wall pipelines during the break of or negative pressure induced by water hammer/separation. A small orifice must be included for the release of entrained air under normal pipeline operation. The large orifice of the valve shall not close dynamically before all the air is discharged from the pipeline.

(a) Type III : Single small orifice air valves:

These are for the release of small volumes of air during operation of the pipeline. It shall be of the cylindrical barrel type incorporating a cylindrical float mechanism and must have either screwed or flanged inlets as specified.

General Requirements

The size of the valve/outlet shall be the diameter of the inlet branch and the air valves shall be mounted on a isolating valve with a pressure rating similar to that of the air valve.

12 mm Cast steel needle valves or chrome plated brass P T F E seated ball valves shall be fitted to drain valve bodies when isolated from the pipeline and for the attachment of pressure gauges to valve bodies.

The pressure rating of these valves shall be the same as for the air valve it is attached to.

Valves shall not exhibit leaks or weeping of liquid past the seal at operating pressure of 0,3 bar to twice rated pressure.

Valve design shall incorporate an over pressure safety feature that will fail without an explosive effect, such as is normally the case when highly compressed air is suddenly released. The control floats shall not distort when subjected to closed end tests for material strength and soundness, nor shall they be damaged by the possible corrosive effects of the water, not under any condition of frequent operation.

All air valves shall be provided with a separate isolating valve as indicated on the Drawings which is coupled to the air valve in such a manner to allow the removal of the air valve without removing the isolating valve.

All air valves shall be able to operate at the specified working pressures and flange drilling must be in accordance with the specified working pressure to BS4504.

All air valves shall be mounted on a steel extension pipe, which varies in length, according to the pipeline depth. For Contract purposes a length of 500 mm shall be assumed.

The inlet diameters of air valves shall be 25 mm for single air valves and 50 or 80 mm, as specified or shown on the Drawings, for double air valves.

PSL3.10.3 Level Control Valves

Level control valves shall be suitable for a working pressure as indicated on Drawings and shall open wide when the water level drops below a specific level and shall gradually close as the water level rises, closing fully at the full supply level. The friction loss in the valve shall not exceed 2 m.

The level control valves shall be of steel or cast-iron construction and shall be protected against corrosion as specified for gate valves.

PSL3.10.4 Non-Return Valves

Non-return valves shall be suitable for a working pressure as indicated on Drawings. All metal components shall be protected against corrosion as specified for gate valves.

PSL 3.10.4 Control valves (pressure reducing / sustaining / relief, rate-of-flow)

The control valves shall be fully automatic, requiring no external power source. The control valves shall have large filter(s) in the control circuit. All pilot valves shall after being set, be sealed with sealing wire and lead seals. All pilot valves shall be permanently marked.
The valve shall be delivered complete a full set of operating instructions and a diagram indicating the control logic.

PSL3.11 Manholes and Surface Boxes

Manholes, surface boxes and the like shall be constructed of the materials as shown on the Drawings and not as shown on the Figures contained in SABS 1200L.

PSL4 PLANT

PSL4.1 Transportation and Storing (Clause L4.1)

The Contractor shall be fully responsible for transporting pipes, valves, specials and fitting to the point of installation, in good condition. Approved end-caps shall be provided for pipes. All materials such as rubber rings and the like must be protected against direct sunlight. Any material which, in the opinion of the Engineer, is damaged in any way shall be removed from Site without delay.

UPVC pipes shall be stored under cover and shall be suitable stacked and supported to prevent deflection or deformation.

PSL5 CONSTRUCTION

PSL5.1.4 Depth and Cover (Clause L5.1.4)

The depths of pipes below ground level shall be a minimum of 1m and as indicated on the Drawings.

PSL5.2 Valve Chambers (Clause L5.6)

Valve chambers shall be constructed in accordance with the details shown on the Drawings and not as shown on the Figures contained in SABS 1200L.

PSL5.3 Manholes (Clause L5.7)

Manholes shall be constructed in accordance with the details shown on the Drawings and not as shown on the Figures contained in SABS 1200L.

PSL7 TESTING

PSL7.2.21 Radiographic Examination (Clause L7.2.2)

No radiographic examination is required.

PSL7.3.1 Test Pressures (Clause L7.3.1)

The test section shall be subject to a pressure test, at pressures not less than 75% and not exceeding 100% of the appropriate allowable maximum working pressure for the class of pipes, for the highest and lowest point respectively of the section being tested. This pressure shall be obtained by continuous pumping so as to ensure a gradual increase of pressure until the specified value is obtained.

PSL7.3.4 Final Inspection of Pipelines and other Items of Equipment (new clause)

After the entire piping system has been laid and all parts thereof have been tested to the satisfaction of the Engineer and backfilled, the system will be put into operation and the Contractor shall inspect the same in the presence of the Engineer, to ensure that all valves and other equipment are operating satisfactorily and to check that all pipe supports, brackets and the like are capable of withstanding the loads imposed on them.

Any faults or defects which are detected during this inspection shall be repaired by the Contractor, or where

necessary, the defective parts or materials shall be replaced by the Contractor, to the satisfaction of the Engineer, all at the Contractor's expense.

All items of equipment not specifically mentioned in the Specifications, shall be inspected during the commissioning period for proper operation and to verify that these items comply with the requirements of the Specification.

PSL 7.5 Disinfection of Pipes (new clause)

PSL7.5.1 Pipes must be disinfected over the whole length, including couplings, before going into operation. Pipes must be filled with drinking-water, chlorinated to a concentration of 15mg chloride per litre water which must stay in contact with the inside surface of the pipe over a minimum of a 24 hour period. The pipeline must be filled in such a way as to prevent chlorine shock or air being captured inside the pipeline.

PSL7.5.2 The Contractor must give notice to the Engineer of the method of disinfection of pipelines 14 days in advance for acceptance of the method by the Engineer.

PSL7.5.3 The Contractor shall supply all necessary materials, equipment, tools and labour for the disinfection of the pipelines. The Contractor is responsible, at no extra cost, for the emptying of water from the pipelines and disposal of the water in a way as approved by the Engineer.

PSL7.5.4 The Contractor may use the following products as a source of chloride:

a) Chloride of lime with a yield of 33% free chloride per mass according to SABS 295.

b) Calciumhipochloride with a yield of 70% free chloride per mass according to SABS 295.

c) Chlorine gas applied with a chlorinator.

PSL7.5.5 After disinfection, a minimum of 10% (randomly selected and evenly spreaded and to be indicated on Drawings) of the total water ends must be tested by means of an approved water quality test. This test must include a full bacteriological test in accordance with SABS 241 and the test results must be handed over to the Engineer for inclusion thereof with the Contract Documentation. The Contractor will carry all costs pertaining to meaningless tests.

PSL7.5.6 The disinfection of pipes must be carried out in the presence of the Engineer.

PSL8 MEASUREMENT AND PAYMENT

PSL8.2.1 Supply and Installation of Pipes and Couplings (Clause L8.2.1)

Pipes shall be measured per linear meter for each type, pressure rating and diameter. The rates shall include for the supply, complete with couplings, fittings, corrosion protection, handling cost, inspection, transport and all other requirements in connection herewith.

Flanged pipes shorter than 6 m shall be measured as pipe fittings as specified in Clause PSL8.2.5. All flanges and couplings shall be provided with packings, bolts and nuts and no extra payments will be made for these items.

PSL8.2.5 Valves and Specials (Clause L8.2.5)

Air valves with isolating valves, extension pipes and couplings shall be measured and paid per unit complete.

PSL8.2.10 Temporary Valves, Blank Flanges, etc (Clause L8.2.10)

No separate payments will be made for the supply or loan of temporary valves, end-caps, blank flanges, or other isolating devices required for the testing of pipe systems and all costs in connection therewith shall be included in the rates for the supply, laying and bedding of the permanent pipes, specials and valves.

PSL7.4 Connections to Existing Pipelines

A Provisional Amount shall be provided in the Schedule of Quantities for connections to existing pipelines of all diameters.

The material required for the connections shall be measured and paid according to tendered item rates in the Schedule of Quantities. Should specific items not be covered, rates for these shall be agreed or alternatively daywork rates shall apply as determined by the Engineer.

PSL7.5 Pressure Testing and Disinfection of Pipelines

Pressure testing and disinfection of pipelines will be measured separately per m of pipeline tested and disinfected irrespective of the pipe diameter.

PSL7.6 Puddle Flanges

Puddle flanges shall be measured and paid, extra-over the rate for pipes, per unit. Puddle flanges to each pipe diameter shall be measured separately. The rate shall include the complete installation of the flange on the pipe.

PSLB BEDDING (PIPES)

PSLB3 MATERIALS

PSLB3.3 Bedding (Clause LB3.3)

All pipes shall be laid on Class C bedding. Laying and compaction of bedding shall be done by labour intensive methods.

PSLB3.4 Treatment of Excavated Material (Clause LB3.4)

Where excavated material can be rendered suitable for bedding by screening, washing or other treatment and where no suitable material is available within a freehaul distance of 0,5 km from the point of placing, the Engineer may require the Contractor to treat the excavated material to render the same suitable for bedding provided that at least 60% by volume of the material is recovered after treatment. Where otherwise suitable excavated material from a trench is, in the opinion of the Engineer, contaminated due to the Contractor's methods of working, the abovementioned treatment shall be carried out at the Contractor's expense.

PSLB3.4.3 Material from local borrow pits (new clause).

Where material from trench excavations is not suitable for bedding purposes, the Contractor must identify and establish local borrow pits. The location of such borrow pits will be approved by the Engineer, the Project Steering Committee and the Tribal Authority. The Contractor shall negotiate royalties with the relevant Tribal Authorities. The rate shall include establishment of access routes, establishment and de-establishment of the borrow pit, transportation (freehaul of 1 km), laying and compacting of required material.

PSLB5 CONSTRUCTION

PSLB5.4 Concrete Encasing of Pipes (Clause LB5.4)

Where the specified cover over the pipes cannot be maintained at road crossings or at river crossings where scouring may occur, or otherwise where directed, concrete encasing of pipes may be required by the Engineer. In some cases the encasement shall be tied to rock with mild steel dowels grouted into drilled holes. Such dowels will be paid for per unit.

PSLB6 TOLERANCES

PSLB6.11 Moisture Content and Density (Clause LB6.11)

Class II degree accuracy is required.

PSLB8 MEASUREMENT AND PAYMENT

PSLB8.1.4 Separate Items for Cradle and Blanket (Clause LB8.1.4)

Material for the bedding cradle and for the selected fill blanket shall not be measured separately, but as a unit under the description "bedding material".

PSLB8.2 Treatment of Excavated Material (Clause LB8.2)

Where the Contractor is requested to treat excavated material to render the same suitable for bedding, the treated material shall be measured per m^3 as an extra over on the item for bedding material from pipe trenches and shall be measured in accordance with specified theoretical dimensions.

PSLB8.2.1 Bedding Material from trench excavations (Clause LB8.2.1)

Only the provision of bedding material from the trench excavations further than 20 m and closer than 0,5 km from

the point of placing shall be measured and paid under this item.

The provision of bedding material within 20 m from the point of placing is included under payment for the supply, laying, handling and bedding of pipelines.

PSLB8.2.2 Supply of Bedding Material by Importation from local borrow pits (Clause LB8.2.2)

The provision of bedding material by means of importation from a borrow pit shall be measured and paid for per m^3 in accordance with the specified theoretical dimensions, as an extra over on the item for bedding material from pipe trenches when the haul distance is greater than 1km

PSLF - ERF CONNECTIONS

PSLF 8 MEASUREMENT AND PAYMENT

PSLF 8.2.1 Provide erf connections complete (add to clause 8.2.1)
Add the following sub-clauses
1) Domestic erf connections (All erf connections HDPE Class 12)
a) Single short erf connections ..... Unit: No
b) Double short erf connections ..... Unit: No
c) Single long erf connections ..... Unit: No
d) Double long erf connections ..... Unit: No

2) Non-domestic erf connections
25 mm OD
a) Single short erf connections ..... Unit: No
b) Single long erf connections ..... Unit: No

3) 50 mm OD
a) Single short erf connections ..... Unit: No
b) Single long erf connections ..... Unit: No

PSLF 8.2.6 Provision and installation of ball valves (add to clause 8.2.6)
Add the following sub-clauses
a) Provision and installation of ball valves on existing and new erf connections
(Less 500mm deep)
1) 20mm diameter ..... Unit: No
2) 25mm diameter ..... Unit: No

b) Provision and installation of ball valves on existing and new erf connections
(More than 500mm deep)
1) 20mm diameter ..... Unit: No
2) 25mm diameter ..... Unit: No

PSLF 8.2.6.1 Extra-over item for ball valve installation for existing pipes other than HDPE

Add the following sub-clauses
1) 20mm diameter ..... Unit: No
2) 25mm diameter ..... Unit: No

PSLF 8.2.9 Stand pipes (new clause)

a) Installation of communal stand pipes ..... Unit: No

PSLF 8.2.10 Remove existing standpipes (new clause)

a) Locate, remove and disposal of illegal erf connections ..... Unit: No

PART A2 PARTICULAR SPECIFICATIONS

There are no particular specifications for this project.

C3.5 MANAGEMENT

CONTENTS

C3.5.1 FORMS FOR CONTRACT ADMINISTRATION
C3.5.2 PROGRAMMING AND PLANNING
C3.5.3 CONTRACTOR'S RESPONSIBILITY IN TERMS OF THE OHS ACT
C3.5.4 WORKS NOT TO INTERFERE
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C3.5.7 ELECTRONIC PAYMENTS
C3.5.8 WAYLEAVES, PERMISSIONS AND PERMITS
C3.5.9 KEY PERSONNEL

3.5.1 FORMS FOR CONTRACT ADMINISTRATION

The Contractor shall submit with each monthly statement for payment the following updated returns:

- Project Labour Report
- HDI Contract Participation Expenditure Report
- Targeted Labour Contract Participation Expenditure Report

The formats will be supplied by the client.

The Project Labour Report must include details of all labour (including that of sub-contractors) employed on this contract in the month in question.

3.5.2 PROGRAMMING AND PLANNING

A bar-chart type construction programme shall be submitted to the Engineer within 14 days from the Commencement Date. The programme shall be updated monthly during the contract period.

In addition to the above, a monthly cash flow forecast shall also be submitted to the Engineer.

3.5.3 CONTRACTOR'S RESPONSIBILITY IN TERMS OF THE OHS ACT

The Contractor shall be responsible for complying with the Occupational Health and Safety Act, Act 85 of 1993, and specifically the Construction Regulations 2003 issued in terms of Section 43 of the Act (GNR 1010 of 18 July 2003).

3.5.4 WORKS NOT TO INTERFER

The project is to be planned and programmed such that interference with the existing movement of people in the community is kept to a minimum. Tie-ins into existing pipelines or structures are to be planned well in advance to minimise disruptions. The Contractor will advise the appropriate NLM managers and the Engineer a minimum of 2 week prior to any activity that could disrupt the existing water supply in any form.

3.5.5 UNAUTHORIZED PERSONS

The Contractor shall keep unauthorized persons from the Work fronts at all times.

3.5.6 MANAGEMENT MEETINGS

3.5.6.1 Technical Meetings

Technical meetings / site meetings shall be held monthly on Site and will be called by the Engineer.

The Contractor shall arrange for the Contractor's project manager to attend these meetings.

Specific important notes made in the meeting should be taken down by the contractor and the Contractor shall attend to these items immediately and shall provide feedback to the engineer on the progress with the items.

3.5.6.2 Community Meetings

Community meetings shall be held as and when required. It is required that the CLO form part of these meetings and attend the technical meetings to give feedback on community issues in the technical meetings.

3.5.6.3 Health and Safety Meetings

The Contractor is referred to the Health and Safety Specifications.

C3.5.7 ELECTRONIC PAYMENTS

The Contractor shall provide his banking details to enable electronic payments to be made by the NLM.

C3.5.8 WAYLEAVES, PERMISSIONS AND PERMITS

The Contractor shall be responsible for obtaining all of the necessary wayleaves, permissions or permits applicable to working near any existing services or other infrastructure on Site and shall abide by the safety conditions imposed by such wayleaves, permissions or permits.

The Contractor shall ensure that all wayleaves, permissions and permits are kept on site and are available for inspection by the relevant service authorities on demand.

The Contractor shall also ensure that any wayleaves in respect of electricity services are renewed timeously every three months.

C3.5.9 KEY PERSONNEL

The Contractor shall submit an organogram of key personnel (stating position and responsibilities) and a schedule of the same listing contact particulars.

C3.6 ANNEXES

C3.6.1 ANNEX 1 - ENVIRONMENTAL MANAGEMENT PLAN

Annex 1: Environmental Management Plan

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KEY TERMS AND ABBREVIATIONS

Affected environment:	Those parts of the socio-economic and biophysical environment impacted on by the development.
CEMP:	Construction Environmental Management Plan: a plan that organises and co-ordinates mitigation, rehabilitation and monitoring measures in order to guide all phases of the implementation of the development and include all site works.
Construction camp:	Construction camp refers to all site offices, staff accommodation, container sites, workshops and testing facilities.
STLM:	NKOMAZI Local Municipality
ECO:	Environmental Control Officer: a qualified, independent environmental Consultant. The person responsible for ensuring that the requirements of the EMP are implemented.
Environment:	The biosphere in which people and other organisms live. It consists of renewable and non-renewable natural resources, natural ecosystems and habitats; and ecosystems, habitats and spatial surroundings modified or constructed by people, including urbanized areas, rural landscapes and places of cultural significance.
Environmental Awareness Course:	An environmental education course for the Contractor's Management staff and labor force, which informs them of the requirements of the CEMP. The ECO must present and co-ordinate courses
Engineer:	A person who represents the client and is responsible for the technical and contractual development
Fines:	Penalties, which can be imposed on the contractor and/or his subcontractors in the event of a contravention of this EMP.
Method Statement:	Document that describes the scope of the intended work in a step-by-step in order for the PM and ECO to understand the contractors intentions.
Project Manager:	The person responsible for ensuring that on-site activities are undertaken in accordance with the requirements of the EMP.
SAHRA:	The South African Heritage Resources Agency
Site:	The 'site' refers to the cadastral entity (-ies) awarded to the Contractor and any other area reasonably required by the Contractor to undertake the construction activities in order to fulfill the contract.

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

1 INTRODUCTION

1.1 Background

The Employer's objective is to provide access to clean water to the residents of Gretane through a reticulation system that terminates at the yard connections within each property.

This document serves as the Construction Environmental Management Plan (CEMP) for the provision of water reticulation infrastructure to the residents of Gretane in the Nkomazi Local Municipality area of jurisdiction.

The contract covers the installation of water reticulation in the settlement of Gretane. The project includes the installation of 63 756m of uPvC water reticulation pipes and internal bulk pipelines varying in size between 75mm dia. and 250mm dia. with 1800 yard connections with water meters and standpipes. The expected construction period is fifteen (15) months.

The proponent intends to act responsibly and meet environmental obligations.

1.2 Terms of Reference

The purpose of the CEMP is defined in the Integrated Environmental Management (IEM) Guideline Series (DEA, 1992) as: "A plan that organises and co-ordinates mitigation, rehabilitation and monitoring measures in order to guide the implementation of the proposal".

This CEMP serves as a baseline information document and provides guidance for preventing or mitigating environmental impacts that may result as part of the construction phase of the project. It is intended for use by the Environmental Control Officer, the Principal Agents for civil and building works respectively, the various Contractors and sub contractors appointed to the project, the Local Authority and the Project Development Team as a whole. The objectives of this CEMP are thus:

- to include all components of the development;
- to prescribe the best practicable control methods to lessen the environmental impacts associated with the construction of the development;
- to monitor and audit the performance of construction personnel in applying such controls; and
- to ensure that appropriate environmental training is provided to responsible construction personnel.

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

An Environmental Control Officer (ECO) is required on site during the construction phase to ensure that the requirements of the CEMP are implemented.

2 ENVIRONMENTAL POLICY AND LEGISLATION

2.1 Contractual Agreement

This EMP is to be an annexure to the Tender documentation as a commitment from the contractors regarding all their activities and to make them aware of their environmental responsibilities. Failure by any of the contractors' or sub-contractors' employees to adhere to the document will be considered cause for the offending employees to be potentially removed from the site, and/or that the damage be repaired at the cost of the contractor. The Project Manager (PM), under advisement of the ECO, may recommend the removal of equipment causing continual environmental damage.

The CEMP is a legally binding agreement between the Nkomazi Local Municipality, ECO and the contractors. It is therefore important to ensure that the actions specified by the EMP are enforced through integration of the EMP into the tender and other project related documents for the project as a set of environmental specifications. Copies of this EMP shall be made available to the ER, the Contractor and the ECO. A copy of the document must be available on site at all times.

The PM, under advisement of the ECO, may recommend that the contractors suspend part or all of the works if they fail to comply with the specifications set out in the EMP and method statements supplied by themselves or other responsible parties. The suspension shall be enforced until such time as the offending procedure or equipment is corrected. No extension of time will be granted for such delays and all costs will be borne by the contractors.

A policy statement is now presented, together with a list of the most important pieces of legislation pertaining to this project.

2.2 Environmental Policy Statement

The policy statement that follows is formulated specifically to support this construction phase EMP for the developments. All construction personnel will be required to commit themselves to this policy.

- Adherence to the requirements of the CEMP for the project;
- Management of all construction and associated activities so as to minimise the risk of pollution

of ground and surface water, the air and the soil;

- Management of all construction and associated activities so as to minimise the nuisance and disruption to people resident in, working in or commuting through the area;
- Adherence to the environmental legislation relevant to the location and nature of the work being conducted; and
- Compliance with the monitoring and auditing programmes contained in the CEMP, to ensure its accountable and transparent implementation.

2.3 Environmental Legislation

Cognisance will be taken of, but is not limited to, the following pieces of legislation during the construction phase of the project components.

- Atmospheric Pollution Prevention Act (45 of 1965)
- National Environmental Management Act (107 of 1998)
- Hazardous Substances Act (15 of 1973) and Health Act (63 of 1977)
- National Heritage Resources Act (25 of 1999)
- National Water Act (36 of 1998)
- Occupational Health and Safety Act (85 of 1993)
- NEM Waste Act, 2008 (Act 59 of 2008)

3 ORGANISATIONAL STRUCTURE

It is essential that an organisational structure is established early in the construction phase of the project and that all parties concerned accept the structure. This identifies the responsibilities and the authority of the proponent, design team, Project Manager (PM), consulting engineers and the numerous contractors and sub-contractors. The relationship between the PM, the engineers and the contractors' site agents are key links in the structure.

The organisational structure also clarifies the channels to direct instructions and provides the means of interaction between the various groups involved. Good communication is a prerequisite of maintaining the organisational structure and is vital to the smooth operation of the project.

3.1 Responsibility Linkage

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

Essentially, the responsibility for the application of the construction phase EMP for the project begins with the proponent who will devolve the responsibility to the designated PM to assume this task within his or her portfolio.

The ECO will then ensure that the requirements of the CEMP are implemented by monitoring and auditing the performance of the PM in achieving the requirements, while also providing strategic support and advice. In practice, on-site responsibility would typically lie with an engineer tasked with particular components of the project. The ECO may at times communicate directly with the engineer, but always with recourse to the PM.

3.2 Role of the Project Manager (PM)

The PM is responsible for ensuring that on-site activities are undertaken in accordance with the requirements of the CEMP. The PM will thus need to ensure that:

- Method statements requested by the ECO are provided.
- Corrective action is implemented as required.
- Appropriate records and information regarding compliance with the CEMP requirements are maintained and made available to the ECO;
- All site instructions are copied to the ECO; and
- Instructions as required by the ECO are issued to the relevant contractor.

3.3 Role of the Environmental Control Officer (ECO)

The ECO is responsible for ensuring that the requirements of the CEMP are upheld and is to be employed by the Project Proponent for the duration of the project. The ECO should have appropriate qualifications and training and experience in the implementation of environmental management specifications. The ECO provides feedback to the Project Manager regarding all environmental matters. Contractors are answerable to the ECO (or Project Manager, depending on contractual arrangements) for non-compliance with the requirements stated in the EMP.

More specifically, the ECO shall:

- Request, review and approve method statements from the Contractor and Sub-contractors prior to any construction commencing.
- Undertake weekly inspections at the outset of the project and, thereafter, regular inspections (on

average once or twice per week) of the construction site in order to check for compliance with method statements as well as specifications outlined in this document. This should also involve completion of a weekly checklist, which will also serve as site records.

- Ensure that the Contractor and his Subcontractors and his employees have received the appropriate environmental awareness training before commencing site establishment/ set up.
- Meet with the Contractor to discuss the implementation of and non-conformances with this document in Site meetings. These meetings will serve to re-affirm overall policy for the project, method statements as well as discuss weekly checklists.
- Identify appropriate corrective action if non-compliance occurs or unforeseen environmental issues arise that require environmental management action.
- Keep a register of major incidents (spills, injuries, complaints, legal transgressions, etc.) and other documentation related to the CEMP.
- Report to the Project Manager any problems (or complaints) related to conformance with this document which cannot first be resolved in co-operation with the Contractor and/or his Subcontractors.
- Assist in finding environmentally acceptable solutions to construction problems.
- Identify and make minor amendments to the CEMP where appropriate.
- The ECO shall have the authority to issue penalties (via the PM) for non-compliance with the CEMP
- Issuing of site instructions to the Contractor for corrective actions required.
- Conducting regular audits to ensure that the system for implementing the EMP is operating effectively. Reports/audits should be sent to the Nkomazi Local Municipality's E&HRM Branch as well as to contractors on a monthly basis.

3.4 Role of the Contractor

The role of the Contractor is as follows:

- The Contractor shall ensure that all employees, sub-contractors, suppliers, etc. are fully aware of the environmental issues and requirements detailed in this CEMP;
- The Contractor shall liaise closely with the ECO and PM and will ensure that works on site are conducted in an environmentally sensitive manner in accordance with this CEMP;
- The Contractor is to have a copy of the CEMP on site and be familiar with its contents; and
- In conjunction with the ECO, the Contractor must ensure that all employees (permanent and temporary) and all sub-contractors that work on the site for longer than two days, receive Environmental Awareness Training within one week of being on site.

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

4 ENVIRONMENTAL SPECIFICATIONS

4.1 Site Camp Establishment

The Contractor's Camp and Materials Storage Area shall be located in consultation with the ECO. The Contractor is required to fence off or visually screen the site camp.

No site staff other than security personnel shall be housed on site. The Contractor shall provide water and/or washing facilities at the camp site for personnel.

The Contractors Camp and Materials Storage Area shall be kept neat and tidy and free of litter. The Contractor is to ensure that the site camp complies with the Occupational Health and Safety Act (first aid and fire fighting equipment, display of emergency numbers etc.).

4.2 Demarcation of Eating Areas

Eating areas shall be restricted to the site offices and contractors' camp. If employees are to eat elsewhere on the site, the contractors shall, in consultation with the ECO, designate places for eating in the working areas, and shall provide adequate water for washing, toilets and refuse bins at all these places, which should be cleaned on a daily basis.

4.3 Environmental Education

According to the National Environmental Management Act (107 of 1998), any costs incurred to remedy environmental damage shall be borne by the person responsible for that damage, it is therefore critical that the contractors read and understand the requirements of this document. It is a requirement of the act that everyone takes reasonable measures to ensure that they do not pollute the environment.

The information presented at the course shall be communicated by the Contractor to the rest of the employees on the site, to any new employees coming onto site after the initial training course and to his / her suppliers. The presentation shall be conducted, as far as is possible, in the employees' language of choice. As a minimum, training shall include:

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

- Explanation of the importance of complying with the Construction EMP;
- Discussion of the potential environmental impacts of construction activities;
- Employees' roles and responsibilities, including emergency preparedness;
- Explanation of the mitigation measures that must be implemented when carrying out their activities;
- Explanation of the specifics of this Construction EMP and its specification (no-go areas, etc.); and
- Explanation of the management structure of individuals responsible for matters pertaining to the Construction EMP.

Reasonable measures include informing and educating employees about the environmental risks of their work and training them to operate in an environmentally acceptable manner. Training is fundamental to the successful implementation of the CEMP. All personnel whose work may result in an impact on the environment must receive appropriate training in the environmental procedures to be followed. In this regard, the following must be fulfilled:

- All personnel working on the construction site must attend environmental awareness training workshops conducted by the ECO. The purpose of these workshops is to provide staff with the information they require to enable them to meet the requirements of the CEMP.
  The ECO may call upon the services of a specialist environmental education translator should this be required. Contractors and all their staff must attend and failure to do so will not exempt them and/or their employees from environmental compliance.
- Contractors shall make allowance for site staff to attend an initial environmental awareness training workshop of approximately one hour. In addition, contractors shall ensure that all new staff and sub-contractors attend environmental awareness training workshops within five working days of commencement of work on site.
- All personnel involved in day-to-day activities that could have an impact on the environment must be given on-the-job training in the procedures to be followed. Contractors must ensure that this is done and seek the support of the ECO where the contractor and his or her staff are not familiar with the procedures to be followed.
- Contractors shall keep a register of all personnel attending the environmental awareness training workshops and the on-the-job training detailed above and copy this to the ECO.
- All new staff and sub-contractors that start work during the course of the contract must attend the training workshops conducted by the ECO.
- All staff must be trained in emergency response procedures through the conducting of dry runs of

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

emergency situations. Records of emergency response training must be maintained and must include an attendance list for each training session. These records must be made available for audit purposes.

- Environmental awareness posters to be made available by ECO are to be displayed on site. Environmental 'do's and don'ts' must be clearly illustrated.
  The posters shall use pictures to convey the intended message and any explanatory text will be in isiXhosa, English and Afrikaans.

Failure to attend environmental awareness training will not exempt any contractor and/or employees from compliance with the EMP. The Contractor shall keep records of all environmental training sessions, including names of attendees, dates of their attendance and the information presented to them.

4.4 Defining No-go and Working Areas

It is important that activities are conducted within a limited area to facilitate control and to avoid impacts on the areas adjacent to the developable area. Working areas are defined as those areas required by the Contractor to undertake the development. The Contractor shall ensure that all plant, labour and materials remain within the boundaries of the working areas. Access must be restricted to development footprints only, with no disturbance of areas outside the development footprints allowed.

All areas outside the perimeter of the site shall be considered as no-go areas. No areas outside the working areas may be cleared, damaged, excavated or leveled.

4.5 Working Hours

The Contractor may only work during normal working hours (07h00 to 18h00 on weekdays and 08h00 to 13h00 on Saturdays). If the Contractor needs to work outside of working hours as stipulated in the appropriate legislation, the ECO and the Project Manager/Engineer are to be notified in advance. NOTE that written approval from the Local Authority needs to be obtained for any work that is to be undertaken outside of normal working hours.

4.6 Soil Erosion

Soil erosion should be avoided by not exposing large areas of the substrate simultaneously. Areas that are not to be developed and which are particularly sensitive to erosion should be demarcated with danger tape and be considered as no-go areas. All construction vehicles should only use designated routes on site.

Should erosion occur as a result of non-adherence to the above recommendations, or where it impacts on the surroundings, appropriate rehabilitation will be required.

4.7 Batching and Mixing Areas

Cement powder has a high pH. Spillage of dry cement powder and concrete slurry will affect both soil and water pH adversely. Careless handling of cement products resulting in spillage could have serious detrimental effects on the surrounding environment. The following mitigation measures are to be implemented in order to minimise environmental impact:

- Responsibly used ready-mix concrete and cement is preferred to site batched mixes.
- Cement contaminated equipment is to be washed so that contaminated water does not enter stormwater, groundwater and/or drainage lines. Contaminated water must either be removed from site or, with the approval of the ECO and the Local Authority, be disposed of into the local sewage system. Where possible, contaminated water should be recycled back into the batching process.
- Cement must be mixed on mixing trays that prevent runoff and spillage. No mixing will be allowed directly on the ground's surface.
- Locations for mixing areas in the site camp are to be approved by the Project Manager/Engineer and the ECO. Used cement bags are to be stored in a wind and rainproof container for disposal. Used bags are to be removed from site on a regular basis and under no circumstances burned as a method of disposal.
- Excess or spilled cement and concrete are to be removed to an approved Municipal waste site.
- Contaminated soil resulting from a cement or concrete spill is to be removed or rehabilitated at the cost of the Contractor and to the satisfaction of the Project Manager/Engineer and the ECO.

4.8 Equipment Servicing and Cleaning

All vehicles and equipment must be maintained in a good condition in order to minimise the risk of leakage and possible contamination of the soil, groundwater, surface water and/or storm water by fuels, oils and hydraulic fluids.

4.9 Fuel and Hazardous Materials Storage

Contractors shall identify fuels and hazardous substances to be stored on the site and shall ensure that they know the effects of these substances on their staff and the environment. A copy of a fuels and hazardous substance inventory shall be supplied to the ECO by the contractors.

Contractors shall ensure that the quantities of fuels and chemicals on site are appropriate to the requirements and are stored and handled so as to avoid the risk of spillage. All fuels, oils and chemicals shall be confined to specific and secured area, approved by the ECO. These materials shall be stored in an area with a concrete or other impervious base, which is adequately bunded. The volume of the bund shall be two times the volume of the containers stored. Gas and fuel should not be stored in the same storage area, and any generators used on the site should also be placed on a bunded surface.

In the event that fuels, oils and other hazardous fluids are to be stored on site and approval of fuel storage must be given by the ECO and Project Manager/Engineer (refer to the SABS bulk and small volume fuel storage guidelines as available from the local Fire Fighting Authorities).

In addition, the following must be implemented:

- All fuel stores must be equipped with a fire extinguisher;
- No vehicle servicing may take place on the site. Servicing of equipment that uses hydrocarbon fuels, oils, lubricants and other hazardous chemicals may only take place in the site camp under conditions approved by the ECO and the Project Manager/Engineer;
- A suitable leak proof container is to be used for the storage of oiled equipment. This container is to be removed from site and the contents disposed of at an approved waste site as required;
- Fuels and oils must be stored in tanks or drums with lids that remain firmly shut and shielded from the elements. Safety and fire prevention precautions must be strictly adhered to (ref SABS fuel storage standards);
- All fuels are to be stored within a lined demarcated area in the Site Camp. No refuelling is to take place outside of this demarcated area unless authorised by the ECO. Note that filling machinery in the field (on site) from canisters should be cleared with the ECO and both a “no leak” funnel / pump and one of the above mentioned absorption products must be on hand in the event of such refuelling taking place;
- All fuel, oil or hydraulic fluid spills are to be reported to the Project Manager/ Engineer and ECO immediately so that appropriate clean-up measures can be implemented.

4.10 Solid Waste Management

The Contractor is responsible for the establishment of a waste control system that is acceptable to the Project Manager/Engineer and the ECO. This system is to be presented to the ECO in the form of a Method Statement prior to the commencement of works. For the purposes of this CEMP, waste includes all debris, refuse, hazardous waste, construction litter and asphalt (tar) waste.

Refuse collected from the working areas must be stored in a water- and animal- proof enclosure at the designated site camp. Refuse is to be removed from the site camp at least once a week by the Contractor or an appointed refuse removal agent (or approved local waste removal system). Refuse must be disposed of at an approved waste disposal site.

Petroleum, chemical, harmful and hazardous waste is to be stored in an enclosed and bunded area. The location of such bund sites is to be approved by the Project Manager/Engineer and the ECO. This waste will be disposed of at a hazardous waste disposal site as approved by the Local Authority. Storage and disposal etc. is also controlled through other relevant legislation that must be compiled with e.g. the Occupational Health & Safety Act.

The Contractor will ensure that waste and surplus food, food packaging and other waste is not deposited by employees anywhere on the site except in refuse bins for removal on a daily basis by the Contractor to the central point in the site camp. Refuse bins shall be watertight, wind-proof and scavenger-proof, and shall be placed at regular intervals throughout the site. The ECO will approve the design of the bins. Refuse collected from the site shall be stored in an appropriate closed and weatherproof container and removed once a week.
Refuse shall be separated into suitable categories and re-cycled. Construction debris such as scrap metal shall be collected in a skip container and disposed of at an approved dumpsite. Refuse may not be burnt or buried on the site, or in the vicinity. Contractors shall identify a permitted refuse disposal site for various categories of waste and provide documentary proof to the PM and ECO of the type and volume of waste to be disposed of there. The Contractors shall provide workers to clean up the site on a daily basis and the general cleanliness of the site shall form part of the site inspections undertaken by the ECO.

4.11 Water Pollution Prevention

The Contractor shall prevent pollution of surface or underground water and shall comply with the Water Act, 36 of 1998, and any other national, provincial and local legislation regarding the prevention of water pollution, including the pollution of groundwater.

The Contractor must ensure that all reasonable precautions are taken to prevent the pollution of the ground and water resources as a result of site activities. Ground contamination may hinder or prevent the re-establishment of natural vegetation. The Contractor shall keep the necessary materials and equipment on site to deal with ground spills of any of the materials used or stored on site. In addition, the Contractor shall ensure that no oil, petrol, diesel, etc is discharged onto the ground.

Pumps and all machinery requiring oil, diesel etc. that are to remain in one position shall be placed on drip trays. The drip trays shall be emptied regularly and the contaminated water disposed of off site at a facility capable of handling such wastewater. Drip trays shall be cleaned before any possible rain events that may result in the drip trays overflowing, and before long week ends and holidays.

Stormwater and/or groundwater may accumulate on site during the construction period and there is the potential for this water to be contaminated as a result of construction procedures. The Contractor shall ensure that this water does not become contaminated. Contaminated water (eg cement washings or waste water from ablution etc) shall be collected in a conservancy tank, removed from the site and disposed of in a manner approved by the ECO.

4.12 Stormwater Control

Contractors shall take reasonable measures to prevent erosion resulting from a diversion, restriction or increase in the flow of stormwater caused by the presence of their works, operations and activities, all to the satisfaction of the ECO. Any stormwater collected in bunded areas containing oils, fuels, chemicals or other potentially polluting substances shall be pumped out of the bund, collected in a suitable container and removed from the site for disposal as per the NKOMAZILocal Municipality stormwater-pollution by law. Ground water and stormwater in excavated areas shall be filtered through settlement ponds and filters before being discharged/ pumped into the stormwater system.

Contractors shall provide adequate control measures to prevent stormwater damage and erosion during construction. Control measures should include the control by sumps and adequate pumping of water ingress into trenches below the water table. Stormwater should also be directed into attenuation ponds wherever possible. All methods of stormwater control during the construction phase are to be agreed and approved by the PM and ECO. Berms and existing stormwater drainage systems shall be used to prevent surface run-off from entering site excavations.

4.13 Ablution Facilities

The Contractor shall provide the necessary ablution facilities for all his personnel. The primary ablution facility will be connected directly into the existing sewer system. Chemical toilets shall be used in all other areas of the site where necessary. A minimum of one toilet per 15 persons shall be provided. The toilets shall be secured to prevent them from blowing over, and shall be provided with an external closing mechanism to prevent toilet paper from being blown out. Toilet paper shall be provided in all toilets. Toilets

shall be cleaned and serviced regularly by a reputable toilet-servicing company appointed by the Contractor. Toilets shall be emptied before long weekends and builders' holidays.

Toilets shall be locked after working hours. The Contractor shall ensure that chemicals and/or waste from toilet-cleaning operations are not spilled on the ground at any time. All spills shall be cleared up immediately.

4.14 Water Resource Management

Water is a scarce resource in the Western Cape and water shall be conserved wherever possible. The Contractor shall not waste water (eg water areas excessively etc). All leaking water pipes are to be repaired or replaced immediately.

The Contractor shall provide all drinking water and water for construction purposes. The location of taps should be convenient to the workers and should be indicated on the site management plan. Water shall not be used unnecessarily.

4.15 Dust Control

The Contractor will be solely responsible for the control of dust and for any claims against the proponent for damages resulting from dust. All activities that generate dust (cutting, drilling, crushing and demolition operations) will be kept moist with water. If possible non-potable water should be used for dust mitigation.

Soil stockpiles shall be located in sheltered areas where they are not exposed to the erosive effects of the wind. Also, sand will be covered with shade cloth if not used for more than 24 hours. To control dust from the batching operation, water shall be spayed on the materials at regular intervals. Excavation, handling and transport of erodible materials shall be avoided under high wind conditions. During high wind conditions, the PM and ECO shall evaluate the situation and make a recommendation as to whether dust-damping measures are adequate, or whether work should cease altogether until wind speeds drop to acceptable levels.

4.16 Noise Control

Noise generation during construction could create disturbance and a nuisance for people working, resident in and commuting through the area. Contractors shall thus restrict working hours for construction activities

to: 07h00-18h00 on weekdays (excluding public holidays); and 08h00-13h00 on Saturdays (excluding public holidays). No work is to be done on Sundays.

However, any deviation from the working hours needs to be pre-approved by the NKOMAZILocal Municipality in consultation with the ECO. If contractors wish to work outside of these hours, this must be with the agreement of the PM, ECO and the building regulations. The ECO is, however, to be fully informed of any complaints received regarding noise levels during the construction period.

4.17 Fire Prevention

No fires will be allowed on the site. No smoking will be permitted on the site except for within a designated area in the site camp.
Suitable fire fighting equipment must be readily available in this area.

The contractor will be requested to remove any person from the site who is found lighting a fire or smoking outside of the designated smoking area.

Fires for heating, cooking or disposal of any material will not be permitted. Suitable fire fighting equipment must be readily available. The Contractor will be liable for all costs incurred by organisations called to extinguish any fires started by any person(s) under their control. In such an event, the Contractor will be liable for all costs incurred to remediate burnt areas on the site and areas to which the fire has spread.

The Contractor must ensure that the contact details of the nearest Fire Department are displayed on site (together with other emergency services) and that all persons involved with the project know the location of these numbers on site.

4.18 Pollution Prevention and Remediation

The Contractor must ensure that all reasonable precautions are taken to prevent the pollution of the ground and water resources as a result of site activities.

Pollution could result from the release, accidental or otherwise, of contaminated runoff from construction camps, discharge of contaminated construction water, chemicals, oils, fuels, sewage, run off from stockpiles, solid waste, litter, etc.

The first activity to be undertaken once a spill occurs is to terminate the source of the spill and contain the polluted area. All fuel, oil or hydraulic fluid spills are to be reported to the Project Manager/ Engineer and ECO forthwith so that appropriate clean-up measures can be implemented.

The Contractor shall keep the necessary materials and equipment on site to deal with ground spills of any of the materials used or stored on site. Sufficient quantities of suitable hydrocarbon absorbent or remediation materials must be present on site at all times. Absorbent "spill-mop-up" products need to be on hand – Enretech, Spillsorb or Drizit type products should be investigated for these purposes.

4.19 Provision of Water

Contractors shall be responsible for providing construction water, water required for dust control, drinking and washing water. Contractors shall also be responsible for providing washing facilities for all staff.

Wastewater from washing facilities shall be discharged into the existing sewage system, or removed from the site by the contractor or by other means, should the existing services be unavailable. Such alternative means shall be submitted to the ECO for approval.

4.20 Cleanliness of Public Roads

Contractors shall ensure that construction vehicles are not overloaded so as not to spill construction or excavated material onto the public roads in proximity. Contractors shall provide a washing system for cleaning the wheels of vehicles moving off-site, and shall ensure that this is utilised as required. Filtering of ground-water seeping into excavated areas prior to leaving (or being pumped from) site will help keep roads clean.

4.21 Traffic Control

Traffic control and safety shall be done in accordance with the South African Traffic Safety Manual, with the relevant signs, flagmen, barriers, etc being provided at the various access points. Traffic control shall be done in co-operation with local traffic officials. All laws and regulations applicable on the public road system are enforceable on the construction site.

Due to the activities involved in the construction phase, trucks and other related vehicles will be using the roads leading to the site. These vehicles will need to be roadworthy and abide by the speed limits. The Contractor should ensure that additional construction vehicles do not produce excess noise and that

generation of dust is kept to a minimum. Contractors must ensure that their vehicles are road-worthy and that loads are properly secured.

4.22 Safety on Site

Contractors shall follow the guidelines of the Occupational Health and Safety Act (85 of 1993).

The wearing of hard hats by -

- All persons entering the site;
- All persons within 10m of any situation where any form of lifting or hoisting equipment is being used; and
- Any personnel working in any other situation where the possibility of head injury is present, e.g. an area where overhead work is taking place.

The wearing of gloves by personnel -

- Handling heavy materials;
- Carrying out maintenance activities within a crusher;
- Engaged in welding or gas cutting activities; and
- Handling materials/equipment with unfinished steel edges.

The wearing of approved safety shoes or safety boots by -

- All persons entering the construction site or workshop, storage and depot areas.

The wearing of safety goggles by -

- Persons operating equipment under dusty conditions;
- Persons engaged in cutting or welding activities; and
- Persons engaged in grinding activities.

The wearing of hearing protection by -

- All persons engaged in rock drilling activities (>85 decibel):
- All crushing operators; and
- Any persons entering into high noise areas (>85 decibel).
  These areas should be appropriately marked using a standard National Occupational Safety Association (NOSA) pictogram.

The wearing of safety belts by -

- Any person carrying out work 2m above ground level, unless it is being carried out from a safe and

protected work platform; and

- All heavy equipment operators.

4.23 Protection of Flora and Fauna

Except where construction activities will be undertaken, flora shall not be removed, damaged or disturbed. It must be noted that all identified conservation worthy trees must be retained.

Where animals do not move off the site as of their own accord and are in the way of the works or pose a threat to site staff e.g. venomous snakes, the ECO shall be contacted immediately to assist in the relocation of these animals with the appropriate approval from the Cape Nature. The ECO shall also instruct the workers that no snakes or lizards are to be killed or harmed on site. No domestic pets are permitted on Site.

4.24 Temporary Site Closure

If the Site is closed for a period exceeding one week, a checklist procedure shall be carried out by the Contractor in consultation with the ECO. Contractor's Safety Officers (in terms of the Occupational Health and Safety Act) are to check site and report to the Engineer in terms of:

- Fuels / flammables / hazardous materials stores safe and secure/locked.
- Ensure fuel stores as low in volume as possible. No leaks.
- Bund/s empty
- Fire extinguisher serviced and accessible.
- Secure area from accidental damage e.g. vehicle collision.
- All trenches and manholes secured.
- Fencing and barriers in place per the Occupational Health and Safety Act
- Notice boards applicable and secured.
- Emergency and Management contact details displayed.
- Security persons briefed and have facility for contact.
- Night hazards checked e.g. reflectors, lighting, traffic signage.
- Fire hazards identified – local authority notified of any potential threats e.g. large brush stockpiles, fuels etc.
- Pipe stockpile wedged / secured.
- Inspection schedule and log by security or contracts staff.

- Wind and dust mitigation in place e.g. straw, brush packs, irrigation.
- Slopes and stockpiles at stable angle.
- Water contamination and pollution
- Fuels hazardous stores secure.
- Cement and materials stores secured
- Toilets empty and secured
- Refuse bins empty and secured (lids)
- Bunding clean and treated e.g. Spill Sorb or Enretech #1 powder
- Drip trays empty & secure (where possible)
- Structures vulnerable to high winds secure.

The Contractor is to ensure that all temporary closure requirements are met before leaving the site.

4.25 Protection of Archeological and Paleontological Remains

Archaeological sites are protected by the National Heritage Resources Act (No 25 of 1999). According to the Act, it is an offence to disturb, destroy or remove from its original site any archaeological material, or excavate any such site without permission from SAHRA.

If any archaeological or palaeontological artefacts and / or human burials or remains are uncovered during earthworks, work in the vicinity of the find shall cease immediately. The Contractor shall immediately notify the RE, who shall contact the South African Heritage Resources Agency (SAHRA and the local police (in the case of human burials or remains). The Contractor will be required to abide by the specifications as set out by SAHRA or the heritage specialist appointedto investigate the find or burial.

If any human remains are discovered, they must be treated with respect and the South African Heritage Resources Agency (SAHRA) must be notified immediately. An archaeologist may be required to remove the remains at the expense of the Developer -

4.26 Security

Although largely an operational issue, security of the site will need to be maintained during construction. The Contractor will be responsible for the security of its personnel, construction camps and equipment. No personnel will be permitted to live on the site. Security personnel present after hours must be provided with the necessary cooking, heating and ablution facilities. Security lighting should not result in a nuisance for neighbouring properties.

4.27 Surrounding Land Use and Community Relations

Cognisance must be taken of the proximity of residential areas. General disturbance should be kept to a minimum.

The Contractor shall be responsible for responding to third party or public queries and/or complaints relating to operations.

The Contractor shall notify the ECO and the Engineer of any complaints lodged. The Contractor shall be responsible for maintaining a Complaints Register to record complaints received and action taken. This register will be made available to the ECO, the Engineer and the local authority / Nkomazi Local Municipality Environmental.

5 METHOD STATEMENTS

5.1 Contractors Requirements

Specified contractors shall provide method statements for approval by the PM and ECO prior to work commencing on aspects of the project deemed or identified to be of potential risk to the environment, when called upon to do so by the PM. In addition, method statements from contractors may be required by the relevant authorities or the ECO for specific sensitive actions. These include:

- Contractor's camp establishment including bulk fuel storage, toilet facilities and waste management;
- Stormwater management (plan of how stormwater and ground-water is going to be handled on site, example, seeping into excavated areas);
- Pollution prevention (location, layout, preparation and operation of all wash areas, including vehicle wash, paint washing and clearing);
- Windblown sand and dust control measures;
- Batching plant activities (location, layout and preparation of cement/ concrete batching facilities including the methods employed for the mixing of concrete including the management of runoff water from such areas);
- Noise control;
- Storage, handling and management of hazardous material;
- Demarcation of no-go areas;
- Solid waste management (solid waste control, stockpiling of excavated material and removal of waste from Site);
- Traffic management; and
- Any other information deemed necessary by the ECO.

A method statement is a living document that allows for modifications to be negotiated between the contractors and the PM, as circumstances dictate. All method statements will form part of the CEMP documentation and are subject to all terms and conditions contained in the CEMP.

Note that a method statement is a point of departure for understanding the nature of the intended actions to be carried out and allows for all parties to review and understand the procedures to be followed in order to minimise risk of harm to the environment. Changes to, and adaptations of, method statements can be implemented with the prior consent of all parties.

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

A method statement describes the scope of the intended work in a step-by-step description in order for the PM and ECO to understand the contractors intentions. This will enable them to assist in devising any mitigation measures, which would minimise environmental impact during these tasks.

For each instance where it is requested that a contractor submit a method statement to the satisfaction of the PM and ECO, the format should clearly indicate the following:

What - a brief description of the work to be undertaken;
How - a detailed description of the process of work, methods and materials;
Where - a description/sketch map of the locality of work (if applicable); and
When - the sequencing of actions with due commencement dates and completion date estimates.

All method statements are to be to the satisfaction of the PM, the ECO and the local authority / NKOMAZI Local Municipality Environmental and Heritage Resource Management.

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

6 SITE CLEAN UP AND REHABILITATION

6.1 Site Clean Up

The Contractor shall ensure that all temporary structures, equipment, materials, wastes and facilities used are removed upon completion of the contract. The site clean up must be to the satisfaction of the local authority / Nkomazi Local Municipality Environmental and Heritage Resource Management, Project Manager/Engineer and the ECO. A site closure checklist will only be given once site has been closed.

6.2 Rehabilitation

If deemed necessary by the Project Manager/Engineer, the ECO or the local authority / Nkomazi Local Municipality Environmental and Heritage Resource Management, the contractor may have to employ a suitably qualified person to rehabilitate areas damaged during construction activities on site.

In the event of damage occurring to the environment due to the irresponsible actions of the Contractor, (including non-compliance with the EMP), rehabilitation may be required as decided upon by the ECO, the ECO and the Project Manager/Engineer. The completed rehabilitation is to be to the satisfaction of the Project Manager/Engineer, the ECO and the local authority / Nkomazi Local Municipality Environmental and Heritage Resource Management.

On completion of construction, the Contractor shall ensure that all structures, equipment, materials, waste, rubble, notice boards and temporary fences used during construction are removed with minimal damage to the surrounding area. The Contractor shall clean and clear the site to the satisfaction of the ECO.

The cost of such rehabilitation will be for the Contractor’s account and no extension of time will be granted.

7 COMMUNICATION AND SITE INSPECTIONS

7.1 Site Meetings

Regular site meetings must be held for the duration of the construction period. Provision must be made in the agenda of each site meeting for Environmental Management issues to be discussed to facilitate the transfer of information and to update all parties on the environmental compliance aspects of the project as a whole. The ECO should present a summary report on environmental issues at such meetings.

These meetings are to be attended by the ECO, Project Manager or Engineers representative, Contractor and a representative of each of the sub-contractors working on site at the time.

At such meetings environmental queries must be resolved, agreed actions planned with dates of the actions and compliance / non-compliance by the Contractor to be noted. If required, penalties and remedial actions must also be tabled and planned. The frequency of meetings may be altered by the ECO, based on the nature of the works taking place on site at any time, and the level of compliance with the EMP by the Contractors.

Issues relating to complaints or comments received from the public shall also be discussed at these meetings. Minutes of the meetings shall be prepared by the RE and copied to all attendees, including the local authority / Nkomazi Local Municipality Environmental and Heritage Resource Management before the next meeting.

7.2 Site Inspection

A site inspection programme will be implemented and will comprise:

- Visual inspections of site activities by the ECO shall initially be on a weekly basis for the duration of the establishment of the site camp, hoarding off of trees and hedges, structures, no-go areas, etc.; and
- Review of records and documentation to reconcile these with the construction programme.

Records shall be maintained during the construction phase to enable compliance with the CEMP specifications to be demonstrated. These will typically comprise a daily log of activities that record

waste management (documentary proof of type, volume, disposal and transport), fuels and chemicals management (deliveries, spills etc.) and other environmental issues such as adverse weather (wind, rain) and surface water run-off.

C3.6.2 Annex 2: Particular Specification: Occupational Health and Safety

All the definitions as described in the Contract will also have the same meaning in this Report, or any later report produced by the Consultant during the Project.

1. Introduction

Provisions of this Specification typically only refer to the Contractor, compliance herewith is also required from Subcontractors. The Contractor remains responsible for compliance with the requirements of this Specification by Subcontractors and shall ensure that each Subcontractor complies with the requirements hereof at all times and as applicable. Without derogating from his obligations and responsibilities, the Contractor shall ensure that the requirement to comply with the provisions of this Specification is included in all Subcontracts involving activities at the Project Site.

Failure by the Employer, Engineer or Agent to enforce compliance with the requirements of this Schedule shall not relieve the Contractor from any responsibility or obligation under applicable Law.

The Employer requires that the management of health and safety issues shall be to a standard of excellence aligned with world class best practices. The Contractor carries prime accountability and responsibility for the health, safety and welfare of the Contractor's Personnel and for any works that may expose any other person other than their personnel. No health, safety and welfare requirements specified by or imposed on the Employer (whether under the Contract or under applicable Law) shall be construed to reduce the Contractor's accountability and responsibility for the health, safety and welfare of the Contractor's Personnel.

The Contractor is responsible for adequately informing the Contractor's Personnel of all relevant information of this health and safety Specification.

The requirements of this Specification should not be considered to be exhaustive and the Employer reserves the right to add, delete or modify conditions where it is considered to be appropriate in this Specification.

Where additions, deletions or modifications are made to this Specification, the Agent shall advise the Contractor of the change. The Contractor shall be solely responsible for informing the Contractor's personnel and its subcontractors of these changes. The Employer, Engineer or Agent shall not be responsible for any failure caused by a Subcontractor not receiving a notification or failing to act upon such notification.

Any matter dealt with in this specification is also dealt with under applicable Laws, the two are intended to be mutually explanatory and supplementary, the one to the other. In case of conflict or difference between this Schedule and the applicable Laws, the more onerous provision shall prevail unless otherwise instructed by the Agent.

There shall be zero tolerance for failure to comply with the Project Health and Safety Requirements at the Project Site. Any person who is, or appears to the Employer, Engineer or Agent, to transgress the Project Health and Safety Requirements may be required to leave and/or be refused access to the Project Site. If such person is a Contractor's Personnel, the Contractor shall take necessary steps against such person (including disciplinary action, where appropriate, and the possible removal of the person from the Project Site)

The Contractor shall comply with the Occupational Health and Safety Act 85 of 1993 ("OH&S Act") and all applicable regulations promulgated under the OH&S Act and in particular the Construction Regulations ("2014 Construction Regulations") as amended from time to time. The Contractor shall furthermore comply with applicable South African National Standards or International Standards.

It is the duty of the Contractor and his Subcontractors to ensure that they are familiar with all applicable Law, SANS standards and Regulations. The Contractor shall compile and maintain an up to date Health and Safety file.

All contractors are required to execute their works in accordance with this document

2. Applicability

This document shall apply to all contractors executing construction activities

3. Process for monitoring

Conformance to this document shall be via regular safety inspections and by monthly audits

4. Contractor's Health and Safety Policy and Plan

The Contractor and each Subcontractor shall each have a Health and Safety Policy that shall be duly signed by authorised signatory concerning the protection of the health and safety of Contractor's Personnel and others in and about the execution of the Works, and the arrangements for carrying out and reviewing such policy. Copies of the Subcontractors Health and Safety Policies shall be provided as and when Subcontractors are appointed. The Contractor shall prominently display a copy of the policy in the

workplace where the Contractor's Personnel normally report for service. The Contractor shall develop a suitable and sufficient Health and Safety Plan for the execution of the Works. This shall be submitted to the Agent for approval.

Upon approval by the Agent, the Contractor shall implement the Health and Safety Plan. The approval of the Health and Safety Plan shall not, however, relieve the Contractor of any responsibility under law

5. Health and Safety Plan Requirements

The Contractor's Health and Safety Plan shall demonstrate the management process and procedures that shall be adopted to ensure compliance to requirements listed in this Specification. These management processes shall identify each construction activity, the foreseeable internal and external hazards, the specific precautions and controls that shall be necessary to ensure that the Works commence and continue safely and without risks to health or to adjacent operations

The Health and Safety Plan shall further demonstrate the Contractor's commitment to safety and health requirements and shall, as a minimum include the following elements:

1. Compliance to this schedule

2. The Contractor Health and Safety Policy. (OH&S Act section 7)

3. Indication of Competent Supervision (CV's and competency certificates to be included). (Construction Regulation 8(7))

4. Documented proof of competencies of appointed persons (e.g.: scaffold erectors, riggers etc.)

5. Duties and safety responsibilities of all appointed persons.

6. Training procedures, including induction and ongoing training in 'Basic Safe Work' and Occupational Health & Safety training for newly hired or promoted supervisors. (OH&S Act section 8(2)(i))

7. Occupational Health & Safety communications and meetings, including daily safe task instructions and project SHE meetings.

8. Assessment and management procedure for their Subcontractors, including audit requirements for SHE Plans.

9. Safety awareness promotions.

10. Occupational Health and Safety Workplace controls, including provision for monitoring employee exposures to noise, dust, etc. (Hazardous Chemical Substances Regulation 4)

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

11. Personal Protective Equipment procedure and rules. (OH&S Act section 8, General Safety Regulation

12. Control of dangerous and hazardous substances. (Hazardous Chemical Substances Regulations, Section 43 of OH&S Act, 1993)

13. System of hazard identification and risk control, such as Risk Assessments, Daily Safe Task Instructions and Communications. (OH&S Act section 8, Construction Regulation 9)

14. Inspection and maintenance of plant, tools and equipment prior to introduction to the Project Site and regularly thereafter. (Construction Regulation 23)

15. Accident and incident reporting, recording, investigation and analysis, which ensure that corrective action, are taken and this action is communicated. (General Administrative Regulations 8 & 9)

16. Medical and first aid arrangements. (General Safety Regulation 3) _ Evacuation and emergency planning arrangements; (Construction Regulation 29) Environmental Regulations for Workplaces 9)

17. Substance abuse policy and procedure and programme. (General Safety Regulation 2A)

18. Workers welfare facilities. (Construction Regulation (30)

19. Daily site safety inspections and audits processes.

20. Letter of good standing with a compensation insurer

6. Appointments and Supervision

The Contractor shall in writing appoint as per the OHS Act requirements and shall ensure that all his appointees are made aware of their accountabilities and responsibilities in terms of their appointment and that they advise and assist these appointees in the execution of their duties.

The Contractor shall provide and keep up to date an outline organogram and a list of names and contact telephone numbers of all appointments as required from the table below.

The Contractor shall keep a record of all Contractors' Personnel, indicating their date of induction, relevant skills and licenses, and be able to produce this list at the request of the Agent.

The Contractor shall ensure that the performance of all specified work is supervised throughout the duration of the Contract by a sufficient number of competent appointed representatives of the Contractor, who have experience in the type of work specified.

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

No work shall commence and / or continue without the presence of an appointed Construction Manager, Construction Supervisor or appointed Construction Supervisor Assistants as per Construction Regulation requirements during execution of the work.

In determining the number of appointed competent supervisors, the nature and scope of work being performed shall be taken into consideration and consented to by the Agent. The required appointed Construction Supervisor (Construction Regulation 8(7)) shall not leave the Project Site during working hours unless there is a sufficient number of appointed competent Assistant Construction Supervisor/s (Construction Regulation 8(8) to assist with supervision.

Appointment letters and competency certificates of the persons appointed as Construction Supervisors or Assistant Construction Supervisors in terms of Construction Regulation 8(7) or 8(8) shall be signed by persons who are suitably qualified and duly authorised to the satisfaction of the Agent. Relevant training certificates and proof of experience of assignees shall be submitted with the SHE Plan.

In determining the number of appointed competent Construction Health and Safety Officers to the number of employees, the nature and scope of work being performed shall be taken into consideration. Unless otherwise approved by the Agent a minimum average ratio of 1 Construction Health and Safety Officer to 50 employees shall be applied. Similarly, unless otherwise approved by the Agent all Construction Health & Safety Officers must be available for health and safety meetings and shall participate fully in all activities outlined in this Schedule and in the Contractors SHE Plan.

Part time Health & Safety Officers may be appointed in writing and shall have no other duties, unless otherwise approved in writing by Agent. All South African safety officers and managers will be required to hold SACPCMP professional registration/ or provide proof of acknowledgement by SACPCMS of submission of application for registration.

The Contractor shall ensure that the following appointments are made in writing, as applicable:

Reference	Description
16(2)	Persons assigned functions to assist the Chief Executive Officer (if required)
17	Health and Safety Representative
19	Health and Safety Committee Member (if there are 2 or more H&S reps

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

	there will be a
	H&S committee)
	Chairperson of Health and Safety Committee
GSR 3	First Aiders
GSR 5(1)	Person that pronounces & certifies a confined space safe for the duration of work being conducted
GAR 9(2)	Incident / Accident Investigator
DMR18(11)	Lifting Machinery Operator (Appointment or Permit)
DMR18(5)	Lifting Machinery Inspector
DMR18(10)(e)	Lifting Tackle Inspector
EMR 9	Portable Electrical Equipment Inspector
VUP 10	Portable Gas Container Inspector
VUP 13(1)(b)	Pressure Vessels Inspector
HCS 3(3)	Hazardous Chemical Substances Co-coordinator
CR 5(1)(k)	Appointment of the Contractor by the Employer
CR 7(1)(c)(v)	Subcontractors Appointment by the Contractor
CR 8(1)	Construction Manager
CR 8 (2)	Assistant Construction Manager
CR 8(7)	Construction Supervisor appointed by the Contractor's OH&S Act Section 16(2) assignee
CR 8(8)	Assistant Construction Supervisor appointed by the Contractor's OH&S Act Section 16(2) assignee

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

CR 8(5)	Construction Health and Safety Officer as and when required
CR 9(1)	Person to Compile Risk Assessments
CR 10(1)(a)	Competent Person to compile Fall Protection Plan
CR 13(1	Person to supervise Excavation Work
CR 14(1)	Demolition Work Supervisor
CR 21	Competent Person in the use of Explosives & Development of the Method Statements
CR 17(1)	Competent Person as Suspended Platform Supervisor
CR 16(1)	Competent Person as Scaffolding Supervisor
CR 19(8)(a)	Material Hoist Inspector
CR 21(2)(b)	Competent Person as Explosive Powered Tool Inspector
CR 21(2)(g)(i)	Appointed Person responsible for issuing & collection of Explosive Powered Tools cartridges & nails or studs
CR 23(1)(k)	Construction Vehicle and Mobile Plant Inspector
CR 24(e)	Competent Person for Temporary Electrical Installation Inspections
CR 28(a)	Competent Person for Stacking and Storage Supervisor
CR 29(h)	Competent Person as Fire Fighting Equipment Inspector
	Emergency Planning Co-coordinator
	Fire Official
	Environmental Officer
CR 18(1)(a)	Rope Access Supervisor (new appointment)

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

	Sans 12480-1&3 Crane coordinator – Tower crane operations /Appointed Person Mobile Crane
CR 21(2)(b)	Competent Person as Explosive Powered Tool Inspector

Notes to the appointments listed above:

Section 16(1) creates a legal presumption, and therefore no appointment is required. The Contractor shall provide the full names, contact telephone number and business address of the Chief Executive Officer.

7. Required Competencies

Health & Safety Representative Required Competencies:

- Health and Safety Representative Training

Construction Manager Required Competency:

- Three year's applicable experience in construction management
- Supervisors Health and Safety course
- OH&S Act and Regulations course
  (Latest version of the Act and Regulations)

Construction Supervisor Required Competency:

- Three year's applicable experience in construction management
- Supervisors Health and Safety course
- OH&S Act and Regulations course
  (Latest version of the Act and Regulations)

Construction Safety Officer Minimum Required Competency

- A recognised safety certification (minimum: of 2 weeks training) (e.g. SAMTRAC / Modern SHEQ
- Management course)
- OH&S Act and Regulations (latest version of the Act and regulations);
- Incident Investigation and Root Cause Analysis Technique;
- Hazard Identification and Risk Assessment Training;
- Health & Safety Auditing;
- Emergency Preparedness Coordination Training

All South African safety practitioners shall be registered with Statutory Body- SACPCMP/ or provide proof of acknowledgement by SACPCMP of submission of application for registration.

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

8. Induction and Training

All Contractors' Personnel shall undergo a project specific induction developed and presented by the Principal Contractor. Re- Induction Training shall be performed annually. Visitors to the site shall be required to undergo and comply with the Principal Contractors Visitors Health, Safety and Environmental Induction prior to being allowed access to site. This training shall be conducted by a person deemed competent to deliver the training.

All visitors shall remain in the care and custody of a person (host) who has received a full induction. Acknowledgement of receiving and understanding the induction shall be signed by all persons receiving this induction. A copy of this signed understanding of induction shall be maintained by each person for the duration of their site visit per Construction Regulation 7(8).

Prior to induction all Contractors Personnel shall undergo a pre-employment medical examination and be confirmed fit for duty, in accordance with annexure 3 (medical Certificate of fitness- Construction regulations). This examination shall be arranged by the Contractor at the Contractor's cost. A copy of the certificate of fitness shall be retained in the contractors health and safety file.

Personnel are responsible for their own health and safety and that of their co-workers within their work area. They shall be made aware of their responsibilities during induction and awareness sessions which include:

- Familiarising themselves with their workplaces and health and safety procedures.
- Working in a manner that does not endanger them or cause harm to others.
- Keeping their work area neat and orderly; free from excessive materials which could pose hazards.
- Reporting all incidents / accidents / occupational ill-health and near misses.
- Protecting fellow workers from injury.
- Reporting unsafe acts and unsafe conditions.
- Reporting any situation that may become dangerous.
- Carrying out lawful orders and obeying health, safety and environmental rules

The Contractor shall ensure that all Contractors' Personnel undergo general work induction with regard to the approved SHE Plan, general hazards prevalent on the Project Site, Construction Risk Assessments and other related aspects.

The Contractor shall ensure that Contractor's Personnel are informed of and understand of the work to be performed, the specific hazards prevalent to the work performed and the control measures required to mitigate such risks. Proof of job specific induction signed by inductor and trainee shall be kept in the health and safety file. The Contractor shall ensure that all Contractors' Personnel working on the Project Site are

adequately trained in the type of work / tasks to be performed. This training shall extend to include relevant procedures, hazard identification and risk assessment. Contractor's Personnel shall have the appropriate qualifications and certificates, and shall work under competent supervision. Copies of records of appropriate training and qualifications for all Contractors' Personnel shall be kept and maintained on site.

9. Occupational Health and Hygiene

Compensation for Occupational Injuries and Diseases

The Contractor shall submit, and shall ensure that each Subcontractor submits evidence of current registration and a Letter of Good Standing with the Compensation Fund or, with a licensed compensation insurer. This shall be renewed as and when required to remain valid for the duration of the Contract.

Occupational Hygiene

The Contractor shall identify the occupational stressors which could include exposure to chemical and biological hazards, noise, dust, vibration, heat, etc., to which any person may be exposed as a result of his work activities.

Once the occupational stressors have been identified the risk shall be assessed in accordance with statutory requirements, including the nature of the stressor, the work process, the exposure severity and duration, possible adverse effects etc.

The Contractor shall provide details of all control measures that shall be implemented to eliminate or reduce exposure to occupational stressors. Where mechanical means are employed he shall provide details of how these shall be maintained to ensure that they operated at maximum efficiency.

The Contractor shall provide and adhere to effective monitoring procedures. These procedures shall include the planning, carrying out and recording of the results of the measurement programme. This is to confirm the effectiveness of the implemented control measures and the results shall be made available to the Agent on request.

Medical Surveillance Programme

The Contractor shall ensure that all Contractors' Personnel are registered on a medical surveillance programme appropriate to their occupational exposures and in possession of a valid medical health certificate. The certificate of fitness shall also be required that is relevant to the type of work (risk based) that the employee will be performing. The Agent will only accept medical surveillances conducted by Registered Occupational Health Practitioners who hold valid qualifications in occupational health.

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

The Contractor shall ensure that all Contractors' Personnel have undergone pre-entry medical examination before starting work on Project Site. The certificate shall be renewed and maintained as valid at all times.

The Contractor shall provide a documented process for managing those Contractor's Personnel who are issued with a conditional certificate of fitness. In instances where sick leave is taken for a period of one week or more, the Contractor shall submit a declaration signed by the Contractor's Personnel in question indicating that she or he did not suffer any illness or injuries which occurred in the period of absence, which may affect his ability to work on the Project Site

10. Emergency Care

A list of site emergency numbers shall be prominently displayed on site. The Contractor shall ensure that Contractors' Personnel are familiar with the emergency numbers. The Contractor shall have one first aid box to cover the first 5 persons on the Project Site and thereafter one for every 50 or team of workers, or part thereof. Additional first aid boxes shall be provided if the risks and / or distance between work teams or workplace requirements require it (it shall be available, compliant and accessible for the treatment of injured persons at that workplace). Prominent notices or symbolic signs shall be displayed in prominent places in the workplace, indicating where the first aid box or boxes are kept as well as the name and contact details of the First Aiders.

11. Emergency Preparedness and Response

Emergency Response Plan

The Contractor shall develop his own emergency response plan for both work areas and office areas and submit this plan to the Agent for approval. The plan shall be amended as required by the Agent. The Contractor shall ensure that all Contractors' Personnel are aware of and trained in the execution of the emergency plan. The Contractor shall also initiate his own emergency drills, with the co-operation, and subject to the approval of the Agent. Details of such drills shall be recorded and such records shall be made available on request. The Contractor shall be responsible for ensuring that his emergency plan is reviewed annually, and after every incident which caused the emergency plan to be activated. Any changes made shall be briefed to all persons affected and the information provided to the Agent.

The Contractor shall develop fire safety and evacuation procedures for any area under his control prior to the commencement of any work thereon. The procedure shall take into consideration the size of the area, types of work being done (e.g. cutting, welding, grinding, etc.), amount of combustible materials present etc. It shall take account of any hot work permit arrangements and all other applicable fire and evacuation

procedures. All Contractor's Personnel entering and working on the Project Site shall be trained in fire safety and emergency evacuation and any other duties they are required to perform e.g. Fire Warden.

Fire Safety Plan

The Contractor shall prepare a Fire Safety Plan which shall include:

1. The designation and organisation of Contractors' Personnel to carry out fire safety duties, including fire watch service, if applicable.

2. Emergency procedures to be used in the case of fire, including:
- method of sounding the fire alarm;
- notifying the fire department;
- instructions to Contractor's Personnel;
- firefighting procedures;
- evacuation routes;
- location of assembly points, and
- Integration with existing emergency procedures.

3. The control of fire hazards in and around buildings.

4. Maintenance of firefighting facilities.

5. Display in strategic places a site plan that will illustrate the assembly points, locations, means of raising the alarm and extinguisher media. A plan shall be drawn up for each area under the Contractors control and shall, where appropriate, include office and welfare facilities

Fire Alarm Shut-down

The Contractor shall inform the Agent of all fire alarm shut-down requests in writing 7 days prior to any part of a fire alarm system being shut down. When this is required the Contractors shall develop alternative procedures, as approved by the Agent, to follow during a fire alarm shutdown

12. Work Stoppage

The Client, Engineer and Agent is entitled to stop the execution of the Works and issue non-conformance notices for health, safety or environmental violations. Any non-conformances / findings / observations found during audits/ inspections shall, where practicable, be raised, discussed and resolved with the Contractor.

The conditions that can lead to work stoppages include but shall not be limited to:

- Management of change: This is when there are changes to the work environment (e.g. Management / supervisory changes) and / or construction work (e.g. modifications to the design) at any phase of the construction period, and / or amendments with regards to the Employers' rules and regulations and / or legislative amendments;
- Unsafe acts / behaviours by Contractor's Personnel
- Unsafe conditions resulting from unforeseen hazards, changes in working procedures, unexpected weather conditions and malicious acts of vandalism.
- In the event of unsafe conditions being identified by any person, the process to be followed shall be:
    - The Engineer, Agent shall be informed immediately.
    - The work activity shall be stopped immediately and conditions made as safe as possible as an interim measure.
    - The affected workforce shall be removed from the work area and the Contractor shall correct the health and safety deficiencies by allowing only the people in the area that are competent to make the area safe.
    - The Contractor shall ensure that no other work is being performed in the area during this time.
    - The area shall be barricaded and a sign placed with the wording "Unsafe Area – Authorized Access Only". Where necessary, guards shall be posted to prevent entry.
    - The Agent shall review the affected parts / sections of the SHE Plan with the purpose of providing additional SHE information to the Contractor to enable the establishment of a safe working environment.
    - The Contractor shall revise the relevant sections in the SHE Plan to accommodate the changes.
    - The Agent shall review the revised provisions in the SHE Plan to ensure they are adequate and approve it before the work activity is commenced. The work activity / work area shall be subject to additional monitoring in the initial stages to ensure that safe conditions remain.
    - Before the workforce is allowed back in the area, the Contractor shall ensure:
    - The area is re-inspected by the Contractor's Health and Safety Officer and Construction Supervisor who shall note corrective actions taken;
    - Declare the area safe for work

13. Hazard and Risk Management

Hazard Identification

The Contractor shall identify hazardous and potentially hazardous work operations. He shall demonstrate that work hazards, work activity risks and the mitigating measures have been considered in his risk assessments. Activity based risk assessments shall be carried out by competent persons.

Specific Health and Safety Hazards

In complying with the requirements of Construction Regulation 5(1)(a), the specific known health and safety hazards pertaining to the environment and physical conditions that the Contractor may be exposed to in performing his work on the Project Site are as per the project baseline risk assessment.

The Employer, Engineer and Agent will make all reasonable efforts to ensure that the information provided is complete and correct. However, the Contractor shall make his own assessment of the hazards and risks associated with the work. Without derogating from any other requirements under the Contract, the work shall not be executed at the Project until the Principal Contractor has reviewed the Contractor's Risk Assessment and Method Statements.

The Contractor shall daily and for every task to be performed, conduct a pre-task risk assessment with all Contractors' Personnel involved with the task(s). The pre-task risk assessment shall form the basis of the daily pre-job briefings / tool box talks prior to the start of work. Proof of communication as well as confirmation that it was received and understood by all will be noted on a standard form, which shall be kept at the job site during the job execution. The completed signed pre-task risk assessment form shall be filed in the Contractor's Health and Safety File

14. Project General Health and Safety

The Contractor and each Subcontractor shall be bound by and shall comply with the requirements of the site Health &, Safety Rules and shall comply with all such rules and regulations. In addition to those detailed in this Specification as may be prescribed by the Engineer and Agent from time to time in connection with the Safety, Health and Environmental requirements. The Contractor shall ensure that each Sub-contractor and all Contractors' Personnel comply with all such rules and regulations.

15. Incident Investigations

The Contractor shall report all incidents and accidents including near miss incidents, first aid, medical treatment, lost time incidents (disabling injuries & fatalities); OH&S Act Section 24 and 25 incidents; electrical contact; major equipment damage; chemical spillage and other Environmental Incidents to the Agent within 24 hours of them occurring.

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

A comprehensive and detailed investigation report shall be submitted to the Agent within five days of the incident taking place for review and comment. The Contractor shall ensure that all accidents /incidents are investigated by a competent person and are discussed at the relevant SHE committee meeting. The Employer reserves the right to participate in any accident / incident investigation if the accident / incident are directly linked to any activity related to the Works.

Case studies shall be compiled for all near misses, lost time incidents and fatalities and cascaded as lessons to be learnt across the Project.

The Contractor shall keep at his Project Site Office a record of all accidents and incidents reported

in the form of the OH&S Act Annexure 1 investigation form as referenced in the OH&S Act. (Incident Investigation Report).

The Employer reserves the right to conduct an independent investigation of any accident and / or incident reported by the Contractor or Subcontractors over and above their own investigations. The Contractor and Subcontractors shall co-operate fully with the investigation and implement any additional improvement measures.

Investigations shall begin as soon as practicable after the incident / accident has occurred. Where applicable and with appropriate authorisation (when required), photographs shall be taken of the scene of the incident as well as any equipment involved. Interviews with witnesses shall be conducted as soon as possible after the incident occurred whilst it is still fresh in their memory and if necessary followed up later to determine if further information was recalled.

The Contractor shall investigate all incidents immediately and supply to the Agent a written report within Five days, unless otherwise specified by the Agent, which shall include:

- Date, time and place of incident;
- Description of incident;
- Root causes of incident/accident;
- Type of injury and/or (if any);
- Medical treatment provided (if any);
- Persons involved;
- Loss or damage sustained (if any);
- Names and contact details of witness/s;
- Description of corrective action to prevent a recurrence (with clear deadlines and persons identified for taking remedial action).
- All corrective actions shall be closed out within one month of the date of the incident, unless otherwise required by the Agent.

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

If it is found that the Contractor or their Subcontractors are not reporting incidents, steps (which may include disciplinary action) shall be taken against the line management of the Contractor and /or Subcontractors.

16. Employee Engagement and Behaviour Based Safety

The Contractor shall ensure that all personnel are participating in a suitable Employee Engagement Programme. The Contractor shall ensure the employee engagement programme includes for adequate training for supervisors to conduct wholesome observations and feedback to employees conducting work on the site. This training shall focus primarily on unsafe behaviours of employees as opposed to unsafe conditions on the Project Site. It is also important for the Contractor to recognize those individuals who are performing their work in an exemplary safe manner.

The Contractor shall retain suitable anonymous data from the programme and use these leading indicators to support their safety programme.

The Contractor shall establish a system that fully encompasses their subcontractors and applicable service providers and shall ensure that the engagement programme prioritises high risk activities.

The contractor will make sure that this data is available to the Engineer, Employer and Agent if requested.

17. Audits

Approval and Compliance of the Contractor SHE Plan

SHE Audits may be carried out un-announced by the Agent. Implementation of the SHE Plan may be assessed by the Agent or nominated persons by conducting a systems and physical conditions evaluation of the SHE Plan delivery.

Subcontractor Approval and Compliance

The Contractor shall require his Subcontractors to provide information for approval by the contractor covering their proposed activities as part of the overall SHE Plan. These shall include as a minimum:

- Risk Assessments;
- Method Statements;
- Permits-to Work;
- Safe working procedures.

The Contractor shall review the Subcontractors submission and how it fits within the Contractor's SHE Plan.

Contractor SHE Performance Evaluation Compliance

The Agent shall audit Principal Contractor SHE performance on an ongoing basis.

Internal Audits

The Contractor shall conduct his own internal audits on Contractor's Personnel for the implementation of their SHE Plan monthly or when the scope of work changes.

A summary of the findings and the corrective actions shall be submitted to the Agent on completion of the audit. The final report shall be submitted within seven days after completion of the audit.

The Contractor shall provide an audit non-conformance tracking matrix identifying responsibilities for close out of non-conformances. This shall be reviewed with the Agent on at least a weekly basis to ensure close out of audit non-conformances.

Third Party Legal Compliance Verification Audits

If the Contractor has a third party legal compliance verification audit that is conducted on their activities at the Project Site (or at other places, if any, as may be specified under the Contract as forming part of the Site), a copy of the findings and corrective actions must be provided to the Agent. The report shall be provided within seven days after the completion of the audit.

SHE Plan Audits

Audits shall be conducted by the Agent or other Employer's Personnel on the Contractor's implementation of his SHE Plan. The Contractor's Representative shall attend these audits.

Site Inspections by Contractors' Management

The Contractor should conduct regular site inspections monitoring for SHE compliance on a weekly basis.

The Contractor should make arrangements to accommodate the Engineer and the Agent or his representative on this inspection.

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

18. Permit to Work System (PTW)

The Contractor shall develop and maintain a permit to work system. The permit system will be evaluated and approved for operation by the Agent prior to construction commencement.

19. Environmental Management

General Requirements

The Contractor shall comply with all relevant South African Laws, environmental legislation, regulations, and Employers Policies and Procedures.

Site Establishment and Management

The Contractor shall produce a Contractor yard layout plan detailing the position all buildings, vehicle wash areas, fuel storage areas, hazardous materials storage areas, drainage systems, cement storage areas and any other necessary infrastructure for approval by the Agent.

Hazardous Materials / Chemicals Management

Prior to any Hazardous Chemical Substance (HCS) being brought onto the Project Site the Contractor shall prepare the following and supply the Agent the following:

- Material Safety Data Sheets (MSDS) for materials in accordance with the requirements of the
- OH&S Act - Regulations for Hazardous Chemical Substances;
- Purpose for using the hazardous substance;
- Proposed arrangements for safe storage;
- Proposed methods for handling / usage;
- Proposed method of disposal;
- Hazard communication / training plan.
- A copy of the assessment that shall fulfil the requirements of the HCS regulations
- Details of maintenance of control measures to ensure optimum efficiency.

Storage of Hazardous Substances

A register of Hazardous Substances and Material Safety Data Sheets shall be developed, maintained and kept at the Contractor's Project Site Office and shall be made available to the Agent. The associated assessments shall include all method statement submissions.

Without limiting the Contractor's responsibilities under applicable Legislation, work shall be conducted in such a manner as to ensure that:

- No substance, which can harm or is likely to harm the environment, is to be allowed to leak, spill or escape from any container or storage area.
- No oil or other effluent is permitted to escape into the drainage system and / or local storm water system.
- No oil or other effluent is permitted to escape into the ground and cause soil contamination.
- All powdered pollutants generated during execution of the works are contained to prevent air pollution.
- No sediment generated is permitted to escape into the drainage system and / or local storm water system.
- No harmful solids or liquids are permitted to spill from containers whilst in transit on the premises.
- All fixed facilities such as generators, compressors and transformers shall be situated within bunded facilities.
- All portable facilities such as portable generators shall be located on suitable portable bunds or drip trays.
- Spill kits shall be provided at all fixed facilities.
- All bunds and drip trays shall utilise oil absorbent booms.

Flammable and Combustible Materials

All fuels shall be stored in a secure bunded area. Any volume greater than 40 litres shall be stored in a secure flammable / combustible materials store. Suitable precautions shall be taken to contain any spillage and / or leakage. Environmental absorbent material shall be readily available for controlling accidental spillages.

Before a machine, plant and / or equipment is refuelled, the motor shall be stopped. Refuelling shall take place at designated safe areas and appropriate warning signs installed. Suitable drip trays shall be used to prevent spillage at the filling nozzle. Environmental absorbent material shall be readily available for controlling accidental spillages.

All fuel storage areas shall comply with the following minimum requirements:

- A risk assessment shall determine the health and safety measures and controls that shall apply.
- Storage shall be well clear of occupied buildings by a distance of at least 50 metres.
- Storage areas shall be kept free from all combustible materials.

All danger signs shall be prominently displayed, i.e.:

- Flammable Liquid;
- No Smoking;
- No Naked flames;

- Appropriate Hazardous Chemical Identification.

Fire Hazards

The Contractor shall ensure that staff are educated in fire prevention and will be held responsible to avoid the risk of fire. No fires shall be allowed on the Project at any time without the expressed authorisation of the Owner.

Waste Management

The Contractor shall monitor air quality, dust and noise caused by Contractor's Equipment, generators and other equipment during construction. Factors shall be considered such as wind which can often affect the intensity to which these impacts are experienced.

To ensure that noise does not constitute a disturbance during construction activities, all construction works shall occur between working hours, all in accordance with the Contract.

Mitigation measures shall be implemented as required and agreed with the Owner and Agent.

Dust suppression measures shall be in place to reduce the dust caused by the movement of heavy vehicles and other sources.

Air quality control measures shall be in place to reduce the amount of air pollution caused by such things as silica in dust, vehicle emissions and other sources.

Environmental Incidents

All environmental incidents such as pollution (air, water, land, noise, etc.), birds killed, and animals killed, and plants destroyed, public complaints etc. shall be reported to the Agent within 24 hours of such occurrence.

All environmental incidents occurring on the Project Site shall be recorded, detailing how each incident was dealt with in an Environmental Incident register.

All environmental incidents such as pollution (air, water, land, noise, etc.), birds killed, and animals killed, and plants destroyed, public complaints etc. shall be reported to the Agent within 24 hours of such occurrence. All environmental incidents occurring on the Project Site shall be recorded, detailing how each incident was dealt with in an Environmental Incident register.

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

20. Basic Hazard Identification

The specific known health and safety hazards pertaining to the environment and physical conditions that the Contractor may be exposed to in performing his work on the Project Site are listed below. The Contractor shall however make his own assessment of, and satisfy themselves with the hazards and risks associated with the Works.

Environmental Hazards

- Heat exhaustion
- Sewage spills
- Sunburn
- Insect bites and stings
- Snake bites
- Rodents
- Thunderstorms
- Wind

Construction Hazards

- Construction vehicles and equipment
- Noise
- Dust
- Smoke
- Vibration
- Slippery conditions
- Fire hazards
- Falling objects
- Open foundations, drains, trenches, sumps and manholes, etc.
- Hazardous chemicals, materials and gasses
- High pressure vessels and piping
- High temperature machinery and equipment
- Live electrical equipment and power supplies
- Rotating machinery and equipment
- Oil and chemical spillages
- Working at heights
- Working in confined Spaces
- Working in excavations
- Working near Sewage
- Sharp tools and objects
- Welding, grinding and cutting operations

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

21. Forums for SHE communication

This section provides an outline of the different forums, where Project Site Management shall engage with the Contractor(s) on SHE issues. This also includes the frequency of the different forums as well as the mediums to be employed.

General SHE Walk Down

The Project General SHE Walk Down will commence on a weekly basis and shall be attended by Contractor Management, Safety Practitioners and Safety & Health Representatives.

SHE Representative Meeting

The Project Site Management will host on a monthly basis a meeting in which all Contractor SHE Representatives will be invited to attend. The meeting will consist of rotating topics on Safety, Health, and Environmental issues currently applicable to the Job Site. The meeting will be managed by the Contractor

22. Project General Safety and Health Rules

Construction Vehicles & Mobile Plant

Designated drivers shall be in possession of a current driver's licence, valid for the class of vehicle they are required to operate. The driver's license shall be kept on the person and shall be produced on request. The maximum speed limit within the bounds of the Project Site construction office and parking areas is 8 km/h. No Contractor's drivers or operators may talk on cell phones or two way radios whilst driving under any circumstances. This includes the use of hands-free kits. All cell phones used by drivers shall be switched off before commencing a journey. Cell phone calls by drivers shall only be made when the vehicle is stationary, in a place of safety, and with the engine switched off.

It is the responsibility of the driver to ensure:

- They and their passengers wear seat belts whilst the vehicle is in motion. This applies to front and rear seat passengers.
- They comply with all safety, direction and speed signs.
- That vehicle loads are properly secured onto vehicles.
- Those vehicles are not overloaded and are within their safe working load limit.

Instructions for the transportation of tools/equipment/material & persons on the back of construction vehicles must be adhered to:

- Tools, equipment & material transported in vehicles shall be secured in order to prevent

movement;

- Vehicles shall be provided with fixed & firmly secured seats and seat belts - adequate for the number of passengers being transported. Passengers in vehicles shall only be transported according to the number of seat belts present.
- The driver & all passengers shall be seated with seatbelts fastened whilst the vehicle is in motion

The Contractor shall ensure that the Contractor's Personnel do not:

- Ride on the back of cranes or other mobile plant equipment.
- Leave vehicles unattended with the engine running. Ignition keys shall be removed in all cases when the vehicle is left unattended.
- Park vehicles in unauthorised zones/areas or where parking will obscure other vehicle or pedestrian visibility.

Contractors must establish a formal key control or similar stringent authorisation for operators /drivers of all construction vehicles (plant and equipment). All construction vehicle keys must be secured overnight and prevent unauthorised use. The Contractor shall be solely responsible for the safety and security of any of his vehicles (including private vehicles) on the Project. The Contractor shall attach unique identification markers on all of their vehicles that are permitted to enter the Project Site. A current maintenance logbook is required for all cranes and construction equipment which shall be made available for inspection at any time. The logbook shall be located in the cabin of the crane or construction equipment. Contractor must maintain vehicles in roadworthy condition and hold a valid vehicle license (DISC).

Vehicles shall be subject to inspection by the Agent on random basis. Vehicles which are found to be in an un-roadworthy condition shall not be permitted onto the project site.

In the event where the Contractor does not own the Equipment, the Contractor is still responsible for ensuring all conditions are complied with by all of their Subcontractors. Drivers/operators shall be responsible for the travel-worthiness of all loads conveyed by them. Precautions shall be taken to lash all loads properly and securely. Loads projecting from vehicles shall be securely loaded. In daytime a red flag and during darkness a red light or red reflective material shall be attached to the extreme end of such projecting material.Every mobile machine shall have a "banksman or spotter" when reversing and be fitted with a siren/hooter alarm which sounds when the machine is reversing. All spotters will be trained in the hazards associated with the machine and the operation that it is conducting.Segregation of walkways must be provided where applicable and feasible on the Job Site in order to ensure that pedestrians on the job site are protected from the hazards of the actual "working" area. Walkways need to be clearly marked with the appropriate signage.

Drivers of all vehicles must allow appropriate travel distance between vehicles travelling in front of them and at no time shall "tailgating" be permitted.

23. Housekeeping

The Contractor is responsible for clearing his work area to the satisfaction of the Engineer and Agent. A routine inspection of all work areas shall be undertaken daily to ensure that housekeeping standards are being maintained. In cases where an inadequate standard of housekeeping has developed, compromising health, safety and cleanliness, all staff has the responsibility to bring it to the attention of the Engineer or Agent. The Engineer or Agent will have the authority to suspend the relevant Works until the area has been tidied up and made safe. Neither additional costs nor extension of time to the Contract shall be allowed as a result of such work stoppage. Failure to comply will result in site cleaning by another cleaning contractor at the cost of the Contractor.

Leads, hoses, and extension cords shall be hung up (approximately 2.5m) with a non-conductive material, off all floors, stairways, and walkways. Leads, hoses, and cords are to be removed from the work area when the work is completed or when they are no longer intended to be used. Lead, hose, and cord "rollups" will be required if an excessive amount of equipment accumulates in a work area creating housekeeping or trip hazards. Electrical cords must not be hung by tie wire of any other material that can cut the cable. The Contractor shall add additional insulation to a hanging point if it is connected to a metal structure or scaffold. Nails and staples etc. protruding through timber and packaging shall be removed or bent over so as not to cause injury.

All packaging material including boxes, pallets, crates, etc. shall be removed from the work area immediately. Where such items as protruding rebar and anchor bolts create impalement or tripping hazard, they shall be properly protected and conspicuously marked. The Contractor shall carry out regular safety / housekeeping inspections (daily) to ensure maintenance of satisfactory standards. The Contractor shall document the results of each inspection and shall maintain records for viewing.

24. Compressed Gas Cylinders

Storage areas shall be securely fenced in an open mesh cage, in a shaded area, on stable and solid surfaces. For security and ventilation purposes, a wire mesh fence should surround the storage area. The enclosure shall be kept locked.

Hazard and danger warning signs must be prominently displayed at storage area; e.g.

- No Smoking
- No Naked Flames
- Contractor Identification and Emergency Contact information

Adequate ventilation must be provided. Cylinder cages shall be maintained in the open air. Storage areas must be kept free from all combustible materials; no other materials must be stored in cylinder enclosure. Full cylinders must be kept apart from empty cylinders in a clearly designated area so that it will not be necessary to open valves to check whether cylinders are empty or full. Cylinders must always be chained separately in an upright position in appropriate cylinder stands. Cylinders must be stored in rows with aisle in-between for ease of access and removal in the event of a fire or emergency. Adequate fire- fighting equipment provided by the Contractor must be readily available.

Cylinders for reactive gasses (e.g. oxygen and acetylene) shall be stored separately.

Flammable and oxidising gasses must not be stored together. Greases and oils must never be allowed to come in contact with Oxygen. Cylinders will only be allowed on site in an approved trolley, properly secured and with a chain. All gas cylinder torches to have flashback arrestors fitted on both sides (tank and torch).

25. Personal Protective Equipment (PPE)

All Contractor's Personnel on the Project Site (or at other places, if any, as may be specified under the Contract as forming part of the Site) and visitors shall use the following SANS or the relevant internationally recognised authority approved risk based PPE at all times, unless otherwise approved, as a minimum**:**

- Protective Footwear with Ankle Support and Toe Protection;
- Eye Protection - Impact Safety Spectacles with Side Shields. Prescription glasses must comply with the same standard or cover impact safety spectacles must be worn over them;
- High Visibility Clothing or Vest;
- Long Pants are Necessary at All Times on the Job Site.
- Sleeves on Shirts Shall are required to Cover the Bicep or be at least 10cm long, whichever suits the individual.

Additional PPE shall be identified from task risk assessments for specific areas and tasks. This may include long sleeves, flash resistant clothing for any type of live electrical work or verification of lockout/tag out, hearing protection i.e. ear plugs, muffs or helmet mounted ear defenders providing appropriate protection against the noise source, waterproof overalls, waterproof gloves, face shields when working near raw sewage, respirators etc.

Welders, Brazers, cutters and aiders shall wear suitable eye protection, gloves and apron spats with secure and maintained screens provided to protect onlookers and passers-by. Users of floor breakers and plate compactors shall be required to wear metatarsal guards. Users of breakers breaking down concrete piles shall wear gloves with impact protection on the top side of the hand should a guard or other collective measures not be available to protect the users hands.

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

Suitable impact resistant eye and face protection shall always be worn for grinding, chipping and chasing, with secure and maintained screens provided to protect onlookers and passers-by. When working with hazardous chemical substances, (e.g. acids or caustic material) eye protection, gloves and special overalls shall be worn.

When working near or coming into contact with sewage a detailed risk assessment shall be performed by the contractor and submitted to the Agent for approval before the particular activity commences. PPE such as waterproof Overalls, boots, gloves, goggles, face shield and respirators shall be considered as determined by the risk assessment.

26. Machinery, Tools and Equipment

The Contractor shall ensure that all machinery, tools and equipment are identified, safe to be used and maintained in a safe condition. Concrete power float machines will be selected with the ergonomics of the operator taken into account.

The machine will be fitted with an automatic stop device should the operator lose control. All machines driven by means of belts, gear wheels, chains and couplings shall be adequately guarded. A machine is guarded when persons cannot gain access to the moving parts. The Contractor shall maintain an inventory list for all machinery, tools and equipment on site. All machinery, tools and equipment shall be regularly inspected at least monthly or as required by legislation and risk assessments. A registers of tools shall be kept on the health and safety file. The equipment should be numbered or tagged and colour coded so that it can be properly monitored and inspected.

All machinery, tools and equipment must have the necessary approved test or calibration documentation where applicable prior to being brought onto the premises.

The Agent reserves the right to inspect items of Plant or Equipment brought to the Project by the Contractor for use on the Project. Should any item be found to be inadequate, faulty, unsafe or in any other way unsuitable for the safe or satisfactory execution of the work for which it is intended, the Contractor may be advised in writing and shall remove the item from the site and replace it with a safe and adequate substitute. In such cases, the Contractor shall not be entitled to extra payments or extensions of time in respect of delay caused by these instructions.

All Contractors' Personnel shall be competent when operating or using machines and tools. This shall include:

- Appropriate certification for use;
- Evidence of task training, where required.

Hand Tools and Pneumatic Tools

All hand tools (hammers, chisels, spanners, etc.) must be inspected by the user prior to use. All pneumatic tools should be numbered, recorded and inspected at least monthly. The Equipment should be numbered or tagged and colour coded so that it can be properly monitored and inspected. The Contractor shall ensure that any user of a pneumatic or electric breaker shall have their hands protected when operating near adjacent objects that could cause injury if the bit snags. Tools with sharp points in tool boxes must be protected with a cover. No make-shift tools on site.

All cold chisels used on site shall be fitted with a hand guard to prevent hand injuries in case of a miss with the hammer.

Contractors shall ensure that mull points (points from jack hammers) are not used for preparing a hole for a wooden peg. The Contractor shall ensure that a device is used to prevent a person's hand from being on a post that is being driven by a hammer at the time of the hammer swing. When using the interlocking type of connection of an airline, connectors shall be secured with wire clips through holes provided to prevent accidental disconnection.

Compressed air shall never be used for any purpose other than that for which it is provided. Compressed air should never be used to remove dust from clothing. Hoses shall be orderly and safely routed in order to prevent tripping hazards.

All compressed air hoses used for powering construction tools shall be made from reinforced hoses and the connections must be crimped. All contractors shall have a user policy for use of craft knives. Knives shall not be carried in clothing pockets with an open blade. The Contractor shall ensure that the user wears the appropriate cut resistant PPE. Cut resistant material coverage should include the forearm of the non-knife holding hand unless other safety measures are taken.

Portable Electric Tools

All powered tools shall be examined before use to ensure general serviceability and the presence of all applicable safety devices. The electric cord and electric components shall be given an especially thorough examination. All equipment shall be inspected and documented monthly, at a minimum, and colour coded to designate such inspection. Electrical tools shall be used only within their capability and shall be operated in accordance with the instructions of the manufacturer. All tools shall be kept in good repair and shall be disconnected from the power source while repairs are being made.

Electrical tools shall not be used where there is a hazard of flammable vapours, gases, or dusts. Where reasonably practicable, the Contractor shall ensure that tools or processes that produce dust shall be fitted with dust extraction equipment. Contractors shall avoid dry sweeping of hard surfaces and use a light water spray to minimise dust generation.

Explosive Powered Tools

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

Only certified, competent, appointed personnel (CR. Reg.21) shall be allowed to operate explosive powered tools on site. Safety signs and barriers must be erected before explosive power tools are used. Screening shall be provided around the Project Site. Cartridges and explosive power tools shall be stored separately in a secured location where they are inaccessible to unauthorized persons.

Lifting Machines and Lifting Tackle

No person shall be permitted to ride the hook, sling, or load of any lifting equipment. The Contractor shall verify if the lifting machines have been examined and a performance test carried out by an accredited third party company/person at intervals not exceeding 12 months. Before using any lifting machines or tackle the operator shall inspect it and confirm is it is suitable for use. A lift plan shall be required prior to all critical lifts. Critical lifts are defined as

- any lift that utilizes more than one crane or hoisting device,
- any lift that is over 20 tons,
- any lift involving a crane suspended work platform,
- any lift over critical operating and/or process equipment,
- any lift that exceeds 85 percent of the crane's load chart.

All lifting tackle shall be examined by a competent person prior to use and at intervals not exceeding 1 month. All lifting equipment and tackle shall be inspected and performance tested according to the requirements and to a frequency of the relevant SANS Standard by competent personnel. Should suitable competent personnel not be available, the Contractor shall engage a certified LMI to conduct these inspections at the required frequency. All users of chain and leaver hoists will have proof of competency and authorised by the contractor before utilising these items.

All hooks shall be fitted with a safety latch/catch. All lifting tackle shall be conspicuously and clearly marked with identification particulars and the maximum mass load which it is designed for.

Lifting equipment shall not be loaded beyond its rated capacity Chain hoists or cable hoist and other such devices shall always be rigged for a straight pull. The chain hoist or cable for hoists or other such devices shall not be wrapped around a load and used in place of a sling unless specifically designed for that purpose.Contractors' Personnel shall keep out from under suspended loads. Guide ropes to be used to prevent loads from swinging are required on all loads. Banksmen or spotters shall be used to keep individuals from walking underneath suspended loads.Operators of cranes, derricks, hoists, and other hoisting equipment shall exercise extreme caution when close to energized lines or equipment. The operator shall keep the equipment at least 3 meters away from all lines energized up to 50 kV and increase distance as required by the Electrical Machinery Regulations. All spreader bars shall be tagged with the rated capacity.

Softeners will be used to prevent damage to lifting accessories during lifting operations. All man basket operations shall be set up to ensure that in the case of a hook failure, the personnel inside the basket are restrained. Lifelines shall not be connected to the basket itself.

27. Work at Elevated Positions

The Contractor's Fall Protection Plan Developer shall be competent and hold Fall Protection Plan Developer Training. The fall protection plan shall be specific to the Project operations.

Fall protection is always required when Contractor's Personnel are exposed to a fall in excess of 2m. 100% fall protection is required whether the employee is climbing, traveling from Point A to Point B, connecting structural steel, or erecting scaffolds or other temporary platforms. No Contractor's Personnel or work operation is exempt from the 100% fall protection requirement. When not protected by any other means of fall protection, such as safety nets or scaffold with proper guardrails, Contractor's Personnel shall use full body harnesses, shock absorbing lanyards with double locking snap hooks, and an adequate anchorage point (fall arrest equipment). To achieve 100% fall protection, Contractor's Personnel may need to use a double lanyard system and/or vertical or horizontal lifelines, retractable lifelines, or other such approved devices Note: Works such as slip form and steel erection will require the use of safety nets unless otherwise approved by the Project Site.

Work at elevation shall only be carried out under constant supervision. Whenever persons are required to work in an elevated position, a fall protection plan (which includes fall prevention) will be compiled, implemented and reviewed and every possible and practicable means adopted to provide such persons with effective training and safeguards.

The Contractor shall stop all persons working in elevated positions during periods of inclement weather [e.g. high winds or if the possibility of lightning strikes is present] or prior to it beginning.

Safety belts are not allowed to be used as a means of fall arrest on the Project Site. Only full body safety harnesses with double shock absorbing lanyards are permitted and must be used when conducting work at elevated positions in excess of two meters. Anchorage points for fall arrest equipment shall be capable of supporting 2,300 kg per employee and be located above the employee's body harness attachment point where practicable. Anchorage points shall be independent of any anchorage being used to support or suspend scaffolds or other platforms.

Before each use, the Contractor's Personnel shall visually inspect all fall arrest equipment for cuts, cracks, tears or abrasions, undue stretching, overall deterioration, mildew, operational defects, heat damage, or acid or other corrosion. Equipment showing any defect shall be withdrawn from service.

Proper guardrails shall be installed on open sides of all walkways, runways and floors where the fall distance exceeds 2m.

All floor openings or floor holes shall be protected by guardrails or hole covers and properly labelled (floor hole cover).

In the case of concrete floors, the Contractor must ensure that cast-in form work [tin sheet] remains in place until the hole is required by future operations. This practice shall ensure that open holes are kept to a minimum.

When guardrails are used for fall protection, they shall consist of a top rail, intermediate rail, and toe board. The top rail shall have a vertical height of 900 mm – 1,000 mm, the mid-rail shall be at 450mm -500 mm, and the toe-board 102 mm. Guardrail systems shall be capable of supporting a force of at least 100 kilograms

If wire rope is used for top rails, it shall be flagged at no more than two meter intervals with high visibility material and must remain taught at all times.

Provision must be made to prevent objects and or material from falling from elevated areas and for the protection of persons working below. Where possible, working below persons working at height shall not be permitted. Equipment in elevated positions must be tied back to the structure. Contractors' Personnel are to ensure that all personnel are excluded from the area below personnel working at height.

When working at elevated heights, nets and/or other suitable material should be used catch falling debris and sparks directly below where the task is being performed. All fall protection equipment shall comply with SANS Standards and other recognised international standards.

All work undertaken when working at elevated positions shall be supported by a rescue plan. The Contractor shall verify that working at height training providers are providing an adequate standard of training to workers who are expected to work at height. This responsibility applies to the Contractor and their Subcontractors.

28. Scaffolding

All scaffolding used shall comply with the OHS Act and Construction Regulations. All scaffolding shall be inspected by a competent person on a weekly basis as a minimum and also before use following weather conditions that could have made the scaffolding unsafe e.g. wind, rain which could make ground conditions unstable.

Users of scaffolding shall carry out a visual inspection on a daily basis before use. If unsafe conditions are found or suspected, the scaffold shall be isolated until a thorough inspection has been made.

An appropriate scaffolding tagging system shall be used to confirm the status of scaffolding for use or not to be used.

The footing or anchorage points for scaffolds shall be sound, rigid, and capable of carrying the maximum intended load without settling or displacement. Unstable objects such as barrels, boxes, loose brick, or concrete blocks shall not be used to support scaffolds or planks.

Scaffolds that provide access to areas where personnel can fall into a hazard or from a height of greater than 2m shall install a gate at the access point of the hazard that is affixed with a warning sign stating that 100% tie off required past this point.

The Contractor must give preference to using scaffold stairs instead of ladders for all scaffolds. These scaffolds must be fitted with a kick place at the bottom of each stair section. The kick plate shall be able to prevent a member of contractors' personnel slipping down the staircase and sliding between the floor and the mid-rail.

29. Ladders (Portable)

All ladders shall have an identification tag, logged in a ladder register, and inspected on a monthly basis by a competent person and by the user prior to use. Damaged ladders shall be marked as "DAMAGED" and removed from the Project Site and replaced with ones in good condition.

Contractor's Personnel climbing a ladder with a fall exposure greater than 8 meters shall be protected by an approved cage, ladder climbing device, or by the use of a body harness, lanyard, or lifeline system.

Portable metal ladders shall not be used in the vicinity of energized electrical circuits. Portable straight ladders shall not be used without non-skid bases. The ladder shall be placed so that the distance between the bottom of the ladder and the supporting point is approximately 1/4 of the ladder length between supports.

When dismounting from a ladder at an elevated position (as at a roof), the employee shall ensure that the ladder side rails extend at least 1 meter above the dismount position, or that grab bars are present. Contractor's Personnel shall wear a body harness and lanyard, and tie off to a secure anchor whenever both hands must be used for the job or whenever Contractor's Personnel are exposed to a fall in excess of 2 meters. Step ladder legs shall be fully spread and the spreading bars locked in place. Step ladders shall not be used as straight ladders.

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

30. Barricading

Areas where a restriction or prevention of unauthorised persons accessing (e.g. trenches, excavations, wall and floor openings, etc.) is required will be provided with barricades and guards to prevent entry.

All barricading shall be of the rigid type, unless otherwise approved by the Agent, and secure in assembly.

All openings and edges must be barricaded with solid barricading. Physical barriers and warning signage shall be provided to prevent persons falling into openings in floors, stairwells, staircases, open-sided buildings and any structure in the course of erection, where dangerous openings exist.

31. Permit to Work

The Contractor shall apply a suitable Permit to Work System to control identified high risk activities including, but not limited to: trench & excavation, hot work, confined space work, energized electrical work, etc.

Permit to work systems shall as a minimum include:

- distinct time frames;
- have a start and finish time;
- be authorized by a competent person;
- identify the hazards and risks present and the control measures to be applied;
- provide the emergency arrangements to be applied;
- require that a new permit is issued for each individual shift;
- identify the task supervisor;
- detail any specific skills or competencies required e.g. confined space training.

Should working conditions change during the course of the operation of the permit to work, the work shall cease and the permit to work arrangements be reviewed to determine the appropriate course of action.

32. Trenching and Excavations

The Contractor shall appoint a competent person to fill out a permit and monitor all trench and excavation work. Daily excavation inspections are also required to be performed and documented.

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

Adequate precautions shall be taken to prevent the collapse of excavations, as well as to prevent rocks and loose material falling onto workers. Sloping, shoring or shielding shall be provided for all excavations over 1.5 meters in depth.

All excavations shall be clearly demarcated and securely barricaded to prevent access. Only solid barricading will be used at areas where a fall hazard is present. Solid barricading and / or hole covers shall be provided by the Contractor around all holes or openings to prevent any person being injured as a result of a fall. Danger tape may only be used as a pre-warning to make the solid barricading more visible and to prevent persons from coming close to the danger area.

If an excavation or trench endangers the stability of buildings, walls or channels, shoring, bracing, or underpinning will be provided by the Contractor and Excavations and trenches that are adjacent to backfilled excavations or trenches, or which are subject to vibrations from road traffic, blasting or the operation of machinery (e.g., shovels, cranes, trucks), must be secured by a support system, shield system or other protective systems (i.e., sheet pile shoring, bracing).

Where the contractor undertakes excavation work that might affect the integrity of any sewage channel/works a support/protective system (i.e. bracing propping) will be designed and approved by an structural engineer and the appointed competent person(excavations) prior to any work being undertaken. The contractor will ensure that their emergency plan caters for this type of work and that the required emergency equipment and competent personnel is made available should an emergency situation involving staff and collapse of a structure occur.

No backfill material shall be allowed to be within 1 meter of the excavation edges.

All excavations shall be on a register and inspected daily (documented) before work commences and after inclement weather (e.g. rainfall) by an appointed competent person. When declared safe work can recommence and the findings recorded in the register. If the excavation is not safe to use, remedial action shall be taken before the work site is re-opened.

Ensure that all precautionary measures as stipulated for confined spaces are determined. No work shall commence in an excavation unless the excavation has been declared safe by the competent person.

33. Working In Active Sewer Channels

Where work is to be performed in actively flowing sewer channels the contractor will perform a task specific risk assessment and method statement. Method statements and Risk assessments will be approved by the Agent before work commences.

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

The contractor will ensure that flow is diverted from workers ensuring their safety. Any temporary works/structure erected to divert flow away from workers will be designed and approved by a competent person.

The contractor will develop emergency response procedures and acquire the needed equipment to evacuate persons from enclosures/cofferdams in an emergency situation.

Key considerations during planning the work will include:

- Means of isolating personnel from the active sewage flow
- Temporary structure/cofferdam/works design planning and approval
- Access and egress considerations
- Training of staff members
- PPE requirements (i.e. waterproof overalls, boots, goggles, face shields etc)
- Emergency evacuation/rescue procedures

34. Steel Erection

This section applies to both permanent steel and contractor owned structures.

A site-specific steel erection plan shall be provided to Project Site before steel erection activities begin. This plan must be prepared by a qualified person and shall address the following, at a minimum:

- Working at Elevation procedures for the erection process.
- Training of workers involved with the steel erection process.
- Erection sequence.
- Crane selection and placement.
- Crane inspection program.
- Rigging inspection program.
- Site preparation requirements (e.g., adequate access roads, means and methods for pedestrian and vehicular control, site drainage, soil compaction and stability).
- Overhead protection/routing of lifts.
- Critical lift procedures.
- Falling object protection procedures.
- Perimeter fall protection planning and turnover.

Fall protection is required 100 percent of the time for all steel erection activities when Contractor's personnel are exposed to a fall in excess of 2m or when required by additional rules. Cranes involved in steel erection activities shall be inspected prior to each shift by a competent person. The crane operator shall have the authority to stop work operations that are unsafe. All loads shall be rigged by a qualified

rigger. A qualified rigger shall inspect the rigging prior to each shift. No employee shall work directly below a suspended load except for Contractor's

Personnel engaged in the initial connection of the steel or Contractor's Personnel necessary for the hooking and unhooking of the load. Bundle packaging and strapping shall not be used for hoisting unless specifically designed for that purpose.

35. Severe Weather

The Contractor shall conduct operations in a manner that do not put personnel at risk from weather and weather related injury.

The Contractor shall have plans in place that cover the following

- Lightning
- Heavy rain
- Stability of sheeting during periods of high wind
- The protection of cranes and other similar plant during high winds.

36. Contractors Site Facilities

The Contractor and their sub-contractors shall provide facilities that from a humane perspective have a sense of management care. Site facilities should include facilities that provide shelter in times of heavy rain and lightning storms and be conducive for extended toolbox talks.

The contractor will provide:

- A place onsite with clean water for washing your hands
- A place to wash and clean up after work
- Clean areas set aside for eating and smoking
- Cleaning facilities or services for clothing and equipment. (If clothing is badly soiled, employees should be able to change out of it.)

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

C4 SITE INFORMATION

C4.2 GEOTECHNICAL INFORMATION

A detailed geotechnical investigation was done. It is anticipated that the soil will be soft with some intermediate and hard rock excavations. The contractor is requested to price the schedule of quantities as is and not make his own judgement on the soil conditions without a detailed geotechnical report.

C4.3 REFERENCES TO PUBLICLY AVAILABLE INFORMATION ABOUT THE SITE AND ITS SURROUNDINGS SUCH AS PUBLISHED PAPERS AND INTERPRETATIONS OF THE GEOTECHNICAL INVESTIGATION

None available.

C4.4 INFORMATION ABOUT PIPED AND OTHER SERVICES BELOW THE SURFACE OF THE SITE FOR CONTRACTS INVOLVING GROUND WORKS IN ADDITION TO ANYTHING ABOUT THE PHYSICAL SITE WHICH IMPACTS UPON THE CONTRACT

The Engineer has endeavoured to locate all services and sub-surface obstructions likely to be affected by the work from available records and from surveys, these being shown on the drawings.

Although every care has been exercised in the presentation of the available data, the Municipality cannot and does not vouch for the accuracy or completeness of the information shown. Whenever the Contractor deems it necessary to determine the exact location of an existing service or obstruction, he shall, at his own expense, make any examination that he may consider desirable in advance of the work, and the municipality does not accept any liability for loss, damage or delay to the Contractor as a result of the non-location or inaccurate location of services or obstructions.

In the event of damage to existing services, the Contractor shall take such immediate action as is necessary to prevent further damage or danger to life or property and shall immediately notify the Engineer who will issue instructions as to the necessary repairs or protective measures to be taken. The cost thereof shall be borne by the Contractor irrespective of whether the repairs or protective measures were carried out by him or by or on behalf of the service authority or department concerned.

During the course of the Works, all existing services including water mains, sewers and storm water reticulation, electricity transmission and telephone lines, cables, poles and conduits shall be protected, supported and maintained in service to the satisfaction of the service authority or department concerned and the Engineer. The Contractor shall bear all costs in this regard.

Where on account of location or level, existing services have to be permanently altered to accommodate the proposed Works, the Municipality will pay all charges in connection therewith, unless it has already been provided for in the Schedules of Quantities.

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

Where a number of underground cables are crossed over a distance of 0.5m they shall be regarded as a single crossing.

Hydrants under pressure, water main valve covers and manholes shall be kept unobstructed and accessible at all times.

C4.5 CLIMATIC INFORMATION

Apart from the rainfall figures supplied in the contract data there are no specific environmental conditions to take note off.

General Conditions of Contract

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General Conditions of Contract

1. Definitions 1. The following terms shall be interpreted as indicated:

1.1 “Closing time” means the date and hour specified in the bidding documents for the receipt of bids.

1.2 “Contract” means the written agreement entered into between the purchaser and the supplier, as recorded in the contract form signed by the parties, including all attachments and appendices thereto and all documents incorporated by reference therein.

1.3 “Contract price” means the price payable to the supplier under the contract for the full and proper performance of his contractual obligations.

1.4 “Corrupt practice” means the offering, giving, receiving, or soliciting of any thing of value to influence the action of a public official in the procurement process or in contract execution.

1.5 "Countervailing duties" are imposed in cases where an enterprise abroad is subsidized by its government and encouraged to market its products internationally.

1.6 “Country of origin” means the place where the goods were mined, grown or produced or from which the services are supplied. Goods are produced when, through manufacturing, processing or substantial and major assembly of components, a commercially recognized new product results that is substantially different in basic characteristics or in purpose or utility from its components.

1.7 “Day” means calendar day.

1.8 “Delivery” means delivery in compliance of the conditions of the contract or order.

1.9 “Delivery ex stock” means immediate delivery directly from stock actually on hand.

1.10 “Delivery into consignees store or to his site” means delivered and unloaded in the specified store or depot or on the specified site in compliance with the conditions of the contract or order, the supplier bearing all risks and charges involved until the supplies are so delivered and a valid receipt is obtained.

1.11 "Dumping" occurs when a private enterprise abroad market its goods on own initiative in the RSA at lower prices than that of the country of origin and which have the potential to harm the local industries in the
RSA.

1.12 ”Force majeure” means an event beyond the control of the supplier and not involving the supplier’s fault or negligence and not foreseeable. Such events may include, but is not restricted to, acts of the purchaser in its sovereign capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions and freight embargoes.

1.13 “Fraudulent practice” means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of any bidder, and includes collusive practice among bidders (prior to or after bid submission) designed to establish bid prices at artificial non-competitive levels and to deprive the bidder of the benefits of free and open competition.

1.14 “GCC” means the General Conditions of Contract.

1.15 “Goods” means all of the equipment, machinery, and/or other materials that the supplier is required to supply to the purchaser under the contract.

1.16 “Imported content” means that portion of the bidding price represented by the cost of components, parts or materials which have been or are still to be imported (whether by the supplier or his subcontractors) and which costs are inclusive of the costs abroad, plus freight and other direct importation costs such as landing costs, dock dues, import duty, sales duty or other similar tax or duty at the South African place of entry as well as transportation and handling charges to the factory in the Republic where the supplies covered by the bid will be manufactured.

1.17 “Local content” means that portion of the bidding price which is not included in the imported content provided that local manufacture does take place.

1.18 “Manufacture” means the production of products in a factory using labour, materials, components and machinery and includes other related value-adding activities.

1.19 “Order” means an official written order issued for the supply of goods or works or the rendering of a service.

1.20 “Project site,” where applicable, means the place indicated in bidding documents.

1.21 “Purchaser” means the organization purchasing the goods.

1.22 “Republic” means the Republic of South Africa.

1.23 “SCC” means the Special Conditions of Contract.

1.24 “Services” means those functional services ancillary to the supply of the goods, such as transportation and any other incidental services, such as installation, commissioning, provision of technical assistance, training, catering, gardening, security, maintenance and other such obligations of the supplier covered under the contract.

1.25 “Written” or “in writing” means handwritten in ink or any form of electronic or mechanical writing.

2. Application

2.1 These general conditions are applicable to all bids, contracts and orders including bids for functional and professional services, sales, hiring, letting and the granting or acquiring of rights, but excluding immovable property, unless otherwise indicated in the bidding documents.

2.2 Where applicable, special conditions of contract are also laid down to cover specific supplies, services or works.

2.3 Where such special conditions of contract are in conflict with these general conditions, the special conditions shall apply.

3. General

3.1 Unless otherwise indicated in the bidding documents, the purchaser shall not be liable for any expense incurred in the preparation and submission of a bid. Where applicable a non-refundable fee for documents may be charged.

3.2 With certain exceptions, invitations to bid are only published in the Government Tender Bulletin. The Government Tender Bulletin may be obtained directly from the Government Printer, Private

Bag X85, Pretoria 0001, or accessed electronically from www.treasury.gov.za

4. Standards

4.1 The goods supplied shall conform to the standards mentioned in the bidding documents and specifications.

5. Use of contract documents and information; inspection.

5.1 The supplier shall not, without the purchaser's prior written consent, disclose the contract, or any provision thereof, or any specification, plan, drawing, pattern, sample, or information furnished by or on behalf of the purchaser in connection therewith, to any person other than a person employed by the supplier in the performance of the contract. Disclosure to any such employed person shall be made in confidence and shall extend only so far as may be necessary for purposes of such performance.

5.2 The supplier shall not, without the purchaser's prior written consent, make use of any document or information mentioned in GCC clause 5.1 except for purposes of performing the contract.

5.3 Any document, other than the contract itself mentioned in GCC clause 5.1 shall remain the property of the purchaser and shall be returned (all copies) to the purchaser on completion of the supplier's performance under the contract if so required by the purchaser.

5.4 The supplier shall permit the purchaser to inspect the supplier's records relating to the performance of the supplier and to have them audited by auditors appointed by the purchaser, if so required by the purchaser.

6. Patent rights

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

7. Performance security

7.1 Within thirty (30) days of receipt of the notification of contract award, the successful bidder shall furnish to the purchaser the performance security of the amount specified in SCC.

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

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

(a) a bank guarantee or an irrevocable letter of credit issued by a reputable bank located in the purchaser's country or abroad, acceptable to the purchaser, in the form provided in the bidding documents or another form acceptable to the purchaser; or
(b) a cashier's or certified cheque

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

8. Inspections, tests and analyses

8.1 All pre-bidding testing will be for the account of the bidder.

8.2 If it is a bid condition that supplies to be produced or services to be rendered should at any stage during production or execution or on completion be subject to inspection, the premises of the bidder or contractor shall be open, at all reasonable hours, for inspection by a representative of the Department or an organization acting on behalf of the Department.

8.3 If there are no inspection requirements indicated in the bidding documents and no mention is made in the contract, but during the contract period it is decided that inspections shall be carried out, the purchaser shall itself make the necessary arrangements, including payment arrangements with the testing authority concerned.

8.4 If the inspections, tests and analyses referred to in clauses 8.2 and 8.3 show the supplies to be in accordance with the contract

requirements, the cost of the inspections, tests and analyses shall be defrayed by the purchaser.

8.5 Where the supplies or services referred to in clauses 8.2 and 8.3 do not comply with the contract requirements, irrespective of whether such supplies or services are accepted or not, the cost in connection with these inspections, tests or analyses shall be defrayed by the supplier.

8.6 Supplies and services which are referred to in clauses 8.2 and 8.3 and which do not comply with the contract requirements may be rejected.

8.7 Any contract supplies may on or after delivery be inspected, tested or analyzed and may be rejected if found not to comply with the requirements of the contract. Such rejected supplies shall be held at the cost and risk of the supplier who shall, when called upon, remove them immediately at his own cost and forthwith substitute them with supplies which do comply with the requirements of the contract. Failing such removal the rejected supplies shall be returned at the suppliers cost and risk. Should the supplier fail to provide the substitute supplies forthwith, the purchaser may, without giving the supplier further opportunity to substitute the rejected supplies, purchase such supplies as may be necessary at the expense of the supplier.

8.8 The provisions of clauses 8.4 to 8.7 shall not prejudice the right of the purchaser to cancel the contract on account of a breach of the conditions thereof, or to act in terms of Clause 23 of GCC.

9. Packing

9.1 The supplier shall provide such packing of the goods as is required to prevent their damage or deterioration during transit to their final destination, as indicated in the contract. The packing shall be sufficient to withstand, without limitation, rough handling during transit and exposure to extreme temperatures, salt and precipitation during transit, and open storage. Packing, case size and weights shall take into consideration, where appropriate, the remoteness of the goods' final destination and the absence of heavy handling facilities at all points in transit.

9.2 The packing, marking, and documentation within and outside the packages shall comply strictly with such special requirements as shall be expressly provided for in the contract, including

additional requirements, if any, specified in SCC, and in any subsequent instructions ordered by the purchaser.

10. Delivery and documents

10.1 Delivery of the goods shall be made by the supplier in accordance with the terms specified in the contract. The details of shipping and/or other documents to be furnished by the supplier are specified in SCC.

10.2 Documents to be submitted by the supplier are specified in SCC.

11. Insurance

11.1 The goods supplied under the contract shall be fully insured in a freely convertible currency against loss or damage incidental to manufacture or acquisition, transportation, storage and delivery in the manner specified in the SCC.

12. Transportation

12.1 Should a price other than an all-inclusive delivered price be required, this shall be specified in the SCC.

13. Incidental services

13.1 The supplier may be required to provide any or all of the following services, including additional services, if any, specified in SCC:

(a) performance or supervision of on-site assembly and/or commissioning of the supplied goods;
(b) furnishing of tools required for assembly and/or maintenance of the supplied goods;
(c) furnishing of a detailed operations and maintenance manual for each appropriate unit of the supplied goods;
(d) performance or supervision or maintenance and/or repair of the supplied goods, for a period of time agreed by the parties, provided that this service shall not relieve the supplier of any warranty obligations under this contract; and
(e) training of the purchaser's personnel, at the supplier's plant and/or on-site, in assembly, start-up, operation, maintenance, and/or repair of the supplied goods.

13.2 Prices charged by the supplier for incidental services, if not included in the contract price for the goods, shall be agreed upon in advance by the parties and shall not exceed the

prevailing rates charged to other parties by the supplier for similar services.

14. Spare parts

14.1 As specified in SCC, the supplier may be required to provide any or all of the following materials, notifications, and information pertaining to spare parts manufactured or distributed by the supplier:

(a) such spare parts as the purchaser may elect to purchase from the supplier, provided that this election shall not relieve the supplier of any warranty obligations under the contract; and
(b) in the event of termination of production of the spare parts:
(i) Advance notification to the purchaser of the pending termination, in sufficient time to permit the purchaser to procure needed requirements; and
(ii) following such termination, furnishing at no cost to the purchaser, the blueprints, drawings, and specifications of the spare parts, if requested.

15. Warranty

15.1 The supplier warrants that the goods supplied under the contract are new, unused, of the most recent or current models, and that they incorporate all recent improvements in design and materials unless provided otherwise in the contract. The supplier further warrants that all goods supplied under this contract shall have no defect, arising from design, materials, or workmanship (except when the design and/or material is required by the purchaser's specifications) or from any act or omission of the supplier, that may develop under normal use of the supplied goods in the conditions prevailing in the country of final destination.

15.2 This warranty shall remain valid for twelve (12) months after the goods, or any portion thereof as the case may be, have been delivered to and accepted at the final destination indicated in the contract, or for eighteen (18) months after the date of shipment from the port or place of loading in the source country, whichever period concludes earlier, unless specified otherwise in SCC.

15.3 The purchaser shall promptly notify the supplier in writing of any claims arising under this warranty.

15.4 Upon receipt of such notice, the supplier shall, within the period specified in SCC and with all reasonable speed, repair or replace the defective goods or parts thereof, without costs to the purchaser.

15.5 If the supplier, having been notified, fails to remedy the defect(s) within the period specified in SCC, the purchaser may proceed to take such remedial action as may be necessary, at the supplier's risk and expense and without prejudice to any other rights which the purchaser may have against the supplier under the contract.

16. Payment

16.1 The method and conditions of payment to be made to the supplier under this contract shall be specified in SCC.

16.2 The supplier shall furnish the purchaser with an invoice accompanied by a copy of the delivery note and upon fulfillment of other obligations stipulated in the contract.

16.3 Payments shall be made promptly by the purchaser, but in no case later than thirty (30) days after submission of an invoice or claim by the supplier.

16.4 Payment will be made in Rand unless otherwise stipulated in SCC.

17. Prices

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

18. Contract amendments

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

19. Assignment

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

20. Subcontracts

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

21. Delays in the supplier's performance

21.1 Delivery of the goods and performance of services shall be made by the supplier in accordance with the time schedule prescribed by the purchaser in the contract.

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

21.3 No provision in a contract shall be deemed to prohibit the obtaining of supplies or services from a national department, provincial department, or a local authority.

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

21.5 Except as provided under GCC Clause 25, a delay by the supplier in the performance of its delivery obligations shall render the supplier liable to the imposition of penalties, pursuant to GCC Clause 22, unless an extension of time is agreed upon pursuant to GCC Clause 21.2 without the application of penalties.

21.6 Upon any delay beyond the delivery period in the case of a supplies contract, the purchaser shall, without canceling the contract, be entitled to purchase supplies of a similar quality and up to the same quantity in substitution of the goods not supplied in conformity with the contract and to return any goods delivered

later at the supplier's expense and risk, or to cancel the contract and buy such goods as may be required to complete the contract and without prejudice to his other rights, be entitled to claim damages from the supplier.

22. Penalties

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

23. Termination for default

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

(a) if the supplier fails to deliver any or all of the goods within the period(s) specified in the contract, or within any extension thereof granted by the purchaser pursuant to GCC Clause 21.2;

(b) if the Supplier fails to perform any other obligation(s) under the contract; or

(c) if the supplier, in the judgment of the purchaser, has engaged in corrupt or fraudulent practices in competing for or in executing the contract.

23.2 In the event the purchaser terminates the contract in whole or in part, the purchaser may procure, upon such terms and in such manner as it deems appropriate, goods, works or services similar to those undelivered, and the supplier shall be liable to the purchaser for any excess costs for such similar goods, works or services. However, the supplier shall continue performance of the contract to the extent not terminated.

23.3 Where the purchaser terminates the contract in whole or in part, the purchaser may decide to impose a restriction penalty on the supplier by prohibiting such supplier from doing business with the public sector for a period not exceeding 10 years.

23.4 If a purchaser intends imposing a restriction on a supplier or any person associated with the supplier, the supplier will be allowed a time period of not more than fourteen (14) days to provide reasons why the envisaged restriction should not be imposed. Should the supplier fail to respond within the stipulated fourteen (14) days the purchaser may regard the intended penalty as not objected against and may impose it on the supplier.

23.5 Any restriction imposed on any person by the Accounting Officer / Authority will, at the discretion of the Accounting Officer / Authority, also be applicable to any other enterprise or any partner, manager, director or other person who wholly or partly exercises or exercised or may exercise control over the enterprise of the first-mentioned person, and with which enterprise or person the first-mentioned person, is or was in the opinion of the Accounting Officer / Authority actively associated.

23.6 If a restriction is imposed, the purchaser must, within five (5) working days of such imposition, furnish the National Treasury, with the following information:

(i) the name and address of the supplier and / or person restricted by the purchaser;
(ii) the date of commencement of the restriction
(iii) the period of restriction; and
(iv) the reasons for the restriction.

These details will be loaded in the National Treasury's central database of suppliers or persons prohibited from doing business with the public sector.

23.7 If a court of law convicts a person of an offence as contemplated in sections 12 or 13 of the Prevention and Combating of Corrupt Activities Act, No. 12 of 2004, the court may also rule that such person's name be endorsed on the Register for Tender Defaulters. When a person's name has been endorsed on the Register, the person will be prohibited from doing business with the public sector for a period not less than five years and not more than 10 years. The National Treasury is empowered to determine the period of restriction and each case will be dealt with on its own merits. According to section 32 of the Act the Register must be open to the public. The Register can be perused on the National Treasury website.

24. Anti-dumping and countervailing duties and rights

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

25. Force Majeure

25.1 Notwithstanding the provisions of GCC Clauses 22 and 23, the supplier shall not be liable for forfeiture of its performance security, damages, or termination for default if and to the extent that his delay in performance or other failure to perform his obligations under the contract is the result of an event of force majeure.

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

26. Termination for insolvency

26.1 The purchaser may at any time terminate the contract by giving written notice to the supplier if the supplier becomes bankrupt

or otherwise insolvent. In this event, termination will be without compensation to the supplier, provided that such termination will not prejudice or affect any right of action or remedy which has accrued or will accrue thereafter to the purchaser.

27. Settlement of Disputes

27.1 If any dispute or difference of any kind whatsoever arises between the purchaser and the supplier in connection with or arising out of the contract, the parties shall make every effort to resolve amicably such dispute or difference by mutual consultation.

27.2 If, after thirty (30) days, the parties have failed to resolve their dispute or difference by such mutual consultation, then either the purchaser or the supplier may give notice to the other party of his intention to commence with mediation. No mediation in respect of this matter may be commenced unless such notice is given to the other party.

27.3 Should it not be possible to settle a dispute by means of mediation, it may be settled in a South African court of law.

27.4 Mediation proceedings shall be conducted in accordance with the rules of procedure specified in the SCC.

27.5 Notwithstanding any reference to mediation and/or court proceedings herein,

(a) the parties shall continue to perform their respective obligations under the contract unless they otherwise agree; and

(b) the purchaser shall pay the supplier any monies due the supplier.

28. Limitation of liability

28.1 Except in cases of criminal negligence or willful misconduct, and in the case of infringement pursuant to Clause 6;

(a) the supplier shall not be liable to the purchaser, whether in contract, tort, or otherwise, for any indirect or consequential loss or damage, loss of use, loss of production, or loss of profits or interest costs, provided that this exclusion shall not apply to any obligation of the supplier to pay penalties and/or damages to the purchaser; and

(b) the aggregate liability of the supplier to the purchaser, whether under the contract, in tort or otherwise, shall not exceed the total contract price, provided that this limitation shall not apply to the cost of repairing or replacing defective equipment.

29. Governing language

29.1 The contract shall be written in English. All correspondence and other documents pertaining to the contract that is exchanged by the parties shall also be written in English.

30. Applicable law

30.1 The contract shall be interpreted in accordance with South African laws, unless otherwise specified in SCC.

31. Notices

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

31.2 The time mentioned in the contract documents for performing any act after such aforesaid notice has been given, shall be reckoned from the date of posting of such notice.

32. Taxes and duties

32.1 A foreign supplier shall be entirely responsible for all taxes, stamp duties, license fees, and other such levies imposed outside the purchaser's country.

Programme

34 Prohibition of Restrictive practices

34.1 In terms of section 4 (1) (b) (iii) of the Competition Act No. 89 of 1998, as amended, an agreement between, or concerted practice by, firms, or a decision by an association of firms, is prohibited if it is between parties in a horizontal relationship and if a bidder (s) is / are or a contractor(s) was / were involved in collusive bidding (or bid rigging).

34.2 If a bidder(s) or contractor(s), based on reasonable grounds or evidence obtained by the purchaser, has / have engaged in the restrictive practice referred to above, the purchaser may refer the matter to the Competition Commission for investigation and possible imposition of administrative penalties as contemplated in the Competition Act No. 89 of 1998.

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

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

PART C5: ADDITIONAL RELEVANT DOCUMENTS

C5.1 Tender Drawings

(Bound herewith)

C5.2 Ministerial Determination No.3: Extended Public Works Programmes

(Can be obtained from internet or from the Engineer if required)

C5.3 COVID 19 Regulations: Disaster Management Act, 2002 Amended

(Can be obtained from internet or from the Engineer if required)

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

C5.4 GOVERNING CONDITIONS OF CONTRACT

This Contract shall be governed by the General Conditions of Contract for Construction Works, Third Edition (2015), issued by the South African Institution of Civil Engineering (SAICE), hereinafter referred to as GCC 2015.

GCC 2015 shall be read together with the Contract Data and the Special Conditions of Contract contained in this tender document. In the event of any ambiguity, discrepancy or inconsistency, the Special Conditions of Contract and Contract Data shall take precedence over the General Conditions of Contract, but only to the extent of the applicable amendment or inconsistency.

Any reference in this tender document to the General Conditions of Contract 2010 or any other edition shall be deemed to refer to the General Conditions of Contract for Construction Works, Third Edition (2015), unless expressly stated otherwise.